# THE RELATIVE IMPACT OF PRINCIPAL MANAGERIAL, INSTRUCTIONAL, AND TRANSFORMATIONAL LEADERSHIP ON STUDENT ACHIEVEMENT IN MISSOURI MIDDLE LEVEL SCHOOLS

---

A Dissertation

presented to

the faculty of the Graduate School

University of Missouri-Columbia

---

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

---

By

E. NYLE KLINGINSMITH

Dr. Jerry Valentine, Dissertation Supervisor

MAY 2007

The undersigned, appointed by the Dean of the Graduate Faculty, have examined a dissertation entitled:

THE RELATIVE IMPACT OF PRINCIPAL MANAGERIAL, INSTRUCTIONAL, AND TRANSFORMATIONAL LEADERSHIP ON STUDENT ACHIEVEMENT IN MISSOURI MIDDLE LEVEL SCHOOLS

presented by E. Nyle Klinginsmith, a candidate for the degree of Doctor of Education, and hereby certify that in their opinion it is worthy of acceptance.

_____
Dr. Jerry Valentine, Major Advisor
Educational Leadership and Policy Analysis

_____
Dr. Phyllis Chase
Superintendent of Schools, Columbia Public Schools

_____
Dr. Brendan Maxcy
Educational Leadership and Policy Analysis

_____
Dr. Jay Scribner
Educational Leadership and Policy Analysis

_____
Dr. Juanita Simmons
Educational Leadership and Policy Analysis

ACKNOWLEDGEMENTS

To my advisor and mentor, Dr. Jerry Valentine, for your patience through this process, for encouraging my interests in this topic, and for your flexibility in accommodating a working-principal's schedule.

To Dr. Juanita Simmons for your work with Cohort 4 during the second summer of our work and for the invaluable help you provided in writing this dissertation.

To Dr. Jay Scribner for your work with the Columbia cohort group during the final spring of the program and for your guidance in conducting research.

To Dr. Brendan Maxcy for your encouragement, suggestions, and support.

To Dr. Phyllis Chase for being an example of professionalism in every arena. I appreciate your willingness to be part of the committee and for your interest in my endeavors.

To my sons, Mike, Jon, and Doug, for your love and support. When I got discouraged with this process, I often continued because I didn't want to let you down. I look forward to being able to spend more time visiting and being with you now.

To my late parents, for letting me know from the first day of first grade that education was important. And especially to my mother, who at the age of 50 earned her GED, because as a farm child of the Depression, 8$^{th}$ grade was as high as she was able to attend.

To my wife Barb, whose love, encouragement, and support kept me going. You helped me stuff envelopes, set up spread sheets, and check references against my manuscript and showed me in thousand ways that you were pulling for me.

THE RELATIVE IMPACT OF PRINCIPAL MANAGERIAL, INSTRUCTIONAL, AND TRANSFORMATIONAL LEADERSHIP ON STUDENT ACHIEVEMENT IN MISSOURI MIDDLE LEVEL SCHOOLS

E. Nyle Klinginsmith

Dr. Jerry Valentine, Dissertation Supervisor

## ABSTRACT

This study examined the relationship of three factors of principal leadership, managerial, instructional, and transformational. A total of 133 middle level public schools in Missouri were included in the study. This study was part of a larger study of middle level education being conducted by the Middle Level Leadership Center at the University of Missouri-Columbia. Two survey forms were used to collect data for this study. A total of 849 teachers responded to a survey that collected data about their perceptions of principal effectiveness in one factor of principal managerial leadership and two factors of principal instructional leadership. A total of 854 teachers responded to a survey that collected data about their perceptions of principal transformational leadership. Data from the surveys were aggregated and analyzed using Pearson product-moment correlations, analyses of variance, and multiple regression equation estimates. Student achievement data were obtained from the spring 2006 administration of the Missouri Assessment Program (MAP) tests in Communication Arts and Mathematics.

The study found significant correlations among all nine factors of principal leadership. There were significant differences in principal leadership factor ratings when schools were grouped by student achievement. School demographic factors for SES,

attendance, enrollment, and FTE had significant correlations with student achievement. Three measures of principal experience had significant correlations with student achievement. Seven of the nine factors of principal leadership correlated significantly with both subtests when controlling for SES. The two remaining factors had a significant correlation with one of the tests. The leadership factor, Instructional Improvement, appeared to have the greatest impact on student achievement. A model of the contextual elements of the role of principal and the relationship of school and principal demographic variables as well as principal leadership factors with student achievement in that larger context was developed, and implications for research, practice, policy, and the preparation of educational leaders was developed.

Table of Contents

List of Tables

List of Figures

# Chapter 1

# BACKGROUND TO THE STUDY

## Introduction

The role of the American school principal has been an evolving construct, changing as American society has changed, as society's perception of its schools has changed, and as the very notions of effective leadership have changed. As they are involved in their daily activities, principals must help their schools meet ever-evolving and increasingly complex expectations from constituents, from society, and from various levels of government. New research and theory related to schools and to school leaders emerges constantly, and while new thinking often builds on or extends previous notions of best practice, it frequently proposes new models of school leadership, especially as historical contexts change. The body of literature on principal leadership written over the past century has been categorized and discussed in variety of ways. One widely accepted view has the literature grouped into three broad categories of managerial leadership, instructional leadership, and transformational leadership with each having taken a turn as the prevalent model (Hallinger, 1992; Leithwood and Duke, 1999).

### *Theories of principal leadership*

The role of the school principal had its roots in the role of the "principal teacher" in antebellum America. It began to emerge as a distinctly separate role in the latter years of the nineteenth century, becoming even more common after the turn of the twentieth century. This role emergence occurred as America experienced an "era of rapid urbanization and bureaucratization," (Charles Scribner's Sons, 1993), and at a time that

organizational theory focused on what Bolman and Deal (1997) have termed "the structural frame" with its emphasis on roles, efficiency, and management.

Larger organizations of the late nineteenth and early twentieth centuries were becoming bureaucratized and were often characterized by a division of labor and specialization of tasks with the expectation that these would result in greater efficiency and productivity. Leadership theory of the time focused on such management tasks as supervising, planning, and organizing (Gulick and Urwick, 1937; Mintzberg, 1973). Growing from the works of Weber, Fayol, Mooney, and Urwick, Classical Management leadership theory emphasized "detailed principles and methods through which (a bureaucratized organization) could be achieved" (Morgan, 1997, p. 17). Terms such as "unity of command, span of control, staff and line, division of work, authority and responsibility, and discipline" (p. 19) were essential to Classical Management theory. This was as true for educational leaders as it was for business leaders, as principals were expected to manage staff, budgets, and the physical plants in which teaching and learning occurred. As college coursework developed to train future school leaders, it focused on these managerial functions (Beck and Murphy, 1993).

The model of principal as manager predominated for most of the first part of the twentieth century (Hallinger, 1992). Starting in the late 1950's, however, a number of challenges to America's schools including increasing integration of schools, growth of school-age populations, the "space race," and a sense that American schools were falling behind created a demand for different leadership skills (Weller, 1999). The 1960's saw a wave of social and political upheaval in America, and new issues appeared on the public agenda (Fowler 2004). Social policy, including federal policies designed to combat the

effects of poverty, segregation and gender inequities, and to meet the needs of special education students, was enacted. In addition, new curricula were introduced in areas such as mathematics and science, all of which created a changing environment for principals. At first, principals met these challenges through compliance with these externally mandated programs and were not required to document success through student outcomes (Hallinger, 1992), Fullan, 1991). Later, as concerns grew about student performance, there grew an expectation for principals to lead school change and school reform (Leithwood and Montgomery, 1992)

Social concerns continued into the decade of the 70's, and in 1979, Edmonds published a seminal paper calling for better, more effective schools for America's urban poor. Edmonds reported that strong leadership was a characteristic of effective schools and that such leadership focused on student outcomes. Four years after Edmonds' paper, *A Nation at Risk* (National Commission on Excellence in Education, 1983) was published, and it added to the growing attention to and concern about America's schools. Increasingly, the literature began to speak to the need for more effective schools. Steller (1988), in a summary of the qualities of effective schools, emphasized strong instructional leadership by the principal along with the qualities of instructional focus, high expectations and standards, safe and orderly schools, and frequent monitoring of student achievement. This instructional leadership was characterized by high expectations for teachers as well as students, close supervision of classroom instruction, coordination of the school's curriculum, and close monitoring of student progress (Brookover and Lezotte, 1977; Brookover, Schweitzer, Schneider, Beady, Flood, & Wisenbaker, 1979; Rutter, 1979; Hallinger and Murphy, 1985; Glickman, 1987).

For principals, the emphasis had shifted from being skilled at managerial tasks and roles to being more knowledgeable about and more involved in the school's instructional practices. As this shift was occurring, there began to be an increasing number of studies of the effects of school leadership on student achievement. According to studies by Bossert, Dwyer, Rowan, and Lee (1982); DeBevoise (1984); Andrews and Soder (1987); and Hallinger and Murphy (1985), principals could have a positive impact on a variety of in-school factors and could at least indirectly affect the achievement of students. Increasingly, school success began to be defined by student performance on standardized testing with an emphasis on basic skills testing followed later by a focus on mastery testing (Heck, Larson and Marcoulides, 1990; Heck and Marcoulides, 1993). School principals were expected to positively impact such performance (Finn, 1987, Morris, 1987).

According to Fowler (2004), continued discontent with America's schools in the late 80's led to a call for greater accountability resulting in a nationwide call for standards-based education. This in turn led reformers to push for "a change in the organizational structure, professional roles, and goals of public education" (Prater, 2004). There was a call for "school restructuring" which was perceived as a better way to identify and meet locally determined needs (Hallinger, 1992). Restructuring has been defined as the "reforming of the interrelationships of an organization; a strategy used to analyze and redesign the organization or structure of education in order to improve student outcomes" (MASSP, 1994). Restructuring literature called for schools to be the initiators of change rather than merely reacting to it, and instructional leadership, it was argued, could not accomplish this. Leithwood, Jantzi, and Steinbach (2000b) argued that

instructional leadership was no longer a suitable paradigm for restructuring. Instead they advocated a third model of leadership called transformational leadership, which would be "potentially more powerful and more elegant as a description of effective leadership in the context of school restructuring" (p. 27).

The model of transformational leadership grew originally from the work of James McGregor Burns (1978). After studying great historical leaders, Burns determined that they possessed a distinctive kind of leadership, which he termed "transforming." Such leadership was characterized as being moral and uplifting because, "it raises the level of human conduct and ethical aspiration of leader and led, and thus has a transforming effect on both" (p 20). According to Burns, leadership is found in the relationships between motives, resources, leaders and followers. Bass (1985) researched the effects of one model of transformational leadership. He and his associates defined transformational leaders as possessing a kind of charismatic or idealized influence over followers, while inspiring higher motivation, stimulating them intellectually, and providing individualized consideration for them. Burns (1978) and Bass (1985) also described a form of leadership, called transactional leadership, in which leaders and followers engage in an exchange process with followers being rewarded for behavior considered desirable by the leader.

Researchers have often focused on one model of principal leadership, but there are others such as Leithwood and Duke (1999) who argued that it is unlikely that any one model by itself describes what qualities leaders should possess. Lashway (1997) urged that principal leadership be multi-dimensional with a focus on the hierarchical, transformational, and facilitative elements of schools. Multidimensional leaders should

have a wider set of strategies to employ, similar, for example, to a leader who would employ the various frames of organizational theory provided by Bolman and Deal (1997), or the organizational metaphors posited by Morgan (1997). Marks and Printy (2003) suggested that instructional leadership and transformational leadership should be integrated. Day (2000) contended that managerial leadership was necessary to structure the work done by transformational leadership. Bass (1998) contended that transactional leadership and transformational leadership complement each other. With consideration of the thinking that all three models might contribute to effective principal leadership, Prater (2004) studied the effects of factors of each of the three historical models as they related to student achievement at the high school level.

*Leadership at the middle level*

The history of American middle level education and its leaders mirrors much of the history of educational leadership theory as a whole. Separate schools for young adolescents first emerged in the early 1900's in Columbus, Ohio and Berkeley, California. At that time, there was rapid societal change that was concurrent with change in America's schools including such factors as the growth of schools, a discussion of the appropriate configuration of public school grades, and the emergence of the specialized role of principal (Clark and Clark, 1994; Valentine, Clark, Hackman and Petzko, 2004). As other communities soon followed the Columbus and Berkeley model, junior highs began to flourish, and numbered in the thousands by mid-century.

Even at the time of its greatest ascendancy in post-World War II America, the junior high model began to be challenged as the best way to educate emerging adolescents. The late 1950's and early 60's saw developments such as criticisms of

perceived shortcomings of American schools, classroom and teacher shortages, double and triple sessions due to soaring enrollments, and soaring tax rates (Wiles and Bondi, 1986). Books like *Why Johnny Can't Read* (Flesch, 1955) triggered concerns about the quality of schooling in the United States. The launching of Sputnik in 1957 heightened those concerns and "created an obsession for academic achievement especially in science, foreign languages, and mathematics" (Wiles and Bondi, p. 5). Other changes occurring at that same time which impacted schools included the end of racial segregation, especially in larger cities such as New York.

Following the lead of Eichhorn (1966) and Alexander (1968), who called for schools that were more attuned to the needs of young adolescents, the middle school movement gained increasing attention as a way to answer some of the concerns being raised. Middle schools were built on the ideas that interdisciplinary teaming, enhanced exploration experiences, and shared leadership would better serve the needs of young adolescents than were the junior high schools. Junior highs, it was argued, too closely resembled their high school counterparts with departmentalized structures, standard bell schedules, and selective extra-curricular programs. As some schools experienced success with the middle school model, it became more widespread, and by the 1980's middle schools began to outnumber junior high schools in America (Alexander and George, 1981; Wiles and Bondi, 1986).

In the 1980's America's schools were perceived as falling short of public expectations. This led to the effective schools movement and its related instructional leadership model and had an impact on middle schools, just as the middle school model was achieving ascendancy. Middle schools were being challenged as not meeting the

academic needs of their students, as was American public education as a whole. Some argued there should be a rethinking of middle school philosophies while others called for a return to the more traditional junior high structures. Middle school advocates countered that the perceived failure of middle schools was due to the fact that true middle school practices were seldom fully embraced, and only when they were accomplished would the true benefits of middle schooling be realized (Dickinson and Butler, 2001).

Some have seen the 1990's as a resurgent decade for America's middle schools (Valentine et al., 2004). As America sought to restructure its schools under transformational leadership, so too was there a call to restructure middle level education. Restructuring of middle schools was to occur along lines that addressed the academic as well as social, emotional and physical needs of the students. At the middle level, the focus on shared decision-making with interdisciplinary teacher teams, for example, proved to be a good fit with transformational leadership theory (Valentine, et al., 2004).

This study seeks to add to a relatively small body of literature on the effects of all three types of educational leadership, managerial, instructional, and transformational, and to study the effects of different characteristics of each on student achievement at the middle school level. In doing so, it will add to research on principal leadership and student achievement, especially that conducted by Prater (2004).

## Statement of the Problem

Today's principals are expected to lead schools in an attempt to meet ever-evolving and increasingly complex expectations from many elements of American society including politicians, the media, and the families and communities they serve. Schools and their leaders are responding to calls for reform and restructuring, and to

demonstrate effectiveness through performance on government mandated high-stakes testing. Principals, in particular, are held accountable for the performance of their students on such assessments.

Various models of leadership have been proposed. One widely accepted view has leadership theory grouped into three broad categories: managerial leadership, instructional leadership, and transformational leadership. It has been argued that no one theoretical model will provide school principals with the tools needed to be successful in the highly politicized, ever-changing environment in which they operate today. Deal and Peterson (1994) encouraged a bifocal perspective that considered both managerial and leadership roles. While each model has been written about extensively, there has not been a great deal written about the relationships among factors of the three models of principal leadership. Prater (2004) explored those relationships in his study of leadership at the high school level. Given the unique needs of middle level adolescents and the emphasis on providing programming to meet those needs, it is important to explore those relationships at the middle level as well. Given the additional current expectations that schools demonstrate success in terms of student performance on standardized, high-stakes tests, research connecting primary factors of the three predominant leadership models with student success on such high-stakes testing would appear to be helpful for both researchers and practitioners.

## Purpose of the Study

The purpose of this study was to examine the relative impact of principal managerial leadership, principal instructional leadership, and principal transformational leadership on student achievement. The method of analysis was quantitative, with survey

data and test results being used to determine (a) if any relationships exist between the demographic variables of the principal and the factors of managerial leadership, instructional leadership, and transformational leadership; (b) if any relationships exist between demographic variables of the school, principal leadership characteristics, and student achievement; (c) if any relationships exist among the factors measuring principal managerial leadership, principal instructional leadership, and principal transformational leadership; and, (d) if any relationships exist between the factors measuring principal managerial leadership, principal instructional leadership, and principal transformational leadership and student achievement.

## Research Questions

The following research questions were examined during the completion of this study:

1. What, if any, relationships exist between selected demographic variables of the principal and selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership?
2. What, if any, relationships exist between principal characteristics and school demographic variables, and student achievement as measured by scores on the Missouri Assessment Program (MAP) in Missouri middle level schools?
3. What, if any, relationships exist between selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership in Missouri middle level schools?
4. What, if any, significant differences exist in principal leadership factors measuring managerial leadership, instructional leadership, and transformational

leadership in Missouri middle level schools when schools are grouped by student achievement as measured by scores on the Missouri Assessment Program (MAP)?

5. What, if any, relationships exist between selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership on student achievement as measured by sores on the Missouri Assessment Program (MAP) in Missouri middle level schools, when controlling for school socio-economic status?

## Null Hypotheses

The following hypotheses were tested in this study:

$H_{01}$: There are no significant correlations between selected demographic variables of the principal and principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the Principal Leadership Questionnaire.

$H_{02}$: There are no significant correlations between principal characteristics and school demographic variables, and student achievement as measured by scores on the Missouri Assessment Program in Missouri middle level schools.

$H_{03}$: There are no significant correlations between the principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the Principal Leadership Questionnaire.

$H_{04}$: There are no significant differences in principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of

Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership Questionnaire, when schools are grouped by student achievement as measured by scores on the Missouri Assessment Program (MAP).

$H_{05}$: There are no significant predictive linear relationships between principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership Questionnaire on student achievement as measured by scores on the Missouri Assessment Program (MAP) in Missouri middle level schools, when controlling for school socio-economic status.

## Limitations

The following are the limitations of the study:

1. The population was limited to principals who hold a valid secondary (or elementary) principal's certificate in the state of Missouri, who have also served as head principal in their respective buildings for at least the 2005-06 and 2006-07 school years. The population of teachers included teachers in those buildings led by principals who met the criteria for the study.
2. The findings of this study are limited to the validity and reliability of the instruments used.
3. The findings of the study are subject to the same limitations as other studies utilizing survey methods: (a) the criteria for inferring cause-and-effect relationships cannot be easily established; (b) surveys tend to be highly

standardized; and (c) surveys are susceptible to reactivity, which introduces systematic measurement error (Singleton, Straits, and Straits, 1993).

4. The findings of the study should be considered as limited to the variables studied in the context of the proposed managerial leadership, instructional leadership, and transformational leadership models.

## Definitions

Curriculum Improvement: behavior demonstrating the principal's ability to promote an articulated, outcome-based curriculum through diagnosis of student needs and systematic review and change (Valentine and Bowman, 1988).

Fostering the acceptance of group goals: behavior that demonstrates the principal's ability to promote cooperation among organizational members and assist them in working together toward common goals (Jantzi and Leithwood, 1996).

Holding high performance expectations: behavior that demonstrates the principal's expectations for excellence, quality, and high performance on the part of the organizations' members (Jantzi and Leithwood, 1996).

Identifying and articulating a vision: behavior that demonstrates the principal's ability to identify new opportunities for the organization and to develop, articulate, and inspire others with that vision of the future, (Jantzi and Leithwood, 1996).

Instructional Improvement: behavior that demonstrates the principal's ability to positively influence the instructional skills present in the school through clinical supervision, knowledge of effective schools, and commitment to quality instruction (Valentine and Bowman, 1988).

Interactive Processes: behavior that demonstrates the principal's ability to organize tasks and personnel for the effective day-by-day management of the school, including providing appropriate information to staff and students, developing appropriate rules and procedures, and setting the overall tone for discipline in the school (Valentine and Bowman, 1988).

Leadership: the process of influencing others to understand and agree about what needs to be done and how it can be done effectively, and the process of facilitating individual and collective efforts to accomplish the shared objectives (Yukl, 2002).

Managerial Leadership: leadership characterized by the principal's organizing tasks and personnel for the effective daily management of the school, including implementing policy, maintaining organizational stability, buffering the curriculum and instruction from excessive distractions, and ensuring that routine organizational tasks are performed correctly (Leithwood and Duke, 1999).

Middle Level Schools: any schools "encompassing any grade or grade combination from grades 5 through 9" (Valentine, Clark, Nickerson, and Keefe, 1981, p. xv).

Providing an appropriate model: behavior that demonstrates the principal's ability to set an example for organizational members to follow consistent with the values the principal espouses (Jantzi and Leithwood, 1996).

Providing individualized support: behavior that demonstrates the principal's respect for organizational members and concern about their personal feelings and needs (Jantzi and Leithwood, 1996).

Providing Intellectual stimulation: behavior that demonstrates the principal's ability to challenge organizational members to reexamine some of the assumptions about their work and rethink how it can be performed (Jantzi & Leithwood, 1996)

Transformational leadership: principal leadership characterized by capacity development and higher levels of personal commitment to school goals on the part of teachers and staff through identifying and articulating a vision, providing an appropriate model, fostering the acceptance of group goals, providing individualized support, providing intellectual stimulation, and holding high performance expectations. Increased capacities and commitments are assumed to result in extra effort and greater productivity (Leithwood and Jantzi, 2000b).

## Outline of the Study

Chapter 1 contains background information and includes a rationale for the study. Research questions hypotheses, limitations, and definitions appropriate to the study are also presented in the chapter. Chapter 2 is a review of the literature relevant to managerial leadership, instructional leadership, transformational leadership, middle level educational theory, and student achievement. Chapter 3 describes the design of the study, including procedures for collecting and analyzing the quantitative data. Chapter 4 contains the presentation and quantitative analysis of the data. Chapter 5 includes a discussion of the findings, implications for practice, research and the preparation of educational leadership, and descriptions of future research.

# Chapter 2

# REVIEW OF THE LITERATURE

## Introduction

Organizations are social units created to achieve specific ends (Etzioni, 1961; Morgan, 1997). They are a relatively recent development in the history of mankind. "Only in the last ten or fifteen thousand years have we seen the emergence of institutions more complex than small, nomadic communities. Large organizations came to dominate the social landscape even more recently" (Morgan, p. 7). Relatively new as they are, organizations have become a pervasive part of life in the twenty-first century, and many of life's important activities occur in them. While they are pervasive, organizations have also been called complex, surprising, deceptive, and ambiguous (Bolman and Deal, 1997). This is increasingly true for today's organizations as they function in an ever-changing social-political context made even more complex by revolutionary developments in technology, transportation, and communication (Kotter, 1985).

As organizational life has become more commonplace, writers have searched for ways to characterize it with Weber using the lens of sociology and others employing psychology, political science, and anthropology to gain insights (Bolman and Deal, 1997). Still others, including Morgan (1997), have chosen metaphors, using the characteristics of such diverse things as machines and brains in order to better understand and describe organizational life.

Bolman and Deal (1997) viewed leadership as integral to organizational success, and the improvement of leadership practices as essential to organizational improvement. Leadership can and does exist outside of organizations, but it is an important element of organizational life (Gardner, 2000). Leadership has often been accompanied by descriptors such as good, effective, exemplary, poor, and terrible. Surprisingly, with all that has been written of it, the term has not been well defined. Rost (1991) indicated that most people who wrote about leadership did so without offering a definition of it. Leithwood, Jantzi and Steinbach (2000a) wrote that while much has been learned about leadership, "it has not depended on any clearly agreed upon definition of the concept, as essential as that would seem at first glance" (p. 5). A number of writers, including Yukl (2002), Rost (1991) and Gardner (2000) have described leadership as an influence process. Yukl (2002) described major research approaches that looked at traits, behaviors, power and influence, situational factors, or employed an integrative approach to leadership. Bensinmon, Neumann, and Birnbaum (1989) listed contingency theories, cultural and symbolic theories, and cognitive theories including theories about traits, power and influence, and behaviors in their categorization of leadership approaches.

Bennis and Nanus (1985) and Zaleznik (1977), among others, have differentiated between the ideas of leadership and management, viewing them as opposites. Gardner (2000) described leaders as thinking in longer terms, thinking in bigger terms, thinking in terms of renewal, having greater political skills, and placing an emphasis on "the intangibles of vision, values, and motivation" (p. 6), while managers are seen as being more tightly linked to organizations. Others have described management in terms of preserving the status quo, whereas leaders are seen as challenging it or changing it

(Hemphill, 1958; Lipham, 1965). Leadership appears to exist in contrast to management because leaders value flexibility, innovation, and adaptation, while managers are said to "value stability, order and efficiency" (Yukl, p. 5). These distinctions suggest a dichotomy of management and leadership, yet there are some, including Bass (1990), Hickman (1990), Kotter (1988), Mintzberg (1973), and Rost (1991), who viewed the two as distinct but not incompatible processes.

Organizational members frequently look to leaders to facilitate their efforts, and leaders, in turn, search for ways to enhance their own practice to accomplish that end. "We have certainly tried to make organizations better. Legions of managers go to work every day with that hope in mind" (Bolman and Deal 1997, p. 8). While authors, consultants and policymakers strive to find new answers to guide organizations, "The most basic change strategy is to improve management and leadership" (p. 8). Schools are no different than other organizations in this regard. Their primary activities are aimed at educating students, and their principals, as with their leadership counterparts in other organizations, may view their organizational role as essential to the success of their schools. There is a growing body of research and theory about leadership in general and educational leadership that provides principals with guidance as they seek to enhance their professional practice. The accepted wisdom about what constitutes effective leadership in schools has evolved since the emergence of the role of school principal over a century ago (Hallinger, 1992; Leithwood and Duke, 1999).

As organizations, including schools, grew in size and complexity in the late nineteenth and early twentieth centuries, leadership roles emerged. Leaders were charged with making their organizations more efficient and more productive, and they sought

practices that would help to accomplish this. Leadership theory of the day focused on management and administrative skills such as the classic "PODSCoRB" functions delineated by Gulick and Urwick, (1937), which is reflected four decades later in the list of supervising, planning and organizing, monitoring indicators, coordinating, consulting, and administering that was developed by Mintzberg (1973). Scientific management and efficiency movements influenced public education, too. "The strategies used by industrialists to organize their factories and make them more efficient began to influence public education. The roles of principals and teachers were prescribed as sets of principles for effective school operations (Williamson and Johnston, 2004).

At the mid-point of the twentieth century, societal challenges to America's schools led, in turn, to challenges of the predominant managerial leadership paradigm. Discontent with schools, which emerged in the 1950's, increased during the 1970's and 1980's. However, as concerns grew with the perceived shortcomings of many schools, researchers identified schools that ran counter to this trend. For example, Brookover and Lezotte (1977) studied schools in Michigan and noted that successful schools shared eight characteristics including an emphasis on basic reading and math; teachers who had confidence in the ability and prospects of their students; use of criterion referenced tests as measures of success; and principals who focused on instruction, discipline, and evaluation of student progress. Edmonds' (1979) study gave strong support to the idea that the element of principal leadership was essential to effective schools.

Principals in the 1960's and 70's were challenged to manage programs that resulted from new policies aimed at combating social problems such as poverty and remnants of segregation and to manage the introduction of new curricula (Fullan, 1991).

Increasingly, principals were expected to be more involved in the instructional process, working with both teacher and student factors in order to promote student success. Later, the argument was advanced that the principal could and should not act alone as the instructional leader in schools, and that a more inclusive model of instructional leadership should emerge. Steller (1988) held, for example, that teachers should team together to review curriculum, create curriculum, and exchange good practices that would best meet instructional objectives as part of this larger idea of instructional leadership.

Even as the paradigm of instructional leadership was gaining widespread acceptance in the 1980's, criticisms of America's schools continued to mount. In response to these continuing concerns, standards-based education and high-stakes testing came into vogue (Fowler, 2004). There was a call for restructuring schools in order to better meet student needs, and principals were urged to transform schools in order to promote such restructuring (Hallinger, 1992). Instructional leadership was seen as insufficient to improve America's schools, and a third paradigm for principal leadership, based on the model of the "transforming" leader was born (Burns, 1978). The transformational leader as described by Burns connected organizational members with the larger goals of the organization, which was viewed as essential in an era of restructuring.

These three paradigms – principal as manager, principal as instructional leader, and principal as transformational leader have been described as the three predominant models of principal leadership since the separate role of school principal emerged over a century ago (Hallinger, 1992; Wilmore and Thomas, 2001). Some have suggested that no one model best explains the traits and behaviors that impact student achievement, while

others have argued that due to the complex nature of the role of principal and the complex nature of the organizational environment of schools, there should be "a broader model of principal leadership behaviors" (Prater, 2004). Fullan's (1991) review of the research revealed that no clear leadership style could be determined to be more effective than others. Hallinger (1992) argued that it was necessary for principals to integrate a variety of role orientations in order to be successful as school leaders.

Changes and challenges impacting its schools affected America's middle schools no less than their counterparts at the elementary and senior high levels. Leaders of middle level schools dealt with the same changing environment that impacted all of American public education, but at the same time, they experienced other changes and challenges that were unique to their level. America's middle level schools had emerged as a separate layer of schools in the early twentieth century, appearing first as junior high schools before being re-invented as middle schools in the 1960's. Both variations developed to meet the unique needs of pre- and young adolescents at times of widespread changes in American society. Included on this list of needs to be met were social-emotional, exploratory, and academic needs, with the latter often emerging as a point of contention, especially as criticisms of America's schools reached a crescendo in the 1980's.

Given the complexity of organizational life, specifically life in schools, the question arises: How can principals, including middle level principals, meet the national call to demonstrate organizational success through improved student achievement? This chapter will review the literature relevant to this question through an examination of six areas. First, the development of the managerial leadership paradigm will be traced through its historical and theoretical perspectives to the emergence of a principal

managerial leadership model that will be used in this study. Second, the instructional leadership paradigm will be traced from its inception as a component of the effective schools movement to a framework of principal instructional leadership for schools that will be used in this study. Third, the development of the transformational leadership paradigm will be traced from its historic and theoretical origins to a model of principal transformational leadership for schools that will be used in this study. Fourth, the multifaceted role of the school principal will be reviewed. Fifth, the unique nature of leadership at the middle school level will be studied. Sixth, the empirical evidence of the impact of principal leadership behavior on student achievement will be discussed. This six-part review of the literature will provide the background for understanding the major concepts underlying this study of the relationship between principal leadership behaviors and student achievement.

## Managerial Leadership

### *Historical perspective of managerial leadership*

The rise of the managerial leadership paradigm can be traced to the rise of industrialization and larger business enterprises that first began in Europe and America at the latter stages of the eighteenth century. Adam Smith (1776) was an early proponent of the beneficial effects of specialization of work and division of labor. These ideas called for workers to be focused on and more proficient at specific tasks, which when combined with the specialized work of others, would lead to greater efficiency and productivity. Shortly thereafter, Eli Whitney showcased interchangeable parts for guns, which provided the basis for the related innovation of mass production. The combination of specialization of work, division of labor, interchangeable parts, and mass production led

to an age of industrialization with work being done in factories, often located in urban areas, replacing skilled work done at home and in villages. Advances in power technology and transportation spurred this revolutionary change, (Industrial Revolution, 2006).

A contemporary of Adam Smith, Frederick the Great of Prussia, took an ill-prepared, disorganized Prussian army and introduced concepts that revolutionized the military. "Among these reforms was the introduction of ranks and uniforms, the extension and standardization of regulations, increased specialization of tasks, the use of standardized equipment, the creation of a common language, and systematic training that involved army drills," (Morgan, 1997, p. 16). These reforms resulted in the Prussian Army's becoming one of the dominant military forces of its day. Military and business leaders, in admiration of the success of the Prussian army, studied its tenets and copied them, with the hope of making theirs a more efficient organization. The paradigm of managerial leadership emerged, in part, from efforts to emulate this success.

*Theoretical perspectives of managerial leadership*

"Managerial leadership assumes that the focus of leaders ought to be on functions, tasks, or behaviors and that if these functions are carried out competently the work of others in the organizations will be facilitated" (Leithwood, Jantzi and Steinbach, 2000b, p 14). The paradigm of managerial leadership has a number of theoretical roots. In addition to the work of Smith and to the innovations promoted by Whitney and Frederick the Great, the theoretical roots of managerial leadership were the organizational ideas of classical, scientific, and bureaucratic management.

Managerial leadership also has roots in a view of organizational life that has since been called the structural frame by Bolman and Deal (1997), who credited people such as Fayol (1949) and Gulick and Urwick (1937) as key contributors. According to Bolman and Deal (1997), "The assumptions of the structural frame reflect a belief in rationality and a faith that the right formal arrangements minimize problems and increase quality and performance" (p. 39). This paradigm calls on managers to establish rational organizations with standardized practices, clear lines of authority, and an idealized bureaucracy. Specialization, division of labor, authority with responsibility, discipline, unity of command and direction, and a centralization of authority characterize organizations as viewed through the lens provided by the structural frame. Similar to this structural frame is Morgan's (1997) organization-as-machine metaphor which likens organizational members to the components of a machine with the leader's role that of orchestrating their efficient operation.

Classical management theory emerged at the turn of the twentieth century with a focus on organizational efficiency. Henri Fayol was interested in authority and how it was operationalized in organizations. He advocated the functions of planning, organizing, command, co-ordination and control, as the basis of management through action (Fayol, 2006). Classical management theory, according to Bolman and Deal (1997), included the concept that there is an organizational chain of command from top to bottom with members reporting to one supervisor. Work is divided to promote efficiency; and the organization is characterized by esprit de corps, discipline, a subordination of individual interests to the general interest, and by management that is firm, fair, and equitable.

Taylor (1911) proposed the principles of scientific management, which emphasized efficient, scientific methods through a focus on worker selection, training, and monitoring. Taylor and his followers, building on theories that had been advanced by Babbage nearly a century earlier, sought to break down and evaluate tasks through such methods as time and motion studies in order to minimize motion and effort while simultaneously increasing productivity (Babbage, 2006). Morgan (1997) noted that while classical and scientific management theories were similar, there were some important differences; "Whereas the classical management theorists focused on the design of the total organization, the scientific manager focused on the design and management of individual jobs" (p. 17).

The father of sociology, Max Weber, looked at practices bureaucracies in organizations at the turn of the twentieth century (Pfeiffer, 2006). The bureaucratic practices he observed resembled the mechanization found in industry. Bureaucracies routinized the process of management work in organizations just as machines did in industrial production. Practices were standardized with and emphasis on "precision, speed, clarity, regularity, reliability, and efficiency achieved through the creation of a fixed division of tasks, hierarchical supervision, and detailed rules and regulations" (Morgan, 1997, p. 17).

It has been argued that classical/scientific management practices in industrial organizations of the early twentieth century were dehumanizing and that they resulted in worker dissatisfaction and resistance (Morgan, 1997). As workers began to question and rebel against management practices, new theories of leadership emerged, including the more democratically oriented human relations approach of the 1920's and 1930's

(Bolman and Deal, 1997). Managers, especially those managers interested in minimizing worker unrest, began to consider worker needs. Maslow (1954) developed a hierarchy of human needs and posited the idea that once basic needs such as hunger and safety are met, people will actually strive to meet higher order needs such as belongingness, self-esteem, and self-actualization.

Following Maslow's work, McGregor (1960) proposed the theory that managers tend to have certain assumptions about the motivation of their workers and that these tend to become self-fulfilling prophecies. According to his Theory X, if managers view people as unmotivated and lazy for the most part, they manage accordingly, using strict practices of control that could ultimately result in reduced productivity and a growing militancy among workers. On the other hand, McGregor theorized that those managers who believe their workers to be motivated (Theory Y) would believe "the essential task of management is to arrange organizational conditions so that people can achieve their own goals best by directing their efforts towards organizational rewards" (McGregor, 1960, p. 61). Basic to a Theory Y orientation is the notion that workers actually want to and will be productive "if management [is] smart enough to align jobs with workers' needs" (Bolman and Deal, 1997, p.101). In the arena of public education, Valentine, Clark, Hackmann, and Petzko (2004) noted that principal managerial theory also began to become more democratic and more humanistic after the 1930's.

*The principal as managerial leader*

School principals occupy leadership positions in their schools and are called on each day to handle a number of tasks. It is through their response to even the most mundane of these tasks that their influence is exercised (Kmetz and Willower, 1982;

Harvey, 1986; Davies, 1987; Rosenblatt and Somech, 1998). A review of the literature on principal leadership identifies both direct and inferred functions that can be described as managerial in nature (Rost, 1991). Given the fact that the rise of the role of principal occurred during an era predominated by classical and scientific management and a structural/mechanistic view of organizations, it is not surprising that managerial functions would be present in the role. This managerial orientation is still evident in much of the literature written in the past few years, even in literature that addresses other leadership paradigms.

The structural frame and its related managerial theory viewed organizations as being underlain with rationality (Bolman and Deal, 1997). Leadership, according to Glasman (1984) is a rational component of organizational life made up of that portion of policy, daily operations, and decision making which is necessary to keep the school functioning. The work of a school, quite simply stated, is the education of its students, and the responsibility of the leader is to manage those educational functions. What does the term management mean as it is defined in the role of the school principal? A review of the research that addresses this question reveals a diversity of ideas with an underlying commonality.

Managers seek to promote the stability and smooth operation of their organizations. Brewer (1993) noted that principals indirectly affect students by ensuring that schools are efficiently run operations, and that they enhance the morale of the school through "clear and consistent school rules and policies [that] tend to improve the general disciplinary climate of the school" (p. 218). In a study of effective principal leadership, Bossert, Dwyer, Rowan and Lee (1982) identified organization/coordination as a factor.

Specifically, they noted that a principal's involvement in classroom management has a relationship with school success.

Principals in effective schools provide support to teachers as they deal with those discipline issues that arise in the classrooms. This element of management also manifests itself in control of public spaces in school buildings. Principal attention to disciplinary concerns wherever they may occur helps to minimize their occurrence and results in the structured learning environment that is a characteristic of a successful school. Involvement in staff selection is yet another way principals support a well-run school (Brewer, 1993). With principals seldom being called to deliver direct instruction, the management role in schools manifests itself more in terms of teacher supervision, maintaining staff contact to monitor student progress, and management of the school's curriculum (Smith, Maeher, and Midgley, 1992). A study by Myers and Murphy (1995) included "organizational control" mechanisms consisting of supervision, input controls (including personnel decisions and budgeting), behavior controls (including the development of job descriptions and textbook adoption), and output controls (including student testing). Rosenblatt and Somech (1999) developed a similar list of principal responsibilities that included security; resource acquisition; routine paperwork; communication with staff, students and outsiders; providing an orderly school schedule; and monitoring teachers.

Alvy and Robbins (2005) listed ensuring school safety, providing for a positive learning environment by making sure classrooms are equipped for students and teachers, providing teaching supplies, and operating school budgets as some of the managerial tasks performed by principals. Other writers focused more specifically on a principal's

preserving the stability of the school environment through protecting or buffering the school's curriculum and instruction, its technical core, from an excessive amount of distractions and interruptions, and by functioning as an effective disciplinarian (Rossmiller, 1992; Eberts and Stone, 1998). Bossert et al. (1982) noted that other managerial functions, such as support of special projects and an organized manner of materials distribution, help to organize the environment and are examples of principal managerial behavior that lead to school effectiveness.

In an effort to identify characteristics of effective principal leadership, Valentine began the development of the Audit of Principal Effectiveness in 1982. Three domains consisting of nine factors of effective principal leadership were identified. One such domain, The Organizational Environment domain, "provides insight into the ability of the principal to nurture the ongoing climate of the school through development of positive interpersonal relationships among members of the organization and effective day-by-day operational procedures for the school" (Valentine and Bowman, 1988).

An analysis of one factor of the APE, Interactive Processes, supports the contention that it provides a comprehensive summary of principal managerial leadership factors. Nine items measure the manner in which a "principal organizes tasks and personnel for the effective day-by-day management of the school, including providing appropriate information to staff and students, developing appropriate rules and procedures, and setting the overall tone for discipline in the school" (Valentine and Bowman, 1988, p. 25). Those items are:

1. The principal keeps teachers informed about those aspects of the school program of which they should be aware.

2. When the principal provides teachers with the information about school operations, the information is clear and easily understood.
3. When teachers are informed of administrative decisions, they are aware of what the principal expects of them as it relates to the decision.
4. The principal is able to organize activities, tasks, and people.
5. The principal develops appropriate rules and procedures.
6. The principal uses systematic procedures for staff appraisal, e.g. retention, dismissal, promotion procedures.
7. The principal establishes the overall tone for discipline in the school.
8. The principal establishes a process by which students are made aware of school rules and policies.
9. The principal communicates to teachers the reasons for administrative practices used in the school program (Valentine and Bowman, 1988, p. 20).

A review of the literature supports the appropriateness of the Interactive Process factor from the Audit of Principal Effectiveness as a measure of principal managerial behavior. Principal communication with staff, which is referenced in three of the items, is an element of principal managerial leadership. Hallinger and Murphy (1985) viewed effective principal communication practices as including regular discussions with staff members in such areas as instructional, administrative, and budgetary decisions. Brookover, Schweitzer, Schneider, Beady, Flood, and Wisenbaker (1978) detailed such formal practices as goal statements, staff bulletins, newsletters and handbooks, staff meetings, parent and teacher conferences, and assemblies, along with informal practices such as conversations as opportunities to practice effective communication skills. One

task of the principal is to ensure that school goals and directives are translated into classroom practice (Hallinger and Murphy, 1985).

Other items of the Interactive Process factor from the Audit of Principal Effectiveness measure the principal's ability to promote an effective learning environment. Writing of an orderly environment, Rossow (1990) stated that behaviors such as assigning duties to teachers, scheduling classes, and managing student assemblies, mundane as they seem, support an academic emphasis. Heck, Larsen, and Marcoulides (1990) noted that principals do not impact academic achievement of students in the same manner as do teachers who have more direct contact:

> Principals may, however, impact teaching and classroom practices through such school decisions as . . . setting and communicating high achievement expectations, organizing classrooms for instruction, allocating necessary resources, supervising teachers' performance, monitoring student progress, and promoting a positive, orderly environment for learning (p. 95).

