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The Relationship Between Teacher Leadership and Student Achievement

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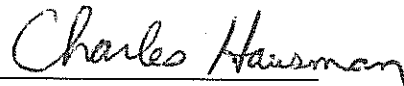
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THE RELATIONSHIP BETWEEN TEACHER LEADERSHIP AND STUDENT
ACHIEVEMENT

By

Sally A. Sugg

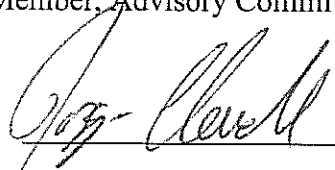
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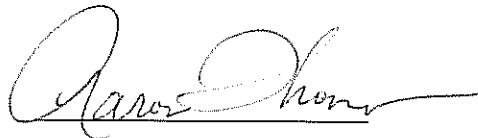
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The Relationship Between Teacher Leadership and Student
Achievement

By

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DEDICATION

This dissertation is dedicated to my husband, Randy, for his patience, understanding and support in my career and the completion of this work

ACKNOWLEDGEMENTS

I would like to acknowledge and thank my husband for his understanding and patience while completing this journey to achieving my doctoral degree. I could not have achieved this if it were not for his sacrifice and understanding during the past several months.

I would also like to thank my father, Howard Williams and late mother, Jacqueline Williams, who both supported me throughout my education by making sure that all my needs were met and then some. In addition, they always believed in me, which gave me great encouragement.

I would never have completed this dissertation without the guidance and counsel of Dr. Charles Hausman. His expertise and knowledge have been instrumental in shaping my understanding of my topic of study. His patience with me has helped me to persevere towards completion. In addition, I would like to thank Dr. Roger Cleveland for his opening in me a new understanding of cultural diversity and Dr. Elaine Farris for being my role model and colleague, as well as my friend. Lastly, I would like to thank Dr. Aaron Thompson for his ability to share his knowledge with his students and make us believe that we too can achieve even our highest goals. His consistent encouragement and counsel anytime I needed it supported me when I felt like giving up on this journey.

Finally, I would like to acknowledge all of those teachers with whom I have worked throughout my career, many of whom aspire to be or have become leaders in their educational roles. Teacher leaders are an absolute necessity for any administrator since the job of leading a school is no longer one that can be accomplished by any one

individual. Those teacher leaders with whom I have been fortunate enough to work have taught me many things that help me in my daily work. Keep on leading.

ABSTRACT

This paper is a study of the relationship between teacher leadership and student achievement outcomes. English/Language Arts scores were collected from two, large urban middle schools under NCLB consequences and receiving School Improvement Grant (SIG) funding. Scaled scores from the state's Criterion Referenced Test (CRT) in English/Language Arts serve as the measure of student achievement. These student achievement scores were linked at the student level to the teacher primarily responsible for each student's English/Language Arts instruction. Forty-two teachers (N=42) were connected to their students (N=2292) to determine the relationship between teacher leadership and student achievement. In addition, other student characteristics (poverty, disability, and ethnicity) were taken into account when the relationship between teacher leadership on student achievement outcomes was assessed.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
Rationale for Study	4
Research Question	5
Conceptual Framework	5
Significance of the Study	8
II. REVIEW OF THE LITERATURE	11
Teachers as Leaders	11
Varied Definitions of Teacher Leadership.....	13
Pathways to Teacher Leadership	16
Shared and Distributed Leadership.....	22
Traditional Leadership and Informal Teacher Leadership Roles	23
Teacher Leadership and Student Achievement in Turnaround Schools.....	24
Turnaround Policy	28
III. METHODS	32
Purpose.....	32
Context of the Study	33
City Context	33
School District	35
Participants.....	37
Teacher Sample.....	37
Student Sample	39
Research Design.....	40
Variables and Measures	41
Student Achievement Data	41
Teacher Leadership Perception Survey	42
Reliability of the Study	43
Data Analyses	43
Limitations of the Study.....	44
IV. RESULTS	45
Overview of the Study	45
Teacher Leadership and Student Achievement.....	45
Data Collection	47
Teacher Sample Descriptive Statistics.....	48
Teacher Leadership Survey Descriptive Statistics.....	51
Descriptive Statistics for the Student Sample.....	55
Student CRT Results in English/Language Arts.....	57
Correlation Between Teacher Leadership and 2011 ELA Scores	60
Regression Analysis.....	60

V. DISCUSSION	62
Purpose of the Study	62
Findings.....	64
Limitations	65
The Paradoxes of Teacher Leadership in Low Achieving Schools	70
Summary Recommendations	73
REFERENCES	77
APPENDICES	82
A. IRB Approval.....	82
B. Teacher Leadership Survey.....	84
VITA.....	86

LIST OF TABLES

TABLE	PAGE
Table 2.1. Pathways to Teacher Leadership	18
Table 3.1. Households by Type (2010).....	34
Table 3.2. City Race/Ethnicity Status (2010)	35
Table 3.3. 2010-2011 District AYP Summary.....	37
Table 3.4. Educational Level of Teacher Sample	38
Table 3.5. Primary Teacher Grade Assignments	38
Table 3.6. Teachers Teaching in Core-Content Area	39
Table 3.7 School Demographics	40
Table 4.1. Frequency and Percent of ELA Teachers Responding to the Teacher Leadership Survey	48
Table 4.2. Frequency and Percent for Teaching Assignments.....	49
Table 4.3. Teacher’s Education Level	50
Table 4.4. Grade Level(s) Taught by Teachers.....	51
Table 4.5. Teacher Leadership Survey Results.....	54
Table 4.6. Frequency and Percent of Students Taking the 2011 CRT Test by School55	55
Table 4.7. Frequency and Percent of Students Taking the 2011 CRT Test by Grade Level	56
Table 4.8. Racial/Ethnic and Demographic Characteristics for the Student Sample Taking the 2011 CRT Test.....	57
Table 4.9. Cross Tabulation of 2011 ELA CRT Proficiency Levels	58
Table 4.10. 2011 Disaggregated Mean Scaled Scores for 2011 ELA CRT by Grade and Student Characteristics.....	59
Table 4.11. Regression of Teacher Leadership and Student Characteristics on Student Achievement	61

LIST OF FIGURES

FIGURE	PAGE
Figure 1.1. The Embedded Logic of Teacher Leadership	7

CHAPTER ONE

INTRODUCTION

Are teachers who consider themselves leaders in their schools making a significant, positive impact in their classrooms? Do their leadership skills put them ahead of their peers in increasing student achievement outcomes? Is teacher leadership simply a route to a job in the educational administrative ranks or a means to improving the professional culture within a school? As teacher leaders work to improve the conditions within their schools and add to the professional knowledge and skills of their colleagues, they interact with and mentor other teachers. Modeling successful teaching strategies, serving on committees and participating in decision-making are additional hallmarks of teacher leaders. While the research (DuFour, 2010; Lambert, 1998; Leithwood, 2010a; Leithwood, 2010b; Leiberman & Miller, 2004; Murphy, 2005; Smylie, 2010; Spillane, 2006) is clear that these types of teacher leadership activities increase the likelihood of total school improvement, whether teacher leaders increase student achievement within their own classrooms at significant levels when compared to their peers has received minimal attention. Especially given the large number of schools that continue to produce high percentages of drop-outs and low student achievement outcomes for their students, teacher leadership may be one of the factors that gives these schools, students and teachers hope beyond total school reform and down to each individual student.

The above questions also need to be answered in light of the fact that the educational system in the United States is spending increasing amounts of the educational budget to promote teacher leadership, especially in low performing schools. When schools adopt or develop new programs, it is increasingly expected that educators only

pursue professional activities that are research-based. It is also the norm to analyze pre and post data to determine if a school, district, or a state department of education is receiving a return on its investment. However, professional development targeting the growth of teachers as educational leaders rarely has been examined empirically at the level of individual classroom achievement, which may help to bolster the growing trend of identifying, developing and promoting teacher leaders within their schools and districts. After investigating teacher leadership and its relationship to school improvement, Robinson (2009) found that, “teacher leadership as a means to school improvement requires further study in the field of educational leadership” (p.141). Indeed, carrying this investigation further to analyze more deeply than whole school improvement, individual classroom and student results should be a vital part of any future investigation of teacher leadership.

It is impossible to quantitatively assess the effect of this relatively new concept of teachers as leaders considering the core of the instructional process - learning outcomes for individual students - without specific data that connects individual student achievement results to their primary teacher of record. The complexity of this type of study is also fraught with confounding questions such as: 1) Which teacher is accountable for which students in collaborative models; 2) how do the findings affect a teacher’s performance evaluation; and 3) what other factors affect student growth in achievement in addition to teachers’ effects within any given year. Intuitively, the educational community believes that teacher leadership initiatives yield more effective teachers and these teachers produce high achieving students. But does empirical data support this logic? More research needs to be conducted before educational funding should be

targeted toward further developing this idea of teachers and others as leaders within the school community. In turnaround schools, which have no time to waste for improving their academic outcomes, this research could help focus school improvement funding efforts, thereby increasing the academic outcomes for each individual student. Currently, there are few rigorous studies that have measured how teacher leadership affects student achievement (York-Barr & Duke, 2004).

Leadership distributed among staff members or the wider school community presents an even more complex situation in which to measure student achievement results. Spillane (2006), the leading researcher on distributed leadership in schools, agrees:

...empirical knowledge about it (distributed leadership) is thin....The barren empirical landscape is to be expected, given that ideas about distributed leadership are still in their infancy. Distributed leadership has garnered sustained attention from scholars, school reformers, and practitioners only over the past half-decade, although the term entered the social science lexicon before that (p. 30).

Smylie (2010) agrees that few studies about the “distribution of authority and influence” (p. 96) have been completed, and the topic would be helpful to explore in relation to continuous school improvement.

This absence of research is a problem that must be addressed, especially in lean economic times when schools have a decreasing amount of funding to spend on professional development and other school improvement initiatives. In fact, schools identified as low performing by federal standards are receiving monetary assistance at

unprecedented levels, and if these funds are to be spent on developing teachers as leaders within the school community, then data need to be generated and analyzed to support these expenditures. More specifically, the 2009 stimulus package added \$3 billion to the \$546 million already appropriated for School Improvement Grants (SIGs). New federal guidance (U.S. Department of Education, 2010a; 2010b) subsequently outlined how states should identify their SIG-eligible schools and what would be required of schools accepting these awards (Dee, 2012).

Rationale for Study

The rationale for this study was that research is needed on teachers' levels of leadership within their schools through self-reporting of their attitudes and experiences. Additionally, the teachers' responses regarding their leadership should be analyzed and related to their students' individual achievement levels on criterion referenced tests to explore any linkage between the two phenomena. While researchers (Lieberman & Miller 2004; Murphy 2005) stress that literature on teacher leadership is relatively new, the linking of teacher leadership to individual student achievement in turnaround schools is indeed extremely rare. This study adds to that small body of knowledge and provides educators a basis for making important decisions about professional development funding and organizational structures to support increased student achievement. In the current climate of school reform with the focus on the lowest achieving schools, this work could support those who seek to make teacher leadership a part of the solution to improve individual student achievement in turnaround schools. This research is imperative given Lieberman and Miller's (1999) assertion that without teachers' "full participation and leadership, any move to reform education—no matter how well-intentioned or

ambitious—is doomed to failure (as cited in Murphy, 2005, p. 7–8). Furthermore, Leithwood et al. (2010b) emphasize that:

...a considerable portion of future educational leadership research should adopt a more limited, “laser-like” focus on discovering the leadership practices most likely to improve the condition or status of variables in schools for which there is already considerable evidence of impact on student learning. (p. 698)

This study attempts to sharpen the focus on educational leadership to more narrowly investigate teacher leadership and its relationship with student achievement in order to understand this condition and its impact on student learning.

Research Question

This study sought to answer the following research question.

- ❖ What is the relationship between teacher leadership and student achievement in turnaround middle schools?

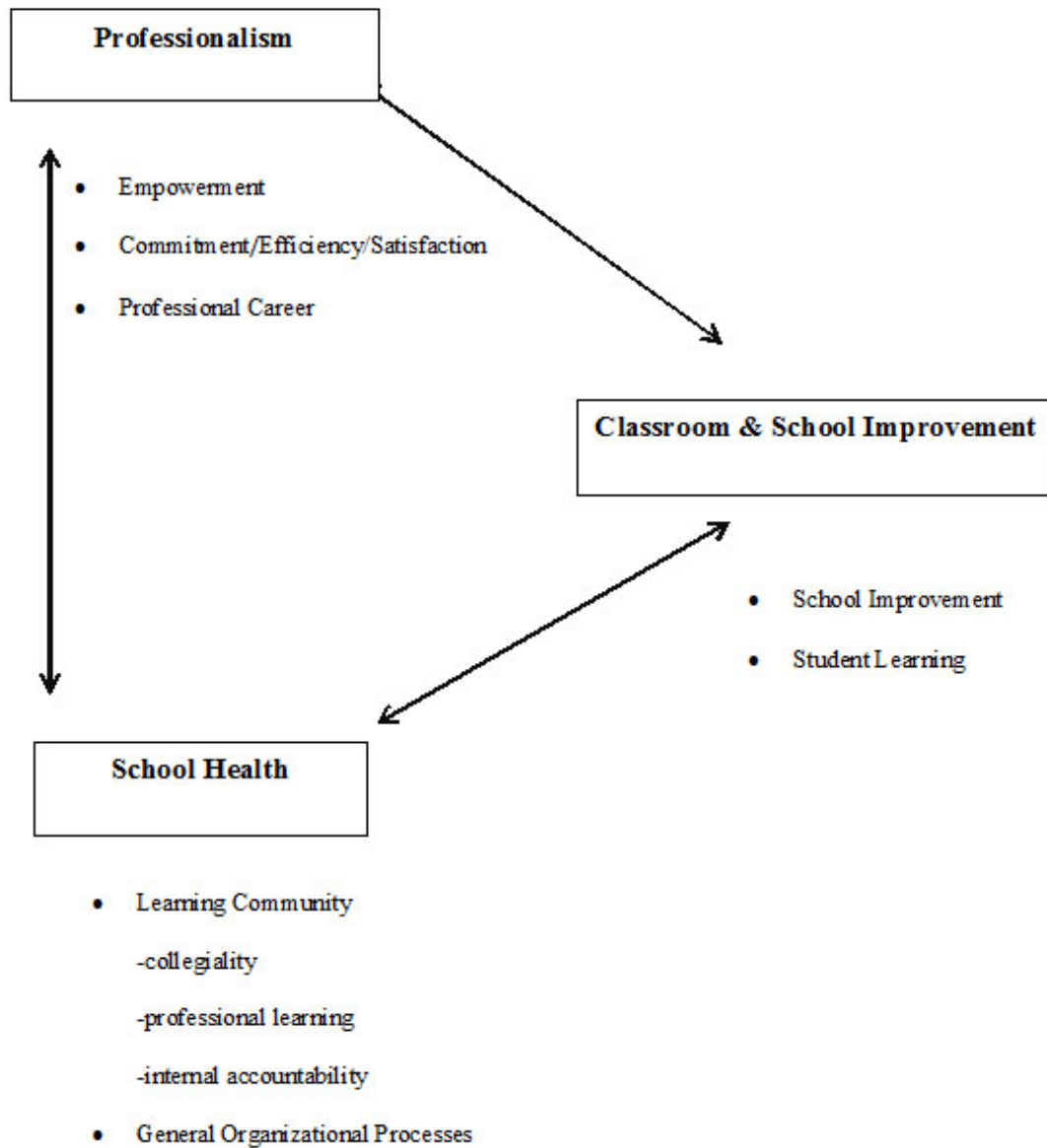
Both status and growth measures of achievement were assessed.

Conceptual Framework

Murphy (2005) developed a framework (See Figure 1.1) to illustrate the reciprocal relationships that exist among the following educational attributes: 1) professionalization of teaching, 2) strengthening of the school organization, and 3) promotion of classroom and school improvement. Murphy’s graphic organizes these three conditions into a triangle of interdependence. The investigation in this study applies Murphy’s framework with the professionalism of teachers leading to increased student

achievement, then in turn to whole school improvement. When teachers increase their professionalism through activities designed to increase teacher leadership, it is expected that they increase their efficacy and improve the outcomes for their students. Lunney (1996) concurs by stating, “Empowering teachers to become leaders is directly tied to teacher professionalism and a necessary prerequisite for developing a student-centered classroom” (p. 39). This phenomenon of teacher leadership and professionalization of the teaching profession can be important for total school improvement as well, especially for those schools finding themselves under accountability sanctions. The data collected and analyzed in this study test the hypothesis that teacher leadership has a positive effect on an individual teacher’s classroom, and thus student achievement, especially in a school that is currently considered a turnaround school.

Figure 1.1.
The Embedded Logic of Teacher Leadership



Significance of the Study

Sarah Sparks (2011), a writer for *Education Week*, recently stated, “Connecting teachers to their students—and vice versa—remains one of the thorniest problems for state longitudinal data systems, both technically and politically, and more states and districts seem to be trying to get teachers invested in the process” (p. 1). While politically charged issues are a barrier to this linkage, according to the Data Quality Campaign’s (DQC) most recent analysis (2010), thirty-five states currently do have the ability to link teachers and their individual students’ achievement results. The remaining states, due to political or practical barriers, are unable to link individual students’ achievement results to their teachers. This 2010 DQC analysis sums up the problem:

With mounting evidence pointing to teacher quality as the critical lever for improving student outcomes, states are increasingly focused on educator effectiveness and looking to leverage their longitudinal data systems to inform this policy priority. Specifically, states are developing plans that rely on data to:

- Identify teacher impact and effectiveness;
- Target professional development;
- Develop evaluation and compensation systems;
- Inform staffing assignments;
- Distribute effective educators equitably;
- Tailor classroom instruction; and,
- Identify programs that prepare effective teachers.

The linchpin of all these efforts is that states must reliably link students, teachers and courses in ways that capture the complex connections that exist in schools. Maximizing the potential for data to drive student achievement will involve educators using data to improve their own teaching and policymakers using data to better prepare and develop educators. (p. 1)

Until these connections can be made for students and their teachers in each state, it will be impossible to determine if, or to what degree, teacher quality, teacher leadership, or other variables influence individual student achievement in any particular school. For this reason, it is valuable to study those schools and districts in states that do allow this linkage to gain a better idea of how, or even if, teacher characteristics such as leadership skills influence student achievement results. Making these connections will ensure that future teacher leadership endeavors result in greater gains for students instead of simply paving a path for the furthering of teachers' personal agendas or the platforms of their unions or professional organizations. The most important outcome of developing teacher leaders should be to further the learning of students. Linking and analyzing the data for teachers and their individual students will inevitably lead to the discovery of strengths and weaknesses within the curricular program and for each teacher. Therefore, as teachers seek leadership opportunities and districts and schools expend funds to develop teacher leaders, it will be possible to target teachers who are truly interested in increasing learning rather than their own authority or personal agendas.

As Villavicencio and Grayman (2012) found in a study of two successful New York City turnaround middle schools, developing teachers internally was among four

common strategies that principals and teachers believe contributed to their school's success. Lieberman and Miller (2004) also assert, "When leadership has scholarship at its foundation, it is more about expertise, credibility, and influence than it is about power, authority and control" (p. 29). Developing leadership among teachers in the school improvement process must be about increasing academic capacity, expertise, credibility, and influence on colleagues if teacher leadership is to positively impact classroom performance.

Patricia Sullivan, chair of the National Education Statistics Agenda Committee (NEASC), recently announced at a National Center for Education Statistics (NCES) data forum plans for further study of this issue. "The forum must call for deeper study of linking teacher-student data..." (as cited in Sparks 2011). Until this linkage is thoroughly explored, teachers and the administrators who supervise and evaluate them will be merely speculating about any direct effects teacher leadership has on student achievement outcomes.

CHAPTER TWO

REVIEW OF THE LITERATURE

The purpose of this chapter is to provide an overview of the existing literature pertaining to the relatively new concepts of teacher leadership, turnaround schools and student achievement within that context. Emphasis is placed on the relationships between these three constructs.

Teachers as Leaders

Dating back to the original one-room school house, teachers have had relative autonomy over their classrooms, including, but not limited to teaching methods and curriculum. Not until the end of the last century did collaboration, collegiality and community become words that are routinely associated with the teaching profession. In fact, it is becoming an essential characteristic of teacher growth according to Linda Lambert. Lambert (2003) contends that “Personal and professional learning require an interactive professional culture if adults are to engage with one another in the processes of growth and development” (p. 3). Not all teachers in the new millennium are fully on board with this concept, but the growing trend is teachers working together professionally to solve problems of practice, similar to the medical profession where peer consultation is the norm. This “new normal” is beginning to break down barriers that impede student academic progress and the overall professionalism and efficacy of the teaching profession.

The educational reform movement that has swept the United States during the past few decades has ushered in professional learning communities, shared leadership, participatory management and a myriad of other structures in which classroom teachers

are learning to open up and seek the best solutions for the school and their students as a part of a team. No longer is the norm for the principal to be the authoritarian or lone instructional leader of the school with teachers left to follow directions or seek employment elsewhere. As a matter of fact, Barth (2013) claims principals are just now realizing this phenomenon and understanding that teachers are more likely to be invested in what they are doing if they are allowed to, “sit at the table with other grown-ups and take on a leadership role” (p. 11).

Likewise, it is no longer acceptable for teachers to close their doors and teach while their student outcomes are never reviewed by others within the school. Opportunities for teachers to be considered as “professionals” have emerged due to these factors. With this increased opportunity, however, comes additional responsibility to use the new-found role of *teacher as leader* as an avenue for increased individual and collective teacher efficacy, as well as whole school improvement and increased achievement at the classroom level.

The 1980s and 1990s ushered in school restructuring and the professionalization of education. These decades also saw the identification of leadership roles for teachers in a similar vein to those roles traditionally held by administrators. Department head, committee chair and union representative are examples of the types of opportunities that teachers could take advantage of if they were inclined to look for leadership roles beyond the classroom. These emerging leadership roles for teachers were modeled primarily after the traditional duties of building administrators. For teachers that were interested in moving up the educational ladder to administrative posts, this was a long overdue path to that end. However, not all classroom teachers look at administration as an appropriate

step for themselves. To remove oneself from the heart of the teaching and learning process may be similar to a gifted surgeon moving into hospital administration. Many teachers want to stay close to the action of the instructional process; they simply long to have an even greater impact on teaching and learning in their buildings, districts and the profession at large. These factors have led to the current concept of the teacher as a leader of learning, not only for students but for peers and others within the school community. Katzenmeyer and Moller (2009) summarize this:

Although some teacher leaders may seek administrative roles, most teachers in leadership roles do not view these opportunities as steps up the ladder to the administrative ranks. These teachers want to remain close to students and are willing to assume leadership roles that will affect decisions related to their daily practice with those students. (p.7)

According to a Metropolitan Life Insurance Company survey (2013), 51% of teachers responded that they have a leadership role in their school such as department chair or teacher mentor. Additionally, 51% also responded that they were interested in teaching part-time and combining additional responsibilities with their teaching load. Only 16%, however, reported they were interested in becoming a principal.

Varied Definitions of Teacher Leadership

According to Goodwin (2013), “One obstacle to researching teacher leadership is that the concept itself often remains ill-defined” (p. 78). Truly, as if driving through a fog and beginning to see the outline of the car ahead, the concept of teacher leadership is an emerging but still elusive term. Depending on who is asked, the union president, the team leader, teacher peers, the principal, superintendent or professor, the definition of teacher

leadership may include some basic similarities but will more likely be described in slightly different terms with the emphasis being placed on the needs or experiences of those defining this term. After years of studying teacher professional practices, Katzenmeyer and Moller (2009) define teacher leaders as those who “lead within and beyond the classroom; identify with and contribute to a community of teacher learners and leaders; influence others toward improved educational practice; and accept responsibility for achieving the outcomes of their leadership” (p. 6). Henderson and Barron (2001) describe the six most common roles of teacher leaders as 1) master teacher, 2) curriculum specialist, 3) mentor, 4) teacher educator, 5) student advocate and 6) researcher. These definitions encapsulate most educational researchers’ operational definitions of teacher leadership.

In a recent paper from the Aspen Institute, Curtis (2013) defines teacher leadership as, “specific roles and responsibilities that recognize the talents of the most effective teachers and deploy them in the service of student learning, adult learning and collaboration, and school and system improvement” (p. 4). Additionally, Curtis (2013) calls teacher leaders, “innovators, researchers, champions of student learning, leaders of colleagues, and policy advocates” (p. 4). This definition is a broad one, but it accurately reflects the varied concepts of teacher leadership. The precise definition, of course, must be determined by the function or goal of the activity or initiative surrounding teacher leadership.

Most findings from the current research about various forms of teacher leadership are positive. Joyce & Showers (2002) assert that traditional “sit-and-get” professional development is inferior when compared to teachers coaching other teachers. They also

affirm that coaching is helping turn knowledge into professional practice which is a far more powerful form of professional development. Allen et al. (2011) found in a recent study (of a coaching program that had clearly defined teacher behaviors and processes for coaching them) that after two years student scores had moved from the 50th to the 59th percentile. These statistics affirm the positive effects of teacher leadership on student achievement. Leithwood and Mascall (2008) found similar positive results in a study of 90 elementary and secondary schools. Analysis of 2,570 teacher responses revealed the more successful schools were those that more often gave leadership roles to teachers and other stakeholders. This shared leadership was found to account for a significant difference in achievement scores across the schools in the study. Significant positive results in math and reading achievement were also reported by a four-year study of 198 elementary schools with varying degrees of shared leadership (Hallinger & Heck, 2010).

On the contrary, not all the research is definitive or even positive about the effects of teacher leadership. According to research by Murray, Ma, and Mazur (2009), if coaching initiatives are not well structured and teacher leaders serving as peer coaches are not given adequate training in conducting effective coaching conversations, the results on student achievement can be at the very least, neutral. Likewise, a national panel concluded, after a review of existing literature to date on teacher leadership, that if the school culture is non-confrontational and egalitarian, placing a high value on autonomy, teacher leaders may be resented and prove to be counterproductive (Teacher Leadership Exploratory Committee, 2011).

So what stands in the way of teachers stepping forward in droves to accept the responsibilities and opportunities of teacher leadership? According to Barth (2013), there

are several factors that, when collectively at play, make it difficult to realize the full potential of teacher leadership. One factor may be the principal of the school. While it seems intuitive that principals would relish the spreading of their duties to other talented educators, Barth points out that principals are ultimately responsible and may be reluctant to give up control because the superintendent is not going to call the teacher in charge of an initiative if it is less than successful. He will call the principal. Barth also cites the fact that teachers' plates are full and few have the time to take on extra responsibilities without additional pay or decreased work load. And of course, as Barth calls it, our profession is a very "leveling profession" where teachers are their own worst enemies. Professional jealousy and punishment from other teachers can be powerful roadblocks to teachers wanting the role of teacher leader in their schools. In Barth's words, teachers "don't welcome it [teacher leadership], typically don't respect it, and often feel threatened by one of their own taking it on" (p. 10).

Pathways to Teacher Leadership

Murphy (2005) provides an organizational framework to look at the characteristics and variables surrounding the most common pathways to teacher leadership (See Table 2.1). Murphy has organized these variables into two distinct pathways, "Role-Based Strategies" and "Community-Based Strategies." He contends that the first has given way to the latter as schools and districts have struggled to mold the position of teacher leader into one that is similar to but different from the role of administrators. Murphy's framework highlights that the extent of impact teacher leaders can have by working collaboratively as a community of learners is yet unknown. Nearly all educational leaders (DuFour, 2010; Lambert, 1998; Leithwood, 2010a; Leithwood,

2010b; Lieberman & Miller, 2004; Murphy, 2005; Smylie, 2010; Spillane, 2006) agree, however, that this type of teacher leadership leads to deeper and more lasting change. Discussing teacher leadership, Danielson (2006) states that, “No school can offer an exemplary instructional program to its students without the devoted work of its teachers. By mobilizing the energy of colleagues, teacher leaders have a significant influence on the quality of that [instructional] program” (p. 84).

Table 2.1.
Pathways to Teacher Leadership

	<i>Role-Based Strategies</i>		<i>Community-Based Strategies</i>	
Domains	Teacher Career Strategies	Broadening Administrative Structures and Roles	Shared Leadership	Communities of Practice
Architecture	structural/hierarchical/institutional		organic/communal/cultural	
View of Leadership	individually based		organizational property/professional phenomenon	
Focus	management/administrative		instruction and learning	
Foundation	administrative prerogative		community product	
Influence Base	legitimacy/control		expertise/social capital	
Scope	targeted work/limited		distributed/generalized	
Nature of Work	activities performed by those in informal roles		work as ingrained in teacher role of all	
Accountability	to administrators (bureaucratic)		to colleagues (professional)	
Nature	formal/competitive		informal/ingrained/cooperative	
Dynamic	Planned		Emergent	
Expression	from the point, organizational		from a web of relationships	
Duration	Limited		Ongoing	
Relationships	thin/separation from peers		deep/collaborative	
Impact	Minimal		Unknown	

Reassuring colleagues that examining student results is aimed at improving student learning is one role of teacher leaders. Danielson (2006) makes it clear that this important teacher leader role can help colleagues work collaboratively for results rather

than feeling criticized. Instead, she contends that effective teacher leaders can convince their peers to find, collect and analyze data, and question their practices in order to improve the school's learning results for students. Furthermore, as school results improve, teachers will collectively continue to point to areas still in need of improvement, as well as areas of growth which are cause for celebration.

In a recent study, Leithwood, Patten, and Jantzi (2010) investigated four dimensions of school leadership and how the leadership practices of each dimension or pathway affect student learning. The leadership pathways they describe are: 1) Rational, 2) Emotions, 3) Organizational, and 4) Family. While all four paths have implications for teacher leaders as well as principals, one of the important facets of the organizational path is the dissemination of knowledge about learning within the school to all staff members, therefore passing the collective knowledge down to all who affect students (Leithwood, Patten, & Jantzi, 2010). These researchers also refer to school leadership as the "exercise of influence and the indirect nature of its effects on students" (p. 673). While principals certainly have influence over their staff, peer pressure and coaching by fellow teachers have even greater potential due to the credibility of recent classroom experience. Teacher leaders are in the most valuable place to see that the cumulative knowledge about teaching and learning is spread throughout the building and passed to those who enter the profession.

This new concept of leadership is prevalent among most educational researchers who previously referred only to the principal as the sole leader of a school. As Leithwood et al. (2010a) further state, "enough evidence is now at hand to justify claims about significant leadership effects on students that the focus of attention for many leadership

researchers has moved on to include questions about how these effects occur” (p. 272).

The continued study of these research questions may likely show teacher leadership to be one of the avenues for increasing individual student achievement as well as total school transformation.

Danielson (2006) stresses that some important cultural and structural conditions must be present for districts to promote teacher leadership, and “It is not accidental that some districts promote teacher leaders and others do not...” (p. 125). Reeves (2009) agrees, saying, “It is no coincidence that award-winning school districts have made teacher leadership a key part of their strategies for continued success” (p. 137). Principals and district office leaders must be comfortable with this change in who has the influence on teacher practices in a building. While the superintendent and principal retain position power, their support of teacher leadership within a district or school should only serve to increase their standing with the rank and file teachers under their supervision.

Included in their investigation, Leithwood et al. (2010a) place an emphasis on professional learning communities being used to “disseminate and reinforce the learning of individual members to create the potential for that learning to be passed on to many others” (p. 680). The recent advocacy for professional learning communities has largely been led by Richard DuFour and embraced by the vast majority of other educational researchers and leaders. As DuFour, DuFour and Eakers (2008) conclude in Revisiting Professional Learning Communities at Work: New Insights for Improving Schools, their follow-up to their earlier work, Professional Learning Communities at Work: Best Practices for Increasing Student Achievement, “In the on-going debate of the efficacy of strategies to improve school districts – top-down versus bottom-up – it is apparent that

top down is losing” (p. 341). This approach to teachers leading each other to study their craft through professional learning teams relies heavily on enhancing teachers’ personal abilities and harnessing the power of peer pressure. DuFour et al, (2010), quote Patterson and the other authors of Influencer: How to Change Anything, as stating “that ‘no resource is more powerful and accessible’ than the power of peer influence...Effective leaders strive to create an environment where both formal and informal leaders constantly promote behavior essential to the change” (as cited in DuFour et al., p. 76).

Describing the environments in New York middle school turnaround success stories, one study notes that:

A key difference between what the teachers described as irrelevant and effective PD lies in its source. One teacher from Jackson Barry said that when a mentor was provided “from the outside,” teachers were reluctant to participate. She described targeted, internal PD sessions as opportunities to openly share work with a colleague and obtain support in a particular area, “whereas before you just went, you listened to somebody, and then you left.” The shift from traditional PD provided by an external expert to more collaborative training sessions led by internal staff who better understand the needs of the staff and its students has increased teachers’ openness to professional growth (Villavicencio & Grayman, 2012, p. 26).

In fact, most of the existing literature that connects teacher leadership activities to increased student achievement actually focuses on the development of professional learning teams within a building or even a district. This internal, collaborative approach

is congruent with Murphy's "Community-Based Strategies Pathway to Teacher Leadership" as cited above in Table 2.1.

Shared and Distributed Leadership

Many school and district leaders are struggling with how to distribute the leadership functions within their schools and districts, especially when accountability ultimately falls to the person at the top or the executive leader of an organization. Additionally, how do teachers, principals and others within the school community work together (or at odds) as leaders to increase student achievement? A fundamental understanding should be held by all that the concept of leadership within school settings should not always be role-based. Leithwood, et al. (2010b) describe school leadership as a "set of practices distributed among staff rather than enacted only by those in formal leadership roles" (p. 683). In this study, the case is further made that principals cannot be the only leaders in the building focusing on developing teachers due to the range of challenges facing them in their administrative lives on a daily basis. Lambert (1998) elaborates by stating the following:

School leadership needs to be a broad concept that is separated from person, role, and a discrete set of individual behaviors. It needs to be embedded in the school community as a whole. Such a broadening of the concept of leadership suggests shared responsibility for a shared purpose of community. (p. 5)

Smylie (2010) agrees, especially within the context of continuous school improvement, by pointing out that, "some studies consider leadership for continuous improvement less

as tied to particular positions than as work that can be ‘distