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THE RELATIONSHIP BETWEEN LEADERSHIP PRACTICES OF PRINCIPALS AND STUDENT ACHIEVEMENT

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ABSTRACT

The Relationship between the Leadership Practices of Principals and Student Achievement

This study sought to determine if a significant relationship existed between the leadership practices of school principals and student achievement in mathematics and reading. The leadership practices of principals were measured using Kouzes'and Posner's Leadership Practices Inventory (LPI) which measures leadership practices in five distinct areas: modeling the way, inspiring a shared vision, challenging the process, enabling others to act and encouraging the heart. Student achievement in reading and mathematics was determined using the percentage of students proficient in reading and mathematics as measured by the state of West Virginia's standardized exam, the West Virginia Educational Standards Test (WESTEST) for the 2003-2004 and 2004-2005 school years. This study also considered the relationship of four selected demographic variables (per-pupil expenditure, principals' years of experience, school size and socioeconomic status) and the interaction of the leadership practices of principals and student achievement in both mathematics and reading.

The study's population consisted of West Virginia's school principals who had served as the principal of their schools for a minimum period of three years and whose schools contained some portion of grades three through eight (N=350). When examining the relationship between the leadership practices of principals and student achievement, a significant relationship was found between the leadership practice modeling the way and individual cases of student achievement in reading. Seven additional significant relationships were found when considering the relationship between selected demographic variables and the interaction of the leadership practices of principals and student achievement in mathematics and reading. The seven significant relationships existed when principals' years of experience, school size and socioeconomic status were considered. No significant relationships were found when examining per-pupil expenditure.

DEDICATION

This work is dedicated to my family whose love, support and encouragement have sustained me through this process: my father, Drexel; my mother, Wanda; my sister, Dawni; and my nephew, Adam.

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From the very beginning of my educational career, both my mother and father, Wanda and Drexel Starcher, have encouraged me to continuously pursue excellence, never settling for anything less than my best. From forcing me to write on the red and blue lined paper in my early years to listening to me recite my lecture notes in preparation for my essay exams in the first history course I took as an undergraduate student, my parents have supported me throughout my life in all of my pursuits. My parents have sacrificed spending time with me over the last three years so that I could complete my doctorate in a timely fashion realizing that one day I would have more time to spend with them. Their undying support, love and encouragement have been and continue to be appreciated and cherished.

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School reform efforts have proliferated the nation since the early 1980s with a focus on improving the nation's public education system. These reform efforts have ranged in size and complexty, requiring varying levels of support and resources from state, district and local leaders. While schools, school districts and states have participated in various reform efforts aimed at improving student achievement, the nation's schools continue to be subjected to claims that they are not providing the education necessary for the world of today and the future (Jazzar & Algozzine, 2006). Attempts to reform the nation's school system have ultimately led to the 2001 reauthorization of the Elementary and Secondary Education Act (ESEA).

As schools, school districts and states continue to focus on school reform and improvement, various researchers indicate that, for improvement focused at the school level to be successful, the principal is key (Fullan, 2003; McNeal & Christy, 2001; Snowden & Gorton, 2002). As principals are charged with leading effective school improvement initiatives, it is imperative that they possess the knowledge and skills and corresponding leadership practices necessary for such pursuits. Furthermore, as the state of West Virginia charges its principals with leading school improvement, it is necessary for state educational leaders to know the knowledge and skills possessed and practices demonstrated by the state's principals, in both high- and low-performing schools, so that the necessary technical assistance and professional development may be provided to aid them in their school improvement initiatives.

School Reform and Improvement

The 1983 publication of *A Nation at Risk: The Imperative for School Reform* by

the National Commission on Excellence in Education and its claims of a mediocre

education system resulted in the state and federal levels of government placing a greater

emphasis on education while this emphasis had historically been situated at the local

level (McNeal & Christy, 2001). As a result of this increased emphasis, states became

more involved in school improvement and reform initiatives. Examples of attempts at

school reform include the effort to develop a set of national goals in the late 1980s, a

focus on systemic school reform in the 1990s, and the requirement that no child be left

behind in the 2000s. The requirement that no child be left behind came in the form of the

2001 reauthorization of the ESEA (Jazzar & Algozzine, 2006).

While states have become more involved with school reform initiatives, McNeal

and Christy (2001) cautioned leaders that for true change to occur, it must happen at the

local (school) level. Therefore, as states focus on school improvement, state leaders must

collaborate with local school administrators and teachers to foster and affect true

educational reform. More importantly, this collaboration should include a focus on the

adaptation of the reform to the beliefs, values and norms of the local school (Wetherill &

Applefield, 2005).

Factors Influencing School Improvement

As schools, school districts and states continue to focus on school reform and

improvement, they must be cognizant of those factors that influence the implementation

and sustainability of improvement efforts (Hall & Hord, 2006; Sergiovanni, 2006).

School improvement initiatives often require resources, either additional or reassigned, to

meet the goals for improvement. Such resources may include additional personnel, time, money, staff development, materials and space (Hall & Hord, 2006; Kaplan, Owings & Nunnery, 2005; Sergiovanni, 2006). Hall and Hord (2006) suggested that leaders of school improvement initiatives need to take the steps necessary to ensure that resources are appropriated for successful implementation of such improvement initiatives (Hall & Hord, 2006). Furthermore, Sergiovanni (2006) indicated that schools and school systems must institutionalize the allotment of resources (i.e., money, personnel and time) to provide for the longevity of the school improvement initiative.

In addition to the provision of necessary resources, a school's or school system's culture and structure often require modification in order to successfully implement an improvement initiative (Sergiovanni, 2006). A school's culture is one often deeply rooted in tradition, values and beliefs, as well as deeply tied to the culture of its external community. Furthermore, this culture ultimately influences the degree to which an improvement initiative is successfully implemented (Jazzar & Algozzine, 2006). Duke (2004) identified several factors associated with schools whose cultures provide a foundation for sustained improvement which include (1) a shared vision promoted by all individuals (i.e., educators, staff, students, parents), (2) collegial and collaborative relationships amongst staff members, (3) educators who trust one another in their commitment to meet the needs of all students, (4) conversations that focus on efforts of what "is working" and "not working" in the classroom, and (5) a continuous pursuit of improvement.

The Principal and School Improvement

While resources and school culture are integral to successful improvement initiatives, Snowden and Gorton (2002) indicated, "…the primary leadership for bringing about school improvement must come from the organizational level of education where the change is to take effect" (p. 134). Therefore, in those instances where school improvement is targeted at the building level, it is imperative that the building administrator, most often the school principal, be prepared with the knowledge as well as possess the leadership skills necessary to effectively lead the improvement initiative. Furthermore, principals must utilize exemplary leadership practices, drawing upon their knowledge and skills, as they seek to effectively lead school improvement initiatives.

In those instances when a school improvement and reform initiative is imposed from the district, state or national level, building administrators must be able to encourage and motivate their staffs to accept the initiative and to provide the necessary resources and support for the staff to successfully implement the initiative (Leithwood, Louis, Anderson, & Wahlstrom, 2004). Administrators must work to build the capacity of their staffs to affect school improvement. In building capacity, Leithwood et al. (2004) indicated, "individual leaders actually behave quite differently…depending on the circumstances they are facing and the people with whom they are working" (p. 10).

While principals are often the key to school improvement efforts, Fullan (2003) identified barriers to improvement often noted by school principals. Such barriers are self- as well as system-imposed. As Fullan (2003) indicated, self-imposed barriers to improvement for school principals include issues such as the perception that the system limits the possibilities of and for improvement, the mindset that if "people" would either

do their job or let "me" do my job, I could lead an improvement initiative, and the tendency to take too much or too little responsibility in leading the improvement initiative. System-imposed barriers to improvement for principals include issues such as not recognizing that the school principal is key to any school improvement effort, not clearly identifying the principal's responsibilities, a lack of leadership development provided for school principals, especially in regard to the improvement initiative, and a lack of a vision for system-wide improvement. As Fullan (2003) indicated, such self- and system-imposed barriers to improvement may slow the improvement process or result in the failure of full implementation of the initiative.

Recognizing the barriers, both self- and system-imposed, to school improvement identified by school principals, it is important for states and districts to provide the necessary resources and supports to principals as deemed necessary (Hall & Hord, 2006; Sergiovanni, 2006). More importantly, for improvement to occur at the school level, school principals must create a culture supportive of change. Principals create such cultures when they (1) create policies and procedures which facilitate the improvement process, (2) arrange schedules so that individuals can work together as they strive for improvement, (3) demonstrate collaborative relationships with members of the staff and other administrators, (4) participate in staff development and other learning activities focused on the improvement initiative, (5) utilize the evaluation process to monitor improvement and assess the degree of implementation, (6) discuss the successes and setbacks experienced during the improvement process, and (7) highlight the successes of individuals as they engage in improvement (Duke, 2004; Fullan, 2005; Hall & Hord, 2006; Kouzes & Posner, 2002).

Practices of Effective Leaders

As Kaplan et al. (2005) indicated, "successful schools invariably have dynamic, knowledgeable, and focused leaders" (p. 1). The literature identifies characteristics essential for effective leadership, including those essential for leading school improvement (Duke, 2004; Fullan, 2005; Hall & Hord, 2006; Kouzes & Posner, 2002). Kouzes and Posner (2002a) have conducted research on the practices and skills of effective leaders. Through their research, Kouzes and Posner (2002a) have identified five practices and ten corresponding commitments that all exemplary leaders, including school principals, demonstrate. Balcerek (1999, p. 4) constructed a table which provides an overview of Kouzes' and Posner's leadership model. (See Table 1)

Table 1: *Kouzes' and Posner's Leadership Model*

Ten Commitments of Leadership		
Practices		Commitments
Model the Way	1	Find your voice by clarifying your personal values.
	2	Set the example by aligning actions with shared values.
Inspire a Shared Vision	3	Envision the future by imagining exciting and ennobling possibilities.
	4	Enlist others in a common vision by appealing to shared aspirations.
Challenge the Process	5	Search for opportunities by seeking innovative ways to change, grow, and improve.
	6	Experiment and take risks by constantly generating small wins and learning from mistakes.
Enable Others to Act	7	Foster collaboration by promoting cooperative goals and building trust.
	8	Strengthen others by sharing power and discretion.
Encourage the Heart	9	Recognize contributions by showing appreciation for individual excellence.
	10	Celebrate the values and victories by creating a spirit of community.

High- and Low-Performing Schools

As Shannon and Bylsma (2002) indicated, effective school leadership is one component often found in high-performing schools. Principals charged with leading schools are "judged" by various indicators, including student performance on standardized exams, student enrollment in advanced placement courses, and the attendance and graduation rates of students (Balcerek, 1999; Kaplan et al., 2005; Lashway, 2003). Increased emphasis on such indicators has occurred as a result of the reauthorization of the ESEA in 2001. The ESEA of 2001 holds schools, school districts and states accountable for ensuring all students are proficient in reading/language arts and mathematics as well as that all students graduate from high school.

In their review of high-performing schools, Shannon and Bylsma (2002) found that such schools often demonstrate five or more of the following characteristics: (1) clear and shared focus, (2) high standards and expectations for all students, (3) effective school leadership, (4) high levels of collaboration and communication, (5) curriculum, instruction and assessment aligned with standards, (6) frequent monitoring of learning and teaching, (7) focused professional development, (8) supportive learning environment, and (9) high levels of family and community involvement. Shannon and Bylsma (2002) additionally noted that such characteristics were evidenced in high performing schools that serviced a high percentage of students from low-socioeconomic backgrounds.

While Shannon and Bylsma (2002) identified characteristics often associated with high-performing schools, Kaplan et al. (2005) noted characteristics of most low-performing schools which include high teacher turnover, a high percentage of impoverished children and a less than positive school culture. In their study of principals

rated as either high- or low-quality as compared to the designation of their schools as high- or low-performing, Kaplan et al. (2005) found that principals of high-performing schools tend to be rated as high-quality while those principals serving low-performing schools are often rated as low-quality.

Just as an array of characteristics are often associated with high- and low-performing schools, the West Virginia Department of Education (WVDE) examines various indicators when considering the performance of the state's schools, such as student performance on standardized exams, attendance and graduation rates, the percentage of students completing advanced placement, dual credit and honors classes, and the percentage of students intending to pursue post-secondary education. This study examined test data from the state of West Virginia's Educational Standards Test (WESTEST) to determine the improvement of student achievement in reading and mathematics from the 2003-2004 to the 2004-2005 school years.

Selected Demographic Variables

While effective school leadership has been identified as a necessary component for high-performing schools (Kearney, 2005), existing research indicates that various school and student demographics often have an impact on school and student performance. Such demographic variables can either negatively or positively affect student achievement and should be given consideration as school administrators and teachers seek to meet the needs of all students. This study considered four selected demographic variables and their effect on the interaction of the leadership practices of principals and student achievement in reading and mathematics. The selected

demographic variables include per-pupil expenditure, principals' years of experience, school size and socioeconomic status.

Problem Statement

School improvement initiatives have often been short-lived, replaced by the latest "cure" for the ills of the nation's public school system (Duke, 2004; Jazzar & Algozzine, 2006). Individuals implementing such initiatives often experience a lack of understanding, lack of leadership, lack of support and lack of resources regarding the initiative, ultimately resulting in less than desired results (Hall & Hord, 2006; Sergiovanni, 2006). For improvement efforts targeted at the school level, Snowden and Gorton (2002) stated that the principal is key to providing the leadership necessary for such efforts to be met with success. Unfortunately, as Woods (2004) indicated, "many certified administrators have not developed the leadership skills to the level necessary to effectively provide the leadership required for school improvement" (p. 16).

The literature indicates that for improvement to occur at the building level, the building-level administrator must have a working knowledge and understanding of the initiative, often provided through staff development, as well as be provided the necessary resources and support for successful implementation and institutionalization (Brown & Anfara, 2003; Hall & Hord, 2006). In turn, the school principal must foster a vision of school improvement, empower others in the improvement initiative, provide the resources necessary to her/his staff to implement the initiative, and encourage collegial and collaborative relationships which support improvement in order for improvement to occur (Duke, 2004; Fullan, 2005; Hall & Hord, 2006; Kouzes & Posner, 2002).

As the state of West Virginia implements its statewide school improvement initiative with the ultimate goal of increased student achievement and fulfillment of the ESEA requirements, the state is depending on its principals to lead local school improvement. While it is imperative that school principals lead the state's improvement efforts at the school site, it is equally as imperative that the principals have the leadership skills and demonstrate the practices necessary to be successful leaders and, more importantly, to be successful leaders of school improvement. While the state's buildings may be staffed with individuals who hold administrative certificates, it is unclear if those individuals demonstrate the leadership practices necessary to effectively lead school improvement (Woods, 2004).

Purpose of the Study

This study sought to determine if a significant relationship existed between the leadership practices of school principals and student achievement in reading and mathematics. The leadership practices of principals were measured using Kouzes'and Posner's Leadership Practices Inventory (LPI) which measures leadership practices in five distinct areas: modeling the way, inspiring a shared vision, challenging the process, enabling others to act and encouraging the heart. Student achievement in reading and mathematics was determined using the percentage of students proficient in reading and mathematics as measured by the WESTEST for the 2003-2004 and 2004-2005 school years.

Research Questions

To study the effective leadership practices of principals in West Virginia, this study examined the relationship between the leadership practices of principals and

student achievement in reading and mathematics. The five leadership practices identified by Kouzes and Posner as essential for exemplary leaders to possess were examined which include: modeling the way, inspiring a shared vision, challenging the process, enabling others to act and encouraging the heart. The following research questions were addressed in this study:

Q1: Is there a relationship between the leadership practices of principals in terms of "modeling the way" and student achievement in mathematics?

Q2: Is there a relationship between the leadership practices of principals in terms of "modeling the way" and student achievement in reading?

Q3: Is there a relationship between the leadership practices of principals in terms of "inspiring a shared vision" and student achievement in mathematics?

Q4: Is there a relationship between the leadership practices of principals in terms of "inspiring a shared vision" and student achievement in reading?

Q5: Is there a relationship between the leadership practices of principals in terms of "challenging the process" and student achievement in mathematics?

Q6: Is there a relationship between the leadership practices of principals in terms of "challenging the process" and student achievement in reading?

Q7: Is there a relationship between the leadership practices of principals in terms of "enabling others to act" and student achievement in mathematics?

Q8: Is there a relationship between the leadership practices of principals in terms of "enabling others to act" and student achievement in reading?

Q9: Is there a relationship between the leadership practices of principals in terms of "encouraging the heart" and student achievement in mathematics?

Q10: Is there a relationship between the leadership practices of principals in terms of "encouraging the heart" and student achievement in reading?

Q11: Is there a relationship between selected demographic variables and the interaction of leadership practices of principals and student achievement in mathematics?

Q12: Is there a relationship between selected demographic variables and the interaction of leadership practices of principals and student achievement in reading?

Significance of Study

Since the publication of *A Nation at Risk: The Imperative for School Reform* in 1983, the nation's public schools have been under much scrutiny, defending themselves against the claims of a mediocre school system as set forth in this infamous publication (Jazzar & Algozzine, 2006). As the nation's schools have sought ways to improve, they have become involved in various reform efforts, some more short-lived than others, with the hope that all students would learn while under their watch and direction (Duke, 2004; Jazzar & Algozzine, 2006).

As schools became more involved in reform efforts, research concentrated on the effect of the principal in leading school improvement. Various researchers began to study the characteristics and practices of principals that made them effective leaders and, more importantly, leaders of successful school reform initiatives (Balcerek, 1999; Lashway, 2003). Effective principals have become increasingly important as leaders of school improvement and increased student achievement as a result of the accountability provisions identified in the ESEA of 2001 (Balcerek, 1999; Lashway, 2003).

Given the need for principals to possess the knowledge and skills and utilize the practices necessary to effectively lead school improvement efforts, this study sought to

determine the leadership practices of the state's school principals based upon the five

leadership practices identified by Kouzes and Posner (2002a) as necessary for all leaders

to possess. Upon determining the leadership practices of the state's principals, the

WVDE and West Virginia Center for Professional Development (WVCPD) may need to

provide professional development and training for principals focused on effective

leadership. If the WVDE and WVCPD determine that such professional development is

necessary, they could request appropriations from the West Virginia Legislature to

support the professional development provided to principals. In addition to state leaders

using the results of this study to guide the delivery of professional development for the

state's principals, district superintendents could utilize the results to determine

professional development to be delivered at the district level for their principals. Finally,

the results of this study could be utilized to guide the preparation of principals at the

state's universities.

Assumptions

The following assumptions were made as this study was conducted:

1. Effective leadership practices are similar across various professions.

2. The survey used in this study provided a valid score for assessing effective
    leadership practices of public school principals.

Operational Definitions

The following terms were defined for this study:

1. LPI scores: Scores received in each of the five leadership practices of model the
    way, inspire a shared vision, challenge the process, enable others to act and

encourage the heart as identified by Kouzes and Posner and determined utilizing the Leadership Practices Inventory (Self)

2. Per-pupil expenditure: Total dollars spent per student per district as identified on the WVDE's website

3. Principals' years of experience: Number of years served as the building principal as indicated on the demographic questionnaire returned by the respondent

4. School size: Second-month enrollment per school as identified on the WVDE's website

5. Selected demographic variables: Per-pupil expenditure, principals' years of experience, school size and socioeconomic status

6. Socioeconomic status: Percentage of students eligible for the federal free and reduced lunch program per school as identified on the WVDE's website

7. Student achievement in mathematics: Change in the percentage of students proficient in mathematics for the 2003-2004 and 2004-2005 school years as measured by the WESTEST

8. Student achievement in reading: Change in the percentage of students proficient in reading for the 2003-2004 and 2004-2005 school years as measured by the WESTEST

Chapter Summary

The nation's public education system has been subjected to various school reform and improvement initiatives since the publication of *A Nation at Risk: The Imperative for School Reform.* Given the vital role principals play in successful school improvement initiatives, there is reason to believe there is a link between effective leadership and

student achievement. Should such a relationship exist, a number of members of the

education community could use this information to promote school improvement. This

study sought to determine if a relationship existed between the leadership practices of

principals and student achievement in reading and mathematics.

CHAPTER TWO: REVIEW OF THE LITERATURE

This chapter presents a review of the literature pertaining to school reform since the publication of *A Nation at Risk: The Imperative for School Reform* in 1983, culminating with the reauthorization of the Elementary and Secondary Education Act (ESEA) of 2001 and the improvement initiative it has spurred in the state of West Virginia. The chapter then examines the role of the principal in affecting school improvement and the leadership practices necessary for all exemplary leaders to demonstrate as identified by Kouzes and Posner. Finally, the chapter concludes with an examination of characteristics of high- and low-performing schools as well as a review of selected demographic variables which may affect school and student performance.

School Reform & Improvement

History

This section focusing on the history of school reform will begin with the 1983 publication of *A Nation at Risk: The Imperative for School Reform* by the National Commission on Excellence in Education. The report indicated, "If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war" (p. 1). In its claim of a mediocre educational system, the National Commission on Excellence in Education stated, "Our Nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world" (p. 1). This claimed mediocrity of the nation's educational system contributed to the surge in educational reform initiatives evidenced since the early 1980s (McNeal & Christy, 2001).

In addition to the claim of mediocrity, the nation's educational system has been influenced by changes in society such as demographics, family structure, drug and alcohol abuse, violence and technological innovations (Campbell, Cunningham, Nystrand & Usdan, 1990; Fenwick & Pierce, 2002; Martin, 2000). These changes in society have placed pressure on the public schools to respond and help solve the problems of society. The public education system has also come under great pressure in terms of accountability, testing, school vouchers and privatization (Fenwick & Pierce, 2002; Martin, 2000).

Following the infamous 1983 publication, the early 1980s witnessed states become more involved in school reform initiatives, with various changes sporadically occurring across the nation such as an increase in graduation requirements, the use of competency exams, and the issuance of varying levels of diplomas (Hoy & Miskel, 2005). However, as Owens (2004) indicated, states' improvement efforts were not met with the successes intended. Owens (2004) attributed this lack of success to the fact that states simply imposed additional requirements without truly "altering the central core of assumptions and structures…of schools" (p. 220).

Following the less than desired change in the early 1980s, the late 80s were marked by an altered focus of education reform. During the presidency of George H. W. Bush, an emphasis was placed upon the need for a set of national standards. As the focus on national education goals intensified, a set of eight goals, otherwise known as Goals 2000, was identified. Goals 2000: Educate America Act (1994) focused on school readiness, school completion, student achievement and citizenship, teacher education and professional development, mathematics and science, adult literacy and lifelong learning,

safe, disciplined and alcohol- and drug-free schools, and parental participation. Given

the sheer breadth of the national goals, various policies and programs were enacted but

lacked coherence and a single focus. Furthermore, the idea of national goals met with

resistance from citizens who believed that schools should be under local control without

interference from the national level (Hoy & Miskel, 2005; Jazzar & Algozzine, 2006).

The 1990s were marked by a period of systemic school reform in which schools,

school systems and states focused on coherent reform efforts rather than supporting

various fragmented improvement initiatives (Hoy & Miskel, 2005). As Schmoker (2004)

indicated, "the aim of genuinely 'systemic' thinking is to promote clarity, coherence, and

economy" (p. 4). The systemic reform era was highlighted by words such as

accountability, standards and testing. In order for reform to be clear and coherent, all

elements, such as curriculum, instruction, assessment, staff development, resources and

support, of a school system must be aligned (Wetherill & Applefield, 2005).

As the turn of the century approached and schools, schools districts and states

continued their focus on school reform and improvement initiatives, the nation's public

school system was favored by advocates and slandered by opponents (Jazzar &

Algozzine, 2006). Cries that the public school system was not preparing students with

the knowledge and skills necessary for success in an increasingly competitive and

changing world and that parents should be able to choose the schools their children attend

rather than the schools in their districts were increasing. Both charter schools and school

vouchers were beginning to proliferate the nation. Ultimately, the time had come for new

legislation regarding the nation's public schools. The new legislation came in the form of

the reauthorization of the ESEA of 2001 (Hoy & Miskel, 2005; Jazzar & Algozzine, 2006).

Elementary and Secondary Education Act of 2001

The ESEA of 2001 is bi-partisan legislation which advances the idea that no child be left behind in the nation's public education system. In its outline of the requirements for ensuring no child is left behind, the ESEA sets forth five goals and accompanying accountability standards for the nation's public schools. The five goals focus on the achievement of all students in reading/language arts and mathematics, the requirement that all students be taught by highly qualified teachers, the desire for all students to graduate from high school, and the need for schools to be violence-free (ESEA, 2001). As schools, school districts and states face the requirements of the ESEA, they are left examining ways in which they can meet the accountability provisions within the pre-determined time frames (Jennings, 2002). As the state of West Virginia found itself examining its options for meeting the accountability provisions of the ESEA of 2001, the West Virginia Department of Education (WVDE) developed West Virginia Achieves and its supporting frameworks.

West Virginia's Initiative

West Virginia Achieves "is a comprehensive series of interrelated programs and policies intended to bring both quality and equity to West Virginia public schools" (Stewart, 2004, p.1). Four components of West Virginia Achieves are the Framework for High Performing School Systems (Framework) and three separate frameworks targeted at the elementary, middle and high school levels. The Framework is intended to serve as the foundation for West Virginia's statewide school improvement initiative, on which the

three programmatic level frameworks are built. Ultimately, the frameworks are part of a statewide initiative developed and implemented in West Virginia to bring about systemic change and to ensure all school districts in West Virginia meet the state's accountability standards.

Through their implementation, the frameworks are expected to assist in the transformation of the state's school districts into learning for all organizations, provide a model and common language for the state's school improvement initiative, and focus the leadership and technical assistance provided to schools during the improvement process. The frameworks are founded on three major premises which include a culture of common beliefs and values, the four pillars of curriculum management, instructional practices, school effectiveness and student/parent support, and effective strategies for enhancing each pillar, and a system of continuous school improvement (WVDE, 2004). While no school or district is a mirror image of another and, accordingly, no reform initiative "works" in one school or district as it "works" in another, the belief is that "it is essential that state, regional, and local educational agencies share a common focus, a unified plan, and a coordinated approach to school system improvement" in order for the public schools of West Virginia to meet the accountability standards identified by the state (WVDE, 2004, p.1). While the state has developed a statewide model for school improvement and as the state's schools and school districts implement the frameworks as they strive to meet the demands of the ESEA of 2001, it is imperative that this implementation be led by leaders who possess the necessary skills and demonstrate critical practices for bringing about change.

Factors Affecting School Improvement

As schools, school systems and states strive to meet the accountability provisions of the ESEA of 2001, often involving school improvement initiatives, it is imperative for educational leaders to be cognizant of those factors that affect the success of such initiatives. Whether internal or external, such factors may affect the successful implementation and institutionalization of an improvement initiative (Schmoker, 2004).

Internal factors affecting school improvement include issues such as the capacity of the school staff to engage in the initiative, the necessary resources and supports provided to staff during the improvement process, a school culture which supports the improvement process, and an individual(s) committed to leading improvement (Murphy, 1999; Schmoker, 2004). While individuals must be committed to the improvement process, they must also understand that improvement occurs over time. As Hall and Hord (2006) indicated, "change is a process, not an event" (p. 4). As a result and since small accomplishments are necessary to achieve big gains, small accomplishments should be celebrated as a demonstration of continued support for the improvement initiative (Kouzes & Posner, 2002; Schmoker, 2004).

While various internal factors affect the successful implementation of a school improvement initiative, schools often face external factors which can also affect the initiative's implementation. Such factors include parental and community support, resources and supports provided by the district and state levels of education, district, state and federal laws and policies, and changes in society and family structure (Fenwick & Pierce, 2002; Martin, 2000).

Once developed and implemented, school improvement initiatives must be institutionalized in order to achieve long-term success. Schmoker (2004) identified "overload and fragmentation" as two barriers to the sustainability of an initiative. Too often, educators are faced with a variety of improvement initiatives which may lead to incoherence and uncertainty about the school's agenda for improvement. Too many initiatives may lead to failure of many or all (Schmoker, 2004). Effective leaders and successful schools must choose a limited, coherent set of initiatives to undertake in their quest for continued improvement (Schmoker, 2004).

The Building-Level Principal

Principal's Role in School Improvement

School reform initiatives have resulted in many changes in American education in the past decade. The complexity of the process has presented numerous challenges for every educator (Lashway, 2003). For example, the current reform movement spurred by the ESEA of 2001 presents a "blend of standards-based accountability, educational choice, and old-fashioned bureaucratic mandates, not all of which work together harmoniously" (Lashway, 2003, p. 5).

From the 1983 publication of *A Nation at Risk: The Imperative for School Reform* to the ESEA of 2001, educational systems nationwide have and are transforming themselves to meet the needs of students in the 21st century. These transformations involve enhancing the competencies and skills of principals to prepare them for a changing landscape as they lead tomorrow's schools. As Lashway (2003) indicated, today's school principals "must define themselves as learners, not just doers, constantly scanning the environment for new ideas, tools, and solutions, and reflecting on the

implications" (p. 8). As principals continue to adapt their changing roles, effective

leadership skills and corresponding practices are essential to assist schools in expanding

their traditional boundaries. Effective school leaders strike a balance in managing

buildings, maintaining higher accountability standards for student achievement,

promoting teacher professional development and advising parents and community

members in school-related decisions (Childs-Bowen, 2005; Chirichello, 1999; Hurley,

2001; Lashway, 2003).

As reformers look to the future, they must recognize the vital role the principal

plays in driving school improvement initiatives which affects the capacity of the school

to increase the achievement of all students. In responding to increased standards for

student achievement, effective principals recognize that they alone can not be the sole

instructional leader but must lead, coach, mentor and empower faculty and staff in the

common pursuit of reform for few school improvement initiatives succeed without

support from the school principal (Barth, 2001; Hurley, 2001).

The Principalship

In their study of the alignment of the standards for school administrators

identified by the Interstate School Leaders Licensure Consortium (ISLLC) with student

achievement in the state of Virginia, Kaplan et al. (2005) indicated the following:

Although the principal's effect on student achievement may be indirect, it is

crucial. The principal controls the most important factors affecting a school's

teaching and instructional quality, including attracting, selecting, and keeping

outstanding teachers; working with the school community to establish a common

mission, instructional vision, and goals; creating a school culture grounded in

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collaboration and high expectations; facilitating continuous instructional

improvement; finding fair, effective ways to improve or remove low-performing

teachers; and producing excellent academic results for all students as gauged by

external tests aligned with state academic standards (p. 29).

As evidenced in the previous statement, the principal's role is one filled with diversity of

responsibility for and commitment to ensuring the success of all students. The role of the

principal has evolved since its inception. The following section provides an overview of

the evolution of the principalship.

History of the Principalship

During the early 1800s, discussions regarding the need for a free and public

elementary education system arose. While the early schools were quite small, often one-

room schoolhouses, and were overseen by the local community, the growth of the

nation's cities in the latter part of the first half of the century resulted in increased student

enrollment and expansion of the one-room schoolhouse. With this growth came an

increase in the number of teachers. Furthermore, as students progressed through school,

it became necessary to place students in particular grades. Ultimately, this growth led to

the establishment of the principalship (Campbell et al., 1990).

The principalship dates back to 1838 when the schools of Cincinnati, Ohio were

each assigned a principal-teacher as a result of increased enrollment in the city's schools.

Other cities such as Boston, Massachusetts and St. Louis, Missouri followed in the 1840s

and 50s when they assigned principals to each of their schools (Campbell et al., 1990).

As Campbell et al. (1990) indicated, the responsibilities of the early principal were

primarily those associated with maintaining paperwork such as attendance data.

The role of the principal has evolved since the early to mid 1800s taking on various responsibilities such as the manager of schools, instructional leader and transformational leader (Balcerek, 1999). Continuing into the 1960s, the principal was one charged with implementing programs handed down from higher levels such as the state and federal governments. Such programs included the federal entitlement programs identified in the Elementary and Secondary Education Act of 1965, the Individuals with Disabilities Education Act of 1975 and various curricular programs, most notably those focusing on mathematics and science (Balcerek, 1999).

The late 1970s and early 80s found the principal's role changing to that of instructional leader. As instructional leaders, principals monitored both teachers and students, checking to see if teachers were teaching and students were learning. Furthermore, principals became involved in curricular matters aimed at ensuring the success of all students (Geocaris, 2004; Lashway, 2003). It was during this period that principals began juggling multiple roles, those of manager and instructional leader (Balcerek, 1999). While this role continued, researchers began to examine the role of the principal in leading effective schools as a result of the 1983 publication of *A Nation at Risk: The Imperative for School Reform* (Balcerek, 1999). Ultimately, it was during the 1980s that "the principal became identified as the key to success" (Geocaris, 2004).

With an emphasis placed on accountability and student achievement, the principal of the 1990s became one expected to promote a school vision, provide appropriate staff development, manage as well as lead, foster shared decision making, encourage communication, collaboration and collegiality, and solve problems with an ultimate focus on student achievement (Balcerek, 1999; Geocaris, 2004).

The principal of the 1990s looks remarkably like the principal of today. With the increased pressures placed on principals to lead their schools as they strive to meet the requirements set forth in the ESEA of 2001, principals and teachers are collaboratively engaged in the analysis and use of student assessment data to inform instruction as they seek to leave no child behind (Geocaris, 2004; Lashway, 2003). The principal of today continues to manage and lead. According to Lashway (2003), in addition to traditional managerial duties, today's principals must

- Serve as leaders for student learning

- Know academic content and pedagogical techniques

- Work with teachers to strengthen skills

- Collect, analyze and use data in ways that fuel excellence

- Rally students, teachers, parents, local health and family service agencies, youth development groups, local businesses and other community residents and partners around the common goal of raising student performance

- Have the leadership skills and knowledge to exercise the autonomy and authority to pursue these strategies (p. 2).

While principals are faced with multiple roles and responsibilities in today's schools, Archer (2003) indicated that "foundations and policy groups…are arguing that while there are plenty of people who could become administrators, few possess the skills or knowledge needed to succeed at a time when expectations for student performance have never been higher" (p. 1).

Leadership Practices of Effective Principals

Given the multiple roles and responsibilities of today's school principal and the role the principal plays in leading school improvement, various research has been conducted on the characteristics, skills and practices of effective school principals. As Balcerek (1999) indicated, "The importance of the principalship to the success children experience in schools today is of critical importance and it is apparent that new leadership practices are emerging across organizational and institutional boundaries" (p. 23). As a result of extensive research on the practices and skills of effective leaders across professions, Kouzes and Posner (2002a) have identified five practices and 10 corresponding commitments of effective leaders (See Table 1). The following sections will discuss each of the five practices in greater detail, providing insight into how the leadership practices identified by Kouzes and Posner (2002a) relate to the role of the school principal.

Model the Way

In modeling the way, effective leaders know their own voice and are deeply committed to their beliefs, values and principles. Such leaders express themselves using their own words and actions, rather than relying on the words of others. In addition to knowing their own voice, effective leaders set the example for their constituents. By setting the example, leaders demonstrate a commitment to the organization and its people. Through modeling the way, effective leaders cultivate a culture in which people are committed and loyal as well as take pride in the organization and its work (Kouzes & Posner, 2002).

As Childs-Bowen (2005) indicated, principals must first understand themselves before they can effectively lead others in affecting school improvement and ensuring all students are provided the resources necessary to achieve. In knowing one's self, a principal must have a solid understanding of her/his beliefs and values so that s/he can draw upon those as s/he works with and leads others.

Effective principals who model the way demonstrate a commitment to the vision and goals of their schools. Such principals spend time with teachers and students, paying attention to them and responding to their needs (Southworth & Du Quesnay, 2005). Furthermore, effective principals are committed to spending as much time, if not more, at the school as they expect of their teachers (Kouzes & Posner, 2002).

Shannon and Bylsma (2002) found that highly effective principals are extremely visible throughout the school building, demonstrating the importance of the teaching and learning process and activities taking place under their direction. Effective principals also demonstrate a strong work ethic, modeling in one's self the expectations of others (teachers, parents, students and staff). Finally, Shannon and Bylsma (2002) found that effective principals listen to others, keep their commitments and respect others.

Inspire a Shared Vision

While effective leaders are deeply committed to their beliefs, values and principles, they are equally as committed to working with their constituents to develop and foster a shared vision among all stakeholders. In developing a shared vision, effective leaders encourage constituents to examine the big picture rather than simply focus on the here and now. Effective leaders encourage others to envision where they want to be or where they want to go in their futures. As Kouzes and Posner (2002a)

indicated, "Envisioning the future is a process that begins with passion, feeling, concern, or an inspiration that something is worth doing" (p. 124).

In addition to envisioning the future, effective leaders enlist the work and help of others. Recognizing that they alone can not lead an organization to success, effective leaders successfully communicate the need for a team effort in accomplishing a shared vision. Effective leaders listen to their constituents, encourage them to commit to the organization's work, and help them feel satisfied as contributing members of the organization (Kouzes & Posner, 2002).

In terms of schools, shared visions should be developed by various stakeholders (i.e., administrators, educators, staff, students, parents, community members) and should inform the direction that schools or school systems take in pursuit of school improvement (Jarnagin, 2004; Kent, 2004). In developing a vision for school improvement, stakeholders should examine the goals of the school, the data which support the need for improvement, the initiatives that could address the areas for improvement, and the results expected as a result of the improvement initiative (Hall & Hord, 2006).   Following the development of the vision for improvement, the vision should be communicated to all individuals affiliated with the school (Kent, 2004).

Communication of the vision to all stakeholders is critical if school improvement is to manifest itself and penetrate the school and/or school system (Jerald, 2005). Leaders should seek all avenues of communication, utilizing each to deliver the message that the school and/or school system is entrenched in an improvement initiative and requests their commitment to the challenge. In addition to communicating the vision for improvement,

school leaders must seek the removal of barriers to implementation of the improvement initiative (Duke, 2004; Hall & Hord, 2006; Jerald, 2005).

As one method of removing barriers to implementation, the school leader(s) should utilize the vision for improvement to inform all decisions regarding the resources (i.e., money, personnel and time) allotted for the improvement initiative. Appropriate staff development should also be arranged as it applies to the improvement initiative so that individuals involved understand the initiative and the role they will play in the improvement process (Jerald, 2005).

Ownership of and commitment to change often occur simultaneously. When individuals involved in a change effort perceive a sense of personal ownership in the initiative, they often demonstrate a greater level of commitment (Jarnagin, 2004). As a result, leaders should strive to ensure that all stakeholders involved in the initiative are provided an opportunity(ies) to develop ownership of the initiative, thereby fostering personal commitment (Duke, 2004; Fullan, 2005). Finally, as Balcerek (1999) noted, principals must utilize their leadership skills and practices to inspire others to commit to the vision and goals of the school while, at the same time, "connecting school goals with internal motivators" thereby "energizing and positively harnessing a wide variety of emotional resources embodied" in the members of the school community (p. 21).

Challenge the Process

Leaders who challenge the process are continuously searching for opportunities to improve and innovate, with little fear of experimenting and taking risks. Such leaders are proactive and unwilling to settle for the status quo. Effective leaders are open to new

ideas and innovations, yearning to "make something happen" (Kouzes & Posner, 2002, p. 178).

As leaders experiment and take risks, so must their constituents. To support their constituents in taking risks, leaders must set expectations just a step or two above where constituents currently are, helping them reach new heights. As people inevitably make mistakes, leaders help pick them up and move forward. Effective leaders help people learn from their mistakes, continuing towards success. As leaders and their constituents stumble along the path to excellence, they must not blame themselves but examine the initiative and determine if it needs modified in order to accomplish the ultimate goal. Ultimately, leaders must build a commitment to the challenge of reaching new heights, supporting constituents along the way (Kouzes & Posner, 2002).

As principals lead their schools, they must constantly look for ways to improve (Fullan, Bertani & Quinn, 2004). Principals need to support their staff members in trying innovative ideas such as new curriculum, new instructional strategies and new assessments as they strive to meet the needs of all children. Principals also need to encourage their students to take advantage of all learning opportunities, both in and out of school (Kouzes & Posner, 2002).

Enable Others to Act

Effective leaders who enable others to act are committed to fostering collaboration among all constituents and work to strengthen the capacity of others. As Kouzes and Posner (2002a) noted, "Collaboration is *the* critical competency for achieving and sustaining high performance" (p. 242). In fostering collaboration, leaders must establish a culture of trust, interdependence and interactions. In order for people to

collaborate with others, they must believe that they can trust others as their colleagues as well as to do the work. Leaders must trust others and utilize their expertise and experiences to influence the work of the organization. Establishing a culture of interdependence simply indicates that individuals rely on one another to accomplish the shared goals of the organization, recognizing that everyone must contribute in order for the organization to be successful. Finally, effective leaders create opportunities for various interactions so that individuals can network with one another, sharing their experiences and expertise as well as celebrating their accomplishments (Kouzes & Posner, 2002).

In addition to fostering collaboration among staff members, effective leaders seek ways to strengthen others. As Kouzes and Posner (2002a) stated, "Leaders accept and act on the paradox of power: *we become most powerful when we give our power away*" (p. 284). Leaders seek to empower others, sharing information and data with them and seeking their input into solving problems and setting the direction for the organization. Ultimately, effective leaders trust others to support the work of the organization and empress upon them the fact that they do make a difference (Kouzes & Posner, 2002).

As principals seek to enable others in the school improvement process, they must focus on building the capacity of others. As Fullan (2005) noted, "Capacity building involves developing the collective ability – dispositions, skills, knowledge, motivation, and resources – to act together to bring about positive change" (p. 4). Both horizontal and vertical forms of capacity exist. Horizontal capacity is that shared among one's peers (i.e., teacher to teacher, administrator to administrator) as individuals seek to develop and understand the practices necessary to achieve desired change. Vertical capacity focuses

on providing individuals with the resources and support necessary to implement the improvement initiative in its entirety.

Building capacity for school improvement initiatives often requires staff development to provide individuals the knowledge, skills, materials and additional resources necessary for implementation as well as the opportunities to engage in meaningful learning activities, construct new knowledge and reflect on their own learning (Lambert, 2003). Furthermore, while staff development is crucial for the initial implementation of a reform, it is equally as important for its sustainability (Atkinson, 2002; Duke, 2004; Jerald, 2005). As educators implement an initiative and experience problems and/or develop concerns, staff development can serve to solve problems, thereby continuing the improvement process (Duke, 2004).

An additional means of building capacity is to enable others to become leaders. Principals must recognize that they can not provide the sole leadership for continuous school improvement. Instead, principals should seek to instill leadership capacity in others. As Childs-Bowen (2005) indicated, "the success of any leader is largely contingent on how many leaders he or she leaves behind" (p. 7).

Enabling others to affect school improvement also results from a culture supportive of change. In their study of the relationship between leadership practices and school climate, Kelley, Thornton and Daugherty (2005) surveyed 31 elementary school principals and 155 teachers (5 teachers per school) using the Leader Behavior Analysis II (LBAII) and the School Climate Assessment Questionnaire (SDSCAQ). Each principal and one teacher from each school completed the LBAII while the other four teachers from each school completed the SDSCAQ. Utilizing Pearson Product-Moment

Correlations, Kelley et al. (2005) found that principals' leadership practices played an integral role in creating a positive school climate as well as one supportive of improvement.

Ultimately, in creating a supportive climate, principals "must be able to correctly envision the needs of their teachers, empower them to share the vision, and enable them to create an effective learning environment" (Kelley et al., 2005, p. 23). Furthermore, in their analysis of approximately 20 research studies as well as a review of high- and low-performing schools in the state of Washington, Shannon and Bylsma (2002) found that principals seeking to create school climates supportive of improvement and collaboration provide teachers with the time necessary to work with other teachers, encourage relationships built on trust, model professional discussions during which all individuals are encouraged to express their opinion and beliefs without fear of being ridiculed, and demonstrate courage to continually seek improvement.

Encourage the Heart

Encouraging the heart involves the recognition of contributions and the celebration of victories (Kouzes & Posner, 2002). Recognizing contributions involves focusing on the organization's shared vision and goals, expecting the best of others in their efforts to meet the established goals, paying attention to the work of others by listening to them and showing you care, and recognizing their efforts through thoughtful and creative ways. In addition to recognizing the contributions of others, effective leaders celebrate the victories of the organization. Such celebrations build a sense of community, make lasting memories of success, reinforce the goals of the organization,

and demonstrate that the leader is aware of the contributions of her/his constituents (Kouzes & Posner, 2002).

By recognizing the contributions to and successes of members of the school community (teachers, staff, students, parents) as they relate to the school's vision and goals for school improvement, the school principal encourages members to continue working hard in their pursuit of the school's goals. Individuals enjoy praise for the work they do and recognition of their accomplishments. Few, if any, improvement initiatives are accomplished in a short period of time. School improvement initiatives often take a period of three to five years and involve numerous accomplishments along the way (Jazzar & Algozzine, 2006). Therefore, effective school principals need to recognize the "small" accomplishments along the route to the successful implementation and institutionalization of an improvement initiative.

High- and Low-Performing Schools

In an era of increased accountability for student achievement, states have begun to identify schools based upon their performance, using terms such as high-, low- and inadequately-performing, high- and low-achieving, and successful and unsuccessful. Such identification is based upon a variety of factors such as student performance on standardized exams, graduation and attendance rates, and post-secondary going-rate (Balcerek, 1999; Kaplan et al., 2005). Given the increased emphasis placed upon student achievement and school performance, various researchers (Kaplan et al., 2005; Kelley et al., 2005; Shannon & Bylsma, 2002) have identified characteristics often associated with high levels of both student and school performance.

As Kelley et al. (2005) indicated, "Education leadership is possibly the most important single determinant of an effective learning environment" (p. 17). Creating an effective learning environment involves developing a culture supportive of creativity, envisioning the school's future and encouraging all members of the school community to become involved in implementing the school's vision. Kelley et al. (2005) further stated that a positive school climate is essential for creating a high-performing school and that principals contribute to such climates through the utilization of "effective communication, teacher advocacy, participatory decision-making, and equitable evaluation procedures" (p. 20).

In their study of 160 schools (5 primary, 61 elementary, 50 middle and 44 high), Kaplan et al. (2005) found that "a significant relationship [existed] between principal quality and school poverty" (p. 35). Principal quality was assessed using a rubric designed utilizing the ISLLC standards. Principals rated as high-quality were more likely to be found in low-poverty schools while low-quality rated principals were often found in high-poverty schools. More importantly, comparing the achievement of third and fifth graders on indicators of student achievement yielded the result that principals rated as high-quality had higher student achievement results than principals rated as low-quality. While Kaplan et al. (2005) linked third and fifth graders' achievement to principal quality, they were unable to establish a relationship between principal quality and the achievement of eighth graders. Finally, no relationship was established between the performance of high school students on end-of-course exams and principal quality.

Synthesizing the results of their research, Kaplan et al. (2005) indicated that low-quality principals are often placed in low-performing and hard-to-staff schools.

According to Kaplan et al. (2005), such placement compounds the negative factors affecting low-performing schools rather than correcting them. Ultimately, high-quality principals who are strong instructional leaders provide opportunities for teachers and staff members to become active participants in the decision-making process, encourage the development of collegial and collaborative relationships, and create learning environments that are safe for all students and staff. Finally, Kaplan et al. (2005) found that principals' mastery of the ISLLC standards and demonstration of strong instructional leadership capacity correlated to high-achieving schools.

In their analysis of existing literature and review of high- and low-performing schools in the state of Washington, Shannon and Bylsma (2002) found that high-performing schools demonstrate at least five of nine characteristics which include a clear and shared focus, high standards and expectations for all students, effective school leadership, high levels of collaboration and communication, curriculum, instruction and assessments aligned with state standards, frequent monitoring of learning and teaching, focused professional development, supportive learning environments, and a high level of family and community involvement. Shannon and Bylsma (2002) noted that most of the high-performing schools they researched were identified as high-performing based upon student performance on standardized exams, with many of the schools exhibiting a high-percentage of students from low-socioeconomic backgrounds.

In its study of school performance as measured by the Standards of Learning (SOL) exam, the Joint Legislative Audit and Review Commission (JLARC) of the Virginia General Assembly (2004) studied the practices of 61 schools (elementary, middle and high) in the state of Virginia. To conduct its study, the JLARC (2004)

interviewed 61 school principals and 11 division superintendents, surveyed teachers in 56 of the 61 schools (703 responded) and visited the 61 schools. In addition to interviewing the principals and division superintendents, the JLARC (2004) also interviewed various state educational leaders including the State Superintendent of Public Instruction. As a result of its study, the JLARC (2004) sought to determine the practices associated with the state's high-performing schools, including high-performing schools that faced little "challenges," as identified in the study, as well as high-performing schools that faced one or more of the identified challenges. Such challenges included a high percentage of students from low-socioeconomic backgrounds, a high percentage of African-American students, and a high percentage of students whose parents had low educational attainment.

Synthesizing the results of the study, the JLARC (2004) found that nine practices were often associated with high-performing schools, as measured by student performance on the SOL exam, which included strong and stable principal leadership, environment conductive to learning, effective teaching staff, data-driven assessment of student weaknesses and teacher effectiveness, curriculum alignment, pacing and resources, differentiation in teaching, academic remediation, teamwork, collaboration and vertical integration, and structure and intensity of the school day. While the high-performing schools which faced challenges demonstrated each of the nine effective practices listed above, they often utilized additional strategies to effectively reach all students such as providing a greater degree of remedial services, refusing to accept demographic characteristics as a reason for inadequate student performance, and demonstrating a sincere belief that all students can learn.

This section provides a review of characteristics often associated with high-performing schools, one of which is effective leadership. Undoubtedly, school principals are instrumental to high levels of school performance. As Kearney (2005) indicated, "highly accomplished principals are key levers for…increased student achievement" (p. 18).

Selected Demographic Variables

Just as effective school leadership is critical for high-performing schools and student achievement (Kearney, 2005), researchers have found that various demographic variables may have an effect on student achievement and school performance (Czerwonka, 2005; Lee, 2005; Shepherd, 2004). The following section focuses on the potential effects of per-pupil expenditure, principal years of experience, school size and socioeconomic status on student achievement.

Per-Pupil Expenditure

In a 2004 study, Shepherd utilized data published by the Georgia Department of Education in the 2001-2002 report cards for the state's 309 high schools to determine if a relationship existed among high school size, per pupil expenditure, socioeconomic status, race and student achievement in writing, language arts, mathematics, science and social studies. Analysis of the data yielded a slight relationship between per-pupil expenditure and student achievement indicating that, as per-pupil expenditure increased, student achievement slightly decreased. While per-pupil expenditure did not yield a significant relationship with student achievement overall, Shepherd (2004) determined that it had a significant effect on student achievement in language arts.

Shepherd (2004) also determined that a slight relationship existed between per-pupil expenditure and socioeconomic status indicating that, as per-pupil expenditure increased, the percentage of students from low socioeconomic backgrounds slightly increased. Finally, Shepherd (2004) found a weak relationship between per-pupil expenditure and school size. Shepherd (2004) defined per-pupil expenditure as the "monetary allocation received from the state for each school in a district for the purpose of educating the students in the schools within the district. Local and federal funds are not included in the per-pupil expenditure amount for each school" (p. 15).

In a second study, Lee (2005) examined the relationship between various fiscal indicators (per-pupil expenditure; per-pupil local, state and federal revenue; fiscal capacity and poverty index) and student achievement in the state of South Carolina. Lee (2005) used the absolute rating of academic achievement, a value between 1.0 and 4.0 assigned to each school district in South Carolina by the state's Department of Education, as the indicator of student achievement. The absolute rating is based upon the performance of the school district's students on the state's standardized assessment.

Using correlation analysis, Lee (2005) determined that, as per-pupil expenditure increased, student achievement decreased. Lee (2005) also found that as the per-pupil local revenue increased so did student achievement. Finally, as per-pupil state and federal revenue increased, student achievement decreased. While Lee (2005) found significant relationships between the various per-pupil expenditure variables and student achievement, when controlling for the poverty index, no significant relationship existed. For purposes of Lee's (2005) study, poverty index was determined by the percentage of students in a district eligible for the federal free and reduced lunch program. Ultimately,

when controlling for poverty, the only significant relationship existed between student achievement and the poverty index such that as the poverty index increased, student achievement decreased.

Principals' Years of Experience

In a 2005 study focusing on the effect of principal leadership practice, school size and tenure of principal on student achievement in the state of Missouri, Czerwonka surveyed 163 high school principals and received 58 responses. Synthesizing the results of the study, Czerwonka (2005) found that tenure of a principal had a significant effect on tenth graders' achievement in mathematics and eleventh graders' achievement in communication arts, as measured by the state's standardized exams. Czerwonka (2005) also found that the interaction between principal tenure and leadership practice and its effect on student achievement in both mathematics and communication arts was not significant. Principals' tenure was grouped into three categories, 3-10 years, 11-18 years and 19-26 years, with 38, 11 and 1 individual in each group, respectively.

In a second 2005 study focusing on the relationship between principals' prior teaching experience and their years of experience in their current position to school performance, Jackson initially electronically surveyed 805 public school principals in the state of North Carolina in order to obtain selected demographic information. Of the 805 electronically delivered surveys, 44 were undeliverable. As a result, the final sample consisted of 761 school principals. Jackson (2005) received 501 completed surveys, yielding a return rate of 65.8 %. Of the 501 principals who returned a completed survey, 254 had served in their current position for three or more years. Since Jackson (2005) used school performance data provided by the North Carolina Department of Public

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Instruction (NCDPI) for the previous three years, it was necessary for the principals

utilized in the study to have been in their current positions for at least the three preceding

years.

Jackson (2005) ran a series of Lindquist Type III ANOVAs to determine if any

statistically significant relationship(s) existed between the three main effect variables

(principals' years of teaching experience, principals' years of teaching in a subject(s)

included in the state's accountability model, and principals' tenure in current position) as

well as interaction effects and school performance. After analysis of the data obtained

from the surveyed principals coupled with the data provided by the NCDPI, Jackson

(2005) found no statistically significant relationship. Most notably, no statistically

significant relationship existed between principals' tenure in their current position and

school performance.

School Size

In his 2005 study focusing on the effect of principal leadership practice, school

size and tenure of principal on student achievement in the state of Missouri, Czerwonka

found that school size had a significant effect on tenth graders' achievement in

mathematics and eleventh graders' achievement in communication arts, as measured by

the state's standardized exams. Further analysis of the effect of school size on student

achievement yielded the determination that significant differences existed in student

achievement in small- and medium-size schools as well as in small- and large-size

schools. However, no significant difference existed in student achievement for medium-

and large-size schools. Small schools were identified as schools with a maximum student

population of 499, medium schools ranged from 500 to 1499 students, and large schools

were schools with 1500 or more students. Finally, Czerwonka (2005) found that the interaction between school size and principal leadership practice and its effect on student achievement in both mathematics and communication arts was not significant.

In a 2004 study conducted in the high schools of Georgia, Shepherd found a moderate relationship between school size and socioeconomic status indicating that, as school size increased, the percentage of students from low socioeconomic backgrounds decreased. Furthermore, Shepherd (2004) discovered a moderate relationship between school size and student achievement. Ultimately, Shepherd (2004) determined that larger schools yielded higher student achievement.

In a 2005 study, Lee examined the relationship between various demographic variables (school size, SES, English language learners, non-fully credentialed teachers and student mobility rate) and student achievement in the 4,392 public elementary schools in the state of California. Using student achievement data provided on the California Department of Education website, Lee (2005) calculated correlation coefficients between all variables. Correlation coefficients indicated that a significant relationship existed between socioeconomic status and student achievement such that low socioeconomic schools were associated with low student achievement.

Socioeconomic Status

Analyzing the data provided by the Georgia Department of Education, Shepherd (2004) discovered a strong relationship between socioeconomic status and student achievement indicating that, as the percentage of students from low socioeconomic backgrounds increased, student achievement decreased. Moreover, Shepherd (2004) verified this strong negative relationship between socioeconomic status and student

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achievement in each of the five areas of writing, language arts, mathematics, science and social studies.

In the previously referenced Lee (2005) study, the researcher determined that a significant relationship existed between socioeconomic status and student achievement such that low socioeconomic schools were associated with low student achievement. For the purpose of the study, Lee (2005) defined socioeconomic status as the percentage of students who qualified for free or reduced lunch. Furthermore, the schools studied ranged from a free and reduced lunch percentage of zero to 100.

Leadership Practices Inventory

Through extensive research, Kouzes and Posner (2002a) have identified five practices and 10 corresponding commitments of exemplary leaders, across all professions (See Table 1). Based upon the identified practices and commitments, Kouzes and Posner (2002a) developed the LPI to measure leaders' use of the five practices in leading their organizations. The following section identifies studies which support the use of the LPI to measure the extent to which school leaders use the five practices identified by Kouzes and Posner (2002a) as they lead their schools and districts.

Studies to Support the LPI

In a study of the leadership practices of principals in high- and inadequately-performing schools in North Carolina, Balcerek (1999) surveyed principals and teachers in 17 elementary schools (8 high-performing and 9 low-performing) using the LPI-Self and Observer). Using the t-test of differences for independent samples, Balcerek (1999) found no statistical difference between the ranking of elementary school principals on the LPI in relation to the status of their school. Furthermore, principals in both high- and

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inadequately-performing schools ranked themselves the highest in "modeling the way" and lowest in "inspiring a shared vision." Balcerek (1999) selected the sample utilizing information provided by the NCDPI pertaining to the state's ABC model for improving education in elementary schools.

In a study of the relationship between leadership practices and teacher morale, Jarnagin (2004) surveyed 664 teachers and the 10 high school principals with whom they worked in east Tennessee. As one aspect of his study, Jarnagin (2004) examined the relationship between principals' and teachers' perceptions of the principals' use of the five leadership practices Kouzes and Posner identify as necessary for all exemplary leaders to possess. To examine this relationship, Jarnagin (2004) used Kouzes' and Posner's LPI (Self and Observer) questionnaires. In order to measure teacher morale, Jarnagin (2004) used the Purdue Teacher Opinionaire.

After analyzing the study results, Jarnagin (2004) determined that principals rated themselves higher on each of the five practices than their teachers. Furthermore, while no significant difference existed for the practices of inspiring a shared vision, enabling others to act and encouraging the heart, the results of the study yielded a significant difference for the practices of modeling the way and challenging the process. Jarnagin (2004) also found that a significant relationship existed between the use of the five leadership practices and positive teacher morale.

Clisbee (2004) utilized the LPI to determine if a relationship existed between leadership style and gender of superintendents in the state of Massachusetts. For the purpose of the study, Clisbee (2004) surveyed 100 superintendents (76 male, 24 female) and 425 administrators (212 male, 202 female, 11 unknown). Clisbee (2004) distributed

the LPI-Observer to the 425 administrators (i.e., principals, directors of curriculum, treasurers) to gain administrators' perceptions of their superintendents' demonstration of the five leadership practices identified by Kouzes and Posner. The 425 administrators were also asked to complete a survey which provided personal information. Finally, Clisbee (2004) distributed a survey to each superintendent which focused on "organizational and personal data" (p. iv).

Analysis of the data indicated that no relationship existed between superintendents' demonstration of the five leadership practices and gender. Clisbee (2004) also determined that no relationship existed between superintendents' leadership practice and the length of time superintendents had served their districts. Finally, Clisbee (2004) found that the type of administrative position held in the district and the age of the administrators had no relationship with administrators' ratings of the superintendents' leadership practices.

In a 2003 study of the relationship between leadership behavior and school culture, Stone administered the LPI-Observer to 513 teachers in 11 schools in Madison County, Mississippi to gather data regarding the teachers' perceptions of their administrators' demonstration of Kouzes' and Posner's five leadership practices. Stone (2003) used Braskamp's and Maehr's Instructional Climate Inventory, Form T, to measure teachers' perceptions of school culture. Analysis of the data indicated that a relationship existed between administrators' use of each of the five practices and school culture. This relationship was significant for each of the five practices, separately as well as overall. Stone (2003) also found that no significant difference existed between the use

of the five practices and the level at which the administrators worked (elementary, middle or high).

Kouzes and Posner (2002a) indicated that the LPI may be used across professions given that it measures leadership practices necessary for all exemplary leaders to possess. As evidenced in the studies included within this section, the LPI has been used in studies regarding the leadership practices of school principals and superintendents. Furthermore, depending upon the focus of the study, researchers have chosen to use either the LPI-Self, LPI-Observer, or both to measure the leadership practices of school administrators.

Chapter Summary

School reform and improvement initiatives proliferated the nation as schools and school systems continuously sought to meet the demands of society and the needs of all students. Such initiatives have come in varying shapes and sizes, ranged in complexity, and originated at various levels (i.e., local, district, state and national). Given the varied nature of the initiatives, school leaders and educators have at times become overwhelmed as a result of multiple initiatives which lacked coherence. While schools, school systems and states continuously sought improvement, critics continued to claim that the nation's public schools were simply not preparing students for the future.

The 2001 reauthorization of the ESEA sought to ensure that all children were prepared with the knowledge and skills necessary to succeed in today's world. As the nation's schools and school systems seek to fulfill the requirements of the ESEA of 2001, they are once again left seeking ways to improve to ensure all students are proficient in reading/language arts and mathematics, are taught by highly qualified teachers, attend violence-free schools and graduate from high school.

As schools seek to fulfill the requirements of the ESEA of 2001 and ensure that no child is left behind, schools need individuals in leadership positions that possess the knowledge and demonstrate the practices necessary for leading effective schools and the improvement process. Kouzes and Posner (2002a) have identified five leadership practices that are necessary for exemplary leaders, across all professions, to demonstrate as they lead their organizations.

As the schools in the state of West Virginia seek to improve and meet the accountability provisions of the ESEA of 2001, the state has developed its system for statewide school improvement. While the model for improvement has been developed, it is imperative that the state's principals possess the knowledge and skills and demonstrate the practices necessary to lead the improvement effort. As a result, this study sought to determine if West Virginia's school principals possess and demonstrate the leadership practices identified by Kouzes and Posner. Furthermore, this study sought to determine if a relationship exists between the principals' demonstration of Kouzes' and Posner's leadership practices and the performance of their schools' students.

CHAPTER THREE: RESEARCH METHODS

As the state of West Virginia moves forward with its school improvement initiative, it is imperative that the state's principals lead their schools through the improvement process. Unfortunately, many of the nation's school administrators do not possess the leadership skills and demonstrate the practices necessary for positively leading and affecting school improvement (Woods, 2004). This study sought to determine if there is a significant relationship between the leadership practices of West Virginia's school principals and student achievement in reading and mathematics. The leadership practices of principals were measured using Kouzes' and Posner's Leadership Practices Inventory (LPI) which measures leadership practices in five distinct areas: modeling the way, inspiring a shared vision, challenging the process, enabling others to act and encouraging the heart. Student achievement in reading and mathematics was determined by the percentage of students proficient in reading and mathematics as measured by the WESTEST for the 2003-2004 and 2004-2005 school years. This chapter describes the method of the study by presenting the research plan, population, instrumentation, instrument reliability and validity, data collection procedures and data analyses.

Research Plan

School principals from the public schools of West Virginia that contain some combination of grades three through eight and who have served as principal of their current school for three or more years were selected to participate in this study. By participating in this study, school principals completed the LPI (Self) developed by Kouzes and Posner. The LPI (Self) was utilized to determine the leadership practices of

the selected school principals in terms of the five key practices identified by Kouzes and Posner as essential for effective leadership.

Population

Currently, 720 public schools exist in West Virginia of which 590 contain a combination of grades three through eight. Of the 590 schools, 354 have principals who have served as the principal of the building for three or more years. Of the 354 principals, four serve as the principal of two schools. Therefore, a total of 350 individuals have served as the principal of their school for three or more years and constituted the population surveyed for this study.

Instrumentation

Kouzes' and Posner's Leadership Practices Inventory (LPI-Self) was utilized in this study. The LPI-Self measures the leadership practices of individuals in five distinct areas: modeling the way, inspiring a shared vision, challenging the process, enabling others to act and encouraging the heart.

Utilizing both qualitative and quantitative measures, Kouzes and Posner developed the five leadership practices measured by the LPI. The five practices grew out of Kouzes' and Posner's case study work, incorporating the Personal-Best Leadership Experience questionnaire which includes 38 open-ended questions, spanning 12 pages in length. In addition to their case study work, various interviews were conducted, contributing to the refinement of the LPI. After undergoing various psychometric processes, the LPI was developed featuring six behavioral statements per leadership practice (Kouzes & Posner, 2002b).

The LPI consists of 30 statements, six per leadership practice, cast on a 10-point Likert scale ranging from (1) Almost never do what is described in the statement to (10) Almost always do what is described in the statement. Various versions of the LPI exist including LPI-Self, LPI-Observer, LPI-Individual Contributor, LPI-Team and LPI-Student. This study utilized the LPI-Self. Kouzes and Posner (2002b) indicated that it takes approximately eight to 10 minutes to complete the survey.

Reliability and Validity of LPI

Reliability refers to the extent to which an instrument consistently yields the same results. In general, reliability coefficients higher than 0.60 indicate that an instrument is reliable (Kouzes & Posner, 2002b). The LPI-Self has reliability coefficients (Cronbach Alpha) ranging from 0.75 for Enabling Others to Act to 0.87 for Inspiring a Shared Vision and Encouraging the Heart. Various researchers have used the LPI, yielding similar reliability coefficients (Kouzes & Posner, 2002b).

LPI scores have also remained consistent across various demographic factors such as race, nationality, gender and marital status. In addition to demographic factors, LPI scores have been constant across various professions including business, church, health care, and public and higher education (Kouzes & Posner, 2002b).

Validity refers to the extent to which an instrument measures what it claims to measure. In terms of face validity, Kouzes and Posner (2002b) indicated that individuals who have completed the LPI-Self found the instrument to correspond with their beliefs and ideas about exemplary leadership practices. Kouzes and Posner (2002b) also indicated that various analyses have been conducted which indicate that five distinct factors are measured by the LPI-Self and that the six statements purported to measure

each of the five factors correspond "more among themselves than they do with the other factors" (p. 14).

Data Collection Procedure

The researcher mailed a package to each principal containing an introductory letter to the principal describing the researcher's study, a questionnaire featuring three demographic questions, the LPI (Self) and a self-addressed stamped return envelope. The principals were asked to return the completed LPI (Self) and accompanying demographic questionnaire in the enclosed stamped envelope within two weeks.

The LPI (Self) was coded so that the researcher could maintain a log of the individuals who returned the completed questionnaire. After two weeks, the researcher sent a follow-up letter to the surveyed principals requesting that they return the completed LPI (Self) and demographic questionnaire.

Data Analysis

ANOVAs were used to determine if a relationship existed between each of the five leadership practices and student achievement in mathematics and reading. Additional ANOVAs were run to determine if a relationship existed between selected demographic variables and the interaction of leadership practices of principals and student achievement in reading and mathematics. Multiple regression analysis was also used to determine relationships and post-hoc analysis was used as deemed necessary.

Chapter Summary

This chapter describes the method of the study including the research plan, population, instrumentation, instrument reliability and validity, and data collection and analysis. Kouzes' and Posner's LPI (Self) was utilized to measure the leadership

practices of selected school principals in West Virginia. After collecting the data, data analyses were conducted to determine if a relationship existed between the leadership practices of principals and student achievement in reading and mathematics. Additional analyses were conducted to determine if selected demographic variables affected the interaction of leadership practices of principals and student achievement.

CHAPTER FOUR: FINDINGS

The purpose of this chapter is to present and describe the results of this study. This chapter includes a description of the population, method of data collection, major findings, other findings and a chapter summary.

Population

Kouzes' and Posner's Leadership Practices Inventory (LPI-Self) was distributed to 350 school principals in the state of West Virginia that have served as the principal of their schools for a minimum period of three years and whose schools contain some portion of grades three through eight. Of the 350 principals surveyed for this study, four serve as the principal of two buildings. Therefore, the total population was considered to be 354. Of the 354 subjects, 187 returned completed surveys for a return rate of 52.8 %. An additional seven returned the demographic questionnaire but neglected to return the LPI (Self). Since the respondents did not return the LPI (Self), which was coded for the purpose of tracking, the researcher was unable to determine those subjects that had returned the demographic questionnaires. These seven were not included in the data analysis. Finally, one principal returned the survey without completing it, indicating he did not wish to participate.

Method of Data Collection

Each of the 350/354 school principals received an initial mailing containing an introductory letter (See Appendix A), the LPI (Self) (See Appendix B), a demographic questionnaire (See Appendix C) and a self-addressed, stamped return envelope. The researcher coded each LPI (Self) so that she could track those principals who had

returned their surveys. After two weeks, the researcher mailed a reminder letter (See Appendix D) to each of the principals who had not returned a completed survey.

The LPI (Self) consisted of 30 statements, six per leadership practice, which pertained to the five leadership practices identified by Kouzes and Posner as practices of effective leaders. The demographic questionnaire consisted of three questions regarding years of experience as a principal, at her/his current school and in the profession, and the principal's gender.

In addition to the data obtained from the surveys returned by the principals, student performance data in reading and mathematics were obtained from a nonpublic website of the WVDE. Additional data regarding per-pupil expenditure (at the school district level), school size, school level and socioeconomic status were obtained from the WVDE's website (http://wvde.state.wv.us).

Data obtained from the LPI (Self) were entered into scoring software purchased from John Wiley & Sons for the purpose of calculating individual respondent scores for each of the five leadership practices. The five scores obtained from the scoring software were then entered into SPSS, statistical analysis software, for future analysis. In addition, the data obtained from the demographic questionnaire and the WVDE's website were entered into SPSS for analysis.

For purposes of statistical analysis, each set of data was categorized into three groups. In order to group each variable, the mean was calculated as well as one standard deviation above and below the obtained mean. The group which fell more than one standard deviation below the mean was coded as the numeral 1. The middle group was

coded as the numeral 2. Finally, the group which fell more than one standard deviation above the mean was coded as the numeral 3.

Major Findings

This section details the findings of the current study. The first sub-section provides a synopsis of the results regarding the first 10 research questions which focused on the relationship of each leadership practice and student achievement in both mathematics and reading. The second sub-section details the results pertaining to the last two research questions which focused on the relationship of selected demographic variables and the interaction of each leadership practice and student achievement in both mathematics and reading.

Leadership Practices

To determine if a relationship existed between each of Kouzes' and Posner's five leadership practices and student achievement in mathematics and reading, a series of ANOVAs were run. The following sub-section details the results of the statistical analysis for the first 10 research questions.

Q1: Is there a relationship between the leadership practices of principals in terms of "modeling the way" and student achievement in mathematics?

The ANOVA calculated measuring the relationship between modeling the way and student achievement in mathematics yielded an F-value of 0.177 with a probability of significance of 0.838, which was not statistically significant. This finding suggests that principals' demonstration of practices associated with model the way has no direct effect on student achievement in mathematics.

Q2: Is there a relationship between the leadership practices of principals in terms of
"modeling the way" and student achievement in reading?

The ANOVA calculated measuring the relationship between modeling the way and student achievement in reading yielded an F-value of 0.156 with a probability of significance of 0.856, which was not statistically significant. This finding suggests that principals' demonstration of practices associated with model the way has no direct effect on student achievement in reading.

Q3: Is there a relationship between the leadership practices of principals in terms of
"inspiring a shared vision" and student achievement in mathematics?

The ANOVA calculated measuring the relationship between inspiring a shared vision and student achievement in mathematics yielded an F-value of 0.271 with a probability of significance of 0.763, which was not statistically significant. This finding suggests that principals' demonstration of practices associated with inspire a shared vision has no direct effect on student achievement in mathematics.

Q4: Is there a relationship between the leadership practices of principals in terms of
"inspiring a shared vision" and student achievement in reading?

The ANOVA calculated measuring the relationship between inspiring a shared vision and student achievement in reading yielded an F-value of 0.035 with a probability of significance of 0.965, which was not statistically significant. This finding suggests that principals' demonstration of practices associated with inspire a shared vision has no direct effect on student achievement in reading.

Q5: Is there a relationship between the leadership practices of principals in terms of
"challenging the process" and student achievement in mathematics?

The ANOVA calculated measuring the relationship between challenging the process and student achievement in mathematics yielded an F-value of 0.404 with a probability of significance of 0.668, which was not statistically significant. This finding suggests that principals' demonstration of practices associated with challenge the process has no direct effect on student achievement in mathematics.

Q6: Is there a relationship between the leadership practices of principals in terms of "challenging the process" and student achievement in reading?

The ANOVA calculated measuring the relationship between challenging the process and student achievement in reading yielded an F-value of 0.386 with a probability of significance of 0.680, which was not statistically significant. This finding suggests that principals' demonstration of practices associated with challenge the process has no direct effect on student achievement in reading.

Q7: Is there a relationship between the leadership practices of principals in terms of "enabling others to act" and student achievement in mathematics?

The ANOVA calculated measuring the relationship between enabling others to act and student achievement in mathematics yielded an F-value of 1.122 with a probability of significance of 0.328, which was not statistically significant. This finding suggests that principals' demonstration of practices associated with enable others to act has no direct effect on student achievement in mathematics.

Q8: Is there a relationship between the leadership practices of principals in terms of "enabling others to act" and student achievement in reading?

The ANOVA calculated measuring the relationship between enabling others to act and student achievement in reading yielded an F-value of 0.806 with a probability of

significance of 0.448, which was not statistically significant. This finding suggests that principals' demonstration of practices associated with enable others to act has no direct effect on student achievement in reading.

Q9: Is there a relationship between the leadership practices of principals in terms of "encouraging the heart" and student achievement in mathematics?

The ANOVA calculated measuring the relationship between encouraging the heart and student achievement in mathematics yielded an F-value of 0.029 with a probability of significance of 0.971, which was not statistically significant. This finding suggests that principals' demonstration of practices associated with encourage the heart has no direct effect on student achievement in mathematics.

Q10: Is there a relationship between the leadership practices of principals in terms of "encouraging the heart" and student achievement in reading?

The ANOVA calculated measuring the relationship between encouraging the heart and student achievement in reading yielded an F-value of 0.324 with a probability of significance of 0.724, which was not statistically significant. This finding suggests that principals' demonstration of practices associated with encourage the heart has no direct effect on student achievement in reading.

Selected Demographic Variables

To determine if a relationship existed between selected demographic variables and the interaction of leadership practices of principals and student achievement in mathematics and reading, the researcher first identified the demographic variables as per-pupil expenditure, principals' years of experience at both her/his current school and in her/his career, school size and socioeconomic status.

The researcher ran a series of ANOVAs and multiple regression analysis to determine if a significant relationship existed between the demographic variables and the interaction of the leadership practices and student achievement. The following sub-section details the results of the statistical analysis for the last two research questions.

Q11: Is there a relationship between selected demographic variables and the interaction of leadership practices of principals and student achievement in mathematics?

ANOVAs obtained for the relationship between socioeconomic status and the interaction of the five leadership practices and student achievement in mathematics yielded no significant relationships. Similar results were obtained from the ANOVAs calculated for the relationship between the demographic variables of school size, per-pupil expenditure and principals' years of experience at the current school such that no significant relationship was found to exist between each of the variables and the interaction of leadership practices and student achievement in mathematics.

While no significant relationships were found to exist between principals' years of experience at the current school and the interaction of leadership practices and student achievement in mathematics, when principals' total years of experience were less than 4.87 and considered in relationship to the interaction of the leadership practice enabling others to act and student achievement in mathematics, an F-value of 6.074 and a corresponding p-value of 0.006 were obtained indicating a significant relationship. This finding suggests that when principals have limited years of experience, their demonstration of the leadership practice enable others to act has an effect on student achievement in mathematics.

Q12: Is there a relationship between selected demographic variables and the interaction of leadership practices of principals and student achievement in reading?

ANOVAs obtained for the relationship between socioeconomic status and the interaction of the five leadership practices and student achievement in reading yielded two significant relationships. An F-value of 4.737 with a corresponding 0.017 probability of significance, which was statistically significant, existed between the socioeconomic status when socioeconomic status was less than 39.65 % and the interaction of the leadership practice enabling others to act and student achievement in reading. The same F-value of 4.737 and corresponding 0.017 probability of significance, again statistically significant, were also obtained for the relationship between socioeconomic status when socioeconomic status was less than 39.65 % and the interaction of the leadership practice encouraging the heart and student achievement in reading. These findings suggest that when schools have fewer students from low-socioeconomic backgrounds, principals' demonstration of the leadership practices enabling others to act and encouraging the heart has an effect on student achievement in reading.

ANOVAs obtained for the relationship between school size and the interaction of the five leadership practices and student achievement in reading yielded one significant relationship. The relationship of school size greater than 459.25 students and the interaction of the leadership practice challenging the process and student achievement in reading was significant with an F-value of 4.706 and a corresponding 0.019 probability of significance. This finding suggests that given larger schools, principals' demonstration

of the leadership practice challenging the process has an effect on student achievement in reading.

ANOVAs obtained for the relationship between per-pupil expenditure and the interaction of the five leadership practices and student achievement in reading yielded no significant relationships. Similar results were obtained from the ANOVAs calculated for the relationship between the demographic variable principals' years of experience at the current school such that no significant relationship was found to exist between the variable and the interaction of leadership practices and student achievement in reading.

The ANOVAs calculated for the relationship between the demographic variable principals' years of experience in the profession and the interaction of the five leadership practices and student achievement in reading yielded one significant relationship. The relationship between principals' years of experience in the profession when less than 4.87 years and the interaction of the leadership practice enabling others to act and student achievement in reading yielded an F-value of 3.914 and a 0.030 probability of significance, which was statistically significant. This finding suggests that when principals have limited years of experience, their demonstration of the leadership practice enable others to act has an effect on student achievement in reading.

Chapter Summary

This chapter describes the population surveyed as well as the method of data collection utilized in the current study. Kouzes' and Posner's Leadership Practices Inventory (LPI-Self) and a demographic questionnaire were distributed to 350 school principals in the state of West Virginia. Following the first follow-up letter requesting

the return of the LPI (Self) and demographic questionnaire, the researcher had a return rate of 52.8 %.

Using SPSS, statistical analysis software, the researcher ran a series of ANOVAs and multiple regression analysis to analyze the data obtained from the returned LPIs and demographic questionnaires as well as the WVDE website. Upon analysis of the data, the researcher found five significant relationships. The five relationships existed between selected demographic variables (principals' years of experience, school size and socioeconomic status) and the interaction of specific leadership practices (challenging the process, enabling others to act and encouraging the heart) and student achievement in reading and mathematics.

The data obtained from the statistical analysis have been summarized in the following tables for reference. Table 2 provides data pertaining to the first 10 research questions. Tables 3 and 4 provide data related to research questions 11 and 12, respectively.

Table 2: *Relationship between Each Leadership Practice and Student Achievement in Mathematics and Reading*

Leadership Practice	Student Achievement in Mathematics		Student Achievement in Reading	
	F-Value	Significance	F-Value	Significance
Model the Way	0.177	0.838	0.156	0.856
Inspire a Shared Vision	0.271	0.763	0.035	0.965
Challenge the Process	0.404	0.668	0.386	0.680
Enable Others to Act	1.122	0.328	0.806	0.448
Encourage the Heart	0.029	0.971	0.324	0.724

Table 3: *Relationship between Each Selected Demographic Variable and the Interaction of Each Leadership Practice and Student Achievement in Mathematics*

Selected Demographic Variable	Model the Way		Inspire a Shared Vision		Challenge the Process		Enable Others to Act		Encourage the Heart	
	F-Value	Significance	F-Value	Significance	F-Value	Significance	F-Value	Significance	F-Value	Significance
Per-Pupil Expenditure										
< $7603.21	0.308	0.737	0.010	0.991	0.042	0.958	0.411	0.667	0.346	0.711
$7603.21 – $8567.25	0.199	0.819	0.411	0.664	0.147	0.864	0.777	0.462	0.021	0.979
> $8567.25	0.159	0.854	0.133	0.876	2.295	0.122	1.248	0.305	0.000	1.000
Principal Years of Experience (Current)										
< -2.21	-	-	-	-	-	-	-	-	-	-
-2.21 – 15.81	0.629	0.535	0.070	0.932	1.896	0.154	2.375	0.097	0.670	0.513
> 15.81	0.955	0.394	0.581	0.564	1.628	0.210	0.487	0.618	1.430	0.253
Principal Years of Experience (Profession)										
< 4.87	2.463	0.101	0.204	0.817	0.154	0.858	6.074	0.006*	0.761	0.475
4.87 – 23.27	0.556	0.575	0.731	0.484	0.589	0.557	1.351	0.263	0.109	0.897
> 23.27	0.847	0.439	0.007	0.993	0.436	0.650	1.926	0.163	0.043	0.958
School Size										
< 138.87	0.236	0.792	0.738	0.491	1.067	0.363	0.591	0.563	0.161	0.853
138.87 – 459.25	0.055	0.946	0.330	0.719	0.309	0.735	0.149	0.861	0.229	0.796
> 459.25	1.819	0.184	1.151	0.333	1.819	0.184	1.813	0.185	1.827	0.183
Socioeconomic Status										
< 39.65 %	0.087	0.770	0.735	0.398	1.188	0.284	0.256	0.617	0.721	0.402
39.65 % - 70.63 %	2.408	0.096	1.127	0.329	1.938	0.151	1.659	0.197	0.115	0.892
> 70.63 %	0.205	0.815	1.194	0.309	0.738	0.482	0.253	0.777	0.072	0.931

*Significant at p>0.05

Table 4: *Relationship between Each Selected Demographic Variable and the Interaction of Each Leadership Practice and Student Achievement in Reading*

Selected Demographic Variable	Model the Way F-Value	Significance	Inspire a Shared Vision F-Value	Significance	Challenge the Process F-Value	Significance	Enable Others to Act F-Value	Significance	Encourage the Heart F-Value	Significance
Per-Pupil Expenditure										
< $7603.21	0.473	0.628	0.710	0.500	0.379	0.688	0.710	0.500	0.014	0.986
$7603.21 – $8567.25	0.254	0.776	0.000	1.000	0.590	0.556	1.822	0.166	0.018	0.983
> $8567.25	0.076	0.927	1.306	0.290	1.011	0.379	2.741	0.085	1.698	0.204
Principal Years of Experience (Current)										
< -2.21	-	-	-	-	-	-	-	-	-	-
-2.21 – 15.81	0.148	0.863	0.004	0.996	1.151	0.319	1.121	0.329	0.242	0.785
> 15.81	0.655	0.526	0.212	0.810	1.532	0.230	0.783	0.465	1.820	0.177
Principal Years of Experience (Profession)										
< 4.87	0.802	0.457	0.457	0.637	0.425	0.657	3.914	0.030*	0.601	0.554
4.87 – 23.27	0.451	0.638	0.377	0.687	0.517	0.598	0.309	0.735	0.117	0.889
> 23.27	2.222	0.126	0.663	0.523	0.165	0.849	2.222	0.126	0.443	0.646
School Size										
< 138.87	0.112	0.894	0.713	0.502	0.573	0.573	1.629	0.221	1.343	0.284
138.87 – 459.25	1.249	0.290	0.022	0.979	0.192	0.825	1.320	0.270	1.835	0.164
> 459.25	1.840	0.181	1.573	0.228	4.706	0.019*	1.696	0.205	0.850	0.440
Socioeconomic Status										
< 39.65 %	2.408	0.108	1.961	0.159	2.613	0.090	4.737	0.017*	4.737	0.017*
39.65 % - 70.63 %	0.819	0.444	0.557	0.575	2.076	0.132	2.058	0.134	0.356	0.702
> 70.63 %	0.569	0.569	1.601	0.209	2.421	0.096	0.060	0.942	0.679	0.510

*Significant at p>0.05

CHAPTER FIVE: CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

This chapter provides a review of the purpose and procedures of the study as well as a summary of the researcher's findings and conclusions. The chapter concludes with implications of the findings and recommendations for future research.

Summary of Purpose

This study sought to determine if a significant relationship existed between the leadership practices of school principals and student achievement in reading and mathematics. The Elementary and Secondary Education Act (ESEA) of 2001 stated that all students are to achieve proficiency in reading/language arts and mathematics by the end of the 2013-2014 school year, be taught by highly qualified teachers, graduate from high school, and attend safe and violence-free schools. Given the requirements of the ESEA of 2001, school administrators must not only manage but lead their schools (Childs-Bowen, 2005; Chirichello, 1999; Hurley, 2001; Lashway, 2003). In order to effectively lead schools, administrators must possess the knowledge and skills as well as demonstrate the practices associated with exemplary leaders (Barth, 2001; Hurley, 2001). As the state of West Virginia and its schools and school districts face the requirements of the ESEA of 2001, it is imperative that the state's school administrators demonstrate the knowledge, skills and practices necessary to effectively lead the state's schools.

Through both qualitative and quantitative work including case studies and interviews, Kouzes and Posner (2002b) have identified five leadership practices characteristic of exemplary leaders across all professions. The five leadership practices are termed modeling the way, inspiring a shared vision, challenging the process, enabling others to act and encouraging the heart. Utilizing the work of Kouzes and Posner to

guide this study, the researcher used Kouzes' and Posner's Leadership Practices

Inventory (LPI-Self) to measure the leadership practices of principals in each of the five

areas. Student achievement in reading and mathematics was determined by the change in

percentage of students proficient in reading and mathematics as measured by the West

Virginia Educational Standards Test (WESTEST) for the 2003-2004 and 2004-2005

school years.

The following research questions were used to guide this study:

Q1: Is there a relationship between the leadership practices of principals in terms of
"modeling the way" and student achievement in mathematics?

Q2: Is there a relationship between the leadership practices of principals in terms of
"modeling the way" and student achievement in reading?

Q3: Is there a relationship between the leadership practices of principals in terms of
"inspiring a shared vision" and student achievement in mathematics?

Q4: Is there a relationship between the leadership practices of principals in terms of
"inspiring a shared vision" and student achievement in reading?

Q5: Is there a relationship between the leadership practices of principals in terms of
"challenging the process" and student achievement in mathematics?

Q6: Is there a relationship between the leadership practices of principals in terms of
"challenging the process" and student achievement in reading?

Q7: Is there a relationship between the leadership practices of principals in terms of
"enabling others to act" and student achievement in mathematics?

Q8: Is there a relationship between the leadership practices of principals in terms of
"enabling others to act" and student achievement in reading?

Q9: Is there a relationship between the leadership practices of principals in terms of "encouraging the heart" and student achievement in mathematics?

Q10: Is there a relationship between the leadership practices of principals in terms of "encouraging the heart" and student achievement in reading?

Q11: Is there a relationship between selected demographic variables and the interaction of leadership practices of principals and student achievement in mathematics?

Q12: Is there a relationship between selected demographic variables and the interaction of leadership practices of principals and student achievement in reading?

Summary of Procedures

A packet containing an introductory letter (See Appendix A), the LPI (Self) (See Appendix B), a demographic survey (See Appendix C) and self-addressed, stamped return envelope were mailed to 350 school principals in the state of West Virginia. Four principals served as the principal of two different schools so the total population was considered to be 354. Each principal was asked to complete the LPI (Self) and demographic survey and then return the completed surveys to the researcher within two weeks. Each LPI (Self) was coded so that the researcher could track those surveys that had been returned so that a follow-up could be conducted two weeks after the initial mailing with only those principals who had not already returned the completed surveys. Two weeks after the initial mailing, the researcher distributed a follow-up letter (See Appendix D) requesting the return of the completed surveys.

Of the 350/354 principals surveyed, 187 returned both completed surveys for a return rate of 52.8 %. An additional seven returned the demographic survey but chose

not to return the LPI (Self) and, therefore, were not included in the data analysis. Also, one principal returned the incomplete survey indicating he did not wish to participate.

Data obtained from the LPI (Self) were entered into scoring software purchased from John Wiley & Sons for the purpose of calculating individual respondent scores for each of the five leadership practices. The five scores obtained from the scoring software were then entered into SPSS for further analysis. The data obtained from the demographic questionnaire and the West Virginia Department of Education's (WVDE) website (http://wvde.state.wv.us) were also entered into SPSS, statistical software, for analysis.

In addition to the data obtained from the surveys returned by the principals, student performance data in reading and mathematics were obtained from a nonpublic website of the WVDE. Additional data regarding per-pupil expenditure (at the school district level), school size, school level and socioeconomic status were obtained from the WVDE's website (http://wvde.state.wv.us). All data were entered into SPSS.

<div align="center">

Summary of Findings and Conclusions

</div>

For research questions one through ten, each independent variable (leadership practices) was correlated with each dependent variable (student achievement in mathematics and reading) using the ANOVA in SPSS to determine the relationship between the leadership practices and student achievement. Each leadership practice was categorized into three groups based upon the mean and one standard deviation of the mean. Student achievement in reading and mathematics was also categorized into three groups using the same process.

Kouzes' and Posner's Leadership Practices

Kouzes and Posner (2002a) identified five leadership practices and ten corresponding commitments demonstrated by exemplary leaders across all professions. As identified in Table 1, the five leadership practices are model the way, inspire a shared vision, challenge the process, enable others to act and encourage the heart. Leaders who *model the way* must first understand their own values and beliefs and then set the example based upon such values and beliefs. Exemplary leaders who *inspire a shared vision* plan for the future and enlist the work of others. Leaders who *challenge the process* continuously strive to improve, with little fear of risk-taking. As leaders seek to *enable others to act*, they seek to establish a collaborative work environment as well as build the capacity of others. Finally, leaders who *encourage the heart* celebrate accomplishments, whether great or small, while consistently acknowledging others for their contributions.

Findings and Conclusions (Leadership Practices)

Given the vital role principals play in effective school improvement initiatives as well as high-performing schools, the researcher had reason to believe that a link between effective leadership practices of principals and student achievement existed (JLARC of the Virginia General Assembly, 2004; Kaplan et al., 2005; Shannon & Bylsma, 2002). As a result, this study sought to determine if a relationship existed between the leadership practices of principals in the public schools of West Virginia and student achievement in reading and mathematics.

The state of West Virginia uses the WESTEST as its standardized exam which is administered to students in grades three through eight and ten. The percentage of

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students proficient on the WESTEST in both reading and mathematics is one component used for the purpose of determining adequate yearly progress, as required under the ESEA of 2001. At the time of this study, data from the WESTEST were available for the 2003-2004 and 2004-2005 school years. Utilizing the available WESTEST data, student achievement in reading and mathematics was determined as the change in percent proficient from 2003-2004 to 2004-2005. Given the fact that student achievement was based upon the 2003-2004 and 2004-2005 WESTEST data, the researcher only surveyed principals who had served as the principal of their current school for no less than the last three years.

The current study was framed by 12 research questions, the first 10 of which examined the relationship between the five leadership practices of principals and student achievement in both reading and mathematics. While existing research (JLARC of the Virginia General Assembly, 2004; Kaplan et al., 2005; Shannon & Bylsma, 2002) indicated a link between principals' leadership practices and student achievement, the current study yielded no significant relationship between the leadership practices of principals and student achievement.

Findings of the current study do not support the work of Kaplan et al. (2005) such that principal leadership had an effect on student achievement of both third and fifth graders. However, the results of the current study support Kaplan et al. (2005) such that they were unable to establish a relationship between principal leadership and the achievement of eighth graders. Further, the JLARC of the Virginia General Assembly (2004) identified nine practices associated with high-performing schools, determined by student performance on the state's Standards of Learning exam. One of the nine

practices identified was principal leadership. Again, the results of the current study do not establish a link between any of the five leadership practices of principals and student achievement in mathematics and reading.

Selected Demographic Variables

Given existing research (Czerwonka, 2005; Lee, 2005; Shepherd, 2004) which indicated that various demographic variables could have an effect on student achievement, the researcher conducted multiple regression analysis and ANOVAs to determine if four selected demographic variables had an effect on the interaction of the five leadership practices of principals and student achievement in mathematics and reading. The four demographic variables selected for this study included per-pupil expenditure, principals' years of experience, school size and socioeconomic status.

The relationship of each demographic variable and the interaction of each leadership practice and student achievement in both mathematics and reading was determined. The current study yielded five significant relationships between selected demographic variables and the interaction of principals' leadership practices and student achievement. One of the significant relationships regarded student achievement in mathematics while four pertained to student achievement in reading.

One of the five significant relationships existed between school size, the leadership practices of principals and student achievement in reading. This finding does not support the work of Czerwonka (2005) such that no significant relationship existed between school size, leadership practices of principals and student achievement in both mathematics and communication arts. Further, two of the five significant relationships existed between principals' years of experience, the leadership practices of principals and

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student achievement in reading and mathematics. This finding does not support the work of Czerwonka (2005) such that no significant relationship existed between principal tenure, leadership practices of principals and student achievement in both mathematics and communication arts. No significant relationships existed between per-pupil expenditure and the interaction of principals' leadership practices and student achievement.

Socioeconomic status. Research often indicates a relationship between socioeconomic status and student achievement such that as the socioeconomic status of students increases so does student achievement (Lee, 2005; Shepherd, 2004). However, research also exists which indicates that schools can overcome the low socioeconomic status of its students in terms of student achievement (JLARC of the Virginia General Assembly, 2004; Shannon & Bylsma, 2002). Two of the five significant relationships discovered in the current study relate to socioeconomic status and its relationship to the leadership practices of principals and student achievement.

The two significant relationships existed between socioeconomic status of schools when less than 39.65 % and the interaction of two leadership practices (enabling others to act and encouraging the heart) and student achievement in reading. The significant relationship discovered between socioeconomic status when less than 39.65 % and the interaction of the leadership practice enabling others to act and student achievement in reading may be due to the fact that expectations for all, including teachers, may unknowingly be set higher in more affluent schools. Parents often have high expectations for their children and for the education their children receive. More affluent schools may have higher levels of parental involvement as well as more resources and more money

than less affluent schools. Finally, children from affluent backgrounds often have a higher reading ability than children from low socioeconomic backgrounds.

These findings support the findings of the Joint Legislative Audit and Review Commission (JLARC) of the Virginia General Assembly. In its 2004 study of the practices of 61 elementary, middle and secondary schools in the state of Virginia, the JLARC found that high-performing schools exhibited extensive collaboration and teamwork as well as an environment conducive to learning. Additionally, high-performing schools provided necessary resources to teachers as they sought to diversify the curriculum, instruction and assessment so as to meet the needs of all children.

Findings of the current study also support a second study conducted by Kelly et al. (2005) such that principals' leadership practices played an integral role in creating a positive school climate as well as one supportive of improvement. Creation of a positive school climate certainly enhances the environment in which teachers and students strive for increased student learning and achievement in reading. Such enhancement of the learning environment serves to enable both teachers and students in the learning process.

The significant relationship discovered between socioeconomic status when less than 39.65 % and the interaction of the leadership practice encouraging the heart and student achievement in reading may be due to the fact that students from backgrounds in which their basic needs are met (i.e., food, clothes) typically come to school nourished and able to concentrate on their studies, better suited to excel in school. As a result, principals of schools with socioeconomic status less than 39.65 % may lead schools which appear to have more accomplishments to celebrate. In turn, such principals may recognize the contributions of their teachers to the overall teaching and learning process

more than their counterparts in less-affluent schools. Ultimately, parental and school expectations to recognize and celebrate the accomplishments of the teachers and students may be more prevalent in affluent schools.

Principals' years of experience. Two of the five significant relationships discovered in the current study relate to principals' years of experience and its relationship to the leadership practice enabling others to act and student achievement in reading and mathematics. In both instances, the principals' years of experience were less than 4.87 years. This finding could be due in part to the fact that less tenured principals may have recently completed their principal preparation programs, often structured around the standards identified by the Educational Leadership Constituent Council (ELCC). Six of the seven ELCC standards focus on school community, context, culture, environment and vision as well as integrity. More specifically, ELCC Standard Two indicates that school leaders "promote the success of all students by promoting a positive school culture…and designing comprehensive professional growth plans for staff" (ELCC, 2002, p. 4). Furthermore, ELCC Standard Three indicates that school leaders "promote the success of all students by managing the organization, operations, and resources in a way that promotes a safe, efficient, and effective learning environment" (ELCC, 2002, p. 7). Components of both Standards Two and Three serve to enable others to act.

Furthermore, since the less tenured principals are relatively new to their positions, they may be more inclined to lean on their veteran teachers to help them lead their schools which serves to enable their teachers to act. This study's current findings also support the findings of Kelly et al. (2005) such that principals' leadership practices

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play an integral role in creating a positive school climate as well as one supportive of improvement, both of which serve to enable others to act.

School size. One of the five significant relationships discovered in the current study relates to school size and its relationship to the leadership practice challenge the process and student achievement in reading. The relationship existed when school size was larger than 459.25 students.

As school size increases, principals may challenge the process to a greater degree than principals in a small school due to the diversity of the student population. Given the diversity of the school's student population, principals must be willing to experiment and take risks as they seek new innovations to meet the needs of all students. Furthermore, given the increased size of the student body, a school would have more teachers who are diversified themselves. Recognizing the diversity of needs of the students, teachers must be willing to diversify their instruction using a variety of instructional strategies and resources to meet the needs of all students. Finally, as school size increases schools tend to have more resources that teachers can use to explore various instructional practices.

The findings of the current study do not support the findings of Czerwonka's (2005) research which focused on the effect of principal leadership practice, school size and tenure of principals on student achievement in the state of Missouri. Czerwonka (2005) found that the interaction between school size and principal leadership practice and its effect on student achievement in communication arts was not significant.

Implications

Given the limited number of significant relationships found with the current study, future research should reexamine an effective measure of the leadership practices

of principals in relationship to their effect on student achievement. Researchers should also remember that it is difficult to compare the practices of one principal to another given the fact that principals may view their role differently based upon the individual needs of their schools. For example, one school may need a principal to help it develop and foster a shared vision while another school may have already established a shared vision but needs a principal to help the stakeholders challenge the process as they experiment and take risks. Therefore, further research should utilize a different instrument or method for determining the leadership practices of principals.

In addition to reexamining how one assesses principals' leadership practices, it would be advantageous to reconsider how one defines student achievement. The current study considered student achievement in terms of percent of students proficient in reading and mathematics as measured on the state's standardized exam. Future research should redefine student achievement to not only include performance on standardized exams but to also include attendance and graduation rates as well as postsecondary going rate. By defining student achievement broadly, a significant relationship(s) may be found between principals' leadership practices and student achievement, unlike the results of the current study.

Given the significant relationship between least tenured principals and the interaction of the leadership practice enabling others to act and student achievement in reading and mathematics, school leaders should provide professional development to all principals, specifically principals with greater than five years of experience, focusing on the practice of enabling others to act. It is important to note that assistant principals have various responsibilities so they, rather than the principal, may serve as the administrator

that enables others to act. In addition, veteran principals may be comfortable enough in their positions that they do not foster collaboration and strengthen others to participate in the leadership roles within the school. However, instead of being merely comfortable in their positions, veteran principals may have never learned how to enable others to act.

While professional development targeted at the leadership practice enabling others to act may be advantageous for more senior administrators, the state and its school systems should consider providing professional development focused on strengthening the leadership practices of the state's school principals based upon the work of Kouzes and Posner. Additionally, the state and its school districts should provide information and training to the state's principals focused on examining socioeconomic status and school size as it relates to the achievement of students and adjusting their practices accordingly.

Recommendations for Further Research

Based on the findings of this study, the following recommendations are made for further research:

1. Dissemination of the LPI (Observer) to teachers working under the supervision of each respondent school principal in order to compare the self-assessment of principals' leadership practices to that provided by the teachers.

2. Exploration of other variables that may affect student achievement may produce different results when considering their relationship with the interaction of leadership practices of principals and student achievement.

3. Selection and use of a different instrument to measure leadership practices of principals may yield a greater relationship between such practices and student achievement.

4. Use of a more comprehensive definition of student achievement (i.e., attendance, graduation, college-going rate) may demonstrate a greater relationship between leadership practices and student achievement as well as the effect of selected demographic variables on such achievement.

5. Implementation of a longitudinal study to consider the relationship between the leadership practices of principals and student achievement.

6. Development of a professional development plan for experienced principals focused on the leadership practices and skills necessary for effective principals.

REFERENCES

Archer, J. (2003). Debate heating up on how to lure top-notch principals. *Education Week, 22*(39), 1-2.

Atkinson, T.S. (2002). "We're not just whistling Dixie": Policymakers' perspectives on state education reform. *Reading Research and Instruction, 41*(4), 289-308.

Balcerek, E.B. (1999). *Principals' effective leadership practice in high performing and inadequately performing schools.* Doctoral dissertation. The University of Tennessee, Knoxville. UMI ProQuest Digital Dissertations, AAT 9973430.

Barth, R.S. (2001). Teacher leader. *Phi Delta Kappan*, 82(6), 443-449.

Brown, K.M., & Anfara, Jr., V.A. (2003). Paving the way for change: Visionary leadership in action at the middle level. *NASSP Bulletin, 87*(635), 16-34.

Campbell, R.F., Cunningham, L.L., Nystrand, R.O., & Usdan, M.D. (1990). *The organization and control of American school* (6th ed.). New Jersey: Prentice-Hall, Inc.

Childs-Bowen, D. (2005). Rest in peace, charming all-powerful principal. *JSD, 26*(4), 7.

Chirichello, M. (1999, January). *Building capacity for change: Transformational leadership for school principals*. Paper presented at the Annual International Congress for School Effectiveness and Improvement, San Antonio, TX. (ERIC Document Reproduction Service No. ED432037)

Clisbee, M.A. (2004). *Leadership style: Do male and female school superintendents lead differently*. Doctoral dissertation. The University of Massachusetts-Lowell. UMI ProQuest Digital Dissertations, AAT 3122967.

Czerwonka, F.L. (2005). *Variance of student achievement based on high school principal leadership practices, size of high school, and tenure of principal*. Doctoral dissertation. The Graduate School of Saint Louis University. UMI ProQuest Digital Dissertations, AAT 3185051.

Duke, D. (2004). *The challenges of educational change*. Boston: Pearson Education, Inc.

Elementary and Secondary Education Act. (2002). H.R. 1, 107th Congress. http://www.ed.gov/policy/elsec/leg/esea02/107-110.pdf.

Fenwick, L.T., & Pierce, M.C. (2002). *Professional development of principals*. ERIC Digest. Washington, D.C.: ERIC Clearinghouse on Teaching and Teacher Education. (ERIC Document Reproduction Service No. ED477731)

Fullan, M. (2001). *Leading in a culture of change*. San Francisco: Jossey-Bass, Inc.

Fullan, M. (2003). *The moral imperative of school leadership*. Thousand Oaks: Corwin Press.

Fullan, M. (2005). *Leadership & sustainability*. Thousand Oaks: Corwin Press.

Fullan, M., Bertani, A. & Quinn, J. (2004). New lessons for districtwide reform. *Educational leadership, 61*(7), 42-46.

Geocaris, C.M. (2004. *The evolving role of the principalship: Critical insights for a new paradigm*. Doctoral dissertation. Northern Illinois University. UMI ProQuest Digital Dissertations, AAT 3132422.

Goals 2000: Educate America Act. (1994). H.R. 1804, 103rd Congress.

http://www.ed.gov/legislation/GOALS2000/TheAct/index.html.

Hall, G.E., & Hord, S.M. (2006). *Implementing change: patterns, principles, and potholes* (2nd ed.). Boston: Pearson Education, Inc.

Hoy & Miskel (2005). *Educational administration: Theory, research, and practice* (7th ed.). Boston: McGraw Hill.

Hurley, C. (2001). The principalship: Less may be more. *Education Week, 20*(37), 37-38.

Jackson, R.M. (2005). *Analysis of the relationship among principals' prior teaching experiences and tenure in their current positions to their schools' performance level rankings on the North Carolina accountability model (ABCS) over three years*. Doctoral dissertation. East Carolina University College of Education. UMI ProQuest Digital Dissertations, AAT 3148753.

Jarnagin, K.R. (2004). *Leadership behaviors in high school principals: Traits and actions that affect teacher morale*. Doctoral dissertation. East Tennessee State University. UMI ProQuest Digital Dissertations, AAT 9973430.

Jazzar, M., & Algozzine, B. (2006). *Critical issues in educational leadership*. Boston: Pearson Education, Inc.

Jennings, J. (2002). Stricter federal demands, bigger state role: What to expect from the No Child Left Behind Act. *The State Education Standard*, 3(2), 24-28.

Jerald, C. (2005). *The implementation trap: Helping schools overcome barriers to change*. Washington, D.C.: The Center for Comprehensive Reform and Improvement.

Joint Legislative Audit and Review Commission of the Virginia General Assembly

(2004). *Review of factors and practices associated with school performance in Virginia.* S. Rep. No. 04-008 (2004).

Kaplan, L.S., Owings, W.A., & Nunnery, J. (2005). Principal quality: A Virginia study connecting interstate school leaders licensure consortium standards with student achievement. *NASSP Bulletin, 89*(643), 28-44.

Kearney, K. (2005). Guiding improvements in principal performance. *Leadership, 35*(1), 19-21.

Kelley, Thornton & Daugherty (2005). Relationships between measures of leadership and school climate. *Education, 126*(1), 17-25.

Kent, A.M. (2004). Improving teacher quality through professional development. *Education, 124*(3), 427-435.

Kouzes, J., & Posner, B. (2002a). *The leadership challenge* (3rd ed.). San Francisco: John Wiley & Sons, Inc.

Kouzes, J., & Posner, B. (2002b). *The leadership practices inventory: Theory and evidence behind the five practices of exemplary leaders*. Retrieved June 6, 2006, from http://media.wiley.com/assets/463/74/lc_jb_appendix.pdf.

Lambert, L. (2003). *Leadership capacity for lasting school improvement*. Alexandria: ASCD.

Lashway, L. (2003). *Role of the school leader. Trends and issues.* Washington, D.C.: ERIC Clearinghouse on Educational Management. (ERIC Document Reproduction Service No. ED479933)

Leithwood, K., Louis, K.S., Anderson, S., & Wahlstrom, K. (2004). How leadership influences student learning. Learning from Leadership Project.

Martin, D.T. (2000). *The change process: Stages of concern of the standards of learning in superintendents' region seven in* Virginia. Doctoral dissertation. Virginia Polytechnic Institute and State University. ETD 04202000-20570031.

McNeal, L., & Christy, W.K. (2001). A discussion of change theory, system theory, and state designed standards and accountability initiatives. Paper presented at the annual meeting of the Southern Regional Council on Educational Administration. (ERIC Document Reproduction Service No. ED581980)

Murphy, P.K. (1999). *Examining elements of change in four suburban high school in Virginia*. Doctoral dissertation. Virginia Polytechnic Institute and State University. UMI ProQuest Digital Dissertations, AAT 9923372.

National Commission on Excellence in Education. (1983). A nation at risk: The imperative for school reform.

Owens, R.G. (2004). *Organizational behavior in education: Adaptive leadership and school reform* (8th ed.). Boston: Pearson Education, Inc.

Reeves, D.B. (2004). *Accountability for learning: How teachers and school leaders can take charge*. Alexandria: ASCD.

Schmoker, M. (2004). Tipping point: From feckless reform to substantive instructional improvement. *Phi Delta Kappan, 85*(6), 424-432.

Scholten, J.P. (2004). *The role of leadership in building collaborative initiatives for school improvement*. Doctoral dissertation. Central Michigan University. UMI ProQuest Digital Dissertations, AAT 3118360.

Sergiovanni, T.J. (2006). *The principalship: A reflective practice perspective*(5th ed.). Boston: Pearson.

Shannon, G.S., & Bylsma, P. (2002). Addressing the achievement gap: A challenge for

    Washington state educators. Seattle, WA: Boeing Co. (ERIC Document

    Reproduction Service No. ED474392)

Shepherd, D.P. (2004). *The relationship among high school size, per pupil expenditure,*

    socioeconomic status, race/ethnicity, and Georgia high school graduation test

    scores. Doctoral dissertation. Averitt College of Graduate Studies of Georgia

    Southern University. UMI ProQuest Digital Dissertations. AAT 3143332.

Snowden, P.E., & Gorton, R.A. (2002). *School leadership and administration:*

    Important concepts, case studies, & simulations. Boston: McGraw Hill.

Southworth, G. & Du Quesnay, H. (2005). School leadership and system leadership. *The*

    educational forum, 69, 212-220.

Stewart (2004). (2004). Foreword. *Framework for high performing school systems:*

    2004-2014. Charleston, WV.

Stone, C.M. (2003). *A study of the relationship between principals' leadership behaviors*

    and the school culture as perceived by the teachers. Doctoral Dissertation. The

    University of Mississippi – Oxford. UMI ProQuest Digital Dissertations, AAT

    3089846.

United States Department of Education. (2006). *Reading first: Over $4.3 billion to*

    improve the reading skills of young children. Retrieved June 6, 2006, from

    http://www.ed.gov/programs/readingfirst/nclb-reading-first.html.

West Virginia Department of Education. (2006). *Reading for all*. Retrieved June 6, 2006,

    from http://wvde.state.wv.us/reading/readingfirst.html.

West Virginia Department of Education. (2004). *Framework for high performing*

school systems: 2004-2014. Charleston, WV.

Wetherill, K.S., & Applefield, J.M. (2005). Using school change states to analyze comprehensive school reform projects. *School effectiveness and school improvement, 16*(2), 197-215.

Woods, J.T. (2004). *Healing schools that hurt: The principal's impact on school improvement in high stakes situations*. Doctoral Dissertation. University of Illinois at Urbana-Champaign. UMI ProQuest Digital Dissertations, AAT 3131056.

APPENDICES

Appendix A: Introductory Letter

Appendix B: Leadership Practices Inventory (Self)

Appendix C: Demographic Questionnaire

Appendix D: Follow-up Letter

Appendix E: IRB Approval Letter

Appendix F: Procedures Used for Establishing Groups

Appendix G: Curriculum Vitae

APPENDIX A: INTRODUCTORY LETTER

March 8, 2006

Name
School
Address
City, State Zip

Dear Mr./Ms. Last Name:

You have been selected to participate in a study that examines the leadership practices of West Virginia's school principals. While you have been selected, your participation in the study is strictly voluntary. Assuming you agree to participate in the study, you will complete a questionnaire that will take approximately ten minutes to complete and return it to the researcher. While answering every question is encouraged, you may choose to skip questions you would rather not answer. Please be assured that your responses to the questionnaire will be kept confidential with no report identifying specific schools or principals involved in the study.

The results of this study will assist the state's educational leaders in assessing the leadership practices of the state's school principals as they lead their schools in meeting the accountability provisions of the No Child Left Behind Act of 2001. Furthermore, the results may be used as a guide to determine the types of resources and supports needed by the state's principals as they lead their schools, strive for continuous improvement and meet the needs of all students.

In order to complete the study, a high return rate is crucial. Therefore, please return your completed questionnaire in the enclosed self-addressed, stamped envelope no later than March 22, 2006. Your participation in this study is greatly appreciated. If you have any questions regarding the research, please feel free to contact my doctoral committee chair, Dr. Teresa Eagle, by phone at 304.746.8924 or by email at t.eagle@marshall.edu. If you have any questions regarding your rights as a research subject, please contact the Office of Research Integrity at Marshall University by phone at 304.696.7230. Thank you.

Sincerely,

Serena L. Starcher
Doctoral Candidate
Marshall University

APPENDIX B: LEADERSHIP PRACTICES INVENTORY (SELF)

KOUZES
POSNER

LEADERSHIP
PRACTICES
INVENTORY

LPI

THIRD EDITION

SELF

LPI▸ SELF
Leadership Practices Inventory

by JAMES M. KOUZES
& BARRY Z. POSNER

INSTRUCTIONS

Write your name in the space provided at the top of the next page. Below your name, you will find thirty statements describing various leadership behaviors. Please read each statement carefully, and using the RATING SCALE on the right, ask yourself:

"How frequently do I engage in the behavior described?"

- Be realistic about the extent to which you *actually* engage in the behavior.

- Be as honest and accurate as you can be.

- DO NOT answer in terms of how you would like to behave or in terms of how you think you should behave

- DO answer in terms of how you typically behave on most days, on most projects, and with most people.

- Be thoughtful about your responses. For example, giving yourself 10s on all items is most likely not an accurate description of your behavior. Similarly, giving yourself all 1s or all 5s is most likely not an accurate description either. Most people will do some things more or less often than they do other things.

- If you feel that a statement does not apply to you, it's probably because you don't frequently engage in the behavior. In that case, assign a rating of 3 or lower.

For each statement, decide on a response and then record the corresponding number in the box to the right of the statement. After you have responded to all thirty statements, go back through the LPI one more time to make sure you have responded to each statement. *Every* statement *must* have a rating.

The RATING SCALE runs from 1 to 10. Choose the number that best applies to each statement.

1 = Almost Never

2 = Rarely

3 = Seldom

4 = Once in a While

5 = Occasionally

6 = Sometimes

7 = Fairly Often

8 = Usually

9 = Very Frequently

10 = Almost Always

When you have completed the LPI-Self, please return it to:

_____   _____

_____   _____

_____

Thank you.

APPENDIX C: DEMOGRAPHIC QUESTIONNAIRE

Demographic Information Provided by School Principals Completing Kouzes' and Posner's Leadership Practices Inventory

DIRECTIONS: The following questions will provide the researcher with general demographic information from which she may draw conclusions. Please answer each to the best of your ability.

1. How many years of experience do you have as the principal (not assistant principal) at your current school? _____

2. How many years of experience do you have as a principal (at any school and not assistant principal)? _____

3. Please indicate your gender.

Female _____   Male _____

APPENDIX D: FOLLOW-UP LETTER

March 22, 2006

Name
School
Address
City, State Zip

Dear Mr./Ms. Last Name:

You recently received a copy of a survey that I am using to gather information for my doctoral dissertation which focuses on the relationship between the leadership practices of principals and student achievement. If you have already responded, please disregard this letter.

If not, please take eight to ten minutes to fill out the survey (Leadership Practices Inventory **and** demographic survey) and return it in the self-addressed stamped envelope previously provided. If you did not receive the original mailing or if you accidentally discarded the information and would like to respond to my request, please email me at starche5@marshall.edu. Upon receipt of your email, I will be more than happy to send you another survey and self-addressed stamped envelope. If you choose not to email me, you may send your request/completed survey/correspondence to the following address:

> Marshall University Graduate College
> Office of Doctoral Programs in Education
> 100 Angus E Peyton Drive
> South Charleston, WV 25303

I know that you are very busy, but I believe the information gained from this study will benefit the principals of West Virginia as well as the education profession. Again, please feel free to contact me if you have any questions or need additional information.

Sincerely,

Serena L. Starcher
Doctoral Candidate
Marshall University

APPENDIX E: INSTITUTIONAL REVIEW BOARD

Institutional Review Board Approval Letter

MARSHALL UNIVERSITY

www.marshall.edu

Graduate College
School of Education & Professional Development
Office of Doctoral Programs

Date

Name
School
Address
City, State Zip

Dear Mr./Ms. Last Name:

You have been randomly selected to participate in a study that examines the leadership practices of West Virginia's school principals. While you have been randomly selected, your participation in the study is strictly voluntary. Assuming you agree to participate in the study, you will complete a questionnaire that will take approximately ten minutes to complete and return it to the researcher. While answering every question is encouraged, you may choose to skip questions you would rather not answer. Please be assured that your responses to the questionnaire will be kept confidential with no report identifying specific schools or principals involved in the study.

The results of this study will assist the state's educational leaders in assessing the leadership practices of the state's school principals as they lead their schools in meeting the accountability provisions of the No Child Left Behind Act of 2001. Furthermore, the results may be used as a guide to determine the types of resources and supports needed by the state's principals as they lead their schools, strive for continuous improvement and meet the needs of all students.

In order to complete the study, a high return rate is crucial. Therefore, please return your completed questionnaire in the enclosed self-addressed, stamped envelope no later than _____. Your participation in this study is greatly appreciated. If you have any questions regarding the research, please feel free to contact my doctoral committee chair, Dr. Teresa Eagle, by phone at 304.746.8924 or by email at t.eagle@marshall.edu. If you have any questions regarding your rights as a research subject, please contact the Office of Research Integrity at Marshall University by phone at 304.696.7230. Thank you.

Sincerely,

Serena L. Starcher
Doctoral Candidate
Marshall University

Office of Research Integrity
Institutional Review Board

Friday, February 24, 2006

Teresa R. Eagle, Ed.D
Leadership Studies
MUGC/Leadership Studies
100 Angus E. Peyton Dr.
S. Charleston, WV. 25303

RE: IRB Study # 7052   **At:** Marshall IRB 2

Dear Dr. Eagle:

Protocol Title:
The Relationship Between Leadership Practices of Principals and Student Achievement

Expiration Date:	2/23/2007	
Our Internal #:	2197	
Type of Change:	(Other)	Expedited
Expedited ?:	✓	
Date of Change:	2/24/2006	
Date Received:	2/24/2006	
On Meeting Date:	3/19/2003	

Description: In accordance with 45CFR46.110, the above listed study was granted expedited approval for a period of 12 months. This study is for student Serena Starcher. A progress report of this study is due prior to the anniversary date of February 23, 2007 or upon completion and or closure if prior to the anniversary date.

The purpose of this study is to determine if a relationship exists between the leadership practices of principals and student achievement in reading and mathematics.

Respectfully yours.

Stephen D. Cooper, Ph.D.
Marshall University IRB#2 Chairperson

APPENDIX F: PROCEDURES USED FOR ESTABLISHING GROUPS

Leadership Practices

For purposes of this study, student achievement in mathematics and reading was recoded into three groups. In order to group student achievement, the mean student achievement in mathematics was calculated as well as one standard deviation above and below the obtained mean. As indicated in Table 5, student achievement in mathematics ranged from -21.40 to 30.80 with a mean of 5.12 and a standard deviation of 7.36. Upon calculating the mean and obtaining the standard deviation, the researcher identified three groups in which the individual differences in student achievement in mathematics were recoded. The group which fell more than one standard deviation below the mean (-2.24 percentage points) was coded as the numeral 1 (N=24). The middle group (-2.24 to 12.48) was coded as the numeral 2 (N=137). Finally, the group which fell more than one standard deviation above the mean (12.48) was coded as the numeral 3 (N=26). Table 6 identifies the number of respondents in each group as well as the associated values for each group.

The same process was followed to recode the individual differences in student achievement in reading. As provided in Table 5, student achievement in reading ranged from -15.30 to 19.60 with a mean of 3.08 and a standard deviation of 5.62. Upon calculating the mean and obtaining the standard deviation, the researcher identified three groups in which the individual differences in student achievement in reading were recoded. The group that fell more than one standard deviation below the mean (-2.54 percentage points) was coded as the numeral 1 (N=26). The middle group (-2.54 to 8.70) was coded as the numeral 2 (N=135). The third group, those that fell more than one standard deviation above the mean (8.70), was coded as the numeral 3 (N=26). Table 6

identifies the number of respondents in each group as well as the associated values for each group.

Table 5: *Range, Mean and Standard Deviation for Student Achievement in Mathematics and Reading*

Student Achievement	Minimum	Maximum	Mean	Standard Deviation
Mathematics	-21.40	30.80	5.12	7.36
Reading	-15.30	19.60	3.08	5.62

Table 6: *Number of Respondents and Associated Values for Each Group*

Student Achievement	Number of Respondents	Associated Values
Mathematics	24	< -2.24
	137	-2.24 – 12.48
	26	> 12.48
Reading	26	< -2.54
	135	-2.54 – 8.70
	26	> 8.70

The researcher also grouped the five leadership practices into three groups using the same process described above and used the grouped practices in the data analysis. Table 7 identifies the range, mean, standard deviation for each leadership practice. Table 8 identifies the number of respondents in each group as well as the associated values for each group.

Table 7: *Range, Mean and Standard Deviation for Each Leadership Practice*

Leadership Practice	Minimum	Maximum	Mean	Standard Deviation
Model the Way	37	60	50.94	5.22
Inspire a Shared Vision	23	60	47.58	7.40
Challenge the Process	24	59	47.48	6.93
Enable Others to Act	37	60	52.84	4.34
Encourage the Heart	26	60	50.39	7.33

Table 8: *Number of Respondents and Associated Values for Each Group*

Leadership Practice	Number of Respondents	Associated Values
Model the Way	31	< 45.72
	129	45.72 – 56.16
	27	> 56.16
Inspire a Shared Vision	33	< 40.18
	126	40.18 – 54.98
	28	> 54.98
Challenge the Process	31	< 40.55
	125	40.55 – 54.41
	31	> 54.41
Enable Others to Act	29	< 48.50
	131	48.50 – 57.18
	27	> 57.18
Encourage the Heart	29	< 43.06
	126	43.06 – 57.72
	32	> 57.72

Selected Demographic Variables

To determine if a relationship existed between selected demographic variables and the interaction of leadership practices of principals and student achievement in mathematics and reading, the researcher first identified the demographic variables as per-pupil expenditure, principals' years of experience at both her/his current school and in her/his career, school size and socioeconomic status. The researcher then recoded each

of the demographic variables into three distinct groups. Recoding was completed by first

calculating the mean and one standard deviation above and below for each of the

demographic variables. Table 9 provides the range, mean and standard deviation for each

selected demographic variable. Those values that fell below one standard deviation of

the mean were assigned the numeral 1. Values ranging from one standard deviation

below to one standard deviation above the mean were assigned the numeral 2. The

values that were more than one standard deviation above the mean were assigned the

numeral 3. Table 10 details the values associated with each grouped demographic

variable as well as the number of respondents assigned to each group.

Table 9: *Range, Mean and Standard Deviation for Each Selected Demographic Variable*

Leadership Practice	Minimum	Maximum	Mean	Standard Deviation
Per-Pupil Expenditure	7213.21	10108.45	8085.23	482.02
Principals' Years of Experience*	3	32	9.01	6.80
Principals' Years of Experience**	3	44	14.07	9.20
School Size	52	938	299.06	160.19
Socioeconomic Status	11.86	88.75	55.14	15.49

*Principals' years of experience at current school

**Principals' total years of experience in the profession

Table 10: *Number of Respondents and Associated Values for Each Grouped Demographic Variable*

Leadership Practice	Number of Respondents	Associated Values
Per-Pupil Expenditure	32	< 7603.21
	128	7603.21 – 8567.25
	27	> 8567.25
Principals' Years of Experience (Current)	0	< -2.21
	144	-2.21 – 15.81
	39	> 15.81
Principals' Years of Experience (Total)	35	< 4.87
	114	4.87 – 23.27
	33	> 23.27
School Size	23	< 138.87
	136	138.87 – 459.25
	27	> 459.25
Socioeconomic Status	32	< 39.65
	84	39.65 – 70.63
	71	> 70.63

APPENDIX G: CURRICULUM VITAE

CURRICULUM VITAE

Serena Starcher

EDUCATION

Ed.D. Leadership Studies. Marshall University Graduate College, South Charleston, WV. 2006.

Ed.S. Supervisor of Instruction. Marshall University Graduate College, South Charleston, WV. 2005.

M.A. Leadership Studies. Marshall University Graduate College, South Charleston, WV. 2002.

B.A. Mathematics and Chemistry Education. Marshall University, Huntington, WV. 1998. Summa Cum Laude.

CERTIFICATIONS

West Virginia Permanent Professional Teaching Certificate endorsed for Mathematics (5-Adult) and Chemistry (9-Adult).

West Virginia Five-Year Administrative Certificate endorsed for Principal (PreK-Adult), Superintendent (PreK-Adult) and Supervisor General Instruction (PreK-Adult).

Ohio Four-Year Teaching Certificate endorsed for Mathematics (7-12).

PROFESSIONAL EXPERIENCE

2002-Present	Coordinator, Teacher Education, West Virginia Department of Education, Charleston, WV
Fall 2004	Part-Time Faculty, Marshall University Graduate College, South Charleston, WV
1999-2002	Teacher, Mathematics, Hurricane High School, Hurricane, WV