Principals can also provide an orderly environment by ensuring that teachers have the necessary instructional materials and resources to carry out the educational program (Brookover et al. 1978; Davis, 2003). Activities such as organizing programs, monitoring behavior, and enabling teachers to work more effectively with students have a "trickle-down effect through classrooms that nurture student performance (Heck, 1993b p. 160).

The management of student behavior is another characteristic of the effective principal-manager that contributes to an orderly, disciplined environment. Principals shape the learning environment by "establishing clear, explicit standards that embody the school's expectations of students" (Hallinger and Murphy, 1987, p. 58). Such

expectations can be communicated through policies and practices of the school (Murphy, Weil, Hallinger and Mitman, 1985; Brewer, 1993; Smith and Andrews, 1989). As they manage student behavior and promote an orderly environment, principals contribute to a more positive school climate and indirectly to improved staff morale and student achievement (Donaldson, 1991; Brewer, 1993).

In their review of leadership literature, Duke and Leithwood (1994) identified as many as ten management functions. Included on the list were the provision and distribution of adequate financial and material resources in a manner that enhances their usefulness; anticipation of predictable problems and the development of effective and efficient means for responding to them; management of the school facility and the student body; effective communication with staff, students, parents, and district office personnel; accommodation of district policies and initiatives in a manner that enhances progress towards school goals; buffering staff from disruptions to the instructional program; and handling conflict and the political demands of school functioning. This list is consistent with many of the behaviors assessed by the Interactive Processes factor of the APE and supports its use as an assessment of teacher perceptions of principal managerial leadership.

*Summary of managerial leadership literature*

For much of the twentieth century, leadership in school settings was considered a management role. Organizations were viewed to be rational in nature, and the managers' tasks were to insure efficient operation. The primary responsibilities of principals were perceived to be the management of such things as school staff performance and student conduct. Fundamental management tasks regarding buildings and budgets were also

emphasized. University programs for training principals reflected this view by offering course work in such areas as finance, business administration, organization and administration of school curriculum, and management of school records and reports (Beck & Murphy, 1993). However, by mid-century, managerial theory was evolving from its classical and scientific origins as greater attention was being paid to worker needs.

## Instructional Leadership

### *Historical perspective of instructional leadership*

At the mid-point of the twentieth century major societal changes impacted schools and led to a call for school reform and a new model of principal leadership. The principal managerial leadership model had held prominence through mid-century. In the decade of the 50's, American schools began to come under public scrutiny and criticism, first with the publishing of *Why Johnny Can't Read* (Flesch, 1955), which contended that a lack of attention to phonics instruction was producing a generation of poor readers. Concerns gained momentum with the October 1957 launch of the Russian satellite, Sputnik. At the height of the Cold War, America's falling behind the Soviets in the "space race" was viewed as a failure on the part of several elements of American society, including its schools. Articles in popular publications of the time declared that our public schools were falling short in the areas of math, science and foreign language instruction. In response to these concerns, Congress enacted the National Defense Education Act of 1958 (NDEA). Aimed at bolstering science instruction in America's schools and providing funding for prospective college students, NDEA (NDEA, 2006) was another landmark piece of

national educational legislation. It was especially significant because local control of schools had been an important norm in education prior to its passage (Hadderman, 1998).

The trend toward a more activist federal government that began with NDEA accelerated under the Democratic administrations in the 1960's. Beginning with Kennedy's New Frontier and continuing with Johnson's Great Society programs, legislation was passed to address social ills that were associated with poverty and racial segregation. One major element of President Johnson's War on Poverty was the passage of the Elementary and Secondary School Act in 1965 (ESEA). Designed to send federal assistance to poor schools, communities, and children, ESEA has continued to be reauthorized at 5-year intervals (ESEA, 2006). As with NDEA, the Federal government again entered the arena of educational policy with a landmark national initiative. One year later, the Coleman Report, known officially as the *Report on Equality of Educational Opportunity* (Coleman et al., 1966), looked at the distribution of resources and opportunities among children of different races and used achievement scores as outcome measures.

From its schools' point of view, the American landscape was changing dramatically, and accompanying this change in their social and political contexts came change to schools and to the roles of their leaders (Beck and Murphy, 1993). Schools were now widely perceived as a locus of both societal problems and solutions. As a result of new governmental policy intended to provide programming for poor students, and challenged to implement new curricula in math, science and foreign language, school principals began to see a change in the conceptualization of their roles. No longer was management sufficient, especially after 1979, when Ronald Edmonds asserted that strong

principal leadership was a key component of more effective urban schools. Given these developments, a new paradigm of leadership was needed, one in which the school principal was to become a more active participant in the school's instructional activities. The literature of the 1980's and 90's focused on effective schools led by principals who were instructional leaders.

*Theoretical perspectives of instructional leadership*

Writers such as Bossert, Dwyer, Rowan, and Lee (1982), DeBevoise (1984), Heck, Larsen, and Marcoulides (1990), Heck and Marcoulides (1993), and Hallinger and Heck (1998) wrote of the importance of principal leadership as a component of successful schools. Finn (1987) asserted that, "The principalship is probably the single most powerful fulcrum for improving school effectiveness" (p. 20). Steller (1988) identified strong principal leadership as one of five common characteristics of effective schools found throughout the literature of the day with the others being "clear instructional focus, high expectations and standards, safe and orderly climate and frequent monitoring of student achievement" (p. 14). Lezotte (1991) included instructional leadership in his discussion of the seven characteristics, or "correlates" of effective schools.

In order to become effective instructional leaders, principals were expected to be more knowledgeable about and more involved in their school's instructional practices than they had been in the past. Blumberg and Greenfield (1980) noted that instructional leaders were characterized by goal setting behavior that motivates staff, a high degree of self-confidence and openness to others, tolerance of ambiguity, testing of organizational and interpersonal limits, a sensitivity to the dynamics of power, the ability to maintain an analytic perspective, and remaining in charge.

Bossert et al. (1982) saw the effective principal as one who continually strove to improve the quality of the staff's performance and to improve teacher morale, both of which would have an impact on student achievement. Their research identified four areas of principal leadership:

1. Goals and Student Achievement Emphasis. The studies reviewed indicated that principals in high achieving schools emphasize achievement through setting instructional goals, developing performance standards for their students, and expressing optimism about the ability of their students to meet instructional goals.
2. Power and Decision Making. Principals in effective schools are more active and more involved in areas of curriculum and instruction. They also understand community power structures and maintain good relationships with parents.
3. Curriculum Organization/Coordination. Principals take a more hands-on approach to instruction through such activities as the observation of teachers, conversations with teachers, support of teacher efforts at improvement, and establishing teacher and program evaluation procedures. Researchers have shown that successful principals seek clarity in establishing program and curricular objectives, and coordinating content, sequence, and materials involved in instruction.
4. Human Relations. Effective principals differ from their less effective counterparts in their abilities to recognize the unique styles and needs of teachers, and to help them achieve their own performance goals, which in turn

may help those teachers to meet their own higher order needs. (Bossert et al., 1982, pp. 37-38)

Glickman (1985) identified direct assistance to teachers, group development, staff development, curriculum development, and action research as the five primary tasks of instructional leadership. Pajak (1989) added planning, organizing and facilitating change, and motivating staff to the list of instructional activities. Wanzare and DaCosta (2001) identified supervision and evaluating instructional activities, providing professional development, working on school curriculum, identifying issues with regard to achieving school goals, protecting learning time, defining and communicating the school's mission, goals, objectives and standards, and working with external constituencies among the major roles of an instructional leader. Smith and Andrews (1989) identified being a resource provider, instructional resources provider, communicator, and visible presence as four dimensions or roles of an instructional leader.

The research of Hallinger and Murphy (1985) indicated that the literature of the time focused on principals' management of curriculum and instructional processes. The instrument they developed reflected this finding as it sought to identify those specific management functions that were associated with curriculum, separate from other typical principal behaviors. They grouped a list of twenty instructional functions into the three broad categories of defining the school mission, managing the instructional program, and promoting school climate:

1. Defining the School Mission. A clear vision of what the school should be attempting to accomplish is communicated to students and staff in such a manner that a shared purpose develops that unites the efforts of the school members. This

dimension is characterized by: framing school goals, and communicating school goals.

2. Managing the Instructional Program. This dimension focuses on those activities that involve the principal's working with teachers in areas specific to curriculum and instruction. It is characterized by: supervising and evaluating instruction, coordinating curriculum, and monitoring student progress**.**

3. Promoting a Positive School Learning Climate. The principal influences student success through the norms and attitudes of the staff and students. This dimension is characterized by: protecting instructional time, promoting professional development, maintaining high visibility and providing incentives for teachers, and developing and enforcing academic standards (Hallinger and Murphy, 1985, pp, 221-224).

Cotton (2003) observed that prior to 1985 the emphasis on instructional leadership focused on direct principal behaviors. After that date, the focus broadened and researchers asked, "Is the influence of principals on students direct, or is it primarily indirect—mediated through other variables, most notably teacher behavior?" (p. 3). Researchers such as Hallinger and Heck (1999) reviewed studies that looked not only at direct effects of principal instructional leadership on student achievement but also at its impact on teacher and school-level variables. Blase and Blase (1994) discussed the empowerment of teachers, and Reitzug (1997) advanced the argument that a collaborative model, or shared leadership, is a stronger model than one in which the instructional leadership is centered on the principal. Ogawa and Bossert (1995) described leadership as an organizational quality that exists in interactions as much if not more than in

organizational roles. Lambert (2002) wrote of the notion of leadership capacity throughout the organization. Elmore (2000) advocated an organization in which the responsibility for leadership is distributed, since principals lack the time and energy and are not disposed to be instructional leaders, but others can be.

Lashway (1995) contended that it was evident that "high-achieving schools have principals who boldly lead the academic program, set goals, examine curriculum, evaluate teachers, and assess results" (p. 1). Leithwood (1992) spoke of first and second order changes, contending that instructional leadership focused on "first order" changes of "improving the technical, instructional activities of the school through close monitoring of teachers' and students work" (p. 8). When leaders address building a shared vision, improving communication, and developing a collaborative decision-making processes, they become involved in "second order" changes.

In 1994, Leithwood observed that instructional leaders engage in behaviors such as supervision, coaching, staff development, and modeling designed to influence teachers' thinking and practice. Writing with Duke in 1999, Leithwood distilled this to a more direct definition of instructional leadership indicating that it consists of teacher behaviors as they engage in those activities that affect student growth. However, they also pointed out that some versions of instructional leadership have a different focus, with such factors as organizational variables, including school culture, having consequences for teacher behavior. Kleine-Kracht (1993) referred to direct and indirect forms of instructional leadership. Similarly, Sheppard (1996) categorized these as "narrow" and "broad" forms of instructional leadership with the former being restricted to teacher

behaviors that enhance learning. Broad forms, on the other hand, included organizational and cultural matters.

Sheppard's (1996) research of broader leadership identified framing school goals, communicating school goals, supervising and evaluating instruction, coordinating the curriculum, monitoring student progress, protecting instructional time, maintaining high visibility, and providing incentives for learning as principal behaviors that contribute to teachers' professional growth and performance. Blase and Blase (1999b), in their study of elementary and high-school teachers' perceptions of instructional leadership, determined that teachers' professional development was the most influential instructional practice.

A number of attempts have been made to assess teacher perceptions of principal instructional leadership behavior. Hallinger and Murphy (1987) developed the Principal Instructional Management Scale, which measured instructional leadership in three dimensions: framing the school goals, communicating the school goals, and supervising and evaluating instruction. Andrews joined Soder in a collaborative effort with the Seattle Public School District and the University of Washington to develop the Staff Assessment Questionnaire in 1987. This instrument measured the school organizational characteristics of strong leadership, dedicated staff, frequent monitoring of student progress, high expectations, positive learning climate, early identification of learning problems, curriculum continuity, multicultural education, and sex equity.

Valentine and Bowman's (1988) Audit of Principal Effectiveness contained two factors, Instructional Improvement and Curriculum Improvement, which represent principal instructional leadership. Through traits and behaviors such as "clinical supervision, knowledge of effective schooling, and commitment to quality instruction"

(p. 25), the principal is seen as influencing in a positive manner the instructional skills present in his or her school. Eight items measure the factor of Instructional Improvement:

1. The principal is knowledgeable of the general goals and objectives of the curricular areas.
2. The principal is knowledgeable of the varied teaching strategies teachers might appropriately utilize during instruction
3. The principal possesses instructional observation skills that provide the basis for accurate assessment of the teaching process in the classroom.
4. The principal actively and regularly participates in the observations and assessment of classroom instruction, including teaching strategies and student learning.
5. The principal has effective techniques for helping ineffective teachers.
6. The principal maintains an awareness and knowledge of recent research about the learning process.
7. When criticizing poor practices, the principal provides suggestions for improvement.
8. The principal is committed to instructional improvement (Valentine and Bowman, 1988, p. 21).

The Curriculum Improvement factor of the Audit of Principal Effectiveness assesses the extent to which "The principal promotes an articulated, outcome-based curriculum through diagnosis of student needs and systematic program review and change," (Valentine and Bowman, 1988, p. 25). Seven items assess this factor:

1. The principal promotes the development of educational goals and objectives that reflect societal needs and trends.
2. The principal promotes the diagnosis of individual and group learning needs of students and application of appropriate instruction to meet those needs.
3. The principal administers a school-wide curricular program based upon identification of content goals and objectives and the monitoring of student achievement toward those goals and objectives.
4. The principal participates in instructional improvement activities such as program and curriculum planning and monitoring of student learning outcomes.
5. The principal uses objective data such as test scores to make changes in curriculum and staffing.
6. The principal has a systematic process for program review and change.
7. The principal encourages articulation of the curricular program, (Valentine and Bowman, 1988, p. 21).

A review of the literature lends support to the use of the Instructional Improvement and Curriculum Improvement factors from the Audit of Principal Effectiveness to measure principal instructional leadership behavior. Effective principals should know about and understand teaching and learning theory and be current with regard to educational trends (Bossert et al., 1982; Smith and Andrews, 1989). Research indicates that while the traits of principals are important, instructional leadership behaviors such as modeling what is expected, communicating high expectations, challenging staff members, involving them in decisions, and providing them with

professional development opportunities are more often associated with positive effects in schools (Kirby, Paradise and King, 1992).

*Summary of instructional leadership literature*

Many of the early writers who discussed principal instructional leadership focused on curriculum and instruction that is accomplished through close monitoring and accountability of teachers and students (Hallinger, 1992; Beck and Murphy, 1993). Later research focused more on instructional leadership behaviors and their resulting impact on student performance. Student performance on assessments such as standardized testing became identified as the preferred measure of school effectiveness, and principals were expected to facilitate success on such measures. According to Morris, "The measure of a school principal is his or her ability to produce results, namely, reading and mathematics scores and general achievement scores at or above grade level" (1987, p. 16). After the mid-1980's, the literature focused on indirect effects through the inclusion of teachers in a broader definition of instructional leadership. "Instructional leadership . . . typically assumes that the critical focus for attention by leaders is the behaviours of teachers as they engage in activities directly affecting the growth of students" (Leithwood, Jantzi and Steinbach, 2000a, p. 8). This broader definition of instructional leadership presaged the emergence of yet a third model of principal leadership.

## Transformational Leadership

*Historical perspective of transformational leadership*

In the decade of the 1980's a concern developed that the United States was in decline as a world economic power. Declining productivity, increasing national debt, and intensified international competition marked by a decline in the value of the dollar were

all perceived to be due, at least in part, to a decline in the quality of America's schools (Barnett and Whitaker, 1996). The release of *A Nation at Risk* (National Commission on Excellence in Education, 1983) gave rise to "a tremendous number of state initiatives to improve secondary education that came to be known collectively as the standards-based reform movement. By 1995, Iowa was the only state that did not have mandatory achievement standards for its students (Williamson and Johnston, 2004. p. 37).

Discontent with American schools continued to increase at the same time that the instructional leadership paradigm began to predominate the literature. Following the publication of *A Nation at Risk* in 1983, there was a heightened demand to reform America's schools. As the economies of other countries, notably Japan, showed remarkable growth, and as jobs began to move oversees, America's self-image as the world's economic leader suffered. There was a concern that American schools were producing students who were incapable of competing in the emerging global economy (Beck and Murphy, 1992). Release of the results of such measures as TIMMS (NCES, 2006) only added to these concerns. According to Fowler (2004), this continued discontent with America's schools in the late 80's led to a call for greater accountability and standards-based education with high-stakes testing as a major component. These calls for reform reached a crescendo at decade's end when the nation's governors assembled at Charlottesville, Virginia and issued a collective call for standards-based reform.

In response to these events, the latter half of the 1980's saw the term "restructuring" appear with greater frequency in the literature. "Restructuring has no precise definition, but the term suggests that schooling needs to be comprehensively redesigned" (Newman and Welhage, 1995, p. 1). Restructuring has also been viewed as

the "reforming of the interrelationships of an organization; a strategy used to analyze and redesign the organization or structure of education in order to improve student outcomes" (MASSP, 1994). Harvey and Crandall (1988) characterized restructuring as a process of building on what has been successful in schools and rethinking or redesigning elements that have failed. Restructuring called for a number of changes such as decentralization, shared decision-making, common academic curriculum, flexible scheduling with longer classes, teacher teaming, reduction of tracking and ability grouping, external standards for school accountability, and new forms of assessment (Newman and Welhage, 1995). To accomplish restructuring, several states passed bills that focused on areas such as teacher licensing, graduation requirements, standardized tests and assessments, accountability standards, curriculum development, and decentralized control (O'Neill 1993).

Leithwood, Jantzi, and Steinbach (2000b) argued that instructional leadership was no longer a suitable paradigm in an era of restructuring because it was not always clear what the means and ends of restructuring would be; because there had been a failure of schools to institutionalize changes tried under previous leadership models; because most school reform was occurring in secondary schools, which they believed to be a poorer fit for instructional leadership than elementary schools; and finally, because professionalism of teaching was at the heart of the restructuring agenda. Instead they advocated a third model of leadership called transformational leadership, one they argued, which would be "potentially more powerful and more elegant as a description of effective leadership in the context of school restructuring" (p. 27).

*Theoretical perspectives of transformational leadership*

Transformational leadership originated from James McGregor Burns' (1978) landmark study of leadership. Burns determined that great historical leaders held in common a distinctive kind of leadership, which he termed "transforming." Leadership can be found, according to Burns in relationships between motives, resources, leaders, and followers. Transformational leadership is unique when compared to earlier leadership paradigms in that it focuses on the commitments and capacities of organizational members (Leithwood, Jantzi, and Steinbach, 2000a, p. 9). It is deemed to be both moral and uplifting because "it raises the level of human conduct and ethical aspiration of leader and led, and thus has a transforming effect on both" (Burns, 1978, p 20).

Bass and others have studied transformational leadership in order to determine both its antecedents and its outcomes. Transformational leadership is viewed as being composed of four factors: (1) idealized or charismatic influence, which views leaders as role models for followers, (2) inspiring and motivating followers through a vision of a brighter future, (3) intellectual stimulation of members through the questioning of organizational assumptions and a willingness to innovate, and (4) individualized consideration of organizational members through coaching and mentoring that attends to their needs, including the needs to achieve and grow (Bass, 1998).

Burns contrasted transformational leadership with a model called transactional leadership, which was more political in nature. Bass believed transactional leadership had three dimensions: contingent rewards, management-by-exception, and what he termed a laissez-faire form of leadership. In this model, there is a consideration of the needs of the leaders and followers, with interactions that meet the needs of both being the most

desirable. Working with Avolio and Jung, Bass studied leadership in military, industrial, and educational settings, and among other products, created the Multifactor Leadership Questionnaire with version MLQ-5X (Avolio, Bass, and Jung, 1995) being the most recent. As early as 1988, Avolio and Bass proposed a "two-factor theory" of leadership which posited the idea that transformational leadership can be preceded by and depend upon mastery of transactional leadership behaviors. Where Burns saw transactional leadership and transformational leadership as two ends of a leadership continuum with transformational leadership clearly being identified more closely with history's great leaders, Bass' two-factor theory held that transactional and transformational leadership could, in fact, build on each other. Silins (1994) looked at transactional and transformational leadership in schools and determined that they were supportive of each other with transactional behaviors providing links between transformational leadership behaviors and student outcomes.

*Principals as transformational leaders*

In the 1990's as change became more common, widespread, and rapid (Fullan, 1996; Bjork 1996; Murphy, 1994) organizations, schools included, needed to anticipate change and question their operating norms in order to respond to it (Morgan, 1997; Senge, 1990; Goldring and Rallis, 1993; Murphy and Hallinger, 1992). The times called for schools to learn how to manage internal change in response to or anticipation of external change. Moreover, much of the restructuring literature called for schools to initiate change rather than to simply react to it (Hallinger, 1992).

Murphy and Beck (1994) proposed the thesis that a number of forces including demands for accountability; the perceived economic crisis facing the nation and the belief

that schools would play a key role in improving the situation; changes in the social fabric of America, its communities and its schools; and the evolution towards a post-industrial world would, in turn, change the role of the school principal in the twenty-first century. Fullan (1996) asserted that principals must become agents of change, and that previous managerial and instructional models were not sufficient. "We have come a long way since the days of valuing leaders who 'run a tight ship.' We have gone through the phases of the principal 'as administrator, and the principal as instructional leader' to a broader and more fundamental notion of principal as change agent" (p. 701).

Kenneth Leithwood is recognized as a leader in adapting the principles of transformational leadership to the field of education. In 1992, Leithwood and his colleagues undertook a series of studies aimed at determining the meaning and utility of transformational leadership in schools. Their work uncovered three common goals of principals who exhibited transformational leadership behaviors: (1) to help staff members develop and maintain a collaborative school culture, (2) to foster teacher development, and (3) to help them be more effective problem-solvers. He argued that transformational leadership was relevant for educational leaders because leadership is primarily manifested during times of change, with the nature of change determining the type of leadership needed, and held that the need for reform, change, and restructuring would continue for the foreseeable future (Leithwood, 1993). Seven dimensions of transformational leadership in schools were identified by Leithwood (1994): building school vision; establishing school goals; providing intellectual stimulation; offering individualized support; modeling best practices and important organizational values; demonstrating high performance expectations; creating a productive school culture; and

developing structures to foster participation in school decisions. In 1996, Leithwood refined the list to six factors and incorporated these into a survey instrument, the Principal Leadership Questionnaire (PLQ), which consisted of 24 items measuring specific principal behaviors.

1. Identifying and articulating a vision: This factor relates to principal behaviors that are aimed at identifying new opportunities for staff members and developing, articulating, and inspiring others with his or her vision for the future (Jantzi and Leithwood, 1996).
2. Providing an appropriate model: This factor relates to principal behaviors that set an example for the school staff members to follow. These behaviors are consistent with the values that are espoused by the principal (Jantzi and Leithwood, 1996).
3. Fostering the acceptance of group goals: This factor encompasses behaviors that promote cooperation among school staff members and assist them to work in unison toward shared goals (Jantzi and Leithwood, 1996).
4. Providing individualized support: Transformational leaders display respect and concern for the feelings, needs, and problems and an understanding of the skills and interests of organizational members (Jantzi and Leithwood, 1996).
5. Providing intellectual stimulation: Principal behaviors that challenge staff members to reexamine some of their assumptions about their work and to reconceive ways to do it are representative of this factor (Jantzi and Leithwood, 1996).

6. Holding High performance expectations: This factor involves behavior that demonstrates the principal's expectations for excellence, quality and high performance on the part of the staff (Jantzi and Leithwood, 1996).

*Summary of transformational leadership literature*

Bennis (2003) called for leaders to engage organizational members in a shared vision, speak with a clear and distinctive voice, operate from a strong moral code, and be able to adapt to constant change. Kouzes and Posner (2002) listed inspiring a shared vision as one of five practices of leaders in extraordinary organizations. Bolman and Deal (1997) observed that establishing and communicating a vision was the one characteristic most universally mentioned by those who studied "good leadership." While there has been some question as to whether a leader creates that vision (Bass, 1985, Bennis and Nanus, 1985) or if it already exists in the organization waiting to be articulated by the leader (Cleveland, 1985), vision helps members unite around a commonly held view of an idealized organization. It shapes the behavior of leaders and invests it with the power to reshape organizations. The transformational leader is successful in getting members to embrace the idea that not only will the organization be better, but they as members will also see benefits for their efforts in moving toward that more compelling vision (Hallinger and Murphy, 1985; Hallinger and Heck 1999).

Chase and Kane (1993) asserted that establishing a vision is a characteristic common to effective principals along with setting clear goals, focusing on continuous improvement, maintaining an orderly and positive environment for teaching and learning, allocating resources to support the attainment of goals, setting high standards and

expectations for teachers and students, and being confident in their ability to bring about change. According to Yukl (2002), transformational leaders lead by

> Articulating a clear and appealing vision, explaining how that vision can be attained, acting confidently and optimistically, expressing confidence in followers, using dramatic symbolic actions to emphasize key values, leading by example and empowering people to achieve the vision." (p. 263)

Transformational leaders are also successful in obtaining the support of members toward organizational mission and goals. Mission is also seen as a key factor in organizational effectiveness and is often perceived as a commitment to the stated purpose of an organization and its goals, (Cuban, 1984: Kotter, 1996: Senge, 1990).

Fullan, Bertani, and Quinn (2004) listed ten components that make school reform possible. Included are such things as dialogue, a compelling conceptualization, collective moral purpose, capacity building, ongoing learning, productive conflict and a demanding culture. Newman and Welhage (1995) observed that schools which were most successful in restructuring

> found a way to channel staff and student efforts toward a clear, commonly stated purpose for student learning; they created opportunities for teachers to collaborate and help one another achieve the purpose; and teachers took collective 'not just individual' responsibility for student learning. Schools with strong professional communities were the schools that were better able to offer authentic pedagogy and were more effective in promoting student achievement. (p. 5)

Restructuring is a call to reassess, reorder, reassemble, and recreate educational systems that work for all children (Johnson, 1996). Those who write of school restructuring and of

the kind of principal leadership needed for it, often mention transformational leadership as the model of principal leadership most suited for such restructuring to occur.

## Multifaceted Role of School Principals

Much has been written about principals in terms of roles, traits, behaviors, styles, cultural and situational factors, and power and influence (Yukl, 2002; Bensinmon, Neumann, and Birnbaum, 1989). The literature on principal leadership can also be discussed in historical terms with principal as manager, principal as instructional leader, and more recently principal as transformational leader each having its turn as a predominant model (Hallinger, 1992; Wilmore and Thomas, 2001). Principals perform a number of tasks and fill many roles as they function in today's schools and may benefit from a wide variety of perspectives on what constitutes effective leadership, especially as that leadership seeks to impact student achievement.

Among the roles that have been assigned to school principals are staff recruitment, selection, and supervision, implementing and sustaining change, establishing a building schedule, creating a safe environment through school violence prevention, promoting staff development, promoting the creation and implementation of effective curricula, dealing with a diverse community, and encouraging learning that prepares students for the world of tomorrow (Williams, 1998; Beebe, 1998; Marczely, 1998; Queen and Isenhour, 1998; Davis, 1998; Petzko, 1998; Sprague, Pennell & Sulzberger, 1998; Tatum, 1998; Murphy, 1998; Wallinger, 1998).

As people write of principal leadership, they often do so in terms of the effectiveness of the role. Davis (1998) studied leadership effectiveness and found that, despite years of research, there is no single model or uniform prescription for leadership

effectiveness. He argued that "effective leadership is multifaceted and often defined through both subjective and objective measures of leadership behavior and its effects on organizational processes and outcomes" (pp. 57-58).

Standards have been developed to address the many competencies required of principals to fulfill their role expectations. In 1996, the Council of Chief State School Officers' Interstate School Leaders Licensure Council (ISLLC, 1996), along with assistance from 24 state agencies and representatives of professional associations developed six standards to guide principal performance (Davis and Jazzar, 2005). The standards address ways that administrators impact student success through behaviors that specify a vision of learning that is shared by all members; a school culture that promotes and supports both student learning and the professional development of staff members; school management components such as organization, operations, and resources that make for a safe, efficient, and effective learning environment; school community relationships; integrity, fairness and ethical conduct of an administrator; and administrative understanding of the larger socio-political context (ISLLC, 2007).

Davis (1998) developed a comprehensive list of skills and behaviors needed by school administrators. In order to be successful in their roles, leaders must be sensitive to the needs of staff members and understand that these needs are sometimes in conflict with the needs of other members. They must possess interpersonal relationship skills and communicate effectively with staff. Leaders must be able to adapt to new workplace conditions and environmental contexts. They must possess a variety of styles that they can use in individual interactions and in decision-making situations. Effective leaders view their successes or failures as reflective of their own efforts, abilities or motivation

and not due to external factors that are out of their control. Finally, they are knowledgeable about school practices, make intelligent choices, and maintain personal balance in their lives.

Tasks and challenges facing principals run the continuum from managerial tasks to leading and facilitating organizational change. Alvy and Robbins (2005) discussed learning experiences that should prove helpful to new principals as they prepare for these widely varied roles. According to Alvy and Robbins, teachers will value leaders who have a focus on student success. New leaders must act ethically as they "behave justly, promote student success, support teacher growth, and foster quality relationships in the school community" (p. 51). New principals must be adept at administrative tasks that ensure the building is safe, clean, organized, equipped for learning, has adequate resources and supplies, and they must operate within budgetary limitations. The authors also held that although principals are barraged with daily administrative duties, they must also be sure to attend to student learning. Teachers will view school leaders as being effective if they have competence in the curricular, instructional and assessment areas that are associated with instructional leadership (Bryk and Schneider, 2002). Bennis and Nanus (1985) viewed leaders as lifetime learners, who are role models for staff learning. Relationships with staff members are important, as well, especially in times of stress when the eyes of organizational members look to the leader (Goleman, Boyatzis, and McKee, 2002). Alvy and Robbins (2005) indicated a need for leaders to anticipate problems, orchestrate school-community partnerships, and be life-long learners if they wish to become successful leaders.

*Shifting environments impact principal roles*

A number of issues conspire to challenge today's school principals. Brown and Moffett (1999) shared the opinion that many of these issues are contradictory in nature: conservative and liberal political viewpoints vying for supremacy in public schools; pedagogical models such as whole language and phonetic instruction; uniform standards in education versus diversity; pluralism versus regionalism; new technology that is constantly being outdated by even newer developments; calls for organizational consistency versus individualization of instruction; calls for ability grouping competing with calls for heterogeneous grouping; calls for standards-based education to meet the perceived shortcomings of urban schools when attention should be paid to the problems of aging facilities and inadequate staffing.

Shifting environments in education today create expectations for school leaders to lead the adoption of changes required for the implementation of new policies (Berman, et al, 1977; Louis, 1999; Heller & Firestone, 1995). Some have argued that transformational leadership is a good fit for meeting these expectations. Goldring, Crowson, Laird, and Berk (2003) held that in addition to a focus on transformational leadership, there needs to be a focus on "a leadership of transition" (p. 474). They described the former in terms of changing structures, purposes, goals and behaviors, while the latter focuses on the initial stages of the change process. During this transitional stage, old patterns are unmade or dismantled while new ones are being made or re-created, and this can create a sense of loss, a sense of displacement, and a period when things feel "messy" and disordered to organizational members. It is important during such times of change that leaders must help to clarify the direction of the organization to its members. Two ways of doing so, as

suggested by Goldring et al., are by helping members to develop a clear picture of what the organization will look like when the transition is successfully completed and by establishing networks with members that help persuade them that ultimately the change will be beneficial (pp. 474-475).

The primary shift in the policy environment facing today's school principals involves expectations arising from Elementary and Secondary Education Act (ESEA) mandates in the Goals 2000 initiatives and more recently through NCLB (Ervay, 2006). "However, it is NCLB's focus on standards, assessments, and adequate yearly progress that has made the greatest change in the principal's job description . . .[and that] forces the principal's compliance with external definitions of academic excellence, in addition to the management of daily building needs" (Ervay, p. 79).

Copland (2003) criticized leadership theory that focuses only on those in formal leadership positions:

> What history tells us is that the traditional hierarchical model of school leadership, in which identified leaders in positions of formal authority make critical improvement decisions and then seek, through various strategies to promote adherence to those decisions among those who occupy the rungs on the ladder below has failed to adequately answer the repeated calls for sweeping educational improvements across American schools (p. 375).

Senge (1990) spoke of "reculturing" organizations to effect needed changes, with school reculturation depending on the restructuring of leadership roles and processes. Copland (2003) argued for a distributed leadership model in which leadership "functions or qualities are shared across a much broader segment of the school community" (p. 376).

This broader segment includes administrators, teachers, and other professional and community members. Copland advocated organizational improvement from a cultural perspective, discussing it as an organizational condition or an organizational quality (Murphy, 1994, Ogawa and Bossert, 1995).

Elmore (2000) identified five leadership domains that he labeled: policy, professional, system, school, and practice. Elmore's work removed authority and responsibility for improving teaching and learning from administrators and embedded it in the work of everyone involved in "the enterprise of schooling". His view of distributed leadership described it first, as a collective activity that exceeds the sum of its parts; second, as something that spans tasks, responsibilities and power boundaries, as they are traditionally defined in organizations; and finally, distributed leadership, according to Elmore, rests on expert authority rather than on the authority that is associated with organizational leadership roles.

It has been asserted that the professional culture of a school is the best predictor of its success (Rosenholtz, 1991; Little, 1982; Schein, 1992). Sagor (2003) discussed teacher and student motivation in an era of high-stakes testing and cited a list of norms developed by Saphier and King (1985). They had identified norms including collegiality, experimentation, high expectations, trust and confidence, tangible support, reaching out to the knowledge base, appreciation and recognition, caring, celebration and humor, involvement in decision-making, protection of what's important, traditions, and honest and open communication as contributing to success.

Leithwood, Jantzi & Steinbach (1998) detailed internal and external stimuli that lead to individual and organizational learning in schools: "Prominent among external

stimuli were ‘official’ sources including new ministry programs, new programs being implemented in one’s school, encouragement from administrators to implement new programs, and district policy initiatives” (p. 70). Teachers who helped develop this list identified demographic changes in the student population as an additional external source. Schools responded differently to these stimuli, and the authors theorized this was due to differences in perceived mission and vision and openness to change, with some schools having cultures that fostered such openness.

In addition to external factors, district-level conditions including culture, structures, strategies, policies, and resources also facilitated organizational learning. Community conditions that promoted positive relationships with parents and patrons, and some ministry factors that provided resources for schools and teachers were also cited as conditions that lead to organizational learning. Specific school-based practices including norms of support, respect and a willingness to take risks were associated with organizational learning. Collaboration and collegial cultures fostered learning along with a norm of continuous professional growth. Structural support through planning meetings, informal problem-solving sessions, regularly scheduled professional development time during school, and shared preparation (planning) periods for teachers who needed to work together also contribute to organizational learning

School-based strategies that supported learning were setting and clarifying short-term goals and establishing professional growth plans. Setting a limited number of goals and providing on-going feedback on progress in meeting those goals was also cited. Teachers also cited their fellow teachers along with professional materials, access to computer technology and curriculum resources as building level supports.

Writing in 1990, Senge identified five attributes or "disciplines" that provide administrators with ways to evaluate organizational growth:

1. Systems thinking. Schools are complex, made up of many parts that interact with each other. Member understanding of this interaction is essential to dealing with the complex challenges in today's world.
2. Individual mastery. Members must have a high level of skill and must work continuously to develop and improve that skill.
3. Mental models. Schools have an image of who they are and how they do things that can assist in organizational growth.
4. Building a shared vision. Members must share a powerful vision of what they want to be as an organization, and this vision motivates their efforts at growth and improvement.
5. Team building. New learning is constructed in team or group settings. This learning is collective, interactive, and dialogic.

Senge, Kleiner, Roberts, Ross and Smith (2000) described a phenomenon they labeled "drowning in events" that confronts many principals. Zmuda, Kuklis, and Kline (2004) described two opposing responses to this phenomenon: An administrative approach that views problems as something to be solved in a prompt and efficient manner, and a leadership approach that sees them as opportunities for learning. While both approaches have merit, schools that have leaders who view problems in the latter light become more competent systems (p.33). Members use systems thinking to envision desired results, define current reality through intelligent use of a variety of data, design

and implement staff development that facilitates growth toward goals, develop action plans, and they welcome accountability as they work together.

The principalship is a multifaceted leadership role. Today's principals must be adept at managing those ordinary tasks that keep buildings running smoothly, while working with and through teachers to improve instruction and learning. Finally, in an evolving, shifting environment rife with technological, social, and political change, they are asked to lead a corresponding change or restructuring of their schools that will enable those schools to survive and advance.

## Context and Theory of Middle Level Leadership

In 2004, Michael Prater studied the impact of various factors of the three predominant leadership paradigms on student success in Missouri's high schools. This study sought to conduct similar research at middle level schools. A study of managerial, instructional, and transformational principal leadership at the middle level requires some understanding of the context of middle level education. Middle level schools emerged as a separate level of schooling after the turn of the twentieth century. Concerns about the amount of time students should spend in school, what the grade configurations of schools should be, students retention rates, and preparation of students for college or the industrial settings that had emerged at the end of the nineteenth century provided the genesis for the emergence of separate grades for young adolescents (Wiles and Bondi 1986; Valentine, Clark, Hackmann, and Petzko, 2002).

Prior to the twentieth century, fewer than 10% of American adolescents were enrolled in America's secondary schools (Williamson and Johnston, 2004). Colleges of the time accepted most students who applied, but some required entrance exams of

aspiring students. In 1893, the Committee of Ten on Secondary Studies which was chaired by Charles Eliot of Harvard recommended that high school subjects such as algebra and foreign languages be moved to elementary grades to help better prepare students for college (Clark and Clark, 1994, p. 8). In a related development, the College Entrance Examination Board (CEEB) was formed in 1900 in order to help determine student readiness for college. As more students stayed in school, a variety of concerns, including the preparation of students for college, led to a call for more than four years in secondary school. For example, in 1918, "(The) familiar bulletin, *Cardinal Principles of Secondary Education,* recommended that a school system be organized into a six-year elementary school and a six-year high school that was designed to serve pupils twelve to eighteen years of age" (Wiles and Bondi, 1986, p. 2). There was a call by some to establish a junior and a senior division of that six-year high school program.

The theoretical impetus to create a separate layer of schools can be traced to the work of people such as G. Stanley Hall (1904), who asserted that youth, ages 10-14, had unique developmental needs. Following Hall's work, references to providing for individual differences and meeting the needs of early adolescents began to appear with greater frequency in the literature (Wiles and Bondi, 1986). Separate schools containing grades 7-9 appeared first in Columbus, Ohio in 1909, then a year later in Berkeley, California. In 1913, The Report on Economy of Time in Education (Baker, 1913) was published and issued a call for junior high schools. Ten years after the first 7-9 grade school began, Briggs (1920) published *The Junior High School*, and this event provided significant momentum to the emerging junior high school movement (Valentine et al., 2002).

Several important works in the 1920's, including that of Koos (1927), helped to bring greater identity to junior high schools. Combined with these ideas were other major forces that contributed to the growth of junior high schools, including concerns for economy of time, which called for moving high school course work to younger age groups to provide better preparation for college; concerns about high drop out/poor retention rates; awareness of the variations in the needs of learners; knowledge of the special needs of young adolescents; concerns about overcrowding in schools; and the momentum of the junior high movement, as more and more junior highs opened (Valentine et al., 2004, p. 3).

Gruhn and Douglass (1947) added an important contribution to the literature as they proposed a list of the six basic functions of a junior high school. They labeled these: *integration,* the ability to take previous knowledge and integrate and use that knowledge in an acceptable manner; *exploration*, the opportunity to explore and develop interests; *guidance,* assistance to students in making vocational and social decisions; *differentiation,* meeting the needs of diverse learners; *socialization,* preparing students to be successful in the "social order"; and *articulation*, transition through the educational sequence. Support for these ideas appeared in the writings of Lounsbury (1954) and Van Til, Vars and Lounsbury (1961).

Despite the fact that junior high schools had been created to meet the unique needs of emerging adolescents, few college courses existed to prepare teachers specifically for them working with that age group. In fact, most college preparation was developed for secondary teachers who could be employed to teach at either the junior or senior high level (Weller, 1999). Perhaps as a result, junior high schools were often

organized in a manner that paralleled high schools, with teachers "based in academic departments rather than in interdisciplinary groups" (Weller, 1999. p. 3). Still the model grew, and according to Weller, there were over 5,000 junior high schools in America in the year 1960.

At that time of its ascendancy, a series of developments combined to challenge the junior high model. The burgeoning baby-boomer population that was crowding America's schools created stress on their facilities and led to teacher shortages. This created an environment that made school officials more receptive to new grade configurations. In addition, it was believed that ninth grade students would benefit from greater opportunities provided in high school buildings, and this, it should be noted, was an important consideration in the post-Sputnik world (Valentine et al., 2004; Wiles and Bondi, 1986).

At that time, some critics of junior highs were asserting the need for a different model of middle level education, one that would be more suited to the unique needs of students in the pre-teen and early teenage years (Wiles and Bondi, 1986; Weller, 1999). For a variety of reasons, it was perceived that the junior high structure was not meeting these needs. The junior high had become too much like the high schools, it was argued, with departmental structures, interscholastic sports, selective activities, and conventional bell schedules that were dictated by the need of 9$^{th}$ grade students to earn graduation credits (Anfara, Andrews, and Mertens, 2005; Wiles and Bondi, 1986).

Given an environment in which reconfiguration of grades was possible, even desirable, and given that junior highs were perceived by some as not meeting the needs of young adolescents, several other developments in the early 1960's also contributed to the

call for a new model of middle level education. The earliest roots of this change can be traced to the aforementioned works of Hall, Briggs, Gruhn and Douglass, and Koos who had established the need for a separate level of schools for young adolescents and described the characteristics of the schools that would serve them. Since junior highs often mimicked high schools, it was argued that the vision of these pioneers was not being realized.

The work of several people in a wide variety of fields, including Dewey (progressive education), Toepfer (adolescent learning), Epstein (brain growth and periodization), and Piaget, Gardner, and Havighurst (learning theories), provided the theoretical basis for a completely different model for the middle grades (Wiles and Bondi, 1986; Weller, 1999). Some of the momentum for the middle school movement may also be traced to the work of NASSP Associate Executive Director, J. Lloyd Trump, who along with others such as William Georgiades, promoted new programs and structures that later came to define middle level education, including team teaching, teacher advisories, and interdisciplinary curriculum. At the same time, it should be noted that the 1960's were a decade of change for public education as a whole. New curricula were emerging in science, math, and grammar and these, too, contributed to a climate of innovation and change (Valentine et al., 2004).

Taken as a whole these developments, which echoed the conditions that had led to the emergence of junior highs one-half century earlier, created a climate, which was conducive to the emergence of a new middle level model. Notable among those advocating a new model were Eichhorn (1966) and Alexander (1968) who urged that the focus of middle level education be placed more clearly on the unique physical,

intellectual, and social/emotional characteristics of the age group. "The point of greatest significance is that the middle school must be uniquely planned, staffed, and operated to provide a program that is truly focused on the rapidly moving and changing learners in transition from childhood to adolescence" (Alexander and George, 1981, p. 9).

Grade configurations of these new middle schools were often different than the standard junior high 7-9 structure. Two reasons for this were, first, the earlier onset of puberty noted among American youth at mid-century (Romano and Georgiady, 1994, p. 18), which moved the need for middle school programming to earlier grades, and second, the fact that ninth grade, the freshman year of high school, was held to the need for Carnegie units of credit. This latter factor was important because it dictated the very structure of the school day with implications for a number of issues including inter-disciplinary teaming. As a result, middle schools have often seen eighth grade as the ultimate grade, with the starting point varying from fifth to seventh grade.

By 1967, there were 1,101 middle schools in America, and within another ten years that number had quadrupled (Alexander and George, 1981, p. 13). Accompanying this growth in numbers was a proliferation of publications and conferences focusing on middle schools and young adolescents, which led Valentine et al., (2002) to describe the era from the mid-1960's to the mid 1980's as "the Middle School Era" (p. *v*). In the midst of this era, the ASCD Working Group on the Emerging Adolescent Learner developed a list of 10 characteristics of a middle school:

1. Unique programming for the pre- and early adolescent learner
2. A wide range of intellectual, social, and physical activities

3. A respect for individual differences, while exploring and developing fundamental skills
4. A climate that supports such things as developing abilities, and exploring and weighing options
5. Staff members that are attuned to the needs, interests, and backgrounds of the students
6. A smooth transition from elementary to high school
7. Child centeredness, seeking success for all students
8. Guidance to help produce productive citizens
9. Competent staff equipped for instructing this age group
10. Facilities and time structures that support the program (Gatewood, 1975)

Alexander and George, 1981, revisited the list of junior high functions developed by Gruhn and Douglass (1947), and updated it to include guidance, transition and articulation, block time schedules and interdisciplinary teams, appropriate teaching strategies, exploratory curriculum, and appropriate core curriculum and learning skills as the new essential features of a middle school. Teacher teams, with a common variant being a four-teacher team, often characterized middle schools with each teacher having a specialty in one of the four core areas. The teams shared a common group of students and a common time for curricular planning and student personnel work. In some instances, these teams have been empowered to set the schedules of their own students, which allows for flexible scheduling. Other characteristics of middle schools were homerooms, exploratory experiences in electives areas, intramural rather than interscholastic athletics, and heterogeneous ability grouping (Valentine et al. 2004).

The end of the Middle School Era in the mid 1980's occurred at a time when middle level schools, like their elementary and senior high counterparts, were subject to public criticism. At first, middle schools were not subject to as much negative attention as the high schools were facing, but given the fact that middle schools were responsible for preparing students for high school, they inevitably came under fire. Critics of middle schools increased in number and became increasingly vocal, including The Southern Regional Education Board who called middle schools "education's weak link" (Williamson and Johnston, 1998, p. 38). According to Valentine, Clark, Hackman, and Petzko (2004), "Middle level schools arguably [were] subject to as much intense scrutiny and condemnation as elementary or high schools, if not more" (p. 15). At times, criticism came from within the educational community itself, as even some of their high school counterparts voiced criticisms of middle schools (Williamson and Johnston, 1988).

Measures of student outcomes have also fueled concerns about middle schools. In 1995 the Third International Study of Mathematics and Science (TIMMS) showed poor performance of eighth grade students when compared with other economically developed nations as well as with some developing nations. Balfanz and MacIver (2000) noted that the poor quality of education provided in urban middle schools meant that approximately half of the students were not prepared to be successful at the high school. Results on the National Assessment of Educational Progress (NAEP) showed little improvement over a 20-year span (National Center for Educational Statistics, 2006). The performance of middle school students on TIMMS and on state assessments contributed to a call for high-stakes testing at all levels of education.

As national calls for reform of schools included specific calls to reform middle level education, there were those who demanded a return to the junior high model in order to rectify this situation (Dickinson and Butler, 2001). In 1989, the Carnegie Council on Adolescent Development responded by publishing a report from the Task Force on Education of Young Adolescents. Called *Turning Points*, it represented a set of recommendations for twenty-first century middle schools. The report, rather than calling for a return to a junior high model, called for the schools serving middle level students to more fully adopt practices advocated by middle school experts. The Task Force developed a set of eight recommendations for middle schools:

1. Establish small learning communities, characterized by stable relationships between students and adults, which would in turn foster personal and intellectual development. This implies organizing by interdisciplinary teacher teams and advisor-advisee relationships.
2. Maintain a core academic program that promotes critical thinking skills, learning how to learn, citizenship and ethical behavior and responsibility for self and others.
3. Provide success for all students using cooperative learning and flexible scheduling, while avoiding tracking and ability grouping.
4. Empower teachers to become part of the leadership of the school.
5. Employ teachers trained to work with emerging adolescents.
6. Improve physical and mental health through programs and hiring personnel, such as counselors.
7. Involve families in a meaningful way.

8. Reconnect with the community at large. (Carnegie Council on Adolescent Development, 1989).

Weller (1999) noted that at least four studies conducted at the time of the release of the Carnegie report supported such middle school practices. Research by a number of people including Felner et al. (1997) had revealed that when schools fully implemented reforms such as *Turning Points*, academic rigor, developmental responsiveness, and social equity were fostered. Dickinson and Butler (2001) addressed what they termed as "the arrested development" of middle schools. They believed the middle school model to be valid, and contended that any perceived problems were due to a number of factors:

1. The transition from junior highs to middle schools being poorly implemented. Junior high teachers were placed in middle schools with little training, and for this reason, many schools never fully implemented the middle school model.
2. Lack of teacher programs at the college level and a lack of certification specific to the middle school level.
3. A focus that was more on structural pieces than on the curriculum. When this concern became identified in 1993 it encountered the beginnings of standardized testing – high-stakes testing era.
4. NMSA has not been aggressive enough in advocating for middle schools including *This We Believe* (National Middle School Association, 1995), its own philosophy document.
5. Lack of research to support middle school concepts.
6. Not fully understanding that the original concepts of middle schools were in fact a "total ecology of schooling" (p. 10).

The calls for school restructuring that began to be heard in the 1990's were directed at middle schools as well. A decade after the publication of *Turning Points*, Jackson and Davis (2000) published *Turning Points 2000: Educating Adolescents in the 21st Century*. While acknowledging successes of schools that had implemented *Turning Points* reforms, the authors indicated that much work remained to be done. They called for change to be broader and deeper, especially for students in the lowest-performing schools. In 2003, NMSA reissued *This We Believe: Successful Schools for Young Adolescents.* The positions in *This We Believe* were "supported by a burgeoning research base about young adolescent growth and development and successful practices in curriculum, organization, and indeed every aspect of middle level schools" (National Middle School Association, 2003, p. xi). The paper outlined 14 characteristics, 8 cultural and 6 programmatic, that reassert what it means to be a successful middle school. In combination with *Turning Points 2000*, it provided middle schools and their leaders with a useful template to evaluate their own practices.

*Middle Level Leadership*

When junior highs began to appear at the beginning of the twentieth century, principal leadership was influenced by the prevalent managerial leadership theories of the time. Valentine et al. (2004) noted that middle level leadership roles started changing after the 1930's moving from the prevalent management paradigm through democratic and humanistic models, before ultimately arriving at an instructional model in the 1990's.

Middle schools began to emerge in the 1960's at the beginning of an era of social unrest and educational change in America. The social concerns of the decade were reflected in the 1966 Report on Equality of Educational Opportunity (often called The

Coleman Report) (Coleman et al., 1996) which expressed concern about America's poor students, especially its urban poor. Thirteen years later, Edmonds (1979) echoed the call for better schools for America's children, especially its urban poor. By the time of the publication of *A Nation at Risk,* in 1983, much of the literature on principal leadership was beginning to focus on effective schools and instructional leadership.

A review of the literature conducted by Hoy and Miskel (1991) revealed as many as 10 characteristics of successful schools. Weller's (1999) review of those lists found that strong principal leadership, a safe and orderly environment with an emphasis on academic achievement high expectations for both student and teacher success, an academic emphasis based on a collective vision, planning and goal setting, an emphasis on basic skills with quality instruction, continuous monitoring of student progress, and positive relationships with parents were characteristics that were most often found.

Writing about the characteristic of strong principal leadership, Anfara, Brown, Mills, Hartman, and Mahar (2001) noted, "There is a lack of research focused on the middle level principalship" (p. 185). Nonetheless, George and Alexander (1993) viewed such research as essential because "Middle schools are affected by many factors as they seek to become exemplary, but none is more significant than the quality of their leadership," (p. 497). They held the belief that effective leadership is comprised of three sets of global behaviors:

1. A clear understanding of the characteristics and needs of young adolescents that is translated into a vision of appropriate organization
2. Using knowledge of young adolescents to plan a school program with effective implementation and evaluation

3. Engaging all stakeholders in a shared decision-making process aimed at continual improvement, (George and Alexander, p. 497).

Williamson (1991) described the role of the middle school principal as being an inspirational leader, human resource developer, and change agent. Valentine et al., (2004), contended that principal leadership for highly effective middle schools has three elements: reflective practice, collaborative instructional leadership, and transformational leadership (p. 20). Citing studies by Schön (1987) and Mullen, Gordon, Greenlee and Anderson (2002), they advocated the value of a principal's reflecting on his or her own practice and the ability to help their teachers do the same. Bright (1996) argued that reflective practice "is the process which underlies all forms of high professional competence" (p. 166). York-Barr, Sommers, Ghere, and Montie (2001) reported research that made it clear "that when educators engage in high-quality learning experiences, the impact on student learning is positive" (p. 1). To York-Barr et al., the focus of reflection is the examining of one's beliefs, goals, and practices. Lambert (2003) described reflection on practice as reflection on "methods, techniques, strategies, procedures and the like" (p. 7). Through this examination, educators can gain new insights and develop actions for student learning. York-Barr et al. (2001) saw this happening individually, in small groups or teams, and school wide. The data gathered by Blase and Blase (1999a) indicated that conversations with teachers, including instructional conferences, were instrumental to principal instructional leadership and "encouraged teachers to become aware of and critically reflect on their learning and professional practice" (p. 359). Five practices which included making suggestions, giving feedback, modeling, using inquiry

and soliciting advice and opinions, and giving praise were said by Blase and Blase to promote reflection.

Middle school structures, which often provide a common planning time for interdisciplinary teams to work together, are especially supportive of team reflection. Lambert (2003) indicated that time is a critical factor for processes such as reflection and collaboration to be successful. Flowers, Mertens, and Mulhall (2000) added that flexible scheduling, common adjacent classrooms, and team autonomy are other middle school features that may also contribute to collaboration and professional growth. In 1993, George and Alexander recommended that leadership ensure staff members are involved in "carefully planned staff development" (George and Alexander, (p. 503). The National Staff Development Council called for "specific, targeted professional development strategies that support high performance in the middle grades" (Sparks and Hirsch, 1997, p. 44).

Valentine et al. (2004) stated that instructional leadership, the second element needed for highly effective middle level schools, must be collaborative in nature, "because principals cannot engage in instructional activities in isolation" (p. 21). They suggested that principals should team with internal and external stakeholders, "to promote the formation of a shared vision and common goals" (p. 21). Barth (1990) asserted that no relationship in a school has a greater effect on the quality of that school than the relationship between teacher and principal, and the key to improving schools lies within the improvement of those relationships. Bolman and Deal (1993) stated that the quality of a principal's leadership is dependent on his or her relationships with staff. In

addition to building strong relationships, middle school principals should develop skills in teaming and shared decision-making (George and Grebing, 1992).

Wiles and Bondi (1986) contended that the principal, along with assistants, curricular, team and department leaders, and classroom teachers, together, form the leadership team in middle schools. Among the characteristics of the instructional leaders at the middle level, they proposed

1. understanding the nature of the transescent learner
2. being knowledgeable of new instructional practices in the various disciplines
3. being aware of such organizational structures as interdisciplinary instruction, block scheduling, and flexible time arrangements
4. being creative, dynamic and possessing good communication skills,
5. orchestrating resources to support the program
6. possessing group leadership skills
7. being active in the community
8. seeing the program in the larger K-12 context
9. teaching when possible
10. being knowledgeable about instruction and the teaching and learning processes (p. 162).

In support of understanding the nature of the adolescent learner, McEwin et al. (1996) reminded educators that practices at the middle school level must be responsive to the developmental needs of young adolescents. Valentine et al. (2004) added

> Middle level principals and their faculty members must have a solid understanding of effective curriculum, instruction, and assessment practices. They must possess knowledge about emerging adolescents' physical, cognitive, emotional, and social characteristics so that their learning organizations address the developmental needs of children. (p. 21).

Transformational leadership was the third element of leadership added to reflective practice and collaborative instructional leadership for highly effective middle schools as described by Valentine et al. (2004). Many, including Leithwood, Jantzi, and Steinbach (2000b) have considered it as the model of principal leadership most suited to the era of school restructuring. They had argued that instructional leadership focused on core technology, a first-order change, and that this is too limited to transform a school's teaching and learning. Valentine et al. (2004) contended that change in schools will not become sustainable without school restructuring (a second-order change according to Leithwood, 1999). The school culture becomes transformed only as changes are institutionalized.

Transformational leaders must gain commitment of members to the organizational mission and vision. Vision, at the middle level, should be "built solidly on a compassionate understanding of the characteristics and needs of young adolescents" (George and Alexander 1993, p. 504). The National Policy Board for Educational Administration (NPBEA) pointed out, "Every educational reform report of the last decade concludes that the United States cannot have excellent schools without excellent leaders," (as cited in Thompson, 2004, p. 20). One study of leadership in high-quality middle schools linked "the longevity of commendable programs to a heightened sense of

mission, and the resulting clarity of vision . . . based on a familiarity with and an affinity for the characteristics of older children and adolescents" (George and Alexander, 1991, p. 498). While middle level leadership bears similarity to leadership in all levels of education, it has, based on the unique needs of the students being served, a unique perspective. Leithwood, Jantzi, and Steinbach (1998) reported that teachers who had engaged in organizational and individual learning reported that it impacted their practices, understanding, commitment, and skills. The understanding cited most was the "acceptance of the necessity of meeting the needs of each individual student and the importance of relating to the whole child and not only his/her academic development" (p. 78). This point resonates strongly with middle school philosophy. Processes cited in their study were informal discussions with colleagues, usually occurring in team settings; trial-and-error and experimentation with new practices, especially when associated with reflective practices; and spending time in each other's classes (p. 76).

## Empirical Evidence of Principal Leadership on Student Achievement

Calls for school reform or restructuring have been heard since the decade of the 1980's (Valentine et al. 2004). Accompanying these has been a focus on the role of the school principal as an instrumental agent in effecting school change with researchers and theorists looking at the behaviors of school principals in an effort to determine which, if any, of those behaviors contribute to school success. In addition to an emphasis on behaviors, there has also been a discussion of leadership styles, and a debate as to whether principals directly or indirectly impact student outcomes. This section reviews studies of direct and indirect connections of principal leadership with student achievement.

Heck (1993) determined that the interplay among variables, including the variable of principal leadership, along with school context and student achievement is a complex one. DeBevoise (1984) cited a list of behaviors that lead to success and acknowledged that different styles of leadership could be effective. Similarly, Evans and Teddlie (1995) looked at schools with different socio-economic contexts and determined that different leadership styles work better in different settings with, for example, a stronger leadership style being more effective in lower SES schools. Larsen (1987) surveyed teachers at higher and lower-performing elementary schools in California and determined that principals in higher-performing schools were rated higher than their counterparts on items in the areas of goal setting, school and community relations, supervision and evaluation, school climate, coordination, and staff development. Bamburg and Andrews (1991) studied both high and low-achieving elementary schools and found that principals in higher-achieving schools placed greater emphasis on instructional activities while their faculties demonstrated a focus on excellence.

At least two important meta-analyses have looked at the ways that principals impact student achievement. Cotton (2003) chose to look at research conducted after 1970, with a special focus on research done after 1985. She noted that in 1985 there was a shift from effective schools research, based on the work of Edmonds, Brookover, and Lezotte, and instructional leadership research, based on the work of Leithwood, Montgomery, and DeBevoise, to a broader definition of leadership that included teacher behaviors and an interest in the "well being of others" (p. 4). Cotton looked at studies of high-achieving schools and at the characteristics of the leaders in those schools to develop a list of traits and actions they had in common. Waters, Marzano and McNulty

(2003) reviewed over 2,000 studies that were published after 1978 and reported results from the 70 studies that reported standardized, objective, and quantitative measures of student achievement. For these studies, achievement was the dependent variable and teacher perception of principal leadership was the independent variable. One conclusion drawn from their research was that while "leaders can have a positive impact on achievement, they also can have a marginal, or worse a negative impact on achievement" (p. 5). They pointed out two characteristics that promote positive change: focus of change, which is the leader's ability to improve school and classroom practices that have a greater likelihood of impacting achievement, and a proper understanding of the magnitude and/or "order" of change and making appropriate adjustments in their practices (p. 5).

The Task Force on Developing Researching Educational Leadership asserted that only the effects of the quality of curriculum and teachers' instruction exceed the effects of leadership on student learning, (Leithwood and Riehl, 2003). The Stanford Educational Leadership Institute conducted a meta-analysis of research on educational leadership and identified three important aspects of a principal's job including teacher support, promoting student learning through curriculum management, and transforming schools into organizations that provide for powerful teaching and learning experiences for students (Davis, Darling-Hammond, LaPointe, and Mayerson, 2005). LaPointe and Davis (2006) viewed school leadership as influencing student success through two pathways: first, through the support of effective teachers and second, through the implementation of effective organizational processes.

Cotton (2003) reported 25 characteristics and behaviors of extraordinary principals. The research of Marzano, Waters, and McNulty (2005) revealed a list of 21 responsibilities of principal leadership. They compared that list to Cotton's (Marzano, Waters, and McNulty, 2005, Appendix B). A synthesis of leadership characteristics of these two important studies shows many factors in common. For example, both studies describe effective principals as creating an orderly and safe environment for students. Both see a school culture that shares a common vision and focuses on achieving that vision. Principals are visible and accessible and they reach out to members of the school community, including staff, students, and parents. Leaders seek to find and celebrate individual success of staff and students. Principals allocate resources to instruction and to the professional development of their teachers making sure that their teachers are aware of current research and best practices, and that they are knowledgeable about and actively involved in the school's curriculum. There is a strong emphasis on monitoring student achievement. Both analyses see effective leaders as innovative and risk taking while supporting those same qualities in the faculty. Finally, effective leaders develop relationships with staff and provide support and empathy when needed.

In recent years, school success has been increasingly defined as high performance on standardized, high-stakes testing (Fowler, 2004). Among the first to study principal leadership and student outcomes was Glasman (1984). His work established that student test scores could be impacted if principals led the analysis and sharing of results with staff. Eberts and Stone (1988) conducted a national study of students at the fourth grade level and supported the notion that principal leadership has a relationship with student outcomes. Whether this relationship is coincidental or causal has been debated by a

number of writers including Bossert et al., (1983) and Hallinger and Murphy (1986). Heck and his colleagues (1990) studied the impact of principal leadership on student achievement using results on the California Assessment Program as the measure. While controlling for SES and school level, they determined that, in fact, principal behaviors related to school governance, instructional organization, and school climate do have a relationship with student test scores. Brewer (1993) sought to replicate Eberts and Stone's research at the secondary level and, in doing so, determined that teacher selection and goal setting are ways that secondary principals impact student achievement.

Leadership has been characterized as a multidirectional influence relationship between leader and followers with the mutual purpose of accomplishing change where leaders seek to do the right thing, to produce organizational change, and are not afraid to disrupt order and efficiency as they do (Rost, 1991; Bennis and Nanus 1985; and Kotter 1990). Kathleen Cotton (2003) posed the question, "Do successful principals get results primarily by appealing to the self-interest of staff members, or do they somehow lead the staff to transcend self-interest to focus on the well-being of others?" (p. 3-4).

Hallinger and Heck (1997) have contributed extensively to the research on principals and student outcomes. Their review of the literature led to a three-fold classification of principal effects ranging from direct effects by principal actions to mediated effects which see principals influence outcomes through other variables, to a reciprocal effect through which actions of staff members and of the principal affect each other and have an impact on student outcomes (Hallinger and Heck, 1997, pp. 162-163). In earlier research, Heck (1993) had determined that contextual variables such as school size, type of school, and teacher experience had an effect on student outcomes. Hallinger

and Heck (1997), building on this reasoning, argued that direct effects studies did not take these factors into account. Mediated effects research held the most promise for consistent results, and they urged researchers using direct effects approaches to control for other variables that affect student outcomes.

Hallinger and Heck (1997) asserted that the internal processes of a school that are linked to student success, such as academic expectations, school mission, instructional organization, and academic learning time could be influenced by principal leadership. This should not cause alarm, they argued, for "achieving results through others is the essence of leadership" (Hallinger and Heck, 1996, p. 39). Goleman, Boyatzis, and McKee (2004) identified four leadership styles that facilitated student achievement through promoting a positive and energizing climate for teachers. They listed visionary, coaching, democratic, and facilitative styles as capable of accomplishing positive results. Characteristics associated with these styles include articulating a shared goal; providing performance feedback with suggestions that help facilitate goal achievement; discussing personal aspirations of members and providing feedback that references those aspirations; and eliciting 'buy-in' by listening to members, drawing on their strengths, and creating harmony. Leadership styles that were less likely to facilitate success were labeled as pacesetting and commanding. Characteristics of these styles include modeling a hard-driving personal style and giving orders with an expectation of immediate compliance. These more authoritarian types tended to depress the motivation of organizational members. Studies of British and Canadian school leaders conducted by the Hay Group (2000) and by Stone, Parker, and Wood (2005) supported these findings.

Even as high-stakes testing has become the measure of school effectiveness following the passage of No Child Left Behind (Ed. Gov., 2006), there continue to be critics as well. The proponents of high-stakes testing argue that it improves both teacher focus on important skills and content while encouraging students to be more serious about learning (Mehrens, 1998, Roderick and Engel, 2001). However, there has also been a discussion of the appropriateness of using high-stakes testing as the measure of school effectiveness. Opponents argue that its shortfalls include limiting the scope of instruction, widening achievement gaps by demotivating students, and undermining organizational culture (Shepard, 1990; Mehrens, 1998; Roderick and Engel, 2001; Sergiovanni, 1999). DeMoss (2002) researched the role of principal in Chicago in mediating the stresses created by an environment of high-stakes testing. According to DeMoss, those principals who established and supported a comprehensive program of academic rigor, assessed student performance and growth, and created a school-wide program for preparation in the basics were seen to improve student scores on high-stakes testing. Sagor (2003) held that principals can and do motivate teachers and students in an era of high-stakes testing if there is a focus on school cultural concerns. Given the ubiquitous nature of high-stakes testing and the relatively high importance attached thereto by politicians, the media, and the public, America's principals are called to lead schools in achieving student success as measured by such testing.

## Summary

Researchers often focus on one model of principal leadership, but there are others, such as Leithwood and Duke (1999) who argued that it is unlikely that any one model describes what qualities leaders should possess. Marks and Printy (2003) suggested, for

example, that instructional leadership and transformational leadership should be integrated. Day (2000) contended that managerial leadership was necessary to structure the work done by transformational leadership. Leithwood and Jantzi (2000b) argued that transformational leadership must include management roles along with leadership in order to be successful. Bass, as cited earlier, contended that transactional leadership and transformational leadership complement each other. Prater (2004) studied the effects of factors of each model as they related to student achievement at the high school level, the relationships of factors of each model with each other, and the effects of factors of each model as they related to student achievement at the high school level.

Today's school principals, whatever their level, operate in a social-political environment that is constantly changing. Changes in technology and communication, combined with changing school populations, and the demands of high-stakes testing have all contributed to a changing context of schooling in America. Middle level principals, no less than their counterparts at other levels, deal with this shifting environment while attending to the unique needs of their students.

Three major theoretical models during the junior high and middle school eras, those being managerial, instructional, and transformational, have impacted principal leadership. Each has taken a turn as a predominant leadership paradigm. The literature has sought to explore what it means to be an effective principal under each model. Theory has been advanced and research conducted to help identify principal behaviors that help schools to be successful in terms of student outcomes. Given the relative dearth of research on middle level leadership, a study organized along lines similar to that conducted by Prater (2004) in which he examined the role of the high school principal

through the lenses of those three predominant leadership paradigms, and conducted in a middle level context, would appear to be beneficial.

# Chapter 3

# METHOD

## Rationale

The conceptualization of principal leadership has been an evolving construct over the latter half of the 1900's as the pace and extent of change in American society has accelerated. The prevalent model of principal leadership for the first half of the twentieth century described it in management terms. Principals sought to adopt corporate management principles and practices, to maintain the status quo in the face of a trend towards school consolidation, and to deal with the political nature of schools (Hallinger, 1992). Managerial leadership was viewed as the best way to achieve an efficient school.

The increasing pace and extent of change in post-World War II America contributed to discontent with schools, and led to a demand for more effective schools. Challenged by policy intended to fund programming for poor students and called to implement new curricula in math, science, and foreign language, school principals were faced with an ever-expanding role. Given this changing environment, managerial leadership was no longer viewed as a sufficient model of principal leadership, and instructional elements were included with the previously defined managerial tasks. According to Edmonds (1979), principal leadership was one of five key components needed to provide effective schools for America's urban poor. A measure of the effectiveness of schools and of their instructional leadership was student success, particularly success on standardized testing. According to Morris (1987), "The measure

of a school principal is his or her ability to produce results, namely reading and mathematics scores and general achievement scores at or above grade level" (p. 16).

Even as the effective schools movement with its instructional leadership paradigm gained ascendancy, discontent with American schools continued during the 1980's, and by decade's end, there was a national call for schools to change, reform, or restructure. Testing, particularly governmentally mandated, standards-based tests were to become the measure of student and school success. School leaders, particularly after the Charlottesville Summit of 1989, were expected to lead change in their schools to meet those mandated standards of success. Some advanced the argument that instructional leadership was not sufficient to lead school restructuring (Leithwood, Jantzi and Steinbach, 2000b). Educational leadership looked to the theory of transforming or transformational leadership first proposed by Burns in 1978 as a more suitable model to lead needed changes. Some did not consider this a radical departure, and saw transformational leadership as a logical extension of instructional leadership in that it sought to increase commitment to the efforts of the organization and to develop more skilled practice on the part of organizational members (Leithwood, Jantzi and Steinbach, 1999).

Principals of schools in the middle have dealt with all of the issues faced by their peers at other levels. Changes to schools serving young adolescents sometimes mirrored and occasionally pre-dated those at other levels. Junior high schools emerged in the early part of the twentieth century and became well established by mid-century. During the 1960's, Eichhorn (1966) and Alexander (1968) wrote influential texts that sounded the call for programming to better meet the needs of young adolescents. Such schools would

no longer mimic the structures of the high schools to the same extent that the junior high schools did. The opportunity for reconfiguring schools and offering different programming was available due to a burgeoning population of baby-boomers reaching junior and senior high school age (Valentine et al, 2004; Wiles and Bondi, 1986). The work of Progressives such as Dewey had laid a theoretical groundwork for different approaches (Wiles and Bondi, 1986). Leadership at NASSP created an environment that supported innovation as well.

Principals at the middle level were encouraged to lead schools that were more attuned to the developmental needs of young adolescents. In many cases moving the ninth grade, which had been housed in many junior high schools, to the senior high schools allowed schools more freedom and flexibility to plan without the constraints of graduation credit concerns (Wiles and Bondi, 1986; Anfara, Andrews, and Mertens, 2005). This freedom allowed for teacher-team planning, interdisciplinary instructional units, flexible schedules, and greater attention to the total development of the student. By the 1980's, however, middle level schools were being criticized for a perceived lack of focus on basic academics even more than were their counterparts at other levels (Valentine, Clark, Hackmann and Petzko, 2004).

In some cases, districts reverted to junior high school practices that more closely resembled those at the high schools. Other principals sought ways to improve academic performance while maintaining a commitment to best middle-level practices. *Turning Points* and *Turning Points 2000* sounded a call for meeting all the needs of young adolescents, not the least of which were their academic needs.

## Statement of the Problem

Principals today operate in an ever-changing socio-political context that adds to the challenges and complexity of their role. Schools and their leaders are responding to calls for reform and restructuring and to demonstrate effectiveness through performance on governmentally mandated high-stakes testing. Principals, in particular, are held especially accountable for the performance of their students on such assessments.

Various models of leadership have been proposed. One widely accepted view has leadership theory grouped into three broad categories of managerial leadership, instructional leadership, and transformational leadership (Hallinger, 1992; Wilmore and Thomas, 2001). It has been argued that no one theoretical model will provide school principals with the tools needed to be successful in the highly politicized, ever-changing environment in which they operate today. Deal and Peterson (1994) encouraged a bifocal perspective that considered both managerial and leadership roles. While each model has been written about extensively, there has not been a great deal written about the relationships among the three models of principal leadership. Prater (2004) explored those relationships in his study of leadership at the high school level. Given the uniqueness of the needs of middle level adolescents and the emphasis on providing programming to meet those needs, there appears to be a need to explore those relationships at the middle level, as well. With the added expectations that today's schools demonstrate success in terms of student performance on standardized, mandated tests, research connecting principal factors of the three predominant leadership models with student success on such high-stakes testing would also appear to be a need for both researchers and practitioners.

## Purpose of the study

The purpose of this study was to develop an understanding of the relative impact of principal managerial leadership, principal instructional leadership, and principal transformational leadership on student achievement at the middle level. In order to compare findings of this study with those of Prater (2004), the method of analysis and the research questions were similar. The method of analysis was quantitative, with survey data and test results being used to determine (a) if any relationships exist between demographic variables of the principal and the factors of managerial leadership, instructional leadership, and transformational leadership; (b) if any relationships exist between demographic variables of the school and community and student achievement; (c) if any relationships exist among the factors measuring principal managerial leadership, principal instructional leadership, and principal transformational leadership; and (d) if any relationships exist between the factors measuring principal managerial leadership, principal instructional leadership, and principal transformational leadership and student achievement at the middle level.

## Research Questions

The following research questions were examined during the completion of this study:

1. What, if any, relationships exist between selected demographic variables of the principal and selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership?

2. What, if any, relationships exist between principal characteristics and school demographic variables, and student achievement as measured by scores on the Missouri Assessment Program (MAP) in Missouri middle level schools?
3. What, if any, relationships exist between selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership in Missouri middle level schools?
4. What, if any, significant differences exist in principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership in Missouri middle level schools when schools are grouped by student achievement as measured by scores on the Missouri Assessment Program (MAP)?
5. What, if any, relationships exist between selected principal leadership factors measuring managerial leadership, instructional leadership, on transformational leadership and student achievement as measured by sores on the Missouri Assessment Program (MAP) in Missouri middle level schools, when controlling for school socio-economic status?

## Null Hypotheses

The following hypotheses were tested in this study:

$H_{01}$: There are no significant correlations between selected demographic variables of the principal and principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the Principal Leadership Questionnaire.

$H_{02}$: There are no significant correlations between principal characteristics and school demographic variables, and student achievement as measured by scores on the Missouri Assessment Program in Missouri middle level schools.

$H_{03}$: There are no significant correlations between the principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the Principal Leadership Questionnaire.

$H_{04}$: There are no significant differences in principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership Questionnaire, when schools are grouped by student achievement as measured by scores on the Missouri Assessment Program (MAP).

$H_{05}$: There are no significant predictive linear relationships between principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership Questionnaire on student achievement as measured by scores on the Missouri Assessment Program (MAP) in Missouri middle level schools, when controlling for school socio-economic status.

## Population

This study sought to examine demographic variables of principals, schools, and communities; teacher perceptions of principal managerial leadership behavior, principal instructional leadership behavior, and principal transformational leadership behavior; and

student achievement as measured by the MAP. It was part of a larger study being conducted by the Middle Level Leadership Center at the University of Missouri. The Center identified 335 middle level schools in the state and invited those schools to participate in a study of middle level education. Of these 335 schools, 188 schools returned responses to the Center. From this group of 188 schools, a total of 133 schools met criteria for inclusion in this study. The criteria required that the principal be in at least his or her second year in the position at this school, and that there be at least 40% of the possible total of each survey returned. Teachers' perceptions of principal managerial and instructional leadership behavior were collected using the selected factors of the Audit of Principal Effectiveness. A total of 849 teachers at schools included in the study responded to this survey. Teacher's perceptions of transformational leadership behaviors were collected using the Principal Leadership Questionnaire. A total of 854 teachers in the study schools responded to this survey. A copy of the introductory principal letter can be found in Appendix C.

## Procedures

To accomplish the purpose of this study, the following general procedures will be followed: For all statistical tests, the level of significance was set at $\alpha = .05$.

1. Correlations between selected demographic variables of the principal and selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership were analyzed.
2. Correlations between selected demographic variables of the school and student achievement as measured by scores on the MAP were analyzed.

3. Correlations among selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership were analyzed.
4. Significant differences in student achievement as measured by scores on the MAP were analyzed when the schools were grouped by principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership.
5. Linear relationships between the selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership and student achievements as measured by the MAP were analyzed, using multiple regression analysis.
6. As a result of the above analyses, an explanatory model describing the relative impact of principal managerial instructional and transformational leadership on student achievement was developed.

## Instrumentation

Student achievement data will be analyzed using test results from the Missouri Assessment Program (MAP). The MAP test is a performance-based assessment system used to measure student achievement, administered annually by state mandate to all students at all middle level grades, through grade 8, in Missouri Public schools. Students in all middle level grades are administered both a Communication Arts and Mathematics assessment. The MAP subtests assess a broad range of student achievement, including basic skills, critical thinking, and problem solving. MAP is aligned with the Missouri

state Curriculum frameworks, and should therefore reflect the curricula of state's schools (Missouri Department of Elementary and Secondary Education, 2006).

Three types of test items are used on the MAP test to evaluate student achievement: multiple-choice questions that require students to select the correct answer; short-answer, constructed response items that require students to supply (rather than select) an appropriate response; and performance events that require students to work through more complicated problems or issues (Missouri Department of Elementary and Secondary Education, 2006)

Levels of student achievement on the MAP test are identified by one of four descriptors—Below Basic, Basic, Proficient, or Advanced, and these results are reported annually to school districts. For the purposes of meeting requirements of NCLB for the reporting of Adequate Yearly Progress, student percentages in Proficient and Advanced are added together. (Missouri Department of Elementary and Secondary Education, 2006).

Two instruments were used to collect quantitative data regarding teachers' perceptions of principal leadership behavior. The Audit of Principal Effectiveness (adapted from Valentine and Bowman, 1988) was used to assess one factor of principal managerial leadership and to assess two factors of principal instructional leadership. The Principal Leadership Questionnaire (adapted from Jantzi and Leithwood, 1996) was used to assess six factors of principal transformational leadership.

*Principal managerial leadership*

Principal managerial leadership was measured by the Audit of Principal Effectiveness (Valentine and Bowman, 1988) and assessed each teacher's perception of

the principal's managerial leadership behavior. A copy of the survey instrument and its items, grouped by factor, may be found in Appendix A. The Audit of Principal Effectiveness measures nine factors of principal behavior within three domains. For the purposes of this study, the Interactive Processes factor from the Organizational Environment domain was used to measure managerial leadership behavior. The Interactive Processes factor measures the following behaviors: the principal organizes tasks and personnel for the effective day-by-day management of the school, including providing appropriate information to staff and student, developing appropriate rules and procedures, and setting the overall tone for discipline in the school. This factor contains nine items, and it has a reported reliability coefficient (Chronbach's alpha) of .86 (Bowman and Valentine, 1984).

*Principal instructional leadership*

Principal instructional leadership was measured by the Audit of Principal Effectiveness (Valentine and Bowman, 1988) and assessed each teacher's perception of the principal's instructional leadership behavior. A copy of the survey instrument and its items, grouped by factor, may be found in Appendix A. For the purposes of this study, the two factors from the Educational Program domain were used to measure instructional leadership behavior. The Educational Program domain contains 15 items, and it measures teachers' perceptions of the following two factors that underlie the construct of instructional leadership:

Instructional Improvement: the principal influences positively the instructional skills present in the school through clinical supervision, knowledge of effective schooling, and commitment to quality instruction. This factor contains eight

items, and it has a reported reliability coefficient (Chronbach's alpha) of .85 (Bowman and Valentine, 1984).

Curriculum Improvement: the principal promotes an articulated, outcome-based curriculum through diagnosis of student needs and systematic program review and change. This factor contains seven items, and it has a reported reliability coefficient (Chronbach's alpha) of .84 (Bowman and Valentine, 1984).

*Principal transformational leadership*

Principal transformational leadership was measured by the Principal Leadership Questionnaire (adapted from Jantzi and Leithwood, 1996) and assessed each teacher's perception of the principal's transformational leadership behavior. The Principal Leadership Questionnaire contains 24 items and measures teachers' perceptions of the following six factors that underlie the construct of transformational leadership:

Identifying and articulating a vision: behavior on the part of the principal aimed at identifying new opportunities for his or her school leadership team and developing, articulating, and inspiring others with his or her vision of the future. This factor contains five items, and it has a reported reliability coefficient (Chronbach's alpha) of .88 (Jantzi and Leithwood, 1996).

Providing an appropriate model: behavior on the part of the principal that sets an example for school leadership team members to follow consistent with the values the principal espouses. This factor contains three items, and it has a reported reliability coefficient (Chronbach's alpha) of .86 (Jantzi and Leithwood, 1996).

Fostering the acceptance of group goals: behavior on the part of the principal aimed at promoting cooperating among school leadership team members and

assisting them to work together toward common goals. This factor contains five items, and it has a reported reliability coefficient (Chronbach's alpha) of .80 (Jantzi and Leithwood, 1996).

Providing individualized support: behavior on the part of the principal that indicates respect for school leadership team members and concern about their personal feelings and needs. This factor contains five items, and it has a reported reliability coefficient (Chronbach's alpha) of .82 (Jantzi and Leithwood, 1996).

Providing intellectual stimulation: behavior on the part of the principal that challenges school leadership team members to reexamine some of the assumptions about their work and rethink how it can be performed. This factor contains three items, and it has a reported reliability coefficient (Chronbach's alpha) of .77 (Jantzi and Leithwood, 1996).

Holding high performance expectations: behavior that demonstrates the principal's expectations for excellence, quality, and high performance on the part of the school leadership team. This factor contains three items, and it has a reported reliability coefficient (Chronbach's alpha) of .73 (Jantzi and Leithwood, 1996).

## Data Collection

Teacher's perceptions of principal leadership behavior were collected using the selected factors of the Audit of Principal Effectiveness and the Principal Leadership Questionnaire. Principals and teachers in this study will be part of a larger study conducted by the Middle Level Leadership Center at the University of Missouri-Columbia. A copy of the introductory principal letter can be found in Appendix C. Each

principal was provided with a packet containing teacher survey instruments for the Center's comprehensive study. The instruments were organized into five sets. The set of questions about Leadership used for this study was distributed to every fifth teacher. The distribution, collection, and return of the surveys was conducted by the school secretary, working in conjunction with the staff of the Middle Level Leadership Center. Teachers returned completed surveys in a sealed envelope. The secretary returned the envelopes to the Center within two weeks and after four weeks. A total of 1,703 teachers from the 133 middle level schools included in this survey returned completed surveys for this study.

## Data Analysis

Statistical procedures for this study varied according to the hypothesis being tested. For $H_{01,}$ Pearson product-moment correlations were tested between the selected demographic variables of the principal and principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership. For $H_{02}$, Pearson product-moment correlations were tested between the selected demographic variables of the school and principal characteristics, and student achievement. For $H_{03,}$ Pearson product-moment correlations were tested among the principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership.

For $H_{04}$, a general linear model was developed to test for significant differences in student achievement on the MAP when schools are grouped into quartiles according to principal leadership factors. The Tukey multiple range method was used in a post hoc analysis of variance to identify differences in student achievement on each of the four subtests.

For $H_{05}$, the linear relationships between principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership and student achievement were analyzed using multiple regression analysis. For the multiple regression analysis, school socio-economic status was controlled. This analysis was used to identify the principal leadership factors that best predicted student achievement.

Following the completion of the statistical analyses, a model was constructed illustrating the relative relationships and impact of principal managerial, instructional, and transformational leadership on student achievement.

# Chapter 4

# PRESENTATION AND ANALYSIS OF DATA

## Introduction

For much of the twentieth century, the role of the school principal was conceived as a managerial one. As with its counterpart roles in the world of business, the role of principal was heavily influenced by classical and scientific management principles. The functions and tasks of the principal consisted primarily of management of buildings, budgets, staff, and students with the hope that these would result in an efficiently run organization. Changing social, economic, and political contexts at mid-century brought changes to America's schools and to the role of the school principal. Barnett and Whitaker (1996) viewed the latter half of the century as marked by three waves of change with the first wave focusing on improving math and science in the 1950's and 60's; the second having a focus on equity and excellence in the 1970's and 80's; and a third wave, in the 1990's, focusing on school improvement and reform.

Goldring, Crowson, Laird, and Berk (2003) termed these changes "shifting environments," and as the contexts in which schools operated changed, new models of leadership began to replace the managerial model as the preeminent archetype for school leadership. The first two waves focused on improving curriculum and achieving equity and excellence, led to a call for more effective schools and to a model of leadership that was focused more specifically on instructional matters of the school. The reform wave led to a demand for standards-based instruction, mandated accountability through high-stakes testing, and ultimately to a call for school restructuring. A third model of principal

leadership, that of the transformational leader emerged in response. By the turn of the millennium, the role of the school principal had become a multifaceted one that included a much wider variety of expectations than was the case a century earlier

The leadership theories that impacted their elementary and secondary counterparts have also influenced America's middle level schools. However, given that they were established to meet the unique developmental needs of emerging adolescents, middle level schools faced challenges that were themselves, unique. Changing economic conditions in the latter two decades of the century caused many American institutions to come under intense public criticism. Given that their performance on a number of highly visible test measures was considered poor, America's public schools were scrutinized and criticized more than most elements of society. Some of the sharpest criticisms were aimed at its middle level schools. Middle level principals were encouraged to meet these academic needs while ensuring that the other developmental needs of the students they served were also considered. As with principals at other levels, the role of the middle level principal became a multifaceted one encompassing a wide variety of roles and expectations.

A relatively small number of studies have sought to determine the relationship of principal leadership and student achievement. Prater (2004) conducted such a study at the high school level. His study used quantitative measures of principal managerial leadership, principal instructional leadership, and principal transformational leadership to explore the relationships between principal leadership behaviors and student achievement as measured by the Missouri Assessment Program (MAP). This study attempted to examine those same relationships at middle level schools.

## Study Design

The purpose of this study was to develop an understanding of the relative impact of the principal's managerial leadership, instructional leadership, and transformational leadership on student achievement at the middle level. In order to compare findings of this study with those of Prater (2004), the method of analysis and the research questions were similar to those used in that study. The method of analysis was quantitative, with survey data and test results being used to determine (a) if any relationships exist between demographic variables of the principal and the factors of managerial leadership, instructional leadership, and transformational leadership; (b) if any relationships exist between demographic variables of the school and student achievement; (c) if any relationships exist among the factors measuring principal managerial leadership, principal instructional leadership, and principal transformational leadership; and (d) if any relationships exist between the factors measuring principal managerial leadership, principal instructional leadership, and principal transformational leadership and student achievement at the middle level.

Two instruments were used to collect quantitative data regarding teachers' perceptions of principal leadership behavior. Items from the Audit of Principal Effectiveness (adapted from Valentine and Bowman, 1988) were included in a survey (Appendix A) and used to assess one factor of principal managerial leadership and to assess two factors of principal instructional leadership. The Interactive Processes factor from the Organizational Environment domain measures the following behaviors: the principal organizes tasks and personnel for the effective day-by-day management of the school, including providing appropriate information to staff and student, developing

appropriate rules and procedures, and setting the overall tone for discipline in the school. Two factors of principal instructional leadership from the Educational Program domain were used: The Instructional Improvement factor, which addresses traits and behaviors such as "clinical supervision, knowledge of effective schooling, and commitment to quality instruction" (Valentine and Bowman, 1988, p. 25), and the Curriculum Improvement factor which assesses the extent to which "The principal promotes an articulated, outcome-based curriculum through diagnosis of student needs and systematic program review and change" (Valentine and Bowman, p. 25).

Items from the Principal Leadership Questionnaire (adapted from Jantzi and Leithwood, 1996) were included in a survey (Appendix B) and used to assess six factors of principal transformational leadership: Identifying and Articulating a Vision, Providing an Appropriate Model, Fostering the Acceptance of Group Goals, Providing Individualized Support, Providing Intellectual Stimulation, and Holding High Performance Expectations.

## Research Questions

The following research questions were examined during the completion of this study:

1. What, if any, relationships exist between selected demographic variables of the principal and selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership?
2. What, if any, relationships exist between school demographic variables, principal characteristics and student achievement as measured by scores on the Missouri Assessment Program in Missouri middle level schools?

3. What, if any, relationships exist between selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership in Missouri middle level schools?
4. What, if any, significant differences exist in selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership in Missouri middle level schools when schools are grouped by student achievement as measured by scores on the Missouri Assessment Program (MAP)?
5. What, if any, relationships exist between selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership on student achievement as measured by sores on the Missouri Assessment Program (MAP) in Missouri middle level schools, when controlling for school socio-economic status?

## Null Hypotheses

The following hypotheses were tested in this study:

$H_{01}$: There are no significant correlations between selected demographic variables of the principal and principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the Principal Leadership Questionnaire.

$H_{02}$: There are no significant correlations between principal characteristics and school demographic variables, and student achievement as measured by scores on the Missouri Assessment Program in Missouri middle level schools.

$H_{03}$: There are no significant correlations between the principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the Principal Leadership Questionnaire.

$H_{04}$: There are no significant differences in student achievement as measured by scores on the Missouri Assessment Program (MAP) when schools are grouped by principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership

$H_{05}$: There are no significant predictive linear relationships between principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership Questionnaire on student achievement as measured by scores on the Missouri Assessment Program (MAP) in Missouri middle level schools, when controlling for school socio-economic status.

## Descriptive Findings

*Demographic data*

The Middle Level Leadership Center at the University of Missouri identified 335 middle level schools in the state and invited those schools to participate in a study of middle level education. Of these 335 schools, 188 schools returned responses to the Center. Teacher's perceptions of principal leadership behavior were collected using the selected factors of the Audit of Principal Effectiveness and the Principal Leadership

Questionnaire. Principals and teachers in this study were part of a larger study conducted by the Middle Level Leadership Center at the University of Missouri-Columbia. A copy of the introductory principal letter can be found in Appendix C.

Each principal was provided a packet containing teacher survey instruments for the Center's comprehensive study. The instruments were organized into five sets. The set of questions regarding managerial and instructional leadership used for this study were administered to every fifth teacher. The questions regarding transformational leadership were also randomly assigned to a different set of teachers with every fifth teacher being asked to respond to those items. The distribution, collection, and return of the surveys were conducted by each school's secretary, working in conjunction with the staff of the Middle Level Leadership Center.

Teachers returned completed surveys in a sealed envelope. The secretary returned the envelopes to the Center in two mailings, one within two weeks of the receipt of the surveys and a second after four weeks. A calculation was performed to determine the number of completed surveys needed in order to include a school's responses as part of this study. Using the FTE reported by the school's principal, the number of estimated possible returns (FTE/5) was determined. A school's responses were included in this study only if the total number of returns for each survey equaled 40% of the number possible (FTE/5 X 0.40).

Principals responded to questions regarding demographic information including gender, ethnicity, age, number of years as a teacher, number of years as an assistant principal in different settings, and number of years as a principal in different settings, and number of years as principal at the current school. Since the student achievement data for

this study was from the spring 2006 MAP testing, information for a school was included only for those schools whose principals were in at least their second year at the school, and were therefore principal of the school during the 2005-06 school year. After schools were eliminated from the study for not meeting all of the above criteria for teacher and principal responses, 133 schools remained in the study.

A total of 849 teachers from the 133 middle level schools in this study returned completed surveys containing the items measuring principal managerial and instructional leadership (Survey Form A, Appendix A). Managerial leadership was assessed by items 49-57 of the survey (Interactive Processes Factor). Instructional leadership was assessed by items 65-72 (Instructional Improvement Factor) and by items 73-79 (Curriculum Improvement Factor) of Survey A.

A total of 854 teachers from the 133 middle level schools in this study returned completed surveys containing the items measuring principal transformational leadership (Survey Form B, Appendix B). Items 37-60 of survey B assessed the six factors of transformational leadership.

Principals listed demographic information about their schools that included student enrollment, average daily attendance, free/reduced lunch percentage, and FTE of the school. This information is contained in Appendix E. The schools in this study represent a diversity of enrollments and socio-economic compositions. Student enrollment ranged from 70 to 1,220 students with a mean size of 492.09 students per school. School socio-economic status as determined by the number of students eligible for free and reduced lunch (F/R lunch) ranged from 0% to 98% with a mean of 40.90%.

Average daily attendance for the schools ranged from 92% to 98% with a mean of 93.51. School FTE ranged from 5 to 89 with a mean of 36.33.

The number of teachers per school responding to survey A (managerial and instructional leadership factors as assessed by the APE) ranged from 1 to 15 with a mean of 6.38 teachers per school. The number of teachers responding to survey B (transformational leadership factors as assessed by the PLQ) ranged from 1 to 18 with a mean of 6.35 teachers per school. The 133 schools included in this study resemble schools that were invited by the MLLC to participate in the study. Table 1 contains information about the grade configurations of the schools involved in the study as compared with those for the 335 schools that were invited to participate.

Table 1

*Grade Configurations of Schools in Study Compared to Statewide Percentages*

| Grade levels | Number | % | Statewide Percentage |
|---|---|---|---|
| 5-6-7-8 | 19 | 14.28 | 12.94 |
| 6-7-8 | 73 | 54.89 | 50.67 |
| 7-8 | 27 | 20.82 | 18.87 |
| 7-8-9 | 1 | .5 | 1.88 |
| 8-9 | 5 | 3.75 | 2.43 |
| Other combinations | 8 | 6.02 | 13.21 |
| Total | 133 | 100 | 100 |

Information about the principal variables: gender, ethnicity, age, number of years as a middle school teacher, number of years as an assistant principal, number of years as

middle school principal, and number of years at the current school is contained in Table 2. There were 83 male principals or 63.1% of the respondents, and 47 female principals or 36.9% of the total respondents (130 responses total). The total number of principals reporting their ethnicity as white was 121 (92.97%) and African-American was 9 (7.03%). Ages ranged from 30 to 66 with a mean age of 45.55. Number of years as a teacher, counselor, or other non-administrative position ranged from 2 to 28 with a mean of 10.78. The number of years as a middle level teacher, counselor or other non-administrative position ranged from 1 to 28 with a mean of 5.55. The number of years served as an assistant principal at any level ranged from 1 to 15 with a mean of 3.05. Number of years served as a middle level assistant principal ranged from 1 to 11 with a mean of 1.88. Total number of years served as a principal at any level ranged from 1 to 30 with a mean of 7.66. Total number of years having served as a middle level principal ranged from 1 to 30 with a mean of 6.83. Finally, the total number of years served as principal at the current school ranged from 1 to 30 with a mean of 6.03.

Table 2

*Principal Demographic Data (n = 130)*

| Category | | Number | Percentage |
|---|---|---|---|
| Gender | | | |
| | Males | 82 | 63.1% |
| | Females | 48 | 36.9% |
| Ethnicity | | | |
| | White | 119 | 92.97% |
| | African American | 9 | 7.03% |

Additional Principal Demographic Data

| Category | Minimum | Maximum | Mean |
|---|---|---|---|
| Age | 30 | 66 | 45.5 |
| Years Teacher | 2 | 28 | 10.78 |
| Years Middle Level Teacher | 1 | 28 | 5.55 |
| Years Assistant Principal | 1 | 15 | 3.05 |
| Years Mid. Lev. Assist. Prin. | 1 | 11 | 1.88 |
| Years Principal | 1 | 30 | 7.66 |
| Years Middle Level Principal | 1 | 30 | 6.83 |
| Years Principal at Curr. Sch. | 1 | 30 | 6.03 |

*Note: Three principals from the study elected not to respond to the demographic items.*

Student test data from the 133 schools involved in the study are contained in Table 3. Percentages of students scoring Proficient or Advanced from the spring 2006 MAP testing in the Communication Arts ranged from 16.03% to 85.00%. Percentages of students scoring in the Proficient or Advanced categories for Mathematics ranged from 11.87% to 78.83%.

Table 3

*MAP Score Ranges for Schools by Total Percent in Advanced and Proficient*

| Test | Minimum | Maximum |
|---|---|---|
| Communication Arts | 16.03 | 85.00 |
| Mathematics | 11.87 | 78.83 |

*Principal managerial leadership variables*

The Interactive Processes factor within the Organizational Environment domain of the Audit of Principal Effectiveness was used to measure faculty members' ratings of their principal's managerial leadership behaviors. The Interactive Processes factor measures the following behaviors: the principal organizes tasks and personnel for the effective day-by-day management of the school, including providing appropriate information to staff and students, developing appropriate rules and procedures, and setting the overall tone for discipline in the school. The Interactive Processes factor consists of nine 6-point Likert-scale items with a response of 1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 – Somewhat Agree, 5 = Agree, and 6 = Strongly Agree. Therefore, higher ratings on this scale indicated stronger agreement.

Principal managerial leadership descriptive statistics for the 133 schools are contained in Table 4. The Interactive Processes factor had an overall mean of 4.94. The items with highest overall means for the schools in this study were item 52, "The principal is able to organize activities, tasks, and people," and item 53, "The principal develops appropriate rules and procedures," each with a mean = 5.06. The item with the

lowest overall mean was item 57, "The principal communicates to teachers the reasons for administrative practices used in this school," with a mean = 4.71.

Table 4

*Results by Item – Audit of Principal Effectiveness – Interactive Processes Factor*

| Lead. Model | Factor | Item | Min. | Max. | Mean |
|---|---|---|---|---|---|
| Managerial | | | | | |
| Interactive Processes | | | | | |
| | | 49 | 3.00 | 6.00 | 4.96 |
| | | 50 | 3.17 | 6.00 | 4.92 |
| | | 51 | 3.00 | 6.00 | 4.97 |
| | | 52 | 2.8 | 6.00 | 5.06 |
| | | 53 | 3.00 | 6.00 | 5.06 |
| | | 54 | 2.6 | 6.00 | 4.89 |
| | | 55 | 2.33 | 6.00 | 4.82 |
| | | 56 | 2.67 | 6.00 | 5.05 |
| | | 57 | 2.33 | 6.00 | 4.71 |
| | | Factor | 2.33 | 6.00 | 4.94 |

*Principal instructional leadership variables*

The Instructional Improvement factor and the Curriculum Improvement factor within the Educational Program domain of the Audit of Principal Effectiveness were used to measure faculty members' ratings of their principal's instructional leadership behavior. The Instructional Improvement factor contains eight items and measures the following behaviors: the principal influences positively the instructional skills present in the school through clinical supervision, knowledge of effective schooling, and commitment to quality instruction. The Curriculum Improvement factor contains seven items, and

measures the following behaviors: the principal promotes an articulated, outcome-based curriculum through diagnosis of student needs and systematic program review and change. The 15 items within the Educational Program domain consist of 6-point Likert-scale items where 1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Somewhat Agree, 5 = Agree, and 6 = Strongly Agree. Higher ratings on this scale indicated stronger agreement.

Principal instructional leadership descriptive statistics for the 133 schools are contained in Table 5. The instructional leadership factor, Instructional Improvement, had an overall mean = 4.92. Item 72, "The principal is committed to instructional improvement," had the highest overall mean (5.31), and item 69, "The principal has effective techniques for helping ineffective teachers," had the lowest overall mean (4.31). The Curriculum Improvement factor had an overall mean of 4.94, with item 73, "The principal promotes the development of goals and objectives that reflect societal needs and trends," having the highest overall mean (5.08), and item 78, "The principal has a systematic process for program review and change," having the lowest overall mean (4.75)

Table 5

*Results by Factor/Item – Audit of Principal Effectiveness – Instructional Improvement and Curriculum Improvement Factors*

| Leader. Model | Factor | Item | Min. | Max. | Mean |
|---|---|---|---|---|---|
| Instructional | | | | | |
| | Instructional Improvement | | | | |
| | | 65 | 2.80 | 6 | 5.07 |
| | | 66 | 2.00 | 6 | 5.04 |
| | | 67 | 2.00 | 6 | 4.93 |
| | | 68 | 2.00 | 6 | 4.79 |
| | | 69 | 2.00 | 6 | 4.43 |
| | | 70 | 2.00 | 6 | 4.94 |
| | | 71 | 2.67 | 6 | 4.82 |
| | | 72 | 2.60 | 6 | 5.31 |
| | | Factor | 2.00 | 6 | 4.92 |
| | Curriculum Improvement | | | | |
| | | 73 | 2.67 | 6.00 | 5.08 |
| | | 74 | 2.00 | 6.00 | 4.93 |
| | | 75 | 2.60 | 6.00 | 4.99 |
| | | 76 | 2.00 | 5.83 | 4.92 |
| | | 77 | 2.00 | 6.00 | 4.95 |
| | | 78 | 2.00 | 6.00 | 4.75 |
| | | 79 | 2.00 | 6.00 | 4.99 |
| | | Factor | 2.00 | 6.00 | 4.94 |

*The Principal transformational leadership variables*

The Principal Leadership Questionnaire was used to determine faculty members' ratings of their principal's transformational leadership behavior. The Principal Leadership

Questionnaire contains 24 items and measures teachers' perceptions of the following factors that underlie the construct of transformational leadership: Identifying and Articulating a Vision, Providing an Appropriate Model, Fostering the Acceptance of Group Goals, Providing Individualized Support, Providing Intellectual Stimulation, and Holding High Performance Expectations. The 24 items on the Principal Leadership Questionnaire consist of 6-point Likert scale items where 1 = Strongly Disagree; 2 = Disagree, 3 = Somewhat Disagree, 4 = Somewhat Agree, 5 = Agree, and 6 = Strongly Agree. Higher ratings indicate stronger agreement.

Principal transformational leadership descriptive statistics for the 133 schools are contained in Table 6. The transformational leadership factor, Holding High Performance Expectations had the highest overall factor mean (4.91), followed in descending order by Providing Individualized Support (4.87), Fostering the Acceptance of Group goals (4.76), Identifying and Articulating a Vision (4.72), Providing Intellectual Stimulation (4.70), and Providing an Appropriate Model (4.68).

The factors in order of ranking with their corresponding highest and lowest rated items were: 1). Holding High Performance Expectations item 59, "The principal encourages faculty to be sensitive to the needs and values of other faculty in the school," (mean = 5.02), and item 60, "The principal helps teachers clarify or explain their thoughts by discussing those thoughts with them," (mean = 4.80); 2). Providing Individualized Support item 54, "The principal uses systematic procedures for staff appraisal, e.g. retention, dismissal, promotion procedures," (mean = 4.94) and item 51, "When teachers are informed of administrative decisions, they are aware of what the principal expects of them as it relates to the decision," (mean = 4.81); 3). Fostering the Acceptance of Group

Goals item 46, “The principal is highly visible to the student body,” (mean = 5.03) and item 48, “The principal enjoys working with students,” (mean = 4.59); 4). Identifying and Articulating a Vision item 37, “Teachers feel free to share ideas and concerns about school with the principal,” (mean = 4.95) and item 39, “When talking to the principal, teachers have the feeling the principal is sincerely interested in what they are saying,” (mean = 4.57); 5). Providing Intellectual Stimulation item 56, “The principal establishes a process by which students are made aware of school rules and policies,” (mean = 4.82) and item 55, “The principal establishes the overall tone for discipline in the school,” (mean = 4.63); and 6). Providing an Appropriate Model item 43, “Students in the school see the principal as a leader of school spirit,” (mean = 4.78) and item 42, “Students feel free to initiate communication with the principal,” (mean = 4.54).

Table 6

*Results by Factor/Item – Principal Leadership Questionnaire*

| Leader. Model | Factor | Item | Min. | Max. | Mean |
|---|---|---|---|---|---|
| Transformational | | | | | |
| | Ident. & Artic. Vision | 37 | 2.50 | 6.00 | 4.95 |
| | | 38 | 2.00 | 6.00 | 4.74 |
| | | 39 | 2.00 | 6.00 | 4.57 |
| | | 40 | 2.00 | 6.00 | 4.67 |
| | | 41 | 2.00 | 6.00 | 4.70 |
| | | Factor | 2.00 | 6.00 | 4.72 |
| | Approp. Role Model | 42 | 2.00 | 6.00 | 4.54 |
| | | 43 | 2.33 | 6.00 | 4.78 |
| | | 44 | 2.00 | 6.00 | 4.72 |
| | | Factor | 2.00 | 6.00 | 4.68 |

| | | | | |
|---|---|---|---|---|
| Foster. Group Goals | 45 | 3.00 | 6.00 | 4.84 |
| | 46 | 3.00 | 6.00 | 5.03 |
| | 47 | 2.33 | 6.00 | 4.64 |
| | 48 | 2.00 | 6.00 | 4.59 |
| | 49 | 2.67 | 6.00 | 4.71 |
| | Factor | 2.33 | 6.00 | 4.76 |
| Prov. Individ. Support | 50 | 3.00 | 6.00 | 4.82 |
| | 51 | 2.67 | 6.00 | 4.81 |
| | 52 | 2.67 | 6.00 | 4.98 |
| | 53 | 2.50 | 6.00 | 4.82 |
| | 54 | 2.00 | 6.00 | 4.94 |
| | Factor | 2.00 | 6.00 | 4.87 |
| Intellect. Stimulation | 55 | 2.67 | 6.00 | 4.63 |
| | 56 | 2.67 | 6.00 | 4.82 |
| | 57 | 2.33 | 6.00 | 4.66 |
| | Factor | 2.33 | 6.00 | 4.70 |
| Hold High Expectations | 58 | 2.50 | 6.00 | 4.93 |
| | 59 | 2.00 | 6.00 | 5.02 |
| | 60 | 2.67 | 6.00 | 4.80 |
| | Factor | 2.00 | 6.00 | 4.91 |

## Hypothesis Testing

Five hypotheses were tested in this study. Hypothesis One was a test of zero-order correlations between selected demographic variables of the principal and principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership.

Hypothesis Two was a test of zero-order correlations and partial correlations between principal leadership characteristics and selected demographic variables of the

school, and student achievement. For the partial correlational tests, the school demographic factor, Free and Reduced Lunch was controlled.

Hypothesis Three was a test of zero-order correlations and partial correlations among the principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership.

Hypothesis Four was a test for significant differences in principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership when schools are grouped by student achievement.

Hypothesis Five tested the linear relationships between the principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership, and student achievement. For the linear relationships analysis, school socio-economic status was controlled.

*Hypothesis one*

The first hypothesis tested in this study was: There are no significant correlations between selected demographic variables of the principal and principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the Principal Leadership Questionnaire. Pearson product-moment (zero-order) correlations coefficients were calculated for the relationships between principal gender; principal age; total years as a classroom teacher, counselor, or other non-administrative position at any level; total years as a classroom teacher, counselor, or other non-administrative position at the middle level; total years as an assistant principal at any level; total years experience as an assistant principal at the middle level; total years experience as a principal: total

years experience as principal at the middle level: total years experience as a principal in the current building

The results of the correlations for principal demographic variables are reported in Table 7. The variable, Principal Gender, had no significant zero-order correlations with any of the nine principal leadership factors. The variable, Principal Age, had no significant zero-order correlations with any of the nine principal leadership factors. The variable, Total Years as a Teacher, Counselor, or Non-administrative Position at Any Level, had no significant zero-order correlations with any of the nine principal leadership factors.

The variable, Years as a Teacher, Counselor, or Non-administrator at the Middle Level, had a significant correlation with the principal leadership factor, Providing Individualized Support ($p = .173$ $r = .049$), but had no significant correlations with the factors, Interactive Processes ($p = .085$ $r = .338$), Instructional Improvement ($p = .091$ $r = .303$), Curriculum Improvement ($p = .066$, $r = .455$), Identifying and Articulating a Vision ($p = .119$ $r = .176$), Providing a Model ($p = .113$ $r = .200$), Fostering Goal Acceptance ($p = .108$ $r = .223$), Providing Intellectual Stimulation ($p = .146$ $r = .097$), , or Holding High Performance Expectations ($p = .055$ $r = .533$).

The principal demographic variable, Years as an Assistant Principal at All Levels, had a significant negative correlation with the principal leadership factor, Identifying and Articulating a Vision ($p = -.180$ $r = .041$), but had no significant correlations with the factors Interactive Processes ($p = -.046$ $r = .608$), Instructional Improvement ($p = -.064$ $r = .470$), Curriculum Improvement ($p = -.004$ $r = .961$), Providing a Model ($p = -.160$ $r = .070$), Fostering Goal Acceptance ($p = -.084$ $r = .344$), Providing Individualized Support

(p = -.149 r = .092), Providing Intellectual Stimulation (p = -.145 r = .101), or Holding High Performance Expectations (p = -.161 r = .069)

The principal demographic variables, Years as an Assistant Principal at the Middle Level, Years as a Principal at All Levels, Years as a Principal at the Middle Level, and Years as Principal at the Current School had no significant correlations with any of the nine factors of principal leadership.

Table 7

*Correlations: Principal demographic factors and factors measuring principal leadership (n = 129)*

| Factor | APE Factor 6 In. Pr. | APE Factor 8 Inst. | APE Factor 9 Curr. | PLQ Factor 1 – Vision | PLQ Factor 2 – Model | PLQ Factor 3 – Goal | PLQ Factor 4 – Support | PLQ Factor 5 – Stim. | PLQ Factor 6 – Expect. |
|---|---|---|---|---|---|---|---|---|---|
| Gender | | | | | | | | | |
| r | .063 | -.046 | -.071 | .002 | -.057 | -.032 | .003 | -.020 | .023 |
| Sig. | .479 | .601 | .422 | .982 | .522 | .720 | .969 | .820 | .792 |
| Age | | | | | | | | | |
| r | -.120 | -.153 | -.147 | -.131 | -.094 | -.126 | -.124 | -.115 | -.155 |
| Sig. | .172 | .080 | .093 | .136 | .285 | .152 | .157 | .192 | .078 |
| Years Teach. | | | | | | | | | |
| r | -.032 | -.002 | -.027 | -.031 | -.005 | -.071 | -.031 | -.009 | -.097 |
| Sig. | .718 | .983 | .759 | .727 | .951 | .422 | .729 | .919 | .273 |
| Years Teach. M. L. | | | | | | | | | |
| r | .085 | .091 | .066 | .119 | .113 | 108 | .173* | .146 | .055 |
| Sig. | .338 | .303 | .455 | .176 | .200 | .223 | .049 | .097 | .533 |

*Table continued next page*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Years A. P. all Lev. | | | | | | | | | |
| r | -.046 | -.064 | -.004 | -.180* | -.160 | -.084 | -.149 | -.145 | -.161 |
| Sig. | .608 | .470 | .961 | .041 | .070 | .344 | .092 | .101 | .069 |
| Years A. P. M. L | | | | | | | | | |
| r | -.056 | -.077 | -.015 | -.020 | -.040 | -.043 | .009 | .001 | -.006 |
| Sig. | .532 | .393 | .869 | .828 | .659 | .635 | .918 | .990 | .950 |
| Years Prin. all Lev. | | | | | | | | | |
| r | -.030 | -.115 | -.099 | -.037 | -.022 | -.073 | -.002 | -.023 | .028 |
| Sig. | .733 | .192 | .260 | .673 | .800 | .407 | .979 | .797 | .753 |
| Years Prin. M. L. | | | | | | | | | |
| r | -.039 | -.105 | -107 | -.028 | -.003 | -.043 | .037 | .048 | .068 |
| Sig. | .655 | .232 | .255 | .752 | .977 | .622 | .674 | .589 | .438 |
| Years Prin. Cur, Sch. | | | | | | | | | |
| r | .008 | -.065 | -.057 | -.052 | -.037 | -.041 | -.016 | -.003 | -.005 |
| Sig. | .932 | .464 | .519 | .555 | .671 | .639 | .859 | .973 | .952 |

p< .001

Summary: The principal demographic variable, Years as a Teacher, Counselor, or Non-administrator at the Middle Level had a significant correlation with the leadership factor, Providing Individualized Support, while the variable Years as an Assistant

Principal at All Levels had a significant correlation with the leadership factor Identifying and Articulating a Vision. The latter relationship was negative. Therefore null hypothesis one was rejected.

*Hypothesis two*

The second hypothesis tested in this study was, there are no significant correlations between principal characteristics and school variables, and student achievement as measured by scores on the Missouri Assessment Program in Missouri middle level schools. Pearson product-moment (zero-order) correlation coefficients were calculated for the relationships of the school demographic variables, principal demographic variables, and principal leadership factors. School demographic variables were Free and Reduced Lunch, Average Daily Attendance, Enrollment, and FTE. The principal demographic variables were Age, Total Years as a Teacher at All Levels, Total Years as a Teacher at the Middle Level, Total Years as an Assistant Principal at All Levels, Total Years as Assistant Principal at the Middle Level, Total Years as Principal All Levels, Total Years as Principal at the Middle Level, and Total Years as Principal at the Current School. The nine principal leadership factors were Interactive Processes, Instructional Improvement, Curriculum Improvement, Developing a Vision, Providing a Model, Fostering Group Goals, Providing Support, Providing Intellectual Stimulation, and Holding High Performance Expectations. Student achievement was determined by school results for the spring 2006 MAP testing on Communication Arts and Mathematics subtests. MAP scores were calculated using composite school averages for students scoring in the top two categories, Proficient and Advanced, on each subtest. Partial correlations between the principal characteristics, including demographic variables and

principal leadership factors and student achievement were also calculated. For the partial correlational tests, the school demographic variable Free and Reduced Lunch was held constant.

The data for the Pearson product-moment (zero order) correlations for the school demographic variables and student achievement are reported in Table 8. All relationships were significant with, the relationship of the variable Free and Reduced Lunch reporting the highest r at -.724 on Mathematics and at -.722 on Communication Arts. School Enrollment and Faculty FTE reported similar r values, which is not unexpected given the relationship of faculty size to the number of students enrolled at a given school.

Table 8

*Correlations: School Achievement Scores and School Demographic Variables (n 128 – 133)*

| | | School Enrollment | Faculty FTE | Free/Reduced Lunch | Average Daily Attendance |
|---|---|---|---|---|---|
| CA School Average Top Two Categories | Pearson Correlation | .306(**) | .321(**) | -.722(**) | .358(**) |
| | Sig. (2-tailed) | .005 | .002 | .000 | .000 |
| | N | 128 | 131 | 133 | 131 |
| MA School Average Top Two Categories | Pearson Correlation | .245(**) | .264(**) | -.724(**) | .380(**) |
| | Sig. (2-tailed) | 0.005 | 0.002 | .000 | .000 |
| | N | 128 | 131 | 133 | 131 |

** Correlation is significant at the 0.01 level (2-tailed).
Note: The N varies by factor as a result of varying levels of response by principals to demographic questions.

The matrix data for the Pearson product-moment (zero-order) correlations for principal demographic variables and student achievement are reported in Table 9. The principal variable, Total Years as an Assistant Principal at All Levels had a significant correlation with composite school average scores on the Communication Arts test (r = .214 p = 0.015). The principal demographic variable, Total Years as an Assistant Principal at the Middle Level had significant correlation with composite average scores on the Communication Arts test (r = .371 p = .000) and the Mathematics test (r = .335 p = .000). Total Years Principal at the Current School showed a significant correlation with the Mathematics subtest (r = .183 p = .037).

Table 9

*Zero Order Correlations: Principal demographic variables and School Achievement Scores (n 126 – 133)*

| Principal Demographics | | CA School - Percent Top Two Categories | MA - Percent Top Two Categories |
|---|---|---|---|
| Principal Age | Pearson Correlation | 0.016 | 0.049 |
| | Sig. (2-tailed) | 0.854 | 0.576 |
| | N | 131 | 131 |
| Principal--Years Teacher All Levels | Pearson Correlation | -0.094 | -0.044 |
| | Sig. (2-tailed) | 0.288 | 0.616 |
| | N | 130 | 130 |
| Principal--Years Teacher ML | Pearson Correlation | 0.099 | 0.101 |
| | Sig. (2-tailed) | 0.263 | 0.253 |
| | N | 130 | 130 |

*Table continued on next page*

| | | | |
|---|---|---|---|
| Principal--Years AP All Levels | Pearson Correlation | .214(*) | 0.166 |
| | Sig. (2-tailed) | 0.015 | 0.061 |
| | N | 129 | 129 |
| Principal--Years AP ML | Pearson Correlation | .371(**) | .335(**) |
| | Sig. (2-tailed) | .000 | .000 |
| | N | 126 | 126 |
| Principal--Years Principal All Levels | Pearson Correlation | 0.053 | 0.12 |
| | Sig. (2-tailed) | 0.544 | 0.173 |
| | N | 131 | 131 |
| Principal--Years Principal ML | Pearson Correlation | 0.102 | 0.149 |
| | Sig. (2-tailed) | 0.245 | 0.09 |
| | N | 131 | 131 |
| Principal--Years Principal Current School | Pearson Correlation | 0.12 | .183(*) |
| | Sig. (2-tailed) | 0.173 | 0.037 |
| | N | 131 | 131 |

** Correlation is significant at the 0.01 level (2-tailed).
Note: The N varies by factor as a result of varying levels of response by principals to demographic questions.

The matrix data for the Pearson product-moment partial correlations for the principal demographic variables and student achievement are reported in Table 10. There were no significant correlations found for principal demographic factors and student achievement on either subtest when controlling for Free and Reduced lunch.

Table 10

*Partial Correlations: School Achievement Scores and School Demographic Variables (n 126 – 133)*

| Control Variable | | | CA | M |
|---|---|---|---|---|
| Free and Reduced Lunch | Principal Age | Pearson Correlation | -0.000 | 0.037 |
| | | Sig. (2-tailed) | 0.996 | 0.683 |
| | | N | 121 | 121 |
| | Principal--Years Teacher All Levels | Pearson Correlation | -0.0434 | -0.003 |
| | | Sig. (2-tailed) | 0.634 | 0.971 |
| | | N | 121 | 121 |
| | Principal--Years Teacher ML | Pearson Correlation | 0.159 | 0.103 |
| | | Sig. (2-tailed) | 0.079 | 0.259 |
| | | N | 121 | 121 |
| | Principal--Years AP All Levels | Pearson Correlation | 0.052 | -0.024 |
| | | Sig. (2-tailed) | 0.569 | 0.796 |
| | | N | 121 | 121 |

*Table continued on next page*

| | | | |
|---|---|---|---|
| Principal--Years AP ML | Pearson Correlation | 0.132 | 0.081 |
| | Sig. (2-tailed) | 0.147 | 0.372 |
| | N | 121 | 121 |
| Principal--Years Principal All Levels | Pearson Correlation | 0.030 | 0.129 |
| | Sig. (2-tailed) | 0.743 | 0.154 |
| | N | 121 | 121 |
| Principal--Years Principal ML | Pearson Correlation | 0.061 | 0.129 |
| | Sig. (2-tailed) | 0.501 | 0.156 |
| | N | 121 | 121 |
| Principal--Years Principal Current School | Pearson Correlation | 0.045 | 0.144 |
| | Sig. (2-tailed) | 0.620 | 0.110 |
| | N | 121 | 121 |

The matrix data for the Pearson product-moment (zero-order) correlations of the factor ratings for the nine principal leadership factors and for student achievement as assessed by school composite averages on the MAP subtests are reported in Table 11. The following correlations were significant: APE Factor 6, Interactive Processes and the composite school average with Mathematics (r = .187 p = .031); APE Factor 8,

Instructional Improvement and the composite school average with Mathematics (r = .189 p = .030); APE Factor 9, Curriculum Improvement with Mathematics (r = .181 p = .037); PLQ Factor 1, Identifying and Articulating a Vision with Mathematics (r = .189 p = .029); PLQ Factor 4, Providing Individual Support with Mathematics (r = .199 p = .021) and with Communication Arts (r = .183 p = .035); and PLQ Factor 5, Providing Intellectual Stimulation with Mathematics (r = .177 p = .041).

Table 11

*Correlations: School Achievement Scores and Principal Leadership Factors (n = 133)*

| | | CA - Percent Top Two Categories | MA - Percent Top Two Categories |
|---|---|---|---|
| APE Factor 6 Interactive Processes | Pearson Correlation | 0.117 | .187(*) |
| | Sig. (2-tailed) | 0.178 | 0.031 |
| | N | 133 | 133 |
| APE Factor 8 Instructional Improvement | Pearson Correlation | 0.164 | .189(*) |
| | Sig. (2-tailed) | 0.06 | 0.03 |
| | N | 133 | 133 |
| APE Factor 9 Curriculum Improvement | Pearson Correlation | 0.133 | .181(*) |
| | Sig. (2-tailed) | 0.126 | 0.037 |
| | N | 133 | 133 |
| PLQ Factor 1 Vision Identification | Pearson Correlation | 0.16 | .189(*) |
| | Sig. (2-tailed) | 0.065 | 0.029 |
| | N | 133 | 133 |
| PLQ Factor 2 Modeling | Pearson Correlation | 0.137 | 0.167 |
| | Sig. (2-tailed) | 0.116 | 0.055 |
| | N | 133 | 133 |
| PLQ Factor 3 Goal Acceptance | Pearson Correlation | 0.155 | 0.169 |
| | Sig. (2-tailed) | 0.076 | 0.051 |
| | N | 133 | 133 |

*Table continued next page*

| | | | |
|---|---|---|---|
| PLQ Factor 4 Individualized Support | Pearson Correlation | .183(*) | .199(*) |
| | Sig. (2-tailed) | 0.035 | 0.021 |
| | N | 133 | 133 |
| PLQ Factor 5 Intellectual Stimulation | Pearson Correlation | 0.157 | .177(*) |
| | Sig. (2-tailed) | 0.072 | 0.041 |
| | N | 133 | 133 |
| PLQ Factor 6 High Performance Expectations | Pearson Correlation | 0.121 | 0.108 |
| | Sig. (2-tailed) | 0.164 | 0.215 |
| | N | 133 | 133 |

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

*Correlation is significant at the 0.05 level (2-tailed).

The matrix data for the Pearson product-moment (partial) correlations of the factor ratings for the nine principal leadership factors and for student achievement as assessed by school composite averages on the MAP subtests are reported in Table 12. For the Communication Arts subtest, eight of the factors correlated significantly with student achievement, with the correlation for Interactive Processes being the lone exception. For the Mathematics subtest all of the principal leadership factors correlated significantly with student achievement when controlling for Free and Reduced Lunch, except for the factor, Holding High Expectations.

Table 12

*Partial Correlations: School Achievement Scores and Principal Leadership Factors (n 126 – 133)*

| Control Variable | | | Communication Arts | Mathematics |
|---|---|---|---|---|
| Free and Reduced Lunch | APE. F6. Interactive Processes | Pearson Correlation | 0.153 | 0.253 |
| | | Sig. (2-tailed) | 0.089 | 0.005 |
| | | N | 121 | 121 |
| | APE.F8. Instruct. Imp. | Pearson Correlation | 0.284 | 0.306 |
| | | Sig. (2-tailed) | 0.001 | 0.000 |
| | | N | 121 | 121 |
| | APE.F9. Curric. Imp. | Pearson Correlation | 0.187 | 0.251 |
| | | Sig. (2-tailed) | 0.038 | 0.005 |
| | | N | 121 | 121 |
| | PLQ.F1. Vision | Pearson Correlation | 0.244 | 0.269 |
| | | Sig. (2-tailed) | 0.007 | 0.003 |
| | | N | 121 | 121 |

*Table continued next page*

| | | | |
|---|---|---|---|
| PLQ. F2. Model | Pearson Correlation | 0.249 | 0.269 |
| | Sig. (2-tailed) | 0.005 | 0.003 |
| | N | 121 | 121 |
| PLQ. F3. Goals | Pearson Correlation | 0.178 | 0.190 |
| | Sig. (2-tailed) | 0.048 | 0.036 |
| | N | 121 | 121 |
| PLQ. F4. Support | Pearson Correlation | 0.237 | 0.254 |
| | Sig. (2-tailed) | 0.008 | 0.007 |
| | N | 121 | 121 |
| PLQ. F5. Intel. Stim. | Pearson Correlation | 0.204 | 0.214 |
| | Sig. (2-tailed) | 0.023 | 0.017 |
| | N | 121 | 121 |
| PLQ. F6. High Expectations | Pearson Correlation | 0.179 | 0.135 |
| | Sig. (2-tailed) | 0.047 | 0.136 |
| | N | 121 | 121 |

*Summary*

Analysis of Pearson product-moment (zero-order) correlation coefficients revealed that a number of variables or factors had significant correlations with student achievement on at least one MAP subtest. The school demographic variables Free and Reduced Lunch, Average daily attendance, Enrollment, and FTE, correlated with both Communication Arts and Mathematics scores. The principal demographic variables Total Years as an Assistant Principal at All Levels had a significant correlation with the Communication Arts subtest. The variables, Total Years as an Assistant Principal at the Middle level had a significant relationship with both Communication Arts and Mathematics, the variable. Total Years as a Principal at the Current School had a significant correlation with Mathematics. The principal leadership factors, Interactive Processes, Instructional Improvement, Curriculum Improvement, Identifying and Articulating a Vision, Providing Individual Support, and Providing Intellectual Stimulation, Fostering Group Goals, Providing Individual Support, and Providing Intellectual Stimulation correlated significantly with student achievement on the Mathematics subtest with Providing Intellectual Stimulation having a significant correlation with Communication Arts.

Partial correlations for the leadership factors showed significant correlations for seven of the factors on both tests when partial correlations were run. Two factors Interactive Processes and Holding High Expectations correlated with Mathematics and Communication Arts, respectively. Therefore, null hypothesis two was rejected.

*Hypothesis three*

The third hypothesis tested in this study was: There are no significant correlations between the principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the Principal Leadership Questionnaire. Pearson product-moment (zero-order) correlation coefficients were calculated for the relationships among the one factor of principal managerial leadership (Interactive Processes), the two factors of principal instructional leadership (Instructional Improvement and Curriculum Improvement), and the six factors of principal transformational leadership (Identifying and Articulating a Vision, Providing an Appropriate Model, Fostering Group Goals, Providing Individualized Support, Providing Intellectual Stimulation, and Holding High Performance Expectations).

Table 13 contains the correlation matrix data for the Pearson product-moment correlations. Each of the principal leadership factors, Interactive Processes, Instructional Improvement, Curriculum Improvement, Developing a Vision, Providing a Model, Fostering Group Goals, Providing Support, Providing Intellectual Stimulation, and Holding High Performance Expectations, had significant correlations with the others.

Table 13

*Correlations: Principal Leadership Factors (n = 133)*

| Factor | Inst. Imp. | Curr. Imp. | Dev. Vision | Prov. Model | Foster Goals | Prov. Sup. | Intell. Stim. | Perf. Exp. |
|---|---|---|---|---|---|---|---|---|
| APE.F6 - Int. Proc | .767 ** | .803 ** | .590 ** | .559 ** | .493 ** | .482 ** | .483 ** | .433 ** |
| APE.F8- Inst. Imp. | | .899 ** | .517 ** | .512 ** | .444 ** | .472 ** | .483 ** | .388 ** |
| APE.F9 - Curr. Imp | | | .518 ** | .515 ** | .487 ** | .479 ** | .499 ** | .419 ** |
| PLQ.F1 - Dev. Vision | | | | .955 ** | .902 ** | .898 ** | .880 ** | .861 ** |
| PLQ.F1 - Prov. Model | | | | | .892 ** | .886 ** | .891 ** | .848 ** |
| PLQ.F2 - Foster Goals | | | | | | .857 ** | .867 ** | .840 ** |
| PLQ.F3 - Prov. Sup. | | | | | | | .873 ** | .831 ** |
| PLQ.F4 - Intell Stim. | | | | | | | | .856 ** |

** p < .001

*Summary*

An examination of the data revealed significant relationships among all nine factors of principal leadership. Therefore null hypothesis three was rejected.

*Hypothesis four*

The fourth hypothesis tested in this study was: There are no significant differences in principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership Questionnaire, when schools are grouped by student achievement as measured by scores on the Missouri Assessment Program (MAP). A general linear model was developed to test for significant differences in student achievement on the MAP subtests in Communication Arts and Mathematics when the schools are grouped into quartiles according to leadership factors. The Tukey multiple range method was used in a post hoc analysis of variance to identify significant differences in student achievement on each of the two subtests.

The means for the principal leadership factor ratings for each quartile of Communication Arts composite school averages are reported in Table 14. The school scores on the MAP were composite school averages of students scoring in the top two groups, Proficient and Advanced, on the subtest. Schools were grouped into quartiles by student achievement, with quartile 1 including those schools whose Communication Arts scores placed them in the lower 25% of the total sample and quartile 4 including those schools whose composite school averages placed them in the upper 25% of the total sample. Table 15 reports the post-hoc ANOVA for the differences of the means on the

Communication Arts subtest. There were no significant differences between the means of the factors on Communication Arts.

Table 14

*Means for Principal Leadership Factor Quartiles: Scores grouped by Communication Arts Quartiles (n = 133)*

| | Achiev. Quartile | N | Mean | Std. Deviation | Std. Error |
|---|---|---|---|---|---|
| APE Factor 6 | 1 | 33 | 4.9048 | .57383 | .09989 |
| Interactive Processes | 2 | 34 | 4.7650 | .67623 | .11597 |
| | 3 | 33 | 5.0282 | .53108 | .09245 |
| | 4 | 33 | 5.0576 | .45584 | .07935 |
| | Total | 133 | 4.9376 | .57139 | .04955 |
| APE Factor 8 | 1 | 33 | 4.9036 | .61477 | .10702 |
| Instructional | 2 | 34 | 4.7326 | .70093 | .12021 |
| Improvement | 3 | 33 | 5.0942 | .55886 | .09728 |
| | 4 | 33 | 5.0506 | .65527 | .11407 |
| | Total | 133 | 4.9437 | .64393 | .05584 |
| APE Factor 9 | 1 | 33 | 4.8861 | .70274 | .12233 |
| Curriculum | 2 | 34 | 4.7450 | .63084 | .10819 |
| Improvement | 3 | 33 | 5.0676 | .62592 | .10896 |
| | 4 | 33 | 5.0642 | .42335 | .07370 |
| | Total | 133 | 4.9392 | .61326 | .05318 |

*Table continued next two pages*

| | | | | | |
|---|---|---|---|---|---|
| PLQ Factor 1 Vision Identification | 1 | 33 | 4.5721 | .81237 | .14142 |
| | 2 | 34 | 4.5962 | .89714 | .15386 |
| | 3 | 33 | 4.8439 | .82134 | .14298 |
| | 4 | 33 | 4.8270 | .47256 | .08226 |
| | Total | 133 | 4.7089 | .77128 | .06688 |
| PLQ Factor 2 Modeling | 1 | 33 | 4.5827 | .84753 | .14754 |
| | 2 | 34 | 4.4832 | .94769 | .16253 |
| | 3 | 33 | 4.8388 | .89291 | .15544 |
| | 4 | 33 | 4.7809 | .50532 | .08796 |
| | Total | 133 | 4.6700 | .82154 | .07124 |
| PLQ Factor 3 Goal Acceptance | 1 | 33 | 4.6267 | .67695 | .11784 |
| | 2 | 34 | 4.6979 | .81143 | .13916 |
| | 3 | 33 | 4.8224 | .69242 | .12054 |
| | 4 | 33 | 4.8609 | .45189 | .07866 |
| | Total | 133 | 4.7516 | .67106 | .05819 |
| PLQ Factor 4 Individualized Support | 1 | 33 | 4.7527 | .73247 | .12751 |
| | 2 | 34 | 4.7494 | .79884 | .13700 |
| | 3 | 33 | 4.9176 | .78860 | .13728 |
| | 4 | 33 | 5.0155 | .32017 | .05573 |
| | Total | 133 | 4.8580 | .69145 | .05996 |
| PLQ Factor 5 Intellectual Stimulation | 1 | 33 | 4.5745 | .76892 | .13385 |
| | 2 | 34 | 4.6106 | .73333 | .12577 |
| | 3 | 33 | 4.8355 | .70662 | .12301 |

| | | | | | |
|---|---|---|---|---|---|
| | 4 | 33 | 4.7658 | .42163 | .07340 |
| | Total | 133 | 4.6959 | .67347 | .05840 |
| PLQ Factor 6 High Performance Expectations | 1 | 33 | 4.8094 | .76807 | .13370 |
| | 2 | 34 | 4.8659 | .71012 | .12178 |
| | 3 | 33 | 4.9430 | .78338 | .13637 |
| | 4 | 33 | 4.9936 | .37120 | .06462 |
| | Total | 133 | 4.9027 | .67547 | .05857 |

Table 15

*Post Hoc ANOVA Test for Differences in Means on the Communication Arts Subtest*

*Tukey Multiple Range Test (n = 133)*

| | Leadership Factor Quartiles | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| APE.F6 - Inter. Pro. | Between Groups | 1.794 | 3 | .598 | 1.868 | .138 |
| | Within Groups | 41.302 | 129 | 320 | | |
| | Total | 43.096 | 132 | | | |
| APE.F8 - Instruct. Ldshp. - | Between Groups | 2.692 | 3 | .897 | 2.225 | .088 |
| | Within Groups | 52.041 | 129 | .403 | | |
| | Total | 45.734 | 132 | | | |

*Table continued next page*

| | | | | | | |
|---|---|---|---|---|---|---|
| APE.F9 - Curric. Ldshp. | Between Groups | 2.435 | 3 | .812 | 2.218 | .089 |
| | Within Groups | 47.208 | 129 | .366 | | |
| | Total | 48.643 | 132 | | | |
| PLQ.F1 - Vision | Between Groups | 2.111 | 3 | .704 | 1.188 | .317 |
| | Within Groups | 7.412 | 129 | .592 | | |
| | Total | 78.523 | 132 | | | |
| PLQ.F2 – Modeling | Between Groups | 2.783 | 3 | .928 | 1.387 | .250 |
| | Within Groups | 86.307 | 129 | .669 | | |
| | Total | 89.091 | 132 | | | |
| PLQ.F3 – Goal | Between Groups | 1.173 | 3 | .391 | .865 | .461 |
| | Within Groups | 58.269 | 129 | .452 | | |
| | Total | 59.422 | 132 | | | |
| PLQ.F4 - Individ. Support | Between Groups | 1.702 | 3 | .567 | 1.192 | .316 |
| | Within Groups | 6 1.408 | 129 | .476 | | |
| | Total | 63.110 | 132 | | | |
| PLQ.F5 – Intellect. Stimulation | Between Groups | 1.537 | 3 | .512 | 1.133 | .338 |
| | Within Groups | 58.333 | 129 | .452 | | |
| | Total | 59.870 | 132 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| PLQ.F6 – High Expectations | Between Groups | .660 | 3 | .220 | .476 | .699 |
| | Within Groups | 59.566 | 129 | .462 | | |
| | Total | 60.226 | 132 | | | |

The means for the principal leadership factor ratings for each quartile of Mathematics scores are reported in Table 16. The school scores on the MAP were composite school averages of students scoring in the top two groups, Proficient and Advanced, on the subtest. Schools were grouped into quartiles by student achievement; with quartile 1 including those schools whose Mathematics scores placed them in the lower 25% of the total sample and quartile 4 including those schools whose composite school averages placed them in the upper 25% of the total sample. Table 17 contains the data reported for the post-hoc ANOVA for the differences of the means on the Communication Arts subtest. There were significant differences in the quartile means on three factors, Interactive Processes, Identifying and Articulating a Vision, and Providing Intellectual Stimulation. Table 18 contains the quartiles with significant differences for those factors.

Table 16

*Means for Principal Leadership Factor Quartiles: Scores grouped by Mathematics Quartiles (n = 133)*

| | Achiev. Quartile | N | Mean | Std. Deviation | Std. Error |
|---|---|---|---|---|---|
| APE Factor 6 Interactive Processes | 1 | 33 | 4.6936 | .64294 | .11192 |
| | 2 | 34 | 5.0588 | .56297 | .09655 |

| | | | | | |
|---|---|---|---|---|---|
| | 3 | 33 | 4.9209 | .54857 | .09549 |
| | 4 | 33 | 5.0733 | .45754 | .07965 |
| | Total | 133 | 4.9376 | .57139 | .04955 |
| APE Factor 8 Instructional Improvement | 1 | 33 | 4.7197 | .64353 | .11202 |
| | 2 | 34 | 5.0435 | .57521 | .09865 |
| | 3 | 33 | 4.9261 | .64785 | .11278 |
| | 4 | 33 | 5.0824 | .67297 | .11715 |
| | Total | 133 | 4.9437 | .64393 | .05584 |
| APE Factor 9 Curriculum Improvement | 1 | 33 | 4.7358 | .60977 | .10615 |
| | 2 | 34 | 4.9894 | .58177 | .09977 |
| | 3 | 33 | 4.9136 | .74643 | .12994 |
| | 4 | 33 | 5.1167 | .44139 | .07684 |
| | Total | 133 | 4.9392 | .61326 | .05318 |
| PLQ Factor 1 Vision Identification | 1 | 33 | 4.3930 | .80749 | .14057 |
| | 2 | 34 | 4.7597 | .84279 | .14454 |
| | 3 | 33 | 4.8858 | .77777 | .13539 |
| | 4 | 33 | 4.7958 | .56454 | .09827 |
| | Total | 133 | 4.7089 | .77128 | .06688 |
| PLQ Factor 2 Modeling | 1 | 33 | 4.3803 | .84672 | .14740 |
| | 2 | 34 | 4.7047 | .92704 | .15899 |
| | 3 | 33 | 4.8267 | .83136 | .14472 |
| | 4 | 33 | 4.7673 | .60566 | .10543 |
| | Total | 133 | 4.6700 | .82154 | .07124 |

| | | | | | |
|---|---|---|---|---|---|
| PLQ Factor 3 Goal Acceptance | 1 | 33 | 4.5061 | .68409 | .11908 |
| | 2 | 34 | 4.8076 | .74598 | .12794 |
| | 3 | 33 | 4.8933 | .69196 | .12045 |
| | 4 | 33 | 4.7976 | .49849 | .08678 |
| | Total | 133 | 4.7516 | .67106 | .05819 |
| PLQ Factor 4 Individualized Support | 1 | 33 | 4.5721 | .74538 | .12975 |
| | 2 | 34 | 4.9253 | .78627 | .13484 |
| | 3 | 33 | 4.9548 | .69083 | .12026 |
| | 4 | 33 | 4.9776 | .43393 | .07554 |
| | Total | 133 | 4.8580 | .69145 | .05996 |
| PLQ Factor 5 Intellectual Stimulation | 1 | 33 | 4.4058 | .76388 | .13297 |
| | 2 | 34 | 4.7632 | .63723 | .10928 |
| | 3 | 33 | 4.8755 | .69630 | .12121 |
| | 4 | 33 | 4.7373 | .50715 | .08828 |
| | Total | 133 | 4.6959 | .67347 | .05840 |
| PLQ Factor 6 High Performance Expectations | 1 | 33 | 4.6948 | .70421 | .12259 |
| | 2 | 34 | 4.9615 | .75790 | .12998 |
| | 3 | 33 | 4.9648 | .70416 | .12258 |
| | 4 | 33 | 4.9879 | .48811 | .08497 |
| | Total | 133 | 4.9027 | .67547 | .05857 |

Table 17

*Post Hoc ANOVA Test for Differences in Means on the Mathematics Subtest Tukey Multiple Range Test (n = 133)*

| Leadership Factor Quartiles | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| APE.F6 - Inter. Pro. | Between Groups | 3.081 | 3 | 1.027 | 3.311 | .022 |
| | Within Groups | 40.016 | 129 | .310 | | |
| | Total | 43.096 | 132 | | | |
| APE.F8 - Instruct.Ldshp. - | Between Groups | 2.640 | 3 | .880 | 2.179 | .094 |
| | Within Groups | 52.094 | 129 | .404 | | |
| | Total | 54.734 | 132 | | | |
| APE.F9 - Curric. Ldshp. | Between Groups | 2.512 | 3 | .837 | 2.292 | .081 |
| | Within Groups | 47.131 | 129 | .365 | | |
| | Total | 49.643 | 132 | | | |
| PLQ.F1 - Vision | Between Groups | 4.661 | 3 | 1.554 | 2.174 | .048 |
| | Within Groups | 73.861 | 129 | .660 | | |
| | Total | 78.523 | 132 | | | |
| PLQ.F2 – Modeling | Between Groups | 3.933 | 3 | 1.311 | 1.986 | .119 |
| | Within Groups | 85.158 | 129 | .573 | | |
| | Total | 89.091 | 132 | | | |
| PLQ.F3 – Goal | Between Groups | 2.829 | 3 | .943 | 2.149 | .097 |
| | Within Groups | 56.613 | 129 | .439 | | |
| | Total | 59.442 | 132 | | | |

*Table continued next page*

| | | | | | | |
|---|---|---|---|---|---|---|
| PLQ.F4 - Individ. Support | Between Groups | 3.632 | 3 | 1.211 | 2.626 | .053 |
| | Within Groups | 59.478 | 129 | .461 | | |
| | Total | 63.110 | 132 | | | |
| PLQ.F5 – Intellect. Stimulation | Between Groups | 4.053 | 3 | 1.351 | 3.122 | .028 |
| | Within Groups | 55.817 | 129 | .433 | | |
| | Total | 59.870 | 132 | | | |
| PLQ.F6 – High Expectations | Between Groups | 1.910 | 3 | .637 | 1.408 | .243 |
| | Within Groups | 58.316 | 129 | .452 | | |
| | Total | 50.226 | 132 | | | |

Table 18

*Quartile Means for Leadership Factors With Significant Differences*

| Leadership Factor | Quartile Means | | | | Sig. Diff. ($p < .05$) |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | |
| APE. F.6 – Int. Process. | 4.69 | 5.06 | 4.92 | 5.07 | 2 >1<br>4 > 1 |
| PLQ. F.1- Ident. & Artic. Vision | 4.39 | 4.76 | 4.86 | 4.80 | 3 >1 |
| PLQ.F.2- Intel. Stim. | 4.41 | 4.76 | 4.86 | 4.73 | 3 >1 |

*Summary:* A post hoc analysis of variance revealed significant differences in principal leadership factors Interactive Processes, Identifying and Articulating a Vision, and Providing Intellectual Stimulation on the Mathematics subtests when schools were grouped into quartiles according to student achievement. Therefore, null hypothesis four was rejected.

*Hypothesis five*

The fifth hypothesis tested in this study was: There are no significant predictive linear relationships between principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership Questionnaire, on student achievement as measured by scores on the Missouri Assessment Program (MAP) in Missouri middle level schools, when controlling for school socio-economic status. Two regression equations were estimated for each subtest of the MAP. In both equations student achievement was the dependent variable; in the first equation, the school demographic Free and Reduced Lunch served as the independent variable, while in the second equation the principal leadership variables were added. Entering the school demographic first produced an estimate of the relationship between the demographic variable and student achievement. Entering the principal leadership factors second produced an estimate of the relationship between the leadership factor and student achievement above and beyond the relationship between the demographic and student achievement.

The results of the fifth hypothesis are organized in two sections corresponding to the student achievement scores on the two subtests of the MAP: Communication Arts and Mathematics. Within each of the two sections, the respective effects of school demographics and principal leadership factors are analyzed.

The results of the regression equations estimated for student achievement on the Communication Arts subtest are contained in Tables 19 and 20. Table 19 contains the results of Model 1, which estimated the relationship between the school demographic

Free and Reduced Lunch and student achievement. The demographics model alone accounted for a significant amount of variability of Communication Arts scores ($R^2$ = .522, F = 142.957, p = .000). Model 1 explained 51% of the variance in Communication Arts scores. Table 20 contains the results of Model 2, which estimated the relationship between the principal leadership factor, Instructional Improvement and Communication Arts scores above and beyond the relationship between the school demographic, Free and Reduced Lunch, and Communication Arts scores. The second model accounted for a significant amount of the variability of Communication Arts scores ($R^2$ = .559, F = 82.374, p = .000). Model 2 explained 55% of the variance in Communication Arts scores, an increase of 3% over Model 1. Table 21 reports the results for the remaining principal leadership factors, none of which accounted for a significant amount of the variance.

Table 19

*Regression of Selected Demographics on Communication Arts Scores (n = 132)*

Model Summary

| Model | R | $R^2$ | Adjusted $R^2$ | Std. Error |
|---|---|---|---|---|
| 1 | .722 | .522 | .518 | 7.872 |

ANOVA

| Model | | Sum of Squares | df | Mean Square | F | Sig. F |
|---|---|---|---|---|---|---|
| 1 | Regression | 8,857.673 | 1 | 8,857.673 | 142.957 | .000 |
| | Residual | 8,116.820 | 131 | 61.960 | | |
| | Total | 16,974.494 | 132 | | | |

*Table continued next page*

Coefficients (Model 1)

| Variables | B | Std. Error | β | T | Sig. t |
|---|---|---|---|---|---|
| (Constant) | 64.067 | 1.671 | | 38.345 | .000 |
| F/R Lunch | -.440 | .037 | -.722 | -11.956 | .000 |

Table 20

*Regression: Demographics and Principal Leadership Factors on Communication Arts (n = 132)*

Model Summary

| Model | R | $R^2$ | Adjusted $R^2$ | Std. Error |
|---|---|---|---|---|
| 2 | .748 | .559 | .552 | 7.589 |

ANOVA

| Model | Sum of Squares | df | Mean Square | F | Sig. F |
|---|---|---|---|---|---|
| 2 Regression | 9,487.818 | 2 | 4.743.909 | 82.374 | .000 |
| Residual | 7,486.676 | 130 | 57.590 | | |
| Total | 16,974.494 | 132 | | | |

Coefficients (Model 2)

| Variables | B | Std. Error | β | t | Sig. t |
|---|---|---|---|---|---|
| (Constant) | 47.474 | 5.269 | | 38.345 | .000 |
| F/R Lunch | -.444 | .035 | -.730 | -12.524 | .000 |
| APE.F.8 – Inst. Imp | 3.396 | 1.027 | .193 | 3.308 | .001 |

Table 21

*Principal Leadership Factors excluded from Model 2*

| Factor | Beta In | t | Sig. |
|---|---|---|---|
| APE.F.6 – Interactive Processes | .077(b) | -.845 | .400 |
| APE.F.9 – Curriculum Improvement | -.193(b) | -.1456 | .148 |
| PLQ.F.1- Vision Identification | ..082(b) | 1.200 | .232 |
| PLQ.F.2 – Providing a Model | .084(b) | 1.234 | .219 |
| PLQ.F.3 – Goal Acceptance | .046(b) | .711 | .479 |
| PLQ.F.4 – Individualized Support | .099(b) | 1.506 | .135 |
| PLQ.F.5 – Intellectual Stimulation | .052(b) | .782 | .435 |
| PLQ.F.6 – Performance Expectations | .038(b) | .592 | .555 |

(b) Predictors in the Model: (Constant), Free/Reduced Lunch, APE Factor 8 – Instructional Improvement.

The results of the regression equations estimated for student achievement on the Mathematics subtest are contained in Tables 22 and 23. Table 22 contains the results of Model 1, which estimated the relationship between the school demographic Free and Reduced Lunch and student achievement. The demographics model alone accounted for a significant amount of variability of Mathematics scores ($R^2$ = .525, F = 144.497, p = .000). Model 1 explained 52.1% of the variance in Mathematics scores.

The results of Model 2, which estimated the relationship between the principal leadership factor, Instructional Improvement and Mathematics scores above and beyond the relationship between the school demographic variable Free and Reduced Lunch are reported in Table 23. The second model accounted for a significant amount of the variability of Mathematics scores ($R^2$ = .572, F = 86.893, p = .000). Model 2 explained

56.5% of the variance in Mathematics scores, an increase of 4.5% over Model 1. Table 25 reports the results for the remaining principal leadership factors, none of which accounted for a significant amount of the variance.

Table 22

*Regression of Selected Demographics on Mathematics Scores (n = 132)*

Model Summary

| Model | R | $R^2$ | Adjusted $R^2$ | Std. Error |
|---|---|---|---|---|
| 1 | .724 | .525 | .521 | 8.927 |

ANOVA

| Model | Sum of Squares | df | Mean Square | F | Sig. F |
|---|---|---|---|---|---|
| 1 Regression | 11.522.052 | 1 | 11.522.052 | 144.597 | .000 |
| Residual | 10,438.569 | 131 | 79.684 | | |
| Total | 21,960.622 | 132 | | | |

Coefficients (Model 1)

| Variables | B | Std. Error | β | t | Sig. t |
|---|---|---|---|---|---|
| (Constant) | 66.570 | 1.895 | | 35.134 | .000 |
| F/R Lunch | -.502 | .042 | -.724 | -12.025 | .000 |

Table 23

*Regression: Demographics and Principal Leadership Factors on Mathematics (n = 132)*

Model Summary

| Model | R | $R^2$ | Adjusted $R^2$ | Std. Error |
|---|---|---|---|---|
| 2 | .756 | .572 | .565 | 8.502 |

ANOVA

| Model | Sum of Squares | df | Mean Square | F | Sig. F |
|---|---|---|---|---|---|
| 2 Regression | 12.562.925 | 2 | 6,281.463 | 86.893 | .000 |
| Residual | 9,397.697 | 130 | 72.790 | | |
| Total | 21,960.622 | 132 | | | |

Coefficients (Model 2)

| Variables | B | Std. Error | β | t | Sig. t |
|---|---|---|---|---|---|
| (Constant) | 45.243 | 5.903 | | 7.664 | .000 |
| F/R Lunch | -508 | .040 | -.733 | -12.766 | .000 |
| APE.F.8 – Inst. Imp | 4.364 | 1.150 | .218 | 3.795 | .000 |

Table 24

*Principal Leadership Factors excluded from Model 2*

| Factor | Beta In | t | Sig. |
|---|---|---|---|
| APE.F.6 – Interactive Processes | .045(b) | .501 | .617 |
| APE.F.9 – Curriculum Improvement | -.060(b) | -.459 | .647 |

*Table continued next page*

| | | | |
|---|---|---|---|
| PLQ.F.1- Vision Identification | .104(b) | 1.556 | .122 |
| PLQ.F.2 – Providing a Model | .106(b) | 1.601 | .112 |
| PLQ.F.3 – Goal Acceptance | .051(b) | .789 | .432 |
| PLQ.F.4 – Individualized Support | .105(b) | 1.614 | .109 |
| PLQ.F.5 – Intellectual Stimulation | .063(b) | .965 | .336 |
| PLQ.F.6 – Performance Expectations | .011(b) | .1701 | .865 |

(b) Predictors in the Model: (Constant), Free/Reduced Lunch, APE Factor 8 – Instructional Improvement.

*Summary*

Regression equation estimates indicated that the leadership factor, Instructional Improvement explained variability in student achievement on the Communication Arts and Mathematics subtests of the MAP. Therefore null Hypothesis 5 was rejected.

## Summary of Findings

*Descriptive findings*

A total of 849 teachers in 133 middle level schools responded to a survey measuring principal managerial and principal instructional leadership. Items from the Audit of Principal Effectiveness (adapted from Valentine and Bowman, 1988) were included in a survey (Appendix A) and used to assess one factor of principal managerial leadership and two factors of principal instructional leadership. A total of 854 teachers in 133 middle level schools responded to a survey measuring principal transformational leadership. A total of 854 teachers in 133 middle level schools responded to a survey measuring principal transformational leadership. Items from the Principal Leadership Questionnaire (adapted from Jantzi and Leithwood, 1996) were included in a survey

(Appendix B) and used to provide data about principal transformational leadership behaviors. The Principal Leadership Questionnaire measures six factors of transformational leadership: Developing a Vision, Providing a Model, Fostering Group Goals, Providing Individual Support, Providing Intellectual Stimulation, and Holding High Performance Expectations.

Student achievement data were analyzed using test results from the Missouri Assessment Program (MAP). Data from the two surveys and the spring 2006 MAP results on the Communication Arts and Mathematics subtests were analyzed using Pearson product-moment correlations, partial correlations, post-hoc analysis of variance, and multiple linear regression equations estimates.

For the Educational Program domain of the Audit of Principal Effectiveness, the factors, Interactive Processes and Curriculum Improvement had overall means of 4.94 and the factor, Instructional Improvement had a mean of 4.92. For the Principal Leadership Questionnaire, the transformational leadership factor, Holding High Performance Expectations had the highest overall factor mean (4.91), followed in descending order by the factors, Providing Individualized Support (4.87), Fostering the Acceptance of Group Goals (4.76), Identifying and Articulating a Vision (4.72), Providing Intellectual Stimulation (4.70), and Providing an Appropriate Model (4.68).

*Hypothesis Testing*

Hypothesis One. The first hypothesis, there are no significant correlations between selected demographic variables of the principal and principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the

Principal Leadership Questionnaire, was rejected, because the principal demographic variables, Total Years as a Teacher, Counselor, or Non-administrator at All Levels had a significant correlation with the principal leadership factor, Providing Individualized Support, and Total Years as an Assistant Principal at All Levels had a significant correlation with the principal leadership factor Identifying and Articulating a Vision, with the latter relationship being negative.

Hypothesis Two: The second hypothesis, there are no significant correlations between principal characteristics and school demographic variables, and student achievement as measured by scores on the Missouri Assessment Program (MAP) in Missouri middle level schools, was rejected because an analysis of Pearson product-moment (zero-order) correlation coefficients revealed that a number of variables or factors had significant correlations with student achievement on at least one MAP subtest. The school demographic variables Free and Reduced Lunch, Average Daily Attendance, Enrollment, and FTE correlated with both Communication Arts and Mathematics scores. The principal demographic variable, Total Years as an Assistant Principal at all levels, had a significant correlation with Communication Arts, while Total Years as an Assistant Principal at the Middle Level had significant relationships with both Communication Arts and Mathematics, and Total Years as a Principal at the Current School had a significant correlation with Mathematics. The principal leadership factor, Providing Individual Support had a significant zero order correlation with Communication Arts. The principal leadership factors, Instructional Improvement, Curriculum Improvement, Identifying and Articulating a Vision, Providing Individual Support, and Providing Intellectual Stimulation and Holding High Performance

Expectations correlated significantly with Mathematics. Partial correlations, controlling for Free and Reduced Lunch, showed significant relationships between the seven principal leadership factors Instructional Improvement, Curriculum Improvement, Identifying and Articulating a Vision, Providing a Model, Fostering Group Goals, Providing Individual Support, and Providing Intellectual Stimulation with both tests, and the factors, Holding High Expectations and Interactive Processes correlating significantly with Communication Arts and Mathematics respectively.

Hypothesis Three: The third hypothesis, there are no significant correlations between the principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the Principal Leadership Questionnaire, was rejected because there were significant relationships among all nine factors of principal leadership.

Hypothesis Four: The fourth hypothesis, there are no significant differences in principal leadership factors measuring managerial leadership and instructional leadership as measured by the Audit of Principal Effectiveness as measured by the Audit of Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership Questionnaire, when schools are grouped by student achievement as measured by scores on the Missouri Assessment Program (MAP), was rejected because there were significant differences among three principal leadership factor means, Interactive Processes, Identifying and Articulating a Vision, and Providing Intellectual Stimulation on the Mathematics subtests when schools were grouped into quartiles according to student achievement.

Hypothesis Five: The fifth hypothesis, there are no significant predictive linear relationships between principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership Questionnaire, on student achievement as measured by scores on the Missouri Assessment Program (MAP) in Missouri middle level schools, when controlling for school socio-economic status, was rejected because the leadership factor, "Instructional Improvement", explained variability in student achievement on the Communication Arts and Mathematics subtests of the MAP.

# Chapter 5

# DISCUSSION OF FINDINGS

## Introduction

The role of the school principal has changed dramatically in its relatively short history. Emerging first as the role of principal teacher in the late 1800's, the principalship gained status as a distinctly separate organizational role after the turn of the century. Changes in societal and political contexts have impacted America's schools, and these shifting environments have also impacted the prevailing conceptualizations of the principal's role. In many cases, the environmental shifts occurred contemporaneously with the emergence of new theories of effective leadership. Times of uncertainty and discontent challenged prevalent norms and created the opportunity for these new ideas to be considered and in many cases adopted. As a result of constant social, economic, and political changes and new theories that were arising concurrent with those changes, the role of the principal is much different and far more complex than it was a mere century ago.

Leadership in many organizations at the turn of the twentieth century was perceived to be managerial in nature. The role of the leader was to promote organizational efficiency and success. Tasks and functions of the role emphasized budgets, buildings, staff, and students. College course work that was developed to train aspiring principals focused on these areas (Beck and Murphy, 1993). Schools were becoming both larger and more complex. Discussions at the turn of the century focused on such issues as the number of years that students should spend in school, whether

schools should focus on college or career preparation, and the correct configuration of grades at different levels of schooling (Valentine et al., 2004). The latter issue occurred as other literature spoke to the need for schools to address the unique developmental needs of pre- and young adolescents. This challenge provided an opportunity for the emergence of a separate level of education for these students, and America's junior highs were born (Wiles and Bondi, 1986; Clark and Clark, 1994).

The model of leader-as-manager came under attack as the twentieth century unfolded. Workers began to speak out against the dehumanizing nature of their work. Theorists such as Maslow (1954) and McGregor (1960) called attention to the needs and motivations of individuals, and their work suggested that organizations might benefit if management would attend to both.

These organizational developments preceded the challenges to the principal-manager model in the 1950's and 1960's that arose when America's schools began to come under increasingly intense scrutiny. Barnett and Whitaker (1996) viewed the challenges facing America's schools in the latter half of the century as coming in waves with the first wave focusing on the improvement of math and science in the 1950's and 60's; the second wave focusing on equity and excellence in the 1970's and 80's; and a third wave, in the 1990's, focusing on school improvement and reform.

The calls for curricular change in the 1960's occurred at the same time that innovations such as team teaching, teacher advisories, and interdisciplinary curricula were being proposed by people such as Trump and Georgiades (Valentine, et al., 2004). Concurrent with these developments, America's schools were becoming overcrowded

with the increased numbers of baby-boomers who were by then enrolled at all levels. The overcrowding led to considerations of school reconfiguration.

At that same time, theory called once again for changes to occur at the middle level. The work of Koos (1927), Gruhn and Douglass (1947), Lounsbury (1954), Van Til, Vars, and Lounsbury (1961) and others influenced a movement to a new model of middle level education. Middle schools, owing much to the innovative thinking of the time, began to take the place of junior high schools, which in many cases had held on to high school structures and processes.

As America's cities grew and school desegregation was mandated by court decisions and federal policy, concerns were directed at the educational inequities that existed. This coincided with larger societal concerns about the effects of poverty and led to a call for more effective schools for America's urban poor (Edmonds, 1979). As this second wave of change grew in strength, literature focused on the characteristics of effective schools. Researchers such as Brookover and Lezotte (1977) described the qualities of these schools. One such characteristic identified in the literature was strong principal leadership. This model of leadership differed from the earlier model with its stronger focus on the instructional activities of the school.

The challenges to schools escalated due to a variety of economic, social, and political causes. The changing, and many believed, declining economy of the United States along with disappointing scores on measures such as TIMMS and NAEP led to a third wave, the age of reform. Schools were called on to restructure, and earlier models of leadership were considered inadequate for that challenge. Leadership theory pointed to a

new model, one first discussed by Burns (1978) and labeled the transforming or transformational leader.

Calls for schools to respond to social, economic, and political changes included eras of school accountability through standardized testing. First this took the form of minimal competency or basic skills testing (Riegel and Lovell, 1980), followed later by mastery testing. Ultimately this trend led to the mandates of high-stakes testing for schools, especially after the reauthorization of ESEA, more commonly known as No Child Left Behind (NCLB), in 2002. Principals have been held accountable for school results throughout this era and now face even greater accountability (Finn, 1987; and Morris, 1987; DeMoss, 2002; Fowler, 2004).

It has been suggested that no one model of leadership completely describes the multifaceted role of school principal and that principals must integrate a variety of orientations in their roles (Deal and Peterson, 1994; Cuban, 1988; Marks and Printy, 2003; Day, 2000) This suggests a more comprehensive model of principal leadership especially as principals deal with the context created by the provisions of NCLB. Given the dearth of research on the impact of principal leadership on student achievement, there is a need for such research, particularly at the middle level. This study sought to add to the research on the effects of principal leadership on student achievement, especially the relative impact of principal managerial, principal instructional, and principal transformational leadership on student outcomes. In so doing, it sought to add to a similar study conducted by Prater (2004), which focused on the relationship of principal leadership and student achievement in Missouri's high schools.

## Overview of the Study

The purpose of this study was to examine the relative impact of principal managerial leadership, principal instructional leadership, and principal transformational leadership on student achievement. The method of analysis was quantitative, with survey data and test results being used to determine (a) if any relationships exist between the demographic variables of the principal and the factors of managerial leadership, instructional leadership, and transformational leadership; (b) if any relationships exist between demographic variables of the school, principal leadership characteristics, and student achievement; (c) if any relationships exist among the factors measuring principal managerial leadership, principal instructional leadership, and principal transformational leadership; and, (d) if any relationships exist between the factors measuring principal managerial leadership, principal instructional leadership, and principal transformational leadership and student achievement.

The study was part of a larger study conducted by the Middle Level Leadership Center at the University of Missouri-Columbia. A total of 335 schools were invited to participate in a study of middle level education, and 188 responded. Five sets of surveys were sent to each school, and school secretaries were asked to distribute the sets randomly to teachers and other certificated staff members. Schools were included in this study of middle level leadership if principals were in at least their second year at the school and if the number of surveys returned was equal to the school's reported FTE divided by five multiplied by a return rate of 40% (FTE/5 x 40). A total of 133 schools met these criteria. A total of 1,703 teachers participated in the two surveys used for this study, with 849 responding to a survey on managerial and instructional leadership and

854 responding to a survey on transformational leadership. These schools were representative of the diversity of Missouri middle level schools with regard to the variables of size and grade configurations.

One survey (Appendix A) utilized items from the Audit of Principal Effectiveness (adapted from Valentine and Bowman, 1988) to collect data on one factor of principal managerial leadership, Interactive Processes, and two factors of principal instructional leadership, Instructional Improvement and Curriculum Improvement. A second survey (Appendix B) utilized items from the Principal Leadership Questionnaire (adapted from Jantzi and Leithwood, 1996) to collect data on six factors of transformational leadership: Identifying and Articulating a Vision, Providing an Appropriate Model, Fostering the Acceptance of Group Goals, Providing Individualized Support, Providing Intellectual Stimulation, and Holding High Performance Expectations.

Student achievement data for the study consisted of spring 2006 Missouri Assessment Program (MAP) test results for the Communication Arts and Mathematics subtests. The Missouri MAP testing program is performance-based assessment system that is designed to measure student achievement on Communication Arts and Mathematics. The MAP was mandated for all grades, 6-8, for the first time during the 2005-06 school year. With the passage of NCLB, the MAP has become the measure used to determine school success in meeting the Adequate Yearly Progress requirements of NCLB. Data from the two surveys and the spring 2006 MAP results on Communication Arts and Mathematics subtests were aggregated and analyzed using Pearson product-moment correlations, partial correlations, post-hoc analysis of variance, and multiple linear regression equation estimates.

## Research Questions

The following research questions were examined during the completion of this study:

1. What, if any, relationships exist between selected demographic variables of the principal and selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership?
2. What, if any, relationships exist between principal characteristics and school demographic variables, and student achievement as measured by scores on the Missouri Assessment Program (MAP) in Missouri middle level schools?
3. What, if any, relationships exist among selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership in Missouri middle level schools?
4. What, if any, significant differences exist in principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership in Missouri middle level schools when schools are grouped by student achievement as measured by scores on the Missouri Assessment Program (MAP)?
5. What, if any, relationships exist between selected principal leadership factors measuring managerial leadership, instructional leadership, and transformational leadership and student achievement as measured by sores on the Missouri Assessment Program (MAP) in Missouri middle level schools, when controlling for school socio-economic status?

## Null Hypotheses

The following hypotheses were tested in this study:

$H_{01}$: There are no significant correlations between selected demographic variables of the principal and principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the Principal Leadership Questionnaire.

$H_{02}$: There are no significant correlations between principal characteristics and school demographic variables, and student achievement as measured by scores on the Missouri Assessment Program (MAP) in Missouri middle level schools.

$H_{03}$: There are no significant correlations between the principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the Principal Leadership Questionnaire.

$H_{04}$: There are no significant differences in principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership Questionnaire, when schools are grouped by student achievement as measured by scores on the Missouri Assessment Program (MAP).

$H_{05}$: There are no significant predictive linear relationships between principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership

Questionnaire and student achievement as measured by scores on the Missouri Assessment Program (MAP) in Missouri middle level schools, when controlling for school socio-economic status.

## Summary of Findings

*Descriptive results*

A total of 1,703 teachers from 133 different middle level schools participated in this study. Demographic information as reported by the principals indicated that the schools ranged in size from 70 to 1,220 students with a mean enrollment of 492.09 students per school. Socio-economic status, as represented by free and reduced lunch percentages, ranged from 0 to 98 with a mean of 40.90%. Average daily attendance for the schools ranged from 92% to 98% with a mean of 93.51. School FTE as reported by principals ranged from 5 to 89 with a mean of 36.33.

Principals also responded to a survey of personal demographic information that included gender, ethnicity, age, total years experience as a teacher, total years experience as a teacher at the middle level, total years as an assistant principal, total years as an assistant principal at the middle level, total years as a principal, total years as a principal at the middle level, and total years principal at the current school.

A total of 63.1% of the respondents were male, and 36.9% were female, with 92.97% of the respondents being white and 7.03% African-American. Ages of the respondents ranged from 30 to 66 with a mean age of 45.55. Total years as a teacher, counselor, or other non-administrative staff member ranged from 2 to 28 with a mean of 10.78. Total years as a middle level teacher, counselor or other non-administrative position ranged from 1 to 28 with a mean of 5.55. Total years served as an assistant

principal at any level ranged from 1 to 15 with a mean of 3.05. Total years served as a middle level assistant principal ranged from 1 to 11 with a mean of 1.88. Total years served as a principal at any level ranged from 1 to 30 with a mean of 7.66. Total years served as a middle level principal ranged from 1 to 30 with a mean of 6.83. Finally, the total years served as principal at the current school ranged from 1 to 30 with a mean of 6.03.

A total of 849 teachers completed a survey (Appendix A) that included items from the Interactive Processes factor of the Audit of Principal Effectiveness (adapted from Valentine and Bowman, 1988) to measure their perceptions of the principal as a managerial leader. The Interactive Processes factor had a mean of 4.94. The survey also contained items from the Instructional Improvement and Curriculum Improvement factors from the Audit of Principal Effectiveness to assess teacher perceptions of the principal as an instructional leader. Curriculum Improvement had a higher mean (4.94) than Instructional Improvement (4.92).

A total of 854 teachers completed a survey (Appendix B) that included items from the Principal Leadership Questionnaire (adapted from Jantzi and Leithwood, 1996) to collect data on their perceptions of the principal as a transformational leader. The PLQ measures six factors of transformational leadership: Identifying and Articulating a Vision, Providing an Appropriate Model, Fostering the Acceptance of Group Goals, Providing Individualized Support, Providing Intellectual Stimulation, and Holding High Performance Expectations. The transformational leadership factor, Holding High Performance Expectations, had the highest overall factor mean (4.91) followed in descending order by Providing Individualized Support (4.87), Fostering the Acceptance

of Group Goals (4.76), Identifying and Articulating a Vision (4.72), Providing Intellectual Stimulation (4.70), and Providing an Appropriate Model (4.68).

Test results from the Communication Arts and Mathematics subtests of the spring 2006 MAP testing for each of the 133 middle schools included in this study were analyzed. Scores for each test in the Proficient and Advanced categories were combined and a school average determined for the percentage of students in the top two categories. The percentages for the schools ranged from 16.03% to 85% for Communication Arts and from 11.87% to 78.83% for Mathematics.

*Hypothesis Testing*

Hypothesis One. The first hypothesis, there are no significant correlations between selected demographic variables of the principal and principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the Principal Leadership Questionnaire, was rejected. The principal demographic variables, Total Years as a Teacher, Counselor, or Non-administrator at All Levels and Total Years as an Assistant Principal at All Levels had significant correlations with the leadership factors Providing Individualized Support and Identifying and Articulating a Vision respectively, with the latter relationship being negative.

Hypothesis Two: The second hypothesis, there are no significant correlations between principal characteristics and school demographic variables, and student achievement as measured by scores on the Missouri Assessment Program (MAP) in Missouri middle level schools, was rejected. Analysis of Pearson product-moment (zero-order) correlation coefficients revealed that a number of variables or factors had

significant correlations with student achievement on at least one MAP subtest. The school demographic variables Free and Reduced Lunch, Average Daily Attendance, Enrollment, and FTE, correlated with both Communication Arts and Mathematics scores with a negative correlation for the SES variable, Free and Reduced Lunch. When zero-order correlations were analyzed, the principal demographic variable Total Years as an Assistant Principal at All Levels had a significant correlation with the Communication Arts subtest; the variable, Total Years as an Assistant Principal at the Middle Level had a significant correlation with Mathematics and Communication Arts; and the variable, Total Years as a Principal at the Current School had a significant correlation with Mathematics. However, partial correlations showed no significant relationships between principal demographic variables and student achievement, when controlling for Free and Reduced Lunch.

The principal leadership factors Instructional Improvement, Curriculum Improvement, Identifying and Articulating a Vision, Providing an Appropriate Model, Fostering Group Goals, Providing Individual Support, and Providing Intellectual Stimulation correlated significantly with both Mathematics and Communication Arts. Holding High Expectations had a significant correlation with Communication Arts, and Interactive Processes had a significant correlation with Mathematics when partial correlations were run controlling for Free and Reduced Lunch.

Hypothesis Three: The third hypothesis, there are no significant correlations between the principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership as measured by the Principal Leadership Questionnaire,

was rejected. There were significant relationships among all nine factors of principal leadership.

Hypothesis Four: The fourth hypothesis, there are no significant differences in principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership Questionnaire, when schools are grouped by student achievement as measured by scores on the Missouri Assessment Program (MAP), was rejected. There were significant differences among the means of three factors of principal leadership when schools were grouped into quartiles by student achievement on the Mathematics subtest.

Hypothesis Five: The fifth hypothesis, there are no significant predictive linear relationships between principal leadership factors measuring managerial leadership and instructional leadership, as measured by the Audit of Principal Effectiveness, and factors of transformational leadership, as measured by the Principal Leadership Questionnaire on student achievement as measured by scores on the Missouri Assessment Program (MAP) in Missouri middle level schools, when controlling for school socio-economic status, was rejected. The leadership factor, Instructional Improvement, explained variability in student achievement on both the Communication Arts and Mathematics subtests of the MAP.

## Discussion

This section reviews the relationships between factors of principal managerial leadership, principal instructional leadership, and principal transformational leadership and student achievement. The discussion is organized into sections corresponding to

major findings of the study. The first section discusses findings with respect to relationships between principal demographic variables and principal leadership. The second section discusses findings for the relationships of demographic variables with student achievement. The third section contains the discussion of the relationship of principal leadership factors with student achievement.

*Relationships between demographic variables and principal leadership*

An examination of the data from hypothesis one revealed a significant ($p < .05$) relationship between the principal demographic variable, Years as a Teacher, Counselor, or other Non-administrative Position, with the leadership factor, Providing Individualized Support. Principal relationships with teachers, perhaps the most important of all school relationships, often determine the quality of principal leadership and are vital to school improvement (Bolman and Deal, 1993; Barth, 2000). This finding suggests that principals who have spent a greater number of years as a teacher, or in some other organizational role other than administrator, are better able to develop those important relationships.

This would be evidenced through the behaviors represented in the survey, such as providing for extended training to develop teachers' knowledge and skills; providing the necessary resources to support teachers' implementation of the school's program; treating teachers as individuals with unique needs and expertise; taking teachers' opinions into consideration when initiating actions that affect their work; and behaving in a manner that is thoughtful of teachers' personal needs.

It has been argued that principals at the middle level should focus on building strong relationships with teachers and on developing skills in teaming and shared decision making as they do (George and Grebing, 1992). Goleman, Boyatzis, and McKee

(2002) found that behaviors and characteristics such as articulating a shared goal, providing performance feedback which includes suggestions that facilitate goal attainment, discussing the personal aspirations of organizational members and providing feedback that makes references to those aspirations; drawing on their relative strengths, and creating harmony are behaviors that facilitate student achievement. It appears that a principal who has spent time in the classroom before moving to an administrative position will be perceived by her or his staff to be stronger on this variable, and may in turn, have an advantage in affecting student achievement.

A second principal variable, Total Years as an Assistant Principal at All Levels, had a significant ($p < .05$) negative relationship with the leadership factor, Identifying and Articulating a Vision. An examination of the questions included in the survey reveals that behaviors and characteristics associated with this factor include having the judgment and capacity to overcome obstacles, commanding respect from the faculty, exciting the faculty with what they may be able to accomplish as a team, making the faculty feel and act like leaders, and giving the faculty a sense of overall purpose for its leadership role. The question arises as to what might account for a negative relationship between tenure as an assistant principal and the ability to lead organizational visioning as described by this factor?

One possibility is that spending a number of years in the role of the assistant principal diminishes one's ability to lead visioning activities. While the position might not develop these skills, it seems unlikely that an extended tenure as an assistant would dull them. Perhaps, instead, the job descriptions of assistant principals are not compatible with the development of this set of behaviors and characteristics. A second explanation

for this relationship is that there may be something common to those individuals who have taken longer to "ascend" to the principalship that in turn correlates negatively with leadership in visioning. Perhaps those who take longer to ascend to a principalship simply require more time to develop the leadership skills necessary to become a principal, and perhaps those are some of the same skills seen as critcal to the ability to foster vision development for the school. In other words, the lack of visioning skills may hamper ascension to the principalship because those who appoint principals expect the principals to have that same competence.

Finally, Wiles and Bondi (1986); McEwin et al. (1996); and Valentine et al (2004) have argued that middle level schools must focus first on the specific needs of the students they serve. The variable under consideration in this relationship reflects the number of years as an assistant principal at *all* levels, and it is also possible that there have been some persons placed in principal positions at the middle level whose commitment to middle level education is less than it should be, at least in terms of inspiring a shared vision in organizational members.

*Relationship of demographic variables and student achievement*

The relationships of school demographic variables, principal demographic variables and leadership characteristics with student achievement, as measured by student scores on the MAP test, were analyzed in Hypothesis 2. The analyses revealed a number of relationships of significance.

*School demographic variables.*

An examination of the regression equation estimates that were analyzed in Hypothesis 5 revealed that the school demographic variable for socio-economic status,

Free and Reduced Lunch, explained student achievement scores on the MAP, accounting for 51.8% of the variance in scores on Communication Arts and 52.1% of the variance on Mathematics. Socio-economic variables such as the incidence of students receiving free and reduced lunch, which served as a proxy for poverty in this study, provide much of the community context for schools (Hausman, Crow, and Sperry, 2000). Studies have revealed that the SES context of schools impacts principal roles (Hallinger and Murphy, 1986; Andrews and Soder, 1987; Cuban, 1988). Concerns about equity for students who come from poverty are not new, nor is the finding of this study that poverty levels in a school are associated with poorer achievement on standardized test measures. As early as the 1960's federal policy began to address inequities created by poverty and by long years of school segregation. The work of Coleman et al. (1996) marked one of the earliest efforts in this area. Edmond's (1978) study was a landmark one and is notable for its assertion that principal leadership does impact student achievement in urban schools.

Reeves (2006) reported that the correlation between poverty, as measured by free and reduced lunch percentages, and student achievement in schools involved in a Planning, Implementing and Monitoring study (PIM) was .53, a number very similar to that found in this study. However it was Reeve's contention that the correlation between poverty and *student gains* in the study was .00 (pp. 74-75). Heck (1993) determined that the interplay among variables, including the variable of principal leadership, along with school context and student achievement is a complex one. Evans and Teddlie (1995) studied schools with different socio-economic contexts and determined that different leadership styles work better in different settings. They held that a stronger leadership style was proven to be more effective in lower SES schools. Given the strong correlation

that a high level of poverty has with student achievement, it is imperative that factors of leadership that positively impact achievement in lower SES schools also be identified.

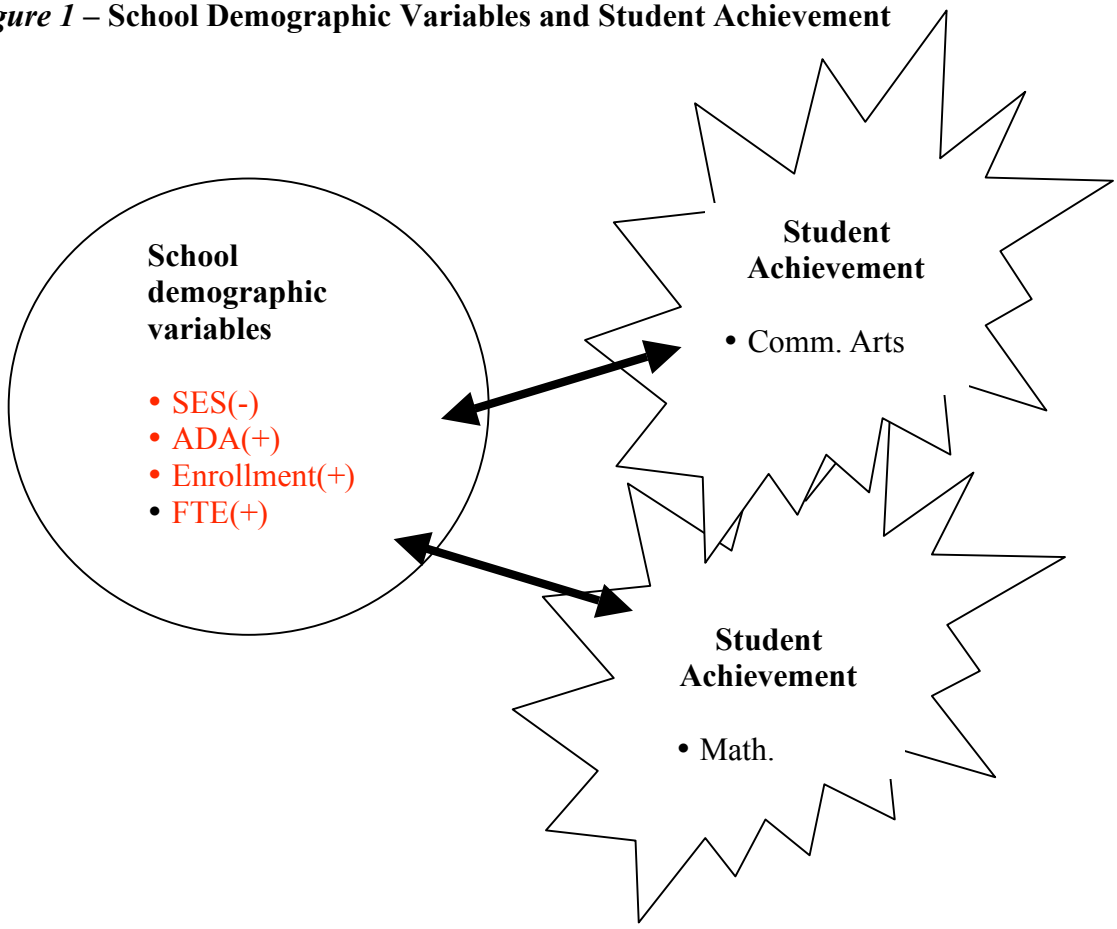
Larger school sizes and greater FTE correlated positively with student performance on the MAP. Hallinger (1993) found that school size as well as other contextual variables such as type of school and teacher experience had a positive effect on student outcomes. Since the difference in this study, although slight, is statistically significant, the question arises as to what factors might exist in larger schools that would support stronger performance on the MAP. Assuming that no differences exist for student factors between smaller and larger schools, something else must be at work in larger schools to account for this difference.

The possibility exists that at a certain point, the size of a school may allow for additional assets or resources such as specialized staff support positions or increased media and technology resources that support learning. It may also be possible that larger schools are located in areas where the teachers have greater access to professional development activities provided by their own district and by other agencies within the vicinity of their districts. Finally, it may also be possible that larger schools are able to attract a stronger teaching staff than smaller districts due to more attractive salary schedules, greater career opportunities, and more desirable community settings.

The school demographic factor, Average Daily Attendance, had a significant positive correlation with student performance on the MAP in this study. Again, this finding matches the experience of educators and research, which has reported that school attendance has a positive correlation with school success (Konstantopoulos, 2004).

School demographic variables have been shown by this study to impact student achievement on MAP tests in both Communication Arts and Mathematics. Schools with high poverty, poor student attendance, and poor resources face a daunting task as they attempt to prove their effectiveness on high-stakes testing. Figure 1 illustrates the relationship of variables and student achievement.

***Figure 1*** **– School Demographic Variables and Student Achievement**




*Principal demographic variables*

Three demographic variables had significant positive zero-order correlations with student achievement. Total Years as an Assistant Principal at All Levels, correlated with student achievement on the Communication Arts subtest ($r = .241$, $p = .015$). Total Years as an Assistant Principal at the Middle Level, had a significant correlation with composite

average scores on the Communication Arts test (r = .371 p = .000) and the Mathematics test (r = .335 p = .000). Total years principal at the current school, had a significant correlation with the Mathematics subtest (r = .183 p = .037). An analysis of these variables reveals an underlying commonality, which is the experience of the principal. When partial correlational analyses were run controlling for Free and Reduced Lunch, there were no significant relationships shown.

*Relationships between leadership and student achievement*

Three approaches were employed in this study to examine possible relationships between principal managerial leadership, principal instructional leadership, and principal transformational leadership and student achievement at the middle level in Missouri. First, zero-order and partial correlation analyses between the factors and student achievement were run. Second, schools were grouped into quartiles by student achievement scores and tested for significant differences in principal leadership factor means. Third, relationships between each of the principal leadership factors and student achievement were analyzed using linear regression methods.

*Correlations of principal leadership factors with student achievement.*

The data that were collected for hypothesis two revealed a number of significant correlations between principal leadership factors and student achievement. The factor that was shown by the zero-order analysis to correlate significantly with Communication Arts was Providing Individualized Support. Six factors including Interactive Processes, Instructional Improvement, Curriculum Improvement, Identifying and Articulating a Vision, Fostering Group Goals, Providing Individualized Support, and Providing Intellectual Stimulation showed significant correlations with Mathematics.

Partial correlations calculated for the Communication Arts subtest showed eight of the nine factors to correlate significantly with student achievement, with the correlation for Interactive Processes being the lone exception. For the Mathematics subtest eight principal leadership factors correlated significantly with student achievement with Holding High Performance Expectations being the exception. The partial correlation analysis was conducted controlling for the school demographic variable, Free and Reduced Lunch. This variable was selected because it had been shown to correlate highly with student achievement. Controlling for it allowed for an analysis that would present a clearer picture of principal leadership above and beyond the impact of student socio-economic status.

*Differences in Means by Leadership Quartiles.*

Given that there are correlations between leadership factors and student achievement on MAP testing, a question arises as to whether leadership "looks" different at schools with different achievement levels. To conduct this analysis, the schools included in the study were ranked by student achievement on the spring 2006 Missouri Assessment Program (MAP) tests in Communication Arts and Mathematics. They were then grouped into quartile levels based on their composite school averages ranging from quartile 1, including schools whose averages were in the lower 25%, to quartile 4, which included schools whose scores ranked their principals in the top 25%. Principal ratings on the nine factors were ranked and grouped into quartiles with an average factor rating determined for each quartile. Differences in the factor means for each quartile were then compared.

There were no significant differences in the factor means when schools were grouped for student achievement on Communication Arts. When a similar analysis was conducted for Mathematics, there were significant differences for means of the leadership factors Interactive Processes, Identifying and Articulating a Vision, and Providing Intellectual Stimulation.

The Interactive Processes factor of the Audit of Principal Effectiveness was selected for this study to assess behaviors of the managerial component of leadership. The factor includes behaviors that demonstrate the principal's ability to organize tasks and personnel for the effective day-by-day management of the school, to provide appropriate information to staff and students, to develop appropriate rules and procedures, and to set the overall tone for discipline in the school (Valentine and Bowman, 1988).

Items from the survey that assess this factor asked teachers to rate principal behaviors such as keeping staff informed of aspects of the school program; providing them with clear information about school operations; providing understanding of administrative expectations for their behavior with regard to decisions that are being made; being able to organize activities, tasks, and people; developing appropriate rules and procedures; using systematic processes for the appraisal of staff including issues of retention, dismissal, and promotion; establishing the overall tone for student discipline; setting a process for making students aware of rules and policies; and ensuring that teachers understand the reasons behind administrative practices.

Leadership is a rational component of organizational life made up of that portion of policy, daily operations, and decision making which is necessary to keep the school

functioning (Glasman, 1984). It has been argued that the management component of school leadership ensures that other activities that are associated with other models are successful (Day, 2000, Leithwood and Jantzi, 2000b). This study appears to reaffirm this assertion as the Interactive Processes factor, a managerial factor of the Audit of Principal Effectiveness, was shown to impact student achievement in this study. Management seeks to establish an orderly, safe, and functional school. It outlines and communicates the rules, policies and procedures by which a school operates. It establishes methods for staff supervision, including processes for evaluating instructional activities. As schools restructure, management helps define what, how, and by whom things are to be done. As leadership has come to be defined, new conceptualizations contend that leadership is shared by a larger group than those people who have formally assigned leadership roles. At the middle school level, team settings provide some opportunity for shared leadership responsibility. Some of the tasks and functions performed in teams are managerial in nature, for example, decisions about the day's schedule for students.

Principal leadership factors that showed a difference in group means for the Mathematics subtest were two factors of transformational leadership as assessed by the PLQ (Jantzi and Leithwood, 1996): Identifying and Articulating a Vision and Providing Intellectual Stimulation. An examination of the questions included in the survey reveals that principal behaviors and characteristics associated with Identifying and Articulating a Vision include possessing the judgment and capacity to overcome obstacles; commanding respect from the faculty; exciting the faculty with what they may be able to accomplish as a team; making the faculty feel and act like leaders; and giving the faculty a sense of overall purpose for its leadership role.

Shared vision is viewed as essential to transformational leadership (Bennis, 2003; Kouzes and Posner, 2002; Bolman and Deal, 1997; Yukl, 2002). Establishing a vision; setting clear goals; focusing on continuous improvement; maintaining an orderly environment for teaching and learning; allocating resources to support goal attainment; setting high standards and expectations for teachers and students; and being confident in their own ability are characteristics common to effective principals (Chase and Kane, 1993).

Characteristics and behaviors associated with the factor, Providing Intellectual Stimulation, as identified by the items on the survey, included challenging teachers to reexamine their basic assumptions about their work; stimulating teachers to consider what they are doing for their students; and providing information that helps teachers think of ways to implement the school's program. A number of writers have spoken to the connection between such teacher and principal reflection and effective schools (Valentine et al., 2004; York-Barr et al., 2001; Lambert, 2003, Blase and Blase, 1999a). It could be argued that the behaviors of this factor actualize the visionary behaviors listed above. Principals in higher achieving schools scored significantly higher than their peers on both.

When the quartile means were examined more closely, a model emerged that suggested that principal leadership does, in fact, have an impact on student achievement. It was noted that the differences in the means for principal leadership factors showed that those schools who scored in the third and fourth quartiles on the MAP. Had principals who were rated higher by their staffs on the leadership factors.

Of special interest is the group of schools, whose students scored in quartile three on the MAP. The teachers in this group of schools rated their principals higher on leadership factors than their peers in the other three quartiles for nine of the eighteen possible instances across the two subtests. At first glance it might appear that having half of the schools rated highest on leadership factors in the third quartile rather than the fourth, would dilute the argument that principal leadership does impact student achievement, since one might otherwise predict those principals to come from top quartile of schools. However, there is also the possibility that the leaders in those schools in quartile three are in fact making a great difference, and that it is principal leadership that is moving those schools to higher levels of achievement. Further investigation of the schools in the various quartiles, and especially those in quartiles two and three, would be needed to make this determination.

Some additional consideration of the fact that the schools in quartile four rated had principals rated highest in leadership only half of the time is also in order. It is possible that teachers in this group of schools perceived that the strengths of their schools with regard to student achievement are to be found in factors other than or in addition to principal leadership, such as the community context, the makeup of the student body, and/or strengths present in the faculty, itself.

*Linear regression results of principal leadership factors and student achievement.*

This study also used linear regression analyses to estimate possible relationships between principal leadership factors and student achievement. Two regression equations were estimated for each subtest of the MAP. In both equations student achievement was the dependent variable. In the first equation, the school demographic variable, Free and

Reduced Lunch, served as the independent variable, while in the second equation the principal leadership variables were added. Entering the school demographic variable first produced an estimate of the relationship between it and student achievement. Entering the principal leadership factors second produced an estimate of the relationship between the leadership factors and student achievement above and beyond the relationship between the demographic variable and student achievement.

Free and Reduced Lunch accounted for a significant amount of the variance (exceeding 50%) on both Communication Arts and Mathematics subtests scores. In this study, the principal leadership factor accounting for a significant amount of the explained variance, above and beyond the school demographic variable, was Instructional Improvement. Principals who demonstrate leadership for instructional improvement do so through "clinical supervision, knowledge of effective schooling, and commitment to quality instruction" (Valentine and Bowman, p. 25). Behaviors representing instructional improvement include being knowledgeable about curricular goals, being knowledgeable about teaching strategies, providing accurate assessment of the teaching process, observing and assessing teaching strategies and student learning, helping ineffective teachers, being informed of current research about learning, having suggestions for improvement when critiquing teachers, and being committed to instructional improvement.

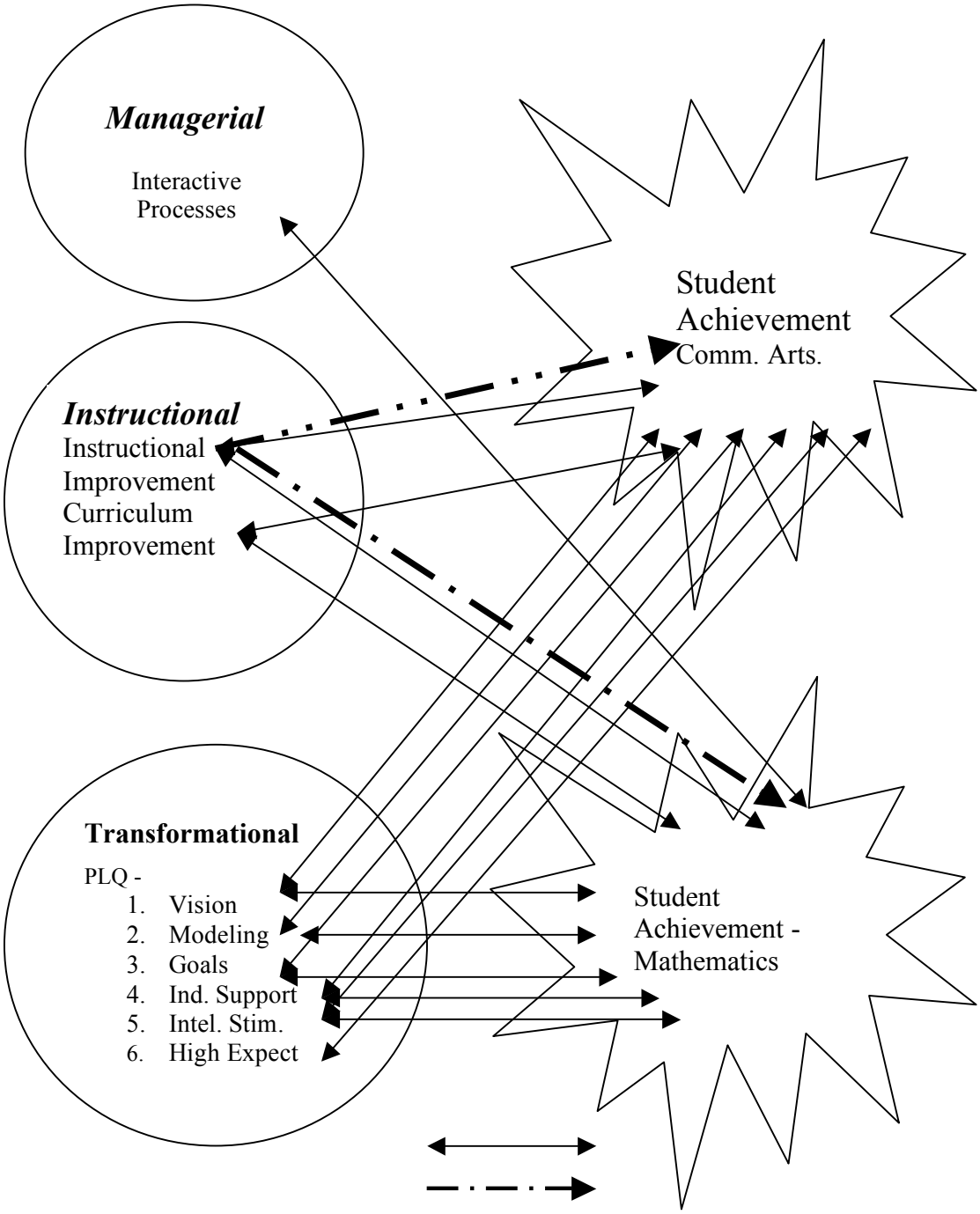
Early stages of effective schools literature emphasized the importance of principal instructional leadership (Bossert et al., 1982; DeBevoise, 1984; Heck, Larsen, and Marcoulides, 1990) and assigned the principals a primary role in improving the performance of schools particularly on math and reading scores (Finn, 1987; Morris,

1987). Direct instructional leadership by the principal includes leading in the establishment of organizational goals, monitoring both teacher and student progress in reaching those goals, interacting with teachers about instruction through observations, conversations, and feedback, and active involvement with the school's curriculum (Blumberg and Greenfield, 1980; Bossert et al., 1982; Glickman, 1985; Hallinger and Murphy, 1985; Leithwood, 1992; Lashway, 1995).

Instructional Improvement is the factor whose representative behaviors are most directly associated with the core activities of teaching and learning of the factors examined in this study. The finding that it is the one factor predictive of student success in this study should encourage principals to continue to develop their personal skills in this area. If it is important for principals to be knowledgeable of content, and of sound instructional practices and to engage in conversations with teachers about instruction, then perhaps it should also be important for teachers. Leithwood (1994) described principal behaviors that support a broader definition of instructional leadership, including supervision, coaching, staff development and modeling in his list. Others included organizational culture in their discussion of shared instructional leadership (Kleine-Kracht, 1993; Sheppard, 1996).

Figure 2 illustrates all of the relationships with leadership factors shown in this study to impact student achievement.

*Figure 2* – **Leadership Factors and Student Achievement**




*Results of similar analyses conducted at the high school level.*

As reported, Prater (2004) performed similar analyses on data provided by 131 high schools in Missouri. The results of his study revealed significant differences in the

means of student achievement scores on all four subtests of the MAP that were administered in 2004 with the nine leadership factors. For the linear regression analyses, two factors of Instructional Improvement, Providing an Appropriate Model, and Identifying and Articulating a Vision, had significant predictive relationships with the results on the Language Arts subtests. The latter two factors also had significant relationships with the Mathematics subtest in 2004. The factor, Instructional Improvement explained variability on student achievement at the middle level in this study. The two studies, taken together, support the contention that principal behaviors can in fact have a positive impact on student achievement at the secondary level.

## A Model for Effective Principal Leadership

Principal leadership has been discussed in a variety of ways. Categorizations of principal leadership have included roles, traits, styles, behaviors, the exercise of power and influence, contingencies, and situational factors (Bensinmon, Neumann, and Birnbaum, 1999; Yukl, 2002). In developing these categories, there has been an attempt to determine what exactly constitutes effective leadership. For much of the past 25 years, principal effectiveness has been defined by student outcomes on standardized testing. It has been argued that principals can and do have a positive impact on student achievement (Waters, Marzano, and McNulty, 2003). The question is through what sets of behaviors or by what leadership style does that occur?

Hallinger and Heck (1997) reviewed the literature on principals and student outcomes and determined that principal effects fall into three categories: direct actions, mediated effects, and reciprocal effects. Due to contextual factors that impact student

outcomes, they held that mediated effects research holds the most promise and they urged researchers to control for other variables if they conduct direct effects research.

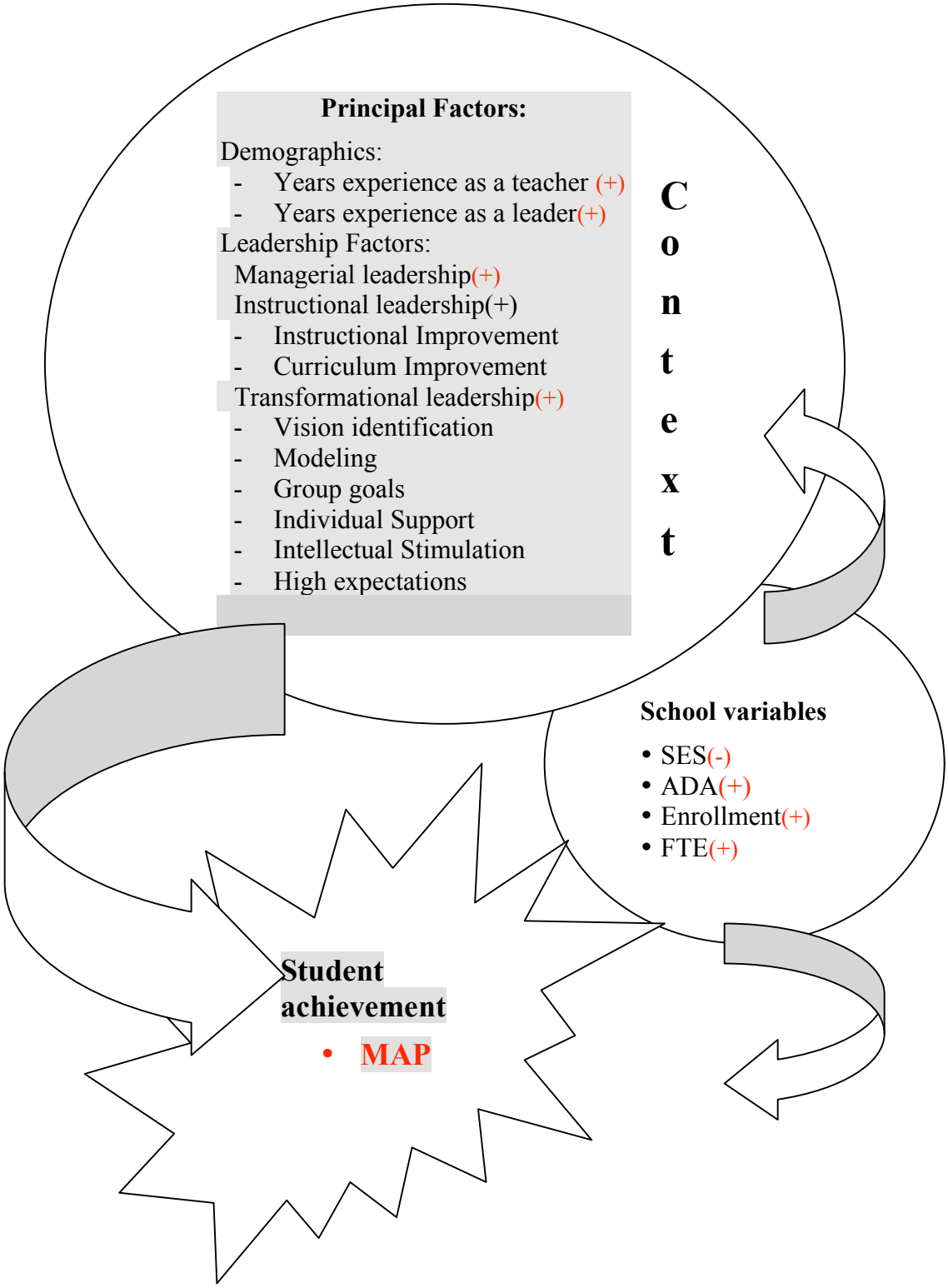
This study of middle level leadership has sought to examine the relationships of factors of the three models of principal leadership, managerial, instructional, and transformational, to determine which, if any of these, has a relationship with student achievement. It was determined that significant differences in principal leadership factors by student achievement means do exist. All nine of the factors of leadership demonstrated significant relationships with student achievement among the 133 Missouri middle level schools included in this study when partial correlations, controlling for SES, were run. This finding also supports the notion that principals should have some flexibility in finding a style that suits them and use different behaviors in different settings and situations rather than being bound to any one model (Bamburg and Andrews, 1991; Hallinger and Heck, 1996).

There is some difficulty in isolating certain individual leadership factors and identifying their relationship with student achievement. Perhaps that accounts for a scarcity of research on the relationship of the two. According to the data gathered for the test of Hypothesis 3, teachers who responded to the survey tended to rate their principals in a similar manner with respect to all of the leadership factors. That is, high ratings on one factor correlated with high ratings on the others. This also supports the idea of an integrated, more comprehensive model of principal leadership. The literature also provides support for this idea. Cuban (1998) contended that principals should integrate a variety of role orientations. As Leithwood and Duke (1999) proposed a model of principal leadership that included managerial leadership, instructional leadership, and

transformational leadership, they suggested that a more comprehensive model would be preferable to embracing  any one of the three by itself.

Principals possess unique sets of traits and experiences and have varying levels of skill with regard to the factors of leadership. They operate in a world of changing contexts with political, social, and economic influences. Hausman, Crow, and Sperry (2000) labeled these contextual factors community, school, and reform. The characteristics of the principal are at work within this contextual framework to impact student achievement. This study identified principal variables and leadership factors that succeed, even in this challenging environment, in positively impacting student achievement. Figure 3 represents these findings.

**Figure 3– *Comprehensive Leadership Model***



## Implications

*Change in practice*

It appears based on this study that principals do positively impact student achievement in middle schools. Early conceptualizations of leadership described it as managerial in nature, while Yukl (2002), Rost (1991) and Gardner (2000) viewed leadership as more of an influence process. Principals impact student achievement through activities that in effect trickle down to the teachers and students (Heck, et al, 1990; Marzano, 2000; Waters, Marzano, and McNulty, 2003, 2005). Yukl's (2002) definition of organizational leadership as "a process of influencing others to understand and agree about what needs to be done and how it can be done effectively, and the process of facilitating individual and collective efforts to accomplish the shared objectives" (p. 7) coincides with current thought with regard to principal leadership.

Principals today operate in a variety of contexts that make theirs a complex and challenging role. Hausman, Crow, and Sperry (2000) identified the contextual elements of community, school, and reforms as "[influencing] the demands on a principal's time, the range of possibilities for reform, and a host of other constraints and opportunities that at least partially define the principal's role" (p. 5). Part of the current context in which principals find themselves is the accountability expected of their schools through high-stakes testing and the expectation that their efforts will lead to successful student outcomes on those assessments (Hausman, Crow, and Sperry, 2000; DeMoss, 2002).

Demographic variables of the principal were shown to correlate with principal leadership factors and with student achievement. The experiences of prospective principals had both positive and negative correlations with the factors. Given the finding

that experience as a classroom teacher correlated positively with the factor, Providing Individual Support, and that behaviors associated with that factor have been identified as promoting student achievement, it would seem that such teacher experience should be valued in the search process for prospective administrators. The findings that were discussed about the importance of Instructional Leadership support this as well. While not every outstanding teacher may have the traits necessary to be an outstanding principal, it is suggested by this finding that previous classroom experience may be helpful to a principals as they work with teachers in a larger context of instructional leadership.

Principal demographic variables that corresponded to years of experience had relationships with both MAP subtests when zero-order correlations were run. School demographic variables all correlated with student achievement in this study, with the strongest relationship, that with Free and Reduced Lunch, being negative. School demographics provide a context within which a principal carries out his or her role. Whileprincipals cannot directly impact those variables, with the possible exception of daily attendance, principals must find a way to identify behaviors that lead to success above and beyond the impact of poverty.

There are resources available to school principals in such settings that identify practices in high-poverty schools that have accounted for gains in student achievement. The question is how are principals able to access that support? Schools that are resource poor are less likely to be able to support learning by the principal and her or his staff. As discussions are held about providing more resources to the professionals in those schools,

resources for professional development, collaboration, and reflection are needed (Reeves, 2006; Schmoker, 2001).

Instructional leadership has long been viewed as a way to achieve improved results on student achievement measures. Hallinger and Heck (1997) determined that principals influence important school processes such as organization, mission, academic expectations, and learning time, which have been linked with student outcomes. One factor of instructional leadership, Instructional Improvement, was found to have such an impact at the middle level in this study. The Instructional Improvement factor of the Audit of Principal Effectiveness (Valentine and Bowman, 1988) measures the following behaviors: the principal positively influences the instructional skills present in the school through clinical supervision, knowledge of effective schooling, and commitment to quality instruction.

This finding suggests that principals who are most actively involved with observing teachers and reflecting with them on instructional practices are engaged in behaviors that promote student achievement. Staying abreast of on-going curricular developments in every content area is difficult for principals. Given that much of instructional leadership literature calls for principals to work through and with teachers, some sharing of this responsibility is not only acceptable but desirable as it helps to build the instructional skills of teachers as well as their leadership capacities.

Lambert (2003) indicated that time is a critical factor if processes such as reflection and collaboration are to be successful. Flowers, Mertens, and Mulhall (2000) asserted that flexible scheduling, common adjacent classrooms, and team autonomy are middle school features, in addition to time, that may also contribute to collaboration and

professional growth (p. 44). If these processes are to work, principals will also need to be more skillful in helping teachers gather and use data as they engage in collaboration and reflection (Schmoker, 2001; DuFour, 2002; Reeves, 2006).

In addition to instructional leadership factors, this study also found that transformational factors and their related behaviors impact student achievement at the middle level. Two factors, Identifying and Articulating a Vision and Providing Intellectual Stimulation were significant in accounting for mean differences on the Mathematics subtest quartiles. The transformational leader who would be rated high on these factors is one whose behavior encourages teachers to reexamine their assumptions and think in terms of what they are doing for students, provides the faculty with a sense of purpose, excites the faculty as to what they can accomplish as a team, and makes them feel they are part of the school's leadership team,

As instructional leadership theory evolved, its focus shifted from direct principal roles to a larger definition of instructional leadership that included teachers. A review of the literature at the latter stages of instructional leadership and at the early stages of transformational leadership shows some commonality. The behaviors cited for the instructional leadership and transformational leadership factors that were significant in this study reflect this commonality. It appears, based on this study that effective principals work through teachers to facilitate student achievement. The skills used to do so are largely instructional and transformational in nature. This forms a more comprehensive model of principal leadership than any one model may provide, and it would seem helpful to the principal in dealing with the diverse expectations of leadership needed in today's constantly changing contexts.

*Principal preparation programs*

The principalship has become a multifaceted role. As principals strive to lead their schools they are asked to perform a variety of tasks, some that are mundane in nature, some of which are highly complex and often seem contradictory. Whitaker and Turner (2000) asked Indiana principals to prioritize no fewer than 31 activities in terms of the importance those activities assume and should assume. The activities ranged from managerial in nature (improve student behavior), to instructional (encourage innovative teaching strategies and work with less effective teachers), to transformational (establish a positive school culture and establish my school as a learning community for students, teachers, and parents). The ISSLC standards also encompass a challenging array of skills that an aspiring principal should possess. The question becomes then, how do principal preparation programs adequately provide for the expectations that principals handle the varied and challenging tasks and functions involved in their roles?

Lauder (2000) examined trends in effective principal preparation programs. Exemplary programs incorporated these components: aligning entrance requirements with the demands of the role; cohort models; clear performance-based standards; opportunities for individualization; and the development and assessment of skills. The suggestions that fit with these components were: 1) to move beyond criteria such as GRE scores for entrance, and to look at experiences that correlate with activities of principals, 2) to enroll students and move them through programs with cohort groups who would support and enrich their learning, 3) to utilize some set of standards such as the 21 Performance Domains and the Interstate School Leaders Licensure Consortium (1996) standards to guide the skill development of students in principal preparation programs, 4)

to individualize programs based on learner interests and needs, and 5) to provide field experiences such as internships that develop invaluable insights into the daily demands of the job.

This study raised a concern with regard to principal preparation. One finding was that principals who had been assistant principals for extended periods were perceived to be weaker on the leadership factor, Identifying and Articulating a Vision, a factor that was identified in this study as being significantly related to student success. Principals and their supervisors should attend to the professional development of their assistants based on this finding. There has been much discussion about identifying and preparing future principals (Muse and Thomas, 1991; Brewer, 1993; Hopkins-Thompson, 2000; Kirkpatrick, 2000; Lauder, 2000; Creighton, 2002; Jackson and Kelley, 2002). Given that nearly two-thirds of the principals in this study served as assistants at some level prior to their becoming middle level principals, this finding suggests that more attention may need to be paid to the breadth of principal preparation experiences.

The job description of the assistant principal may limit their exposure to experiences that prepare them for the principalship. Broader job descriptions are needed that allow assistants who have an interest in moving to the principalship to develop more of those skills that are required of principals. Training programs for aspiring principals include coursework at the university level. Perhaps, just as importantly, it includes the kind of mentoring and support provided by the school's principal. Some consideration should be given by principals to the degree to which their assistants are involved in all the aspects of the multi-faceted jobs of principals.

*Policy change*

Concerns about the quality of education in America's schools have been raised since at least the 1950's (Barnett and Whitaker, 1996). In response to these concerns different policy initiatives have been enacted including NDEA and the various incarnations of ESEA. Testing results have been used as accountability measures with versions in the 1970's focusing on minimal competencies, to the emphasis on mastery testing in the 1980's which led in turn to high-stakes accountability of standards-based assessments called for under NCLB. Principals are held accountable for their school's results and have to negotiate the demands for meeting these requirements with the other demands placed on them and on their schools. Concerns with the use of standardized tests as a single measure of school success have been voiced nationally (DeMoss, 2002; Sergiovanni, 1999). States have been left with the responsibility for implementing the requirements of NCLB, Missouri has chosen to utilize the MAP test, which pre-dated NCLB as its measure of student achievement.

As policy makers mandate new generations of assessments, a broader picture using multiple measures of success must be considered. Reeves' (2006) finding that poverty did not correlate with student gains in the schools involved in his study is encouraging. It suggests that measures which consider the value added by schools should be considered as part of the measures of school effectiveness. Multiple measures have the disadvantage of being less easily understood than single measures of success by those outside the educational community, but if the goal is truly to promote improved student achievement, then multiple measures would provide a truer picture than any single measure In addition, the context of schools should be considered, and the fact that school

demographic variables explain a large percentage of student outcomes should be considered. These factors should be controlled for in a more accurate assessment of student gains.

Principal preparation programs should be evaluated in terms of the experiences offered to their students. In light of the fact that certain behaviors are linked with student success, one lens used to evaluate these programs would be the comprehensive leadership model proposed in this study. In addition to preparing principals to be school managers, experiences that prepare principals to be instructional and transformational leaders should also be provided if we are concerned about developing leaders who will facilitate student success.

*Future research*

The findings in this study and in the study conducted by Prater (2004) at the high school level appear to suggest that principal leadership factors have a positive relationship with student success. Additional research is recommended to investigate the following:

1. What factors, if any, of principal managerial, principal instructional, and principal transformational leadership have a relationship with student success at the elementary level?

2. What principal leadership factors have a relationship with student success in middle level schools in other states using different accountability measures?

## Conclusions

This study provides insight into some relationships of principal leadership factors and student success. Principals are faced each day with a number of tasks, ranging from the mundane to the complex, that must be met and they are often evaluated based on their handling of those tasks. It has been shown that the completion of these managerial functions has a connection with instructional and transformational management behaviors. It appears, based on this study that managerial, instructional and transformational behaviors all correlate with student success. Principals who were rated by teachers at a high level of agreement on a certain factor were rated similarly on the others; therefore a comprehensive model incorporating aspects of all three models is proposed.

Given the complexity of the contexts in which schools and principals operate today, the multifaceted nature of the role of school principal at the middle level, and the challenge of isolating specific principal behaviors that account for differences in achievement, it is still possible to assert that principals can and do have a positive impact on student achievement. Although the correlations reported were often small, the context provided by NCLB makes even these important to principals. Previously cited studies have found relationships between principal leadership and student achievement. Findings from this study support existing literature and add to that body knowledge, the idea of the context of principal leadership in middle level schools.

References

Anfara, V. A., Jr., Andrews, G., & Mertens, S. B. (2005). *The encyclopedia of middle grades education.* Greenwich, CN: Information Age Publishing, 183-212.

Anfara, V. A., Jr., Brown, K. M., Mills, R., Hartman, K., & Mahar, R. J. (2001) in Anfara, V. A., Jr. (Ed.) *The handbook of research in middle level education.* Greenwich, CN: Information Age Publishing.

Alexander, W. M., (1968). *The emergent middle school.* New York: Holt, Rinehart, and Winston.

Alexander, W. M., & George, P. S. (1981). *The exemplary middle school.* New York: CBS College Publishing, Holt, Rinehart & Winston.

Alvy, H. & Robbins, P. (2005). Growing into leadership. *Educational Leadership 62*(8), 50-54.

Andrews, R. L., & Soder, R. (1987). Principal leadership and student achievement. *Educational Leadership, 44*(6), 9-11.

Avolio, B. J., Bass, B. M., & Jung, D. I. (1995). *Construct validation and norms for the Multifactor Leadership Questionnaire (MLQ-Form 5X).* Binghamton, NY: State University of New York Center for Leadership Studies.

Babbage, C. (2006). Retrieved June 2, 2006 from http//www.google.com/search?q=cache:4CtlcRvacRgJ:ei.cs.vt.ecu/history/Babbage.

Baker, J. (1913). *Report of the Committee on the National Council of Education on Economy of Time in Education* (Bulletin 1913, No. 38). Washington, DC: Department of Interior, Bureau of Education.

Balfanz, R., & MacIver, D. J. (2000). Transforming high-poverty urban middle schools into strong learning institutions: Lessons from the first five years of the Talent Development Middle School. *Journal of Education for Students Placed at Risk, 5*(1 and 2), 137-158.

Bamburg, J. D., & Andrews, R. L. (1991). School goals, principals, and achievement. *School Effectiveness and School Improvement, 2*(3), 176-191.

Barnett, B. G., & Whitaker, K. S (1996). *Restructuring for student learning* (P. Short, Ed.). Lancaster, PA: Technomic.

Barth, R. S. (1990). *Improving Schools from within: Teachers, parents, and principals can make the difference*. San Francisco, CA: Jossey-Bass.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.

Bass, B. M. (1990). *Handbook of leadership: A survey of theory and research.* New York: Free Press.

Bass, B, M. (1998). *Transformational leadership: Industrial, military, and educational impact*. Mahway, NJ: Lawrence Erlbaum Associates.

Beck, L. G., & Murphy, J. (1992). Searching for a robust understanding of the principalship. *Educational Administration Quarterly, 28(*3), 387-396.

Beck, L. G., & Murphy, J. (1993). *Understanding the principalship: Metaphorical themes, 1920-1990*. New York: Teachers College Press.

Beebe, R. J., (1998) Recruiting and selecting new teachers: The recruitment budgeting cycle. *NASSP Bulletin 82*(602), 77-82.

Bennis, W. G. (2003). *On becoming a leader: updated and expanded.* Cambridge, MA: Perseus.

Bennis, W. G., & Nanus, B. (1985). *Leaders: The strategies for taking charge.* New York: Harper & Row.

Bensinmon, E. M., Neumann, A. & Birnbaum, R., (1989). *Making sense of administrative leadership: The "L" word in higher education.* ASHE-ERIC Higher Education Report No. 1. Washington, DC: School of Education and Human Development The Geroge Washington University.

Berman, P., McLaughlin, M. W., Bass-Golod, B. B., Pauly, E., & Zellman, G. (1977). *Federal programs supporting educational change, Vol. VII, Factors affecting implementation and continuation.* Santa Monica, CA: RAND Corporation.

Bjork, L.G. (1996). The revisionists' critique of the education reform reports. *Journal of School Leadership, 6*, 290-315.

Blase, J. & Blase & J. (1994). *Empowering teachers: What successful principals do.* Thousand Oaks, CA: Corwin.

Blase, J. & Blase & J. (1999a). Principal's instructional leadership and teacher development: Teachers' perspectives. *Educational Administration Quarterly, 35*(3), 349-378.

Blase, J. & Blase J. (1999b). Effective instructional leadership through the teachers' eyes. *The High School Magazine, 7*(l), 16-20.

Blumberg, A., & Greenfield, W. (1980). *The effective principal: Perspectives on school leadership*. Boston, MA: Allyn and Bacon.

Bolman, L. G., & Deal, T. E. (1993). *The path to school leadership: A portable mentor.* Thousand Oaks, CA: Corwin.

Bolman, L. G., & Deal, T. E. (1997). *Reframing organizations: Artistry, choice, and leadership* (2nd Ed.). San Francisco: Jossey-Bass.

Bossert, S. T., Dwyer, D. C., Rowan, B., & Lee, G. V. (1982). The instructional management role of the principal. *Educational Administration Quarterly, 18*(3), 34-64.

Bossert, S. T., Dwyer, D. C., Rowan, B., Lee, G. V., Harrigan, B., (1983). Leadership characteristics that facilitate school change. *Educational Leadership 49*(5), 53-65.

Bowman, M., & Valentine, J. (1984). *Audit of principal effectiveness: A user's technical manual*.

Brewer, D. J. (1993). Principals and student outcomes: Evidence from U.S. high schools. *Economics of Education Review, 12*(4), 281-292.

Briggs, T. H., (1920). *The junior high school.* Boston: Houghton-Mifflin.

Bright, R. (1996). Reflecting on "reflective practice". *Studies in the education of adults 28*(2), 162-184.

Brookover, W. & Lezotte, L. (1977). *Changes in school characteristics coincident with changes in student achievement.* East Lansing, MI: Michigan State University College of Urban Development.

Brookover, W., Schweitzer, J., Schneider, J., Beady, C., Flood, P., & Wisenbaker, J. (1978). Elementary school climate and school achievement. *American Educational Research Journal, 15*, 301-318.

Brookover, W. & Schweitzer, J., Schneider, J., Beady, C., Flood, P., & Wisenbaker, J. (1979). *School social systems and student achievement: Schools can make a difference.* NY: Preager.

Brown, J. L. & Moffett, C. A. (1999). *The hero's journey: How educators can transform schools and improve learning.* Alexandria, VA: Association for Supervision and Curriculum Development.

Bryk, A., & Schneider, B. (2002). *Trust in schools.* New York: Russell Sage Foundation.

Burns, J. M. (1978). *Leadership*. New York: Harper and Row.

Carnegie Council on Adolescent Development (1989). *Turning points: Preparing American youth for the 21st century.* Washington, DC: Author.

Charles Scribner's Sons (1993). *Public education.* Encyclopedia of American Social History. Retrieved 11/27/05 from http//:www.are.as.wvu.edu/scopedu.htm

Chase, C.M, & Kane, M.B. (1993). The principal as instructional leader: *How much time before we act?* Denver, CO: Education Commission of the States, Task Force on Education for Economic Growth. (ERIC Document Reproduction Service No. ED244369)

Clark, S. N., & Clark, D. C. (1994). *Restructuring the middle level school: Implications for leaders.* Albany, NY: State University of New York Press.

Cleveland, H. (1985). *The knowledge executive: Leadership in an information society*. New York: Dutton.

Coleman, J. et al. (1966). *Equality of educational opportunity.* U. S. Department of Health, Education, and Welfare, Office of Education. Washington, DC: U. S. Government Printing Office.

Copland, M. A. (2003. Leadership of inquiry: Building and sustaining capacity for school improvement. *Educational Evaluation and Policy Analysis 25*(4). 375-395.

Cotton, K. (2003). *Principals and student achievement: What the research says.* Alexandria, VA: Association for Supervision and Curriculum Development.

Cuban, L. (1984). *How teachers taught: Constancy and change in America's classrooms: 1890-1980.* New York: Longman.

Cuban, L. (1988). *The managerial imperative and the practice of leadership in schools*. New York: State University of New York Press.

Davies, L. (1987). The role of the primary school head. *Educational Management and Administration, 15*, 43-47.

Davis, J. R. (2003). *Learning to lead: A handbook for postsecondary administrators.* Westport, CT: American Council on Education and Praeger.

Davis, J. & Jazzar, M., (2005). The seven habits of highly effective principal preparation programs. *Principal 84*(5), 18-21.

Davis, S. H. (1998). Climbing the administrative career ladder: What goes up might come down. *NASSP Bulletin 82*(602), 49-59.

Davis, S., Dariling-Hammond, L., LaPointe, M. A., and Meyerson, D., (2005). *Schol leadership study: Preparing successful principals.* Review of Research

Day, C. (2000). Beyond transformational leadership. *Educational Leadership, 57*(7), 56-59.

Deal, T. E. & Peterson, K. D. (1994). *The leadership paradox: Balancing logic and artistry in schools*. San Francisco: Jossey-Bass.

DeBevoise, W. (1984). Synthesis of research on the principal as instructional leader. *Educational Leadership, 41*(5), 14-20.

DeMoss, K. (2002). Leadership styles and high-stakes testing: Principals make a difference. *Education and Urban Society, 35*(l), 111-133.

Dickinson, T. S. & Butler, D. A. (2001). Reinventing the middle school. *Middle School Journal 33*(1), 7-13.

Donaldson, G. A. (1991). *Learning to lead: The dynamics of high school principalship*. Westport, CT: Greenwood.

DuFour, R., (2002). The learning-centered principal. *Educational leadership 59*(8), 12-18.

Duke, D. L., & Leithwood, K. (1994). *Management and leadership: A comprehensive view of principals' functions*. Toronto: OISE, mimeo.

ESEA (2006). *Elementary and secondary education act of 1965.* Retrieved June 18, 2006 from http//cwx.prenhall.com/bookbind/pubbooks/burns3/medialib/docs/esea1965.htm

Eberts, R. W., & Stone, J. A. (1988). Student achievement in public schools: Do principals make a difference? *Economics of Education Review, 7*(3), 291-299.

Ed. Gov., 2006: *No child left behind.* Retrieved 10/3/06 from http://www.ed.gov/nclb/landing.jhtml

Edmonds, R. (1979). Effective schools for the urban poor. *Educational Leadership, 37*. 15-24.

Eichhorn, D. (1966). *The middle school.* New York: The Center for Applied Research in Education.

Elmore, R. F. (2000). *Building a new structure for school leadership.* Washington, D.C.: The Albert Shanker Institute.

Ervay, S., (2006). Academic leadership in America's public schools. *NASSP Bulletin 90*(2), 77-86.

Etzioni, A. A. (1961). *A comparative analysis of complex organizations.* New York: Free Press.

Evans, L., & Teddlie, C. (1995). Facilitating change in schools: Is there one best style? *School Effectiveness and School Improvement, 6*(1), 1-22.

Fayol, H. (1949). *General and industrial management.* (C. Stours, trans.) London: Pitman. Originally published in 1919.

Fayol, H. (2006). Retrieved May 23, 2006, from http//www.onepine.info/fayol.htm.

Felner, R., Jackson, A., Kasak, D., Mulhall, P., Brand, S., & Flowers, N. (1997). The impact of school reform for the middle years: A longitudinal study of a network engaged in *Turning Points*-based comprehensive school transformation. *Phi Delta Kappan, 78,*(7) 528-532, 541-550.

Finn, Jr., C. (1987). How to spot an effective principal. *Principal,* 20.

Flesch, R. (1955). *Why Johnny can't read.* New York: Harper and Row.

Flowers, N., Mertens, S. B., & Mulhall, P. F. (2000). What makes interdisciplinary teams effective? *Middle School Journal, 31*(4), 53-56.

Fowler, F. C. (2004). *Policy studies for educational leaders: An introduction.* Upper Saddle River, N.J.: Pearson Education Inc.

Fullan, M. (1991). *The new meaning of educational change*. New York: Teachers College Press.

Fullan, M. (1996). Leadership for change. In K. Leithwood et. al. (Eds.), *International handbook of educational leadership and administration*, (701-722). Netherlands: Kluwer Academic Publishers.

Fullan, M., Bertani, A., & Quinn, J. (2004). Lessons from district-wide reform. *Educational Leadership 61*(6), 42-46.

Gardner, J. W. (2000). The nature of leadership. In *Educational Leadership*, San Francisco: Jossey-Bass, (3-12).

Gatewood, T. E. (1975). *The middle school we need: A report from the working group on the emerging adolescent learner.* Washington, DC: Association for Supervision and Curriculum Development.

George, P. S., & Alexander, W. M. (1993). *The exemplary middle school* (2nd ed.). Orlando, FL: Harcourt, Brace & Co.

George, P. S. & Grebing, W., (1992). From junior high to middle school – Principals perspectives. NASSP *Bulletin (74),* 86-94

Glasman, N. S. (1984). Student achievement and the school principal. *Educational Evaluation and Policy Analysis 6*(3), 283-296.

Glickman, A. A. (1985). *Supervision of instruction: A developmental approach*. Boston, MA: Allyn & Bacon.

Glickman, C. D. (1987, April). Good and/or effective schools: What do we want? *Phi Delta Kappan 68*: 622-624.

Goldring, E. B. & Rallis, S. F. (1993). *Principals of dynamic schools: Taking charge of change.* Newbury Park, CA: 1993.

Goldring, E. B., Crowson, R., Laird, D. & Berk, R. (2003). Transition leadership in a shifting policy environment. *Educational Evaluation and Policy Analysis 25*(4), 473-588.

Goleman, D. (2006). The socially intelligent leader. *Educational leadership 64*(1), 76-81.

Goleman, D., Boyatzis, R., & McKee, A. (2004). *Primal leadership: Learning to lead with emotional intelligence.* Boston: Harvard Business School Press.

Gruhn, W. T., & Douglass, H. R. (1947. *The modern junior high school.* New York: Ronald Press.

Gulick, L. & Urwick, L. (1937). *Papers on the science of administration.* New York: Columbia University Press.

Hadderman, M. (1998). *State vs. local control of schools.* ERIC Digest Series Number 24. Retrieved February 2, 2006 from http//:www.thememoryhole.org/edu/eric/ed291164.html.

Hall, G. S. (1904). *Adolescence: Its psychology and its relations to physiology, anthropology, sociology, sex, crime, religion and education* (Vol. 2). New York: D. Appleton.

Hallinger, P. (1992). The evolving role of American principals: From managerial to instructional to transformational leaders. *Journal of Education, Administration, 30*(3), 35-48.

Hallinger, P., & Heck, R. H. (1996). Reassessing the principal's role in school effectiveness: A review of empirical research, 1980-1995. *Educational Administration Quarterly, 32*(1), 5-44.

Hallinger, P., & Heck, R. (1997). Exploring the principal's contribution to school effectiveness. *School Effectiveness and School Improvement, 8*(4), 1-35;

Hallinger, P., & Heck, R. (1998). Exploring the principal's contribution to school effectiveness: 1980-1995. School Effectiveness and School Improvement, 9(2), 157-191.

Hallinger, P., & Heck, R. (1999). Can leadership enhance school effectiveness? In T. Bush, L. Bell, R. Boltan, R. Glatter, & P. Ribbins (Eds.), *Educational management: Redefining theory, policy and practice*. London: Paul Chapman Publishing, 178-190.

Hallinger, P., & Murphy, J. F. (1985). Assessing the instructional management behavior of principals. *The Elementary School Journal, 86*(2), 217-247.

Hallinger, P., & Murphy, J. F. (1987). Assessing and developing principal instructional leadership. *Educational Leadership, 45*(l), 54-61.

Harvey, C. W. (1986). How primary heads spend their time. *Educational Management and Administration, 14*, 60-68.

Harvey, G., & Crandall, D. P. (1988). *A beginning look at the what and how of restructuring.* Andover, MA: Regional Laboratory for Educational Improvement of the Northeast and Islands.

Hausman, C. S., Crow, G. M., & Sperry, D. J., (2000). Portrait of the "ideal principal": Context and self. *NASSP Bulletin 84*(617), 5-15.

Hay Group (2000). *Raising achievement in our schools: Models of excellence for head-teachers in different settings.* Available: www.ncsl.org.uk/media/F7B/52/kpool-hay-models-of-excellence-parts-1-2.pdf

Heck, R. H. (1993). School context, principal leadership, and achievement: The case of secondary schools in Singapore. *The Urban Review, 25*(2), 151-166.

Heck, R. H., Larsen, T. J., & Marcoulides, G. A. (1990). Instructional leadership and school achievement: Validation of a causal model. *Educational Administration Quarterly, 26*(2), 94-125.

Heck, R. H., Larsen, T. J., & Marcoulides, G. A. (1993). Principal leadership behaviors and student achievement. *NASSP Bulletin, 77*(553). 20-28.

Heller, M. F., & Firestone, W. A. (1995) Who's in charge here? Sources of leadership for change in eight schools. *Elementary School Journal 96*(1), 65-86.

Hemphill, J. K. (1958). Administration as problem solving. In Andrew Halpin (Ed.), *Administrative theory in education, (p. 98).* Chicago: University of Chicago Administration Center.

Hickman, C. F. (1990). *Mind of a manager, soul of a leader.* New York: John Wiley.

Hoy, W. K., & Miskel, C. G. (1991). *Educational administration: Theory research and practice.* (4th ed.). NY: McGraw Hill.

Industrial Revolution (2006). Retrieved May 25, 2006 from http://en.wikipedia.org/wiki/Industrial_Revolution

Interstate School Leaders Licensure Consortium (1996). *Standards for school leaders.* Washington, D.C. : Council of Chief State School Officers

ISLLC (2007). (Retrieved March 6, 2007 from http:/www.umsl.edu.edu/~mpea/Pages/AboutISLLC/ABoutISLLC.html

Jackson, A. W., & Davis, G. A. (2000). *Turning Points 2000: Educating adolescents in the 21st century: A report of the Carnegie Corporation of New York.* New York: Teachers College Press.

Jantzi, D., & Leithwood, K. (1996). Toward an explanation of variation in teachers' perceptions of transformational school leadership. *Educational Administration Quarterly, (32)*4, 512-538.

Johnson, R. (1996). School restructuring: A continuing imperative. *IDRA Newsletter, August 1996.* Retrieved April 10, 2006 from http://www.idra.org/Newslttr/1996/Aug/Roy.htm.

Kirby, P. C., Paradise, L. V., King, M. I. (1992). Extraordinary leaders in education: Understanding transformational leadership. *Journal of Educational Research 85*(5), 301-311.

Kleine-Kracht, P. (1993). Indirect instructional leadership: An administrator's choice. *Educational Administration Quarterly, 18*(4), 1-29.

Kmetz, J. T., & Willower, D. J. (1982). Elementary school principals' work behavior. *Educational Administration Quarterly, 18*(4), 1-29.

Konstantoppoulos, Spyros, (2004). Trends of school effects on school achievement: Evidence from NLS:72, HSB:82, and NELS:92. *Teachers College Record 108*(12), 2550-81.

Koos, L. V. (1927). *The junior high school.* (Enlarged ed.). Boston: Ginn and Co.

Kotter, J. P. (1985). *Power and influence: Beyond formal authority.* New York: Free Press.

Kotter, J. P. (1988). *The leadership factor.* New York: Free Press, 1988.

Kotter, J. P. (1990). *A force for change: How leadership differs from management.* New York: Free Press.

Kotter, J. P. (1996). *Leading change.* Boston: Harvard Business School Press.

Kouzes, J. M., & Posner, B. Z. (2002). Five practices of exemplary leadership. In *The Leadership Challenge.* San Francisco: Jossey-Bass, 2-39.

Lambert, L., (2002). A framework for shared leadership. *Educational Leadership, 59*(8), pp. 37-41.

Lambert, L., (2003). *Building leadership capacity for lasting school improvement.* Alexandria, VA: Association for supervision and curriculum development.

LaPointe, M. & Davis, S. H. (2006). Effective schools require effective principals. *Leadership 36*(1), 16-19.

Larson, T. J. (1987). *Identification of instructional leadership behaviors and the impact of their implementation on academic achievement.* ERIC Document Reproduction Service No. ED 282 286

Lashway, L. (1995). *Can instructional leaders be facilitative leaders?* ERIC Digest, 98.

Lashway, L. (1997). *Multidimensional school leadership.* Bloomington, IN: Phi Delta Kappa.

Lauder, A., (2000). The new look in principal preparation programs. *NASSP Bulletin 84*(617), 23-28.

Leithwood, K. (1992). The move toward transformational leadership. *Educational Leadership, 49*(5), 8-12.

Leithwood, K. (1993). *Contributions of transformational leadership to school restructuring*. Paper presented at the 1993 Convention of the University Council for Educational Administration, Houston, TX.

Leithwood, K. (1994). Leadership for school restructuring. *Educational Administration Quarterly, 30*(4), 498-51 S.

Leithwood, K. and Duke, D. L. (1999). A century's quest to understanding school leadership. In J. Murphy & K.S. Louis (Eds.) *Handbook of research on education administration* (2nd ed.), 45-72.

Leithwood, K., Jantzi, D. & Steinbach, R. (1998). Leadership and other conditions which foster organizational learning in schools. In Leithwood and K. S. Louis (Eds.) *Organizational learning in schools.* Lisse: Swets & Zeitlinger Publishers, 67-90

Leithwood, K., Jantzi, D. & Steinbach, R. (2000a). Changing leadership: A menu of possibilities. In *Changing leadership for changing times*. Philadelphia: Open University Press, (3-20).

Leithwood, K., Jantzi, D. & Steinbach, R. (2000b). Transformational leadership: A good place to start. In *Changing leadership for changing times*. Philadelphia: Open University Press, (21-42).

Leithwood, K., & Montgomery, D. (1992). The role of the elementary school principal in program improvement. *Review of educational Research, 52*(3), 309-399

Leithwood, K. & Riehl, C. (2003). *What we know about successful school leadership*. (A report by Division A of the American Educational Research Association). Philadelphia: Temple University.

Lezotte, L. (1991). *Correlates of effective schools: The first and second gneration.* Okemos, MI: Effective Schools Products, Ltd.

Lipham, J. (1965). Leadership and administration. *In Behavioral Science and Educational Administration.* Chicago: National Society for the Study of Education, 1964 Yearbook, 119-141.

Little, J. W. (1982). Norms of collegiality and experimentation: Workplace conditions of school success. *American Educational Research Journal, 5*(19), 325-340.

Louis, K. S., (1999). Rethinking school improvement, in J. Murphy and K. S. Louis (Eds.) Handbook of research on educational administration, (pp. 251-276). Second edition. San Francisco: Jossey-Bass.

Lounsbury, J. H. (1954). *The role and status of the junior high school.* Unpublished doctoral dissertation. Nashville, TN: George Peabody College for Teachers.

Marczely, B. (1998). Defending effective supervision in a litigious climate. *NASSP Bulletin 82*(602), 89-94.

Marks, H.M., & Printy, S.M. (2003). Principal leadership and school performance: An integration of transformational and instructional leadership. *Educational Administration Quarterly, 39*(3), 370-397.

Marzano, R. J., Waters, T, & McNulty, B. A. (2005). *School leadership that works: From research to results.* Alexandria, VA: Association for Supervision and Curriculum

Development and Arvada, CO: Mid-Continent Research for Education and Learning.

Maslow, A. (1954). *Motivation and personality.* New York: Harper

McEwin, C. K., Dickinson, T. S., & Jenkins, D. (1996). *America's middle schools: Practices and progress—A 25-year perspective.* Columbus, OH: National Middle School Association.

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

Mehrens, W. A. (1998). Consequences of assessment: What is the evidence? *Education Policy Analysis Archives, 6*(13). Available from http//epaa.asu.edu.

MASSP (1994). *Michigan schools of the future task force report: Focus on restructuring,* Ann Arbor, MI: Michigan, Michigan Association of Secondary School Principals.

Mintzberg, H. (1973). The nature of managerial work. New York: Harper and Row.

Missouri Department of Elementary and Secondary Education. (2006). Missouri Assessment Program. Retrieved from http://www.dese.mo.gov/divimprove/assess/publications.html

Morgan, G. (1997). *Images of organization.* Thousand Oaks, CA: Sage.

Morris, V. C. (1987). Educational aims and the management of school. In Lane, J., & Walberg, H. (Eds.). *Effective school leadership.* Berkeley, CA: McCutcheon.

Mullen, C. A., Gordon, S. P., Greenlee, B. J., & Anderson, R. H. (2002), Capacities for school leadership: Emerging trends in the literature. *Intrernational Journal of Educational Reform, 11*, 158-198.

Murphy, J. (1994). Redefining the principalship in restructuring schools. *NASSP Bulletin 79*(560), 94-100.

Murphy, J., & Beck, L. G. (1994). Reconstructing the principalship: Challenges and possibilities. In Joseph Murphy & Karen Seashore (Eds.), *Reshaping the Principalship: Insights From Transformational Reform Effort*s. (3-29). Thousand Oaks, CA: Corwin Press.

Murphy, J., & Hallinger, P. (1992). The principal in an era of transformation. *Journal of Educational Administration, 30*(3). 77-88.

Murphy, J., Weil, M., Hallinger, P., & Mitman, A. (1985). School effectiveness: A conceptual framework. *Educational Forum, 49*, 361-374.

Murphy, S. H. (1998). Helping student learn to work together as a team. *NASSP Bulletin 82*(602), 83-94.

Myers, E. & Murphy, J. (1995). Suburban secondary school principals' perceptions of administrative control in schools. *Journal of Educational Administration, 33*(3), 14-37.

National Commission on Excellence in Education (1983). *A nation at risk: The imperative for educational reform. A report to the nation and the Secretary of Education, United States Department of Education.* Washington, DC.

National Middle School Association (NMSA 1995). *This we believe: Successful schools for young adolescents: A position paper of the National Middle School Association.* Westerville, OH: National Middle School Association.

National Middle School Association (NMSA 2003). *This we believe: Successful schools for young adolescents: A position paper of National Middle School Association.* Westerville, OH: National Middle School Association.

NDEA (2006). Government's 50 greatest endeavors. Retrieved February 6, 2006 from: http://www.brook.edu/gs/50ge/endeavors/elementarysecondary.htm.

NCES (National Center for Education Statistics) (2006). *Trends in international mathematics and science study.* Retrieved February 10, 2006 from: http://nces.ed.gov/times/

Newman, F., & Welhage, G. (1995). *Successful school restructuring: A report to the public and educators by the Center on Organization and Restructuring of Schools.* Madison, WI: University of Wisconsin Center on Organization and Restructuring of Schools, School of Education, Wisconsin Center for Education Research.

Ogawa, R. T., & Bossert, S. T. (1995). Leadership as an Organizational Quality. *Educational Administration Quarterly, 31*(2*),* 234-243.

Ogden, E. H., & Germinario, B. (1994). *Nation's best schools: Blueprints for excellence.* Lanham, MD: Rowman and Littlefied

O'Neill, (1993). Turning the system on its head. *Educational leadership 51*(1), 518.

Pajak, E. (1989). *Identification of supervisory proficiencies project*. Alexandria, VA: Association for Supervision and Curriculum Development.

Petzko, V. N. (1998). Preventing legal headaches through staff development: Considerations and recommendations. *NASSP Bulletin 82*(602), 35-42.

Pfeiffer (2006). *Bureaucracy.* Retrieved June 2, 2006 from http://www2.pfeiffer.edu/~Iridener/DSS/Weber/Bureau.HTML

Prater, M. E., (2004). *The relative impact of principal managerial, instructional, and transformational leadership on school achievement.* Unpublished doctoral dissertation, University of Missouri, Columbia.

Queen, J. A. & Isenhour, K. J. (1998). Building a climate of acceptance for block scheduling. *NASSP Bulletin 82*(602), 95-113.

Reeves, D. B., (2006). *The learning leader: How to focus school improvement for better results.* Alexandria, VA: Association for Supervision and Curriculum Development.

Reitzug, U. C. (1997). Images of principal instructional leadership: From supervision to collaborative inquiry. *Journal of Curriculum and Supervision, 12*(4), 356-366.

Riegel, R. P., & Lovell, N. B., (1980). *Minimal competency testing.* Bloomington, IN: Phi Delta Kappa.

Roderick, M., & Engel, M. (2001). The grasshopper and the ant: Motivational responses of low-achieving students to high-stakes testing. *Educational Evaluation and Policy Analysis, 23*(3), 197-227.

Romano, L. G. & Georgiady, N. P., (1994). *Building an effective middle school.* Dubuque, IA: Brown & Benchmark.

Rosenblatt, Z., & Somech, A. (1998). The work behavior of Israeli elementary school principals: Expectations versus reality. *Educational Administration Quarterly, 34*(4), 505-532.

Rosenholtz, S. J. (1991). *Teacher's workplace: The social organization of schools.* New York: Teachers College Press.

Rossmiller, R. A. (1992). The secondary school principal and teachers' quality of work life. *Educational Management and Administration, 20*(3), 132-146.

Rossow, L. F. (1990). *The principalship: Dimensions in instructional leadership*. Englewood Cliffs, NJ: Prentice-Hall.

Rost, J. C. (1991). *Leadership for the 21" century.* New York: Praeger.

Rutter, M. (1979). *Fifteen thousand hours: Secondary schools and their effects on children.* Cambridge, MA: Harvard University Press.

Sagor, R. (2003). *Motivating students and teachers in an era of standards.* Alexandria, VA: Association for Supervision and Curriculum Development.

Saphier, J., & King, M. (1985). Good seeds grow in strong cultures. *Educational leadership 42*(6). 67-74.

Schein, E. H. (1992). *Organizational culture and leadership.* San Francisco: Jossey-Bass.

Schmoker, M., (2001). *The results fieldbook: Practical strategies from dramatically improved schools.* Alexandria, VA: Association for Supervision and Curriculum Development.

Schön, D. A., (1987). *Educating the reflective practitioner.* San Francisco: Jossey-Bass

Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York: Doubleday.

Senge, P. M., Kleiner, A., Robers, C., Ross, R. B., & Smith, B. J. (1994). *The fifth discipline fieldbook: Strategies and tools for building a learning organization.* New York: Doubleday.

Sergiovanni, T. J., (1999). *Lifeworld of leadership: Creating culture, community, and personal meaning in our schools.* San Francisco: Jossey-Bass.

Shepard, L. A. (1990). Inflated test score gains: Is the problem old norms or teaching to the test? *Educational Measurement: Issues and Practice, 9*(3), 15 -22.

Sheppard, B. (1996). Exploring the transformational nature of instructional leadership. *The Alberta Journal of educational Research, 42*(4), 325-344.

Silins, H.C. (1994). The relationship between transformational and transactional leadership and school improvement. *School Effectiveness and School Improvement, 5*(3), 272-298.

Singleton, Jr., R. A., Straits, B. C., & Straits, M. M. *Approaches to social research* (2nd ed.). New York: Oxford University Press.

Smith, Adam (1776). *The wealth of nations*. London: Stratton and Caddell.

Smith, W. F., & Andrews, R. L. (1989). *Instructional leadership: How principals make a difference*. Alexandria, VA: Association of Supervision and Curriculum Development.

Smith, J., Maeher, M., & Midgley C. (1992). Relationship between personal and contextual characteristics and principals' administrative behaviors. *Journal of Educational Research, 86*(2), 111-118.

Sparks, D. & Hirsch, S. (1997). *A new vision for staff development.* Alexandria, VA: Association for Supervision and Curriculum Development.

Sprague, M. M., Pennell, D., & Sulzberger, L. (1998). Engaging all middle level learners in multi-disciplinary curricula. *NASSP Bulletin 82*(602), 60-66.

Steller, A. W. (1988). *Effective schools research: Practice and Promise.* Bloomington, IN: Phi Delta Kappa Foundation.

Stone, H., Parker, J. D., & Wood, I. M. (2005). *Report on the Ontairo Princpials' Council Leadership Study.* Available: www.eiconsortium.org/research/opc-leadership-study-final-report.htm.

Tatum, B. D. (1998) What do you do when they call you a racist? *NASSP Bulletin 82*(602), 43-48.

Taylor, F. W. (1911). *The principles of scientific management.* New York: Harper and Brothers.

Thompson, S. C. (2004) in Thompson, S. C. (Ed.). *Reforming middle level education: Considerations for policymakers.* Greenwich: CN: National Middle School Association.

Valentine, J.W., & Bowman, M.L. (1988). Audit of principal effectiveness: A method for self-improvement. *NASSP Bulletin, 72*(508), 18-26.

Valentine, J. W., Clark, D. C., Nickerson, N. C., & Keefe, J. W., (1981). *The middle level principalship: Vol. 1. A national survey of middle level leaders in schools.* Reston, VA: National Association of Secondary School Principals.

Valentine, J. W., Clark, D. C., Hackmann, D. G., & Petzko, V. N. (2002). *Leadership for highly successful middle schools: A national study of leadership in middle level schools, Volume I.* Reston, VA: NASSP.

Valentine, J. W., Clark, D. C., Hackmann, D. G., & Petzko, V. N. (2004). *Leadership for highly successful middle schools: A national study of leadership in middle level schools, Volume II.* Reston, VA: NASSP.

Van Til, W. G., Vars, G. & Lounsbury, J. (1961). *Modern education for the junior high years.* Indianapolis, IN: Bobbs-Merrill. Wallinger, L. M. (1998).

Wallinger, L. M. (1998). What principals and students should know about college admissions (1998). *NASSP Bulletin 82*(602), 67-76.

Wanzare, Z, & DaCosta, J. L. (2001). Rethinking instructional leadership roles of the school principal. *Journal of Educational Thought, 35*(3), 265-295.

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

Waters, T., Marzano, R., & McNulty, B. (2005). *School leadership that works: From research to results.* Alexandria, VA: Association for Supervision and Curriculum Development and. Aurora, CO: Mid-Continent Research for Education and Learning.

Weller, L. D., Jr. (1999). *Quality middle school leadership: Eleven central skill areas.* Lancaster, PA: Technomic.

Whitaker, T., & Turner, E., (2000). What is your priority? NASSP *Bulletin 84*(617), 16-22.

Wiles, J. & Bondi, J. (1986). *The essential middle school.* Tampa, FL: Wiles, Bondi and Associates.

Williams, W. W. (1998). Preventing violence in school: What can principals do? *NASSP Bulletin 82*(602), 10-17.

Williamson, R. D. & Johnston, J. H. (2004) in Thompson, S. C. (Ed.). *Reforming middle level education: Considerations for policymakers.* Greenwich: CN: National Middle School Association.

Wilmore, E., & Thomas, C. (2001). The new century: Is it too late for transformational leadership? *Educational Horizons, 79*(3), 115-123.

York-Barr, J., Sommers, W. A., Ghere, G. S., & Montie, J. (2001). *Reflective practice to improve schools.* Thousand Oaks, CA: Corwin.

Yukl, G. (2001). *Leadership in organizations.* Upper Saddle River, New Jersey: Prentice Hall.

Zaleznik, A. (1977). *Managers and leaders: Are they different? Harvard Business Review, 55*(5), 67-78

Zmuda, A, Kuklis, R., & Kline, E. (2004). *Transforming schools: Creating a culture of continuous improvement.* Alexandria, VA: Association for Supervision and Curriculum Development.

# Appendix A

## Survey A – Managerial and Instructional Leadership

## MISSOURI STUDY OF MIDDLE LEVEL EDUCATION

***Teacher Survey Form A*** ***School Name: _____***

**Please use the following key to indicate the degree to which each statement applies to your principal. Respond specifically about your principal, not an assistant principal or other school leader. This survey may look lengthy, but the items have been spaced for easy reading to save you time. The typical time to complete this survey is about 15-20 minutes.**

**1=Strongly Disagree 2=Disagree 3=Somewhat Disagree 4=Somewhat Agree 5=Agree 6=Strongly Agree**
**(Circle, check, or darken the number that applies)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | The principal assists faculty in developing an understanding of, and support for, the beliefs and attitudes that form the basis of the educational value system of the school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 2. | The principal provides for the identification of, and the reaching of consensus on, the educational goals of the school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 3. | The principal has high, professional expectations and standards for self, faculty, and school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 4. | The principal helps the faculty develop high, professional expectations and standards for themselves and the school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 5. | The principal envisions future goals and directions for the school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 6. | The principal encourages changes in school programs that lead to a better school for the students. | **1** | **2** | **3** | **4** | **5** | **6** |
| 7. | The principal communicates to teachers the directions the school's programs need to take for growth. | **1** | **2** | **3** | **4** | **5** | **6** |
| 8. | **The principal develops plans for the cooperation and involvement of the community, individuals, and agencies of the school.** | **1** | **2** | **3** | **4** | **5** | **6** |
| 9. | **The principal utilizes resources from outside the school to assist in the study, development, implementation, and/or evaluation of the school.** | **1** | **2** | **3** | **4** | **5** | **6** |
| 10. | **The principal provides for the gathering of information and feedback from individuals and agencies in the community.** | **1** | **2** | **3** | **4** | **5** | **6** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 11. | **The principal provides for the dissemination of information to individuals and agencies in the community.** | **1** | **2** | **3** | **4** | **5** | **6** |
| 12. | **The principal is supportive of, and operates within, the policies of the district.** | **1** | **2** | **3** | **4** | **5** | **6** |
| 13. | **The principal maintains good rapport and a good working relationship with other administrators of the district.** | **1** | **2** | **3** | **4** | **5** | **6** |
| 14. | **The principal invests time with the district office and other external agencies to obtain support and resources from the agencies.** | **1** | **2** | **3** | **4** | **5** | **6** |

**1=Strongly Disagree 2=Disagree 3=Somewhat Disagree 4=Somewhat Agree 5=Agree 6=Strongly Agree**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15. | **The principal strives to achieve autonomy for the school.** | **1** | **2** | **3** | **4** | **5** | **6** |
| 16. | **The principal develops and implements school practices and policies that synthesize educational mandates, requirements and theories, e.g. legal requirements, social expectations, theoretical premises.** | **1** | **2** | **3** | **4** | **5** | **6** |
| 17. | **The principal understands and analyzes the political aspects of education and effectively interacts with various communities, e.g. local, state, national, and/or various subcultures within the local community.** | **1** | **2** | **3** | **4** | **5** | **6** |
| 18. | The principal informs the staff of new developments and ideas in education. | **1** | **2** | **3** | **4** | **5** | **6** |
| 19. | During the identification of needed change, the principal's style is more supportive and participative than directive and authoritative. | **1** | **2** | **3** | **4** | **5** | **6** |
| 20. | During evaluation of change, the principal's style is more supportive and participative than directive and authoritative. | **1** | **2** | **3** | **4** | **5** | **6** |
| 21. | The principal anticipates the effects of decisions. | **1** | **2** | **3** | **4** | **5** | **6** |
| 22. | The principal fairly and effectively evaluates school personnel. | **1** | **2** | **3** | **4** | **5** | **6** |
| 23. | The principal employs new staff who enhance the overall effectiveness of the school and complement the existing staff. | **1** | **2** | **3** | **4** | **5** | **6** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24. | Through discussion with teachers about concerns and problems that affect the school, the principal involves teachers in the decision-making process. | **1** | **2** | **3** | **4** | **5** | **6** |
| 25. | The principal discusses school-related problems with teachers, seeking their opinions and feelings about the problem. | **1** | **2** | **3** | **4** | **5** | **6** |
| 26. | The principal utilizes a systematic process for change that is known and understood by the faculty. | **1** | **2** | **3** | **4** | **5** | **6** |
| 27. | The principal has the patience to wait to resolve a problem if the best solution to that problem is not yet readily evident. | **1** | **2** | **3** | **4** | **5** | **6** |
| 28. | The principal is willing to admit to making an incorrect decision and corrects the decision if feasible. | **1** | **2** | **3** | **4** | **5** | **6** |
| 29. | The principal is perceptive of teacher needs. | **1** | **2** | **3** | **4** | **5** | **6** |
| 30. | The principal gives teachers the support they need to be effective. | **1** | **2** | **3** | **4** | **5** | **6** |
| 31. | The principal diagnoses the causes of conflict and successfully mediates or arbitrates conflict situations. | **1** | **2** | **3** | **4** | **5** | **6** |
| 32. | Teachers feel at ease in the presence of the principal. | **1** | **2** | **3** | **4** | **5** | **6** |
| 33. | When deserving, teachers are complimented by the principal in a sincere and honest manner. | **1** | **2** | **3** | **4** | **5** | **6** |

**1=Strongly Disagree 2=Disagree 3=Somewhat Disagree 4=Somewhat Agree 5=Agree 6=Strongly Agree**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 34. | The principal is receptive to suggestions. | **1** | **2** | **3** | **4** | **5** | **6** |
| 35. | The principal is accessible when needed. | **1** | **2** | **3** | **4** | **5** | **6** |
| 36. | The principal takes time to listen. | **1** | **2** | **3** | **4** | **5** | **6** |
| 37. | Teachers feel free to share ideas and concerns about school with the principal. | **1** | **2** | **3** | **4** | **5** | **6** |
| 38. | When teachers discuss a problem with the principal, the principal demonstrates an understanding and appreciation of how teachers feel about the problem. | **1** | **2** | **3** | **4** | **5** | **6** |
| 39. | When talking to the principal, teachers have the feeling the principal is sincerely interested in what they are saying. | **1** | **2** | **3** | **4** | **5** | **6** |
| 40. | Through effective management of the day-by-day operation of the school, the principal promotes among staff, parents, and community a feeling of confidence in the school. | **1** | **2** | **3** | **4** | **5** | **6** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 41. | The principal finds the time to interact with students. | **1** | **2** | **3** | **4** | **5** | **6** |
| 42. | Students feel free to initiate communication with the principal. | **1** | **2** | **3** | **4** | **5** | **6** |
| 43. | Students in the school view the principal as a leader of school spirit. | **1** | **2** | **3** | **4** | **5** | **6** |
| 44. | The principal encourages student leadership. | **1** | **2** | **3** | **4** | **5** | **6** |
| 45. | The principal helps develop student responsibility. | **1** | **2** | **3** | **4** | **5** | **6** |
| 46. | The principal is highly visible to the student body. | **1** | **2** | **3** | **4** | **5** | **6** |
| 47. | The principal positively reinforces students. | **1** | **2** | **3** | **4** | **5** | **6** |
| 48. | The principal enjoys working with students. | **1** | **2** | **3** | **4** | **5** | **6** |
| 49. | The principal keeps teachers informed about those aspects of the school program of which they should be aware. | **1** | **2** | **3** | **4** | **5** | **6** |
| 50. | When the principal provides teachers with the information about school operations, the information is clear and easily understood. | **1** | **2** | **3** | **4** | **5** | **6** |
| 51. | When teachers are informed of administrative decisions, they are aware of what the principal expects of them as it relates to the decision. | **1** | **2** | **3** | **4** | **5** | **6** |
| 52. | The principal is able to organize activities, tasks, and people. | **1** | **2** | **3** | **4** | **5** | **6** |
| 53. | The principal develops appropriate rules and procedures. | **1** | **2** | **3** | **4** | **5** | **6** |
| 54. | The principal uses systematic procedures for staff appraisal, e.g. retention, dismissal, promotion procedures. | **1** | **2** | **3** | **4** | **5** | **6** |

**1=Strongly Disagree 2=Disagree 3=Somewhat Disagree 4=Somewhat Agree 5=Agree 6=Strongly Agree**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 55. | The principal establishes the overall tone for discipline in the school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 56. | The principal establishes a process by which students are made aware of school rules and policies. | **1** | **2** | **3** | **4** | **5** | **6** |
| 57. | The principal communicates to teachers the reasons for administrative practices used in the school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 58. | The principal works with other leaders of the school in the implementation of a team approach to managing the school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 59. | The principal encourages faculty to be sensitive to the needs and values of other faculty in the school. | **1** | **2** | **3** | **4** | **5** | **6** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 60. | The principal helps teachers clarify or explain their thoughts by discussing those thoughts with them. | **1** | **2** | **3** | **4** | **5** | **6** |
| 61. | During meetings, the principal involves persons in the discussion who might otherwise not participate. | **1** | **2** | **3** | **4** | **5** | **6** |
| 62. | The principal shares personal feelings and opinions about school issues with teachers. | **1** | **2** | **3** | **4** | **5** | **6** |
| 63. | Humor used by the principal helps to improve the school environment by creating a more congenial working climate. | **1** | **2** | **3** | **4** | **5** | **6** |
| 64. | Personal thoughts shared by the principal about school help teachers develop a sense of pride and loyalty as members of the school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 65. | The principal is knowledgeable of the general goals and objectives of the curricular areas. | **1** | **2** | **3** | **4** | **5** | **6** |
| 66. | The principal is knowledgeable of the varied teaching strategies teachers might appropriately utilize during instruction. | **1** | **2** | **3** | **4** | **5** | **6** |
| 67. | The principal possesses instructional observation skills that provide the basis for accurate assessment of the teaching process in the classroom. | **1** | **2** | **3** | **4** | **5** | **6** |
| 68. | The principal actively and regularly participates in the observations and assessment of classroom instruction, including teaching strategies and student learning. | **1** | **2** | **3** | **4** | **5** | **6** |
| 69. | The principal has effective techniques for helping ineffective teachers. | **1** | **2** | **3** | **4** | **5** | **6** |
| 70. | The principal maintains an awareness and knowledge of recent research about the learning process. | **1** | **2** | **3** | **4** | **5** | **6** |
| 71. | When criticizing poor practices, the principal provides suggestions for improvement. | **1** | **2** | **3** | **4** | **5** | **6** |

**1=Strongly Disagree 2=Disagree 3=Somewhat Disagree 4=Somewhat Agree 5=Agree 6=Strongly Agree**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 72. | The principal is committed to instructional improvement. | **1** | **2** | **3** | **4** | **5** | **6** |
| 73. | The principal promotes the development of educational goals and objectives that reflect societal needs and trends. | **1** | **2** | **3** | **4** | **5** | **6** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 74. | The principal promotes the diagnosis of individual and group learning needs of students and application of appropriate instruction to meet those needs. | **1** | **2** | **3** | **4** | **5** | **6** |
| 75. | The principal administers a school-wide curricular program based upon identification of content goals and objectives and the monitoring of student achievement toward those goals and objectives. | **1** | **2** | **3** | **4** | **5** | **6** |
| 76. | The principal participates in instructional improvement activities such as program and curriculum planning and monitoring of student learning outcomes. | **1** | **2** | **3** | **4** | **5** | **6** |
| 77. | The principal uses objective data such as test scores to make changes in curriculum and staffing. | **1** | **2** | **3** | **4** | **5** | **6** |
| 78. | The principal has a systematic process for program review and change. | **1** | **2** | **3** | **4** | **5** | **6** |
| 79. | The principal encourages articulation of the curricular program. | **1** | **2** | **3** | **4** | **5** | **6** |
| 80. | Overall, our principal is an effective leader for our school. | **1** | **2** | **3** | **4** | **5** | **6** |

## Demographic Items

**Demographic responses provide the opportunity to gain insight into differences and similarities of responses from the various groups. Such information is very valuable in this comprehensive statewide study of middle level education. Please circle or mark the most appropriate response item. Select only one response per question. Please understand that demographic items will not be used in any way to identify individual respondents. Thank you for taking a moment to respond to these items.**

**1. Which of the following most accurately describes your teaching area?**
   a. Core content area (math, science, social studies, language arts)
   b. Non-core exploratory or elective content area
   c. Special education teacher
   d. Other, or not sure which of these to select

**2. Which of the following most accurately describes your teaching assignment?**
   a. I am a member of an interdisciplinary teaching team of four or more teachers.
   b. I am a member of an interdisciplinary team of two or three teachers.
   c. I am not a member of an interdisciplinary team.
   d. Other, or not sure which of these to select

**3. How many years (including this year) have you been an educator?**
   a. 1 to 2 years b. 3 to 5 years c. 6 to 10 years d. 11 to 20 years e. 21+ years

**4. What is your gender?**

a. Female b. Male

**5. How many years (including this year) have you been at your present school?**
a. 1 to 2 years b. 3 to 5 years c. 6 to 10 years d. 11 to 20 years e. 21+ years

**6. What subjects do you teach?**
a. Math b. Science c. Social Studies d. English/Language Arts
e. Reading f. Other, or not sure which to select

**7. Through which means did you obtain your certification?**
a. Traditional certification program b. Alternative certification program
c. I do not hold teacher certification d. Other, or not sure which of these to select

**8. As part of your teacher certification coursework, were you required to take a course on student assessment?**
a. Yes b. No

**9. Do you teach in your area of your certification?**
a. Yes b. No

**10. Please indicate the grade level of your certification: (please select the most appropriate response)**
a. Elementary b. Middle c. High d. Elementary/Middle e. Middle/High
f. K-8 g. K-12 h. I don't know i. Other, not sure which of these to select

**If you would like to provide any feedback to our Center about this survey or other information that would help us understand your school and the items asked in this survey, please use the following space.**

**Thank you for taking the time to complete this survey. Please seal this Survey and your Consent Form in the envelope provided and return it to the office secretary for mailing to the Middle Level Leadership Center.**

***Items in this survey not developed by the Middle Level Leadership Center were used with permission of the authors. Do not duplicate or use this survey without written permission from MLLC or the contributing authors. For information about the use of the survey or survey items, contact Jerry Valentine, Director, Middle Level Leadership Center.***

Appendix B

Survey B – Transformational Leadership

## MISSOURI STUDY OF MIDDLE LEVEL EDUCATION

***Teacher Survey Form B*** ***School Name:_____***

**Please use the following key to indicate the degree to which each statement applies to your school. This survey may look lengthy, but the items have been spaced for easy reading to save you time. The typical time to complete this survey is about 15-20 minutes.**

**1=Strongly Disagree 2=Disagree 3=Somewhat Disagree 4=Somewhat Agree 5=Agree 6=Strongly Agree (Circle, check, or darken the number that applies)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | Teachers utilize professional networks to obtain information and resources for classroom instruction. | **1** | **2** | **3** | **4** | **5** | **6** |
| 2. | Leaders value teachers' ideas. | **1** | **2** | **3** | **4** | **5** | **6** |
| 3. | Teachers have opportunities for dialogue and planning across grades and subjects. | **1** | **2** | **3** | **4** | **5** | **6** |
| 4. | Teachers trust each other. | **1** | **2** | **3** | **4** | **5** | **6** |
| 5. | Teachers support the mission of the school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 6. | Teachers and parents have common expectations for student performance. | **1** | **2** | **3** | **4** | **5** | **6** |
| 7. | Leaders in this school trust the professional judgments of teachers. | **1** | **2** | **3** | **4** | **5** | **6** |
| 8. | Teachers spend considerable time planning together. | **1** | **2** | **3** | **4** | **5** | **6** |
| 9. | Teachers regularly seek ideas from seminars, colleagues, and conferences. | **1** | **2** | **3** | **4** | **5** | **6** |
| 10. | Teachers are willing to help out whenever there is a problem. | **1** | **2** | **3** | **4** | **5** | **6** |
| 11. | Leaders take time to praise teachers that perform well. | **1** | **2** | **3** | **4** | **5** | **6** |
| 12. | The school mission provides a clear sense of direction for teachers. | **1** | **2** | **3** | **4** | **5** | **6** |
| 13. | Parents trust teachers' professional judgments. | **1** | **2** | **3** | **4** | **5** | **6** |
| 14. | Teachers are involved in the decision-making process. | **1** | **2** | **3** | **4** | **5** | **6** |
| 15. | Teachers take time to observe each other teaching. | **1** | **2** | **3** | **4** | **5** | **6** |
| 16. | Professional development is valued by the faculty. | **1** | **2** | **3** | **4** | **5** | **6** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17. | Teachers' ideas are valued by other teachers. | **1** | **2** | **3** | **4** | **5** | **6** |
| 18. | Leaders in our school facilitate teachers working together. | **1** | **2** | **3** | **4** | **5** | **6** |
| 19. | Teachers understand the mission of the school. | **1** | **2** | **3** | **4** | **5** | **6** |

**1=Strongly Disagree 2=Disagree 3=Somewhat Disagree 4=Somewhat Agree 5=Agree 6=Strongly Agree**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20. | Teachers are kept informed on current issues in the school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 21. | Teachers and parents communicate frequently about student performance. | **1** | **2** | **3** | **4** | **5** | **6** |
| 22. | My involvement in policy or decision making is taken seriously. | **1** | **2** | **3** | **4** | **5** | **6** |
| 23. | Teachers are generally aware of what other teachers are teaching. | **1** | **2** | **3** | **4** | **5** | **6** |
| 24. | Teachers maintain a current knowledge base about the learning process. | **1** | **2** | **3** | **4** | **5** | **6** |
| 25. | Teachers work cooperatively in groups. | **1** | **2** | **3** | **4** | **5** | **6** |
| 26. | Teachers are rewarded for experimenting with new ideas and techniques. | **1** | **2** | **3** | **4** | **5** | **6** |
| 27. | The school mission statement reflects the values of the community. | **1** | **2** | **3** | **4** | **5** | **6** |
| 28. | Leaders support risk-taking and innovation in teaching. | **1** | **2** | **3** | **4** | **5** | **6** |
| 29. | Teachers work together to develop and evaluate programs and projects. | **1** | **2** | **3** | **4** | **5** | **6** |
| 30. | The faculty values school improvement. | **1** | **2** | **3** | **4** | **5** | **6** |
| 31. | Teaching performance reflects the mission of the school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 32. | Administrators protect instruction and planning time. | **1** | **2** | **3** | **4** | **5** | **6** |
| 33. | Teaching practice disagreements are voiced openly and discussed. | **1** | **2** | **3** | **4** | **5** | **6** |
| 34. | Teachers are encouraged to share ideas. | **1** | **2** | **3** | **4** | **5** | **6** |
| 35. | Students generally accept responsibility for their schooling, for example they engage mentally in class and complete homework assignments. | **1** | **2** | **3** | **4** | **5** | **6** |
| 36. | Overall, the culture of our school is positive, caring, and collaborative. | **1** | **2** | **3** | **4** | **5** | **6** |
| 37. | My principal has both the capacity and the judgment to overcome most obstacles. | **1** | **2** | **3** | **4** | **5** | **6** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 38. | My principal commands respect from everyone on the faculty. | **1** | **2** | **3** | **4** | **5** | **6** |
| 39. | My principal excites faculty with visions of what we may be able to accomplish if we work together as a team. | **1** | **2** | **3** | **4** | **5** | **6** |
| 40. | My principal makes faculty members feel and act like leaders. | **1** | **2** | **3** | **4** | **5** | **6** |
| 41. | My principal gives the faculty a sense of overall purpose for its leadership role. | **1** | **2** | **3** | **4** | **5** | **6** |

**1=Strongly Disagree 2=Disagree 3=Somewhat Disagree 4=Somewhat Agree 5=Agree 6=Strongly Agree**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 42. | My principal leads by “doing” rather than simply by “telling.” | **1** | **2** | **3** | **4** | **5** | **6** |
| 43. | My principal symbolizes success and accomplishment within the profession of education. | **1** | **2** | **3** | **4** | **5** | **6** |
| 44. | My principal provides good models for faculty members to follow. | **1** | **2** | **3** | **4** | **5** | **6** |
| 45. | My principal provides for our participation in the process of developing school goals. | **1** | **2** | **3** | **4** | **5** | **6** |
| 46. | My principal encourages faculty members to work toward the same goals. | **1** | **2** | **3** | **4** | **5** | **6** |
| 47. | My principal uses problem solving with the faculty to generate school goals. | **1** | **2** | **3** | **4** | **5** | **6** |
| 48. | My principal works toward whole faculty consensus in establishing priorities for school goals. | **1** | **2** | **3** | **4** | **5** | **6** |
| 49. | My principal regularly encourages faculty members to evaluate our progress toward achievement of school goals. | **1** | **2** | **3** | **4** | **5** | **6** |
| 50. | My principal provides for extended training to develop my knowledge and skills relevant to being a member of the school faculty. | **1** | **2** | **3** | **4** | **5** | **6** |
| 51. | My principal provides the necessary resources to support my implementation of the school’s program. | **1** | **2** | **3** | **4** | **5** | **6** |
| 52. | My principal treats me as an individual with unique needs and expertise. | **1** | **2** | **3** | **4** | **5** | **6** |
| 53. | My principal takes my opinion into consideration when initiating actions that affect my work. | **1** | **2** | **3** | **4** | **5** | **6** |
| 54. | My principal behaves in a manner thoughtful of my personal needs. | **1** | **2** | **3** | **4** | **5** | **6** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 55. | My principal challenges me to reexamine some basic assumptions I have about my work in the school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 56. | My principal stimulates me to think about what I am doing for the school's students. | **1** | **2** | **3** | **4** | **5** | **6** |
| 57. | My principal provides information that helps me think of ways to implement the school's program. | **1** | **2** | **3** | **4** | **5** | **6** |
| 58. | My principal insists on only the best performance from the school's faculty. | **1** | **2** | **3** | **4** | **5** | **6** |
| 59. | My principal shows us that there are high expectations for the school's faculty as professionals. | **1** | **2** | **3** | **4** | **5** | **6** |

**1=Strongly Disagree 2=Disagree 3=Somewhat Disagree 4=Somewhat Agree 5=Agree 6=Strongly Agree**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 60. | My principal does not settle for second best in the performance of our work as the school's faculty. | **1** | **2** | **3** | **4** | **5** | **6** |
| 61. | Overall, our principal effectively leads our school-wide efforts toward excellence in teaching and learning. | **1** | **2** | **3** | **4** | **5** | **6** |

## Demographic Items

**Demographic responses provide the opportunity to gain insight into differences and similarities of responses from the various groups. Such information is very valuable in this comprehensive statewide study of middle level education. Please circle or mark the most appropriate response item. Select only one response per question. Please understand that demographic items will not be used in any way to identify individual respondents. Thank you for taking a moment to respond to these items.**

**11. Which of the following most accurately describes your teaching area?**

a. Core content area (math, science, social studies, language arts)
b. Non-core exploratory or elective content area
c. Special education teacher
d. Other, or not sure which of these to select

**12. Which of the following most accurately describes your teaching assignment?**

a. I am a member of an interdisciplinary teaching team of four or more teachers.
b. I am a member of an interdisciplinary team of two or three teachers.
c. I am not a member of an interdisciplinary team.
d. Other, or not sure which of these to select

**13. How many years (including this year) have you been an educator?**

a. 1 to 2 years b. 3 to 5 years c. 6 to 10 years d. 11 to 20 years e. 21+ years

**14. What is your gender?**

a. Female b. Male

**15. How many years (including this year) have you been at your present school?**

a. 1 to 2 years b. 3 to 5 years c. 6 to 10 years d. 11 to 20 years e. 21+ years

**16. What subjects do you teach?**

a. Math b. Science c. Social Studies d. English/Language Arts e. Reading f. Other, or not sure which to select

**17. Through which means did you obtain your certification?**

a. Traditional certification program b. Alternative certification program d. I do not hold teacher certification d. Other, or not sure which of these to select

**18. As part of your teacher certification coursework, were you required to take a course on student assessment?**

a. Yes b. No

**19. Do you teach in your area of your certification?**

a. Yes b. No

**20. Please indicate the grade level of your certification: (please select the most appropriate response)**

a. Elementary b. Middle c. High d. Elementary/Middle e. Middle/High f. K-8 g. K-12 h. I don't know i. Other, not sure which of these to select

**If you would like to provide any feedback to our Center about this survey or other information that would help us understand your school and the items asked in this survey, please use the following space.**

## Thank you for taking the time to complete this survey. Please seal this Survey and your Consent Form in the envelope provided and return it to the office secretary for mailing to the Middle Level Leadership Center.

Appendix C

Initial Principal Letter

# Middle Level Leadership Center

University of Missouri-Columbia – 211 Hill Hall – Columbia, MO 65211

**Director of Jerry Valentine (573) 882-0944**

Assistants: Bernard Solomon (573) 882-0947; Kris Matthews (573) 882-0947; Greg Mees (573) 882-0947

Fax: 884-7922 – Email: ValentineJ@Missouri.edu


Dear Middle Level Principal:

I am writing to seek your support of this comprehensive statewide study of Middle Level Education being conducted at the Middle Level Leadership Center at the University of Missouri. What I am asking of you is simple. Please ask your secretary to read the enclosed Secretary letter and complete the brief tasks listed in the letter. The envelope for your school secretary has the directions and materials necessary to distribute and collect the surveys. Essentially, we are asking each of the 10,000 plus Missouri middle level teachers to complete one survey, requiring 15-20 minutes of time. And we are asking 343 secretaries to handle the distribution and collection of the surveys. Please support that effort with a few kind words of encouragement to your teachers and your secretary.

To garner the support of the secretaries for this study and to express appreciation to those who go an extra mile to obtain as many returns as possible, I will give a $50 gift card to the secretaries of the twenty schools with the highest percentage of returned completed teacher surveys. To make that distribution as fair as possible, I have divided the 343 middle level schools in the state into quartiles by enrollment. The five secretaries from each enrollment quartile with the highest percentage of returned completed teacher surveys within forty days from the original MU postmark will receive the gift cards.

As you can see, I consider this to be a very important study and am thus willing to recognize the efforts of the secretaries who help us make the study a success. The information gained from this study is extremely important to middle level education. This comprehensive study of all Missouri middle level schools is the largest of its kind ever conducted. From this study, more will be learned about specific successful practices in middle level education than from any previous study of middle level education. For Missouri, it will provide the opportunity to make policy recommendations to the Commissioner and other state policy makers in support of best practices for educating young adolescents. Also, it will provide the opportunity for each of the 343 middle level principals in the state to compare the aggregated statewide findings with practices used in individual schools. However, please be assured that at no time in this study will the names of schools or individual respondents be reported. All individual responses will be rendered anonymous and all data about schools will be aggregated and will be confidential.

What I am asking of you, therefore, is both important and straightforward. Please:

a) Complete the brief Principal Survey (about 5-10 minutes)
b) Sign the Principal Consent Form,
c) Enclose both the Principal Consent Form and the completed Principal Survey in the envelope provided,

d) Seal the envelope,
e) Give the envelope to your school secretary so it can be returned to the Middle Level Leadership Center at MU,
f) Encourage your teachers to complete their survey, and
g) Encourage your secretary to follow through promptly with the process of collecting and returning surveys.

Please feel free to review any of the enclosed materials. The survey questions focus on a variety of key factors that affect student success, including programs and assessment practices, school culture and climate, principal and teacher leadership, and teacher commitment and efficacy. None of the materials ask sensitive questions but all are vital to build the necessary comprehensive picture of school effectiveness that allows us to study those variables that most directly affect student success.

Thank you for your time and for all of the energy and commitment you provide as a middle school leader. Please contact me if you have any questions about the study or the tasks I am asking you to complete. Look for the results of the study on the MLLC website so you can contrast your school with the statewide findings. I will also disseminate findings directly back to all participating Missouri schools through an email attachment.

Responses from your school and the other middle level schools across Missouri are vital to this effort as we work together to improve middle level education in our state and beyond. Thank you for your support.

Have a great school year!

Sincerely,

Jerry Valentine
Professor and Director, Middle Level Leadership Center
211 Hill Hall
University of Missouri
Columbia, MO 65211
(573) 882-0944
ValentineJ@missouri.edu
www.MLLC.org

**PLEASE SUPPORT THIS STUDY IN YOUR SCHOOL BY:**

- **GIVING THE PACKET OF MATERIALS TO YOUR SECRETARY**

- **ASKING THE SECRETARY TO FOLLOW THROUGH WITH THE APPROPRIATE TASKS**
- **ENCOURAGING YOUR TEACHERS TO TAKE THE FEW MINUTES NECESSARY TO RESPOND TO THEIR RESPECTIVE SURVEYS.**

**THANK YOU!**

Appendix D

Principal Survey

## MISSOURI STUDY OF MIDDLE LEVEL EDUCATION

***Principal Survey*** ***School Name: _____***

**Please take a moment to respond to the following demographic items. Please seal your responses in the envelope and give it to your secretary for mailing to my office at MU. Thank you for taking the time to complete this brief survey and supporting this important study in your school. What we learn will be extremely valuable to middle schools across the state and nation. The items are spaced for quick read and response. It will take you about 5-10 minutes to complete this survey. Thank you!**
**Jerry**

| Questions | | Responses |
|---|---|---|
| 1. | What is the current enrollment in your school? | |
| 2. | How many full-time-equivalent teachers (staffing units for individuals who teach) do you have in your building (half-time teacher is .5, full-time teacher is 1.0, etc.)? | |
| 3. | What grades are included in your school (e.g. 6-7-8, 7-8, etc.)? | |
| 4. | What percent of your students are eligible for free or reduced lunch? | |
| 5. | What do you estimate is the percent of average daily attendance for your student body? | |
| 6. | What is your gender? | |
| 7. | With what ethnic group do you identify yourself? | |
| 8. | What is your age? | |
| 9. | How many years were you a classroom teacher, counselor, or other non-administrator regardless of grade level? | |
| 10. | How many years were you a classroom teacher, counselor, or other non-administrator at the middle level? | |
| 11. | How many years were you an assistant principal, regardless of grade level? | |
| 12. | How many years were you an assistant principal at the middle level? | |
| 13. | How many years have you served as a principal, regardless of grade level, including this school year? | |
| 14. | How many years have you served as a middle level principal, including this school year? | |
| 15. | How many years have you served as the principal of this school? | |

**Continue on the Back -- Thank You.**

**Please use this scale to indicate the degree to which you agree with the following statements.**

**1=Strongly Disagree 2=Disagree 3=Somewhat Disagree 4=Somewhat Agree 5=Agree 6=Strongly Agree**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 16. | Overall, the culture of our school is positive, caring and collaborative. | **1** | **2** | **3** | **4** | **5** | **6** |
| 17. | Overall, our school climate is positive, trusting, and respectful. | **1** | **2** | **3** | **4** | **5** | **6** |
| 18. | Overall, our school is a healthy work environment. | **1** | **2** | **3** | **4** | **5** | **6** |
| 19. | Overall, the teachers in our school trust their fellow teachers. | **1** | **2** | **3** | **4** | **5** | **6** |
| 20. | Overall, the teachers in our school trust the clients (students and parents) they serve. | **1** | **2** | **3** | **4** | **5** | **6** |
| 21. | Overall, the teachers in our school trust me (their principal). | **1** | **2** | **3** | **4** | **5** | **6** |
| 22. | Overall, the teachers in our school trust the district-level leadership (district administrators and school board members). | **1** | **2** | **3** | **4** | **5** | **6** |
| 23. | Overall, the teachers in our school are committed to the success of our school. | **1** | **2** | **3** | **4** | **5** | **6** |
| 24. | Overall, the teachers in our school are committed to the personal and academic success of each and every student. | **1** | **2** | **3** | **4** | **5** | **6** |
| 25. | Overall, our school faculty believes they can make a difference in the lives of our students. | **1** | **2** | **3** | **4** | **5** | **6** |
| 26. | Overall, our school faculty effectively uses instructional strategies that enhance learning for each and every student. | **1** | **2** | **3** | **4** | **5** | **6** |
| 27. | Overall, our school faculty effectively uses assessment strategies and data to improve instruction and achievement for each and every student. | **1** | **2** | **3** | **4** | **5** | **6** |
| 28. | Overall, the teacher leaders in our school effectively lead other faculty in our schoolwide efforts toward excellence in teaching and learning. | **1** | **2** | **3** | **4** | **5** | **6** |
| 29. | Overall, I provide effective leadership toward excellence in teaching and learning. | **1** | **2** | **3** | **4** | **5** | **6** |
| 30. | Overall, I provide effective leadership for our school. | **1** | **2** | **3** | **4** | **5** | **6** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 31. | Overall, the “leadership team” (principal, assistants, counselors, chairs, team leaders, etc.) provides effective leadership for our school. | **1** | **2** | **3** | **4** | **5** | **6** |

**Thank you for taking the time to complete this survey. Please seal this Survey and your Consent Form in the envelope provided and return it to the office secretary for mailing to the Middle Level Leadership Center.**

Appendix E

School Demographic Data

*School Demographic Data*

| School Code | Enroll. | F/R Lunch | Av. Daily Attend. | FTE | No. Surveys Required (FTE/5 x .40) | No. A Surveys Returned | No. B Surveys Returned |
|---|---|---|---|---|---|---|---|
| 2 | 775 | 32 | 95 | 62 | 5 | 14 | 10 |
| 7 | 243 | 54 | 95 | 25 | 2 | 4 | 3 |
| 9 | 943 | 17 | 9 | 82 | 7 | 7 | 9 |
| 13 | 686 | 0 | 94 | 45 | 4 | 6 | 7 |
| 16 | 210 | 60 | 95 | 17 | 1 | 4 | 3 |
| 20 | 352 | 38 | 96 | 21 | 2 | 6 | 6 |
| 21 | 568 | 42 | 94 | 36 | 3 | 7 | 8 |
| 22 | 208 | 25 | 95 | 12 | 1 | 4 | 3 |
| 25 | 550 | 67 | 92 | 55 | 4 | 10 | 10 |
| 26 | 251 | 38 | 92 | 22 | 2 | 5 | 5 |
| 30 | 260 | 88 | 92 | 31 | 2 | 6 | 3 |
| 32 | 244 | 71 | 95 | 21 | 2 | 3 | 3 |
| 38 | 528 | 89 | 93 | 40 | 3 | 4 | 8 |
| 40 | 365 | 75 | 96 | 29 | 2 | 6 | 6 |
| 46 | 465 | 56 | 94 | 30 | 2 | 2 | 5 |
| 52 | 425 | 49 | 95 | 32 | 3 | 7 | 7 |
| 55 | 385 | 68 | 94 | 22 | 2 | 3 | 3 |
| 56 | 234 | 31 | 97 | 18 | 1 | 4 | 4 |
| 58 | 254 | 27 | 97 | 18 | 1 | 5 | 5 |
| 60 | 194 | 40 | 95 | 13 | 1 | 1 | 1 |
| 61 | 180 | 24 | 95 | 17 | 1 | 3 | 4 |
| 65 | 236 | 50 | 95 | 23 | 2 | 5 | 6 |
| 70 | 239 | 22 | 93 | 18 | 1 | 4 | 3 |
| 74 | 252 | 43 | 94 | 19 | 2 | 4 | 2 |
| 76 | 850 | 10 | 98 | 70 | 6 | 10 | 11 |
| 79 | 176 | 66 | 97 | 11 | 1 | 3 | 3 |
| 81 | 298 | 49 | 5 | 24 | 2 | 6 | 6 |
| 82 | 300 | 58 | 94 | 25 | 2 | 4 | 5 |
| 83 | . | . | . | . | . | 14 | 9 |
| 90 | 136 | 41 | 95 | 7 | 1 | 2 | 2 |
| 92 | 497 | 26 | 94 | 33 | 3 | 8 | 8 |
| 94 | 430 | 46 | 95 | 25 | 2 | 5 | 5 |
| 99 | 510 | 41 | 95 | 36 | 3 | 4 | 5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 102 | 648 | 14 | 94 | 44 | 4 | 8 | 7 |
| 103 | 654 | 57 | 93 | 49 | 4 | 8 | 8 |
| 104 | 202 | 35 | 96 | 16 | 1 | 4 | 3 |
| 105 | 114 | 77 | 94 | 10 | 1 | 3 | 3 |
| 108 | . | 70 | 94 | 40 | 3 | 3 | 5 |
| 109 | 795 | 48 | 95 | 61 | 5 | 12 | 10 |
| 113 | . | . | . | . | . | 6 | 7 |
| 114 | 381 | 46 | 96 | 31 | 2 | 6 | 3 |
| 118 | . | 22 | 95 | 60 | 5 | 1 | 12 |
| 120 | 360 | 41 | 96 | 25 | 2 | 5 | 3 |
| 125 | 232 | 51 | 95 | 15 | 1 | 3 | 3 |
| 127 | 256 | 44 | 96 | 17 | 1 | 1 | 3 |
| 130 | 745 | 32 | 96 | 46 | 4 | 6 | 8 |
| 131 | 570 | 50 | 95 | 30 | 2 | 6 | 8 |
| 132 | 900 | 32 | 95 | . | . | 11 | 11 |
| 133 | 580 | 14 | 95 | 49 | 4 | 10 | 9 |
| 134 | 601 | 77 | 93 | . | . | 7 | 7 |
| 138 | 164 | 52 | 97 | 15 | 1 | 1 | 4 |
| 146 | . | 28 | 96 | 37 | 3 | 8 | 8 |
| 149 | 775 | 17 | 95 | 51 | 4 | 8 | 9 |
| 154 | 227 | 30 | 97 | 14 | 1 | 2 | 2 |
| 155 | 365 | 43 | 96 | 25 | 2 | 5 | 6 |
| 156 | 420 | 22 | 96 | 28 | 2 | 7 | 7 |
| 157 | 700 | 48 | 94 | 43 | 3 | 7 | 8 |
| 159 | 900 | 45 | 93 | 64 | 5 | 12 | 11 |
| 162 | 820 | 12 | 95 | 55 | 4 | 5 | 5 |
| 165 | 247 | 98 | 95 | 15 | 1 | 4 | 5 |
| 168 | 185 | 51 | 95 | 13 | 1 | 4 | 4 |
| 171 | 299 | 40 | 96 | 21 | 2 | 5 | 4 |
| 173 | 775 | 51 | 94 | 62 | 5 | 9 | 10 |
| 176 | 167 | 50 | 94 | 16 | 1 | 4 | 4 |
| 177 | 201 | 37 | 96 | 18 | 1 | 4 | 4 |
| 180 | 180 | 38 | 96 | 31 | 2 | 4 | 7 |
| 181 | 690 | 52 | 92 | . | . | 9 | 6 |
| 182 | 555 | 32 | 94 | 43 | 3 | 4 | 5 |
| 183 | 574 | 52 | 93 | 36 | 3 | 6 | 8 |
| 186 | 312 | 45 | 96 | 22 | 2 | 6 | 6 |
| 187 | 213 | 41 | 95 | 9 | 1 | 3 | 2 |
| 189 | 910 | 15 | 95 | 61 | 5 | 12 | 12 |
| 190 | 350 | 62 | 94 | 28 | 2 | 6 | 5 |
| 193 | 405 | . | 95 | 35 | 3 | 7 | 7 |
| 195 | 482 | 47 | 95 | 34 | 3 | 7 | 7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 197 | 945 | 56 | 95 | 55 | 4 | 9 | 8 |
| 201 | 554 | 21 | 97 | 54 | 4 | 8 | 9 |
| 202 | 780 | 26 | 96 | 51 | 4 | 11 | 11 |
| 206 | 572 | 25 | 95 | 54 | 4 | 6 | 7 |
| 211 | 698 | 43 | 94 | . | . | 8 | 8 |
| 213 | 1220 | 36 | 93 | 89 | 7 | 15 | 17 |
| 214 | 130 | 60 | 95 | 13 | 1 | 2 | 1 |
| 219 | 302 | 31 | 95 | 25 | 2 | 6 | 6 |
| 220 | 276 | 42 | 94 | 21 | 2 | 4 | 4 |
| 222 | 435 | 50 | 95 | 31 | 2 | 7 | 7 |
| 224 | 354 | 27 | 97 | 29 | 2 | 5 | 5 |
| 227 | 672 | 47 | 95 | 52 | 4 | 10 | 9 |
| 228 | 780 | 19 | 96 | 36 | 3 | 7 | 5 |
| 230 | 70 | 36 | 96 | 5 | 1 | 2 | 2 |
| 233 | 489 | 18 | 95 | 37 | 3 | 7 | 7 |
| 234 | 747 | 21 | 95 | 56 | 4 | 8 | 7 |
| 240 | 710 | 60 | 93 | 53.5 | 43 | 10 | 9 |
| 241 | 215 | 68 | 94 | 16 | 1 | 3 | 1 |
| 248 | 548 | 76 | 92 | 40 | 3 | 6 | 4 |
| 249 | 350 | 48 | 94 | 24 | 2 | 5 | 6 |
| 250 | 576 | . | 94 | 36 | 3 | 4 | 5 |
| 253 | 400 | . | 93 | 38 | 3 | 7 | 6 |
| 255 | 730 | 66 | 95 | 56 | 4 | 9 | 10 |
| 260 | 976 | 19 | 95 | 72 | 6 | 12 | 7 |
| 265 | 802 | 24 | 95 | 51 | 4 | 6 | 7 |
| 267 | 368 | . | 94 | 25 | 2 | 6 | 5 |
| 268 | 492 | 20 | 95 | 36 | 3 | 7 | 3 |
| 269 | 115 | . | 96 | 10 | 1 | 1 | 2 |
| 273 | 938 | . | 95 | 66 | 5 | 13 | 14 |
| 275 | 220 | 58 | 95 | 15 | 1 | 4 | 3 |
| 276 | 235 | 40 | 95 | 15 | 1 | 4 | 3 |
| 281 | 910 | 26 | 96 | 62 | 5 | 15 | 18 |
| 282 | 494 | 10 | 95 | 35 | 3 | 4 | 7 |
| 283 | 269 | 35 | 95 | 30 | 2 | 4 | 5 |
| 284 | 712 | 15 | 96 | 47 | 4 | 7 | 6 |
| 285 | 565 | 64 | 94 | 41 | 3 | 8 | 7 |
| 287 | 580 | 17 | 96 | 46 | 4 | 10 | 11 |
| 288 | 563 | 11 | 95 | 45 | 4 | 7 | 8 |
| 291 | 781 | 19 | 95 | 49 | 4 | 10 | 10 |
| 293 | 166 | 52 | 95 | 13 | 1 | 4 | 4 |
| 304 | 140 | 35 | 96 | 11 | 1 | 4 | 3 |
| 305 | 440 | 44 | 94 | 34 | 3 | 7 | 8 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 306 | 850 | 6 | 96 | 59 | 5 | 12 | 12 |
| 307 | 713 | 20 | 94 | 52 | 4 | 10 | 9 |
| 308 | 440 | 51 | 96 | 35 | 3 | 6 | 7 |
| 309 | 959 | 40 | 94 | 67 | 5 | 9 | 9 |
| 310 | 361 | 56 | 95 | 36 | 3 | 7 | 7 |
| 311 | 917 | 29 | 93 | 53 | 4 | 10 | 10 |
| 312 | 445 | 56 | 93 | 34 | 3 | 6 | 7 |
| 315 | 236 | 50 | 95 | 17 | 1 | 5 | 3 |
| 316 | 740 | 28 | 95 | 64 | 5 | 8 | 5 |
| 320 | 610 | 43 | 95 | 37 | 3 | 7 | 9 |
| 324 | 730 | 18 | 96 | 55 | 4 | 4 | 4 |
| 326 | 955 | 23 | 96 | 78 | 6 | 14 | 13 |
| 328 | 550 | 64 | 95 | 41 | 3 | 8 | 7 |
| 335 | 665 | 21 | 95 | 56 | 4 | 8 | 10 |
| 339 | 599 | . | 96 | 71 | 6 | 11 | 12 |
| 341 | 700 | 40 | 94 | 53 | 4 | 11 | 10 |
| Means | 492.09 | 40.90 | 93.51 | 36.33 | | 6.44 | 6.49 |

Appendix F

Survey Item Means by Factor

*Means for survey items*

| Leadership Model | Factor | Item | Min. | Max. | Mean |
|---|---|---|---|---|---|
| Managerial | | | | | |
| | | | Interactive Processes | | |
| | | 49 | 3.00 | 6 | 4.96 |
| | | 50 | 3.17 | 6 | 4.92 |
| | | 51 | 3.00 | 6 | 4.97 |
| | | 52 | 2.80 | 6 | 5.06 |
| | | 53 | 3.00 | 6 | 5.06 |
| | | 54 | 2.60 | 6 | 4.89 |
| | | 55 | 2.33 | 6 | 4.82 |
| | | 56 | 2.67 | 6 | 5.05 |
| | | 57 | 2.33 | 6 | 4.71 |
| | Factor | | 2.33 | 6 | 4.94 |
| Instructional | | | | | |
| | | | Instructional Improvement | | |
| | | 65 | 2.80 | 6 | 5.07 |
| | | 66 | 2.00 | 6 | 5.04 |
| | | 67 | 2.00 | 6 | 4.93 |
| | | 68 | 2.00 | 6 | 4.79 |
| | | 69 | 2.00 | 6 | 4.43 |
| | | 70 | 2.00 | 6 | 4.94 |
| | | 71 | 2.67 | 6 | 4.82 |
| | | 72 | 2.60 | 6 | 5.31 |
| | Factor | | 2.00 | 6 | 4.92 |
| | | | Curriculum Improvement | | |
| | | 73 | 2.67 | 6.00 | 5.08 |
| | | 74 | 2.00 | 6.00 | 4.93 |
| | | 75 | 2.60 | 6.00 | 4.99 |
| | | 76 | 2.00 | 5.83 | 4.92 |
| | | 77 | 2.00 | 6.00 | 4.95 |
| | | 78 | 2.00 | 6.00 | 4.75 |
| | | 79 | 2.00 | 6.00 | 4.99 |
| | Factor | | 2.00 | 6.00 | 4.94 |
| Transformational | | | | | |
| | Vision | 37 | 2.50 | 6.00 | 4.95 |
| | | 38 | 2.00 | 6.00 | 4.74 |
| | | 39 | 2.00 | 6.00 | 4.57 |
| | | 40 | 2.00 | 6.00 | 4.67 |

| | | | | |
|---|---|---|---|---|
| | 41 | 2.00 | 6.00 | 4.70 |
| Factor | | 2.00 | 6.00 | 4.72 |
| Model | 42 | 2.00 | 6.00 | 4.54 |
| | 43 | 2.33 | 6.00 | 4.78 |
| | 44 | 2.00 | 6.00 | 4.72 |
| Factor | | 2.00 | 6.00 | 4.68 |
| Goal | 45 | 3.00 | 6.00 | 4.84 |
| | 46 | 3.00 | 6.00 | 5.03 |
| | 47 | 2.33 | 6.00 | 4.64 |
| | 48 | 2.00 | 6.00 | 4.59 |
| | 49 | 2.67 | 6.00 | 4.71 |
| Factor | | 2.33 | 6.00 | 4.76 |
| Support | 50 | 3.00 | 6.00 | 4.82 |
| | 51 | 2.67 | 6.00 | 4.81 |
| | 52 | 2.67 | 6.00 | 4.98 |
| | 53 | 2.50 | 6.00 | 4.82 |
| | 54 | 2.00 | 6.00 | 4.94 |
| Factor | | 2.00 | 6.00 | 4.87 |
| Stimulation | 55 | 2.67 | 6.00 | 4.63 |
| | 56 | 2.67 | 6.00 | 4.82 |
| | 57 | 2.33 | 6.00 | 4.66 |
| Factor | | 2.33 | 6.00 | 4.70 |
| Expectations | 58 | 2.50 | 6.00 | 4.93 |
| | 59 | 2.00 | 6.00 | 5.02 |
| | 60 | 2.67 | 6.00 | 4.80 |
| Factor | | 2.00 | 6.00 | 4.91 |

Appendix G

Campus IRB Approval Document

## Campus Institutional Review Board

University of Missouri-Columbia
483 McReynolds Hall
Columbia, MO 65211-1150

PHONE: (573) 882-9585
FAX: (573) 884-0663

Project Number: **1055838**
Project Title: Missouri Middle School Programs and School-wide Student Achievement
Approval Date: 12-11-2006
Expiration Date: 11-07-2007
Investigator(s): Goodman, Matthew Donald
Klinginsmith, Elmo Nyle
Matthews, Kristin Weiser
Mees, Gregory William
Solomon, Cameron Bernard
Valentine, Jerry Wayne
Level Granted: Expedited

Your Amendment was reviewed and we have determined that you are APPROVED to continue to conduct human subject research on the above-referenced project.

Federal regulations and Campus IRB policies require continuing review of research projects involving human subjects. Campus IRB approval will expire one (1) year from the date of approval unless otherwise indicated. Before the one (1) year expiration date, you must submit a Campus IRB Continuing Review Report to the Campus IRB. Any unexpected events are to be reported at that time. The Campus IRB reserves the right to inspect your records to ensure compliance with federal regulations at any point during your project period and three (3) years from the date of completion of your research.

Any additional changes to your study must be promptly reported and subsequently approved. If you have any questions, please contact the Campus IRB office at (573) 882-9585.

# VITA

E. Nyle Klinginsmith was born May 15, 1948, in Unionville, Missouri. He graduated from Putnam County High School in 1966. He received a Bachelor of Science in Education from the University of Missouri in 1970, a Masters in Education from the University of Missouri in 1974, and an Educational Specialist certificate in 1980. He taught Social Studies from 1970 to 1974, served as Director of Guidance from 1974 to 1998, and as Principal from 1998 to present. He is married to the former Barbara Herold of Ft. Madison, Iowa, and they have three sons, Michael, Jonathan, and Douglas, and one daughter-in-law, Megan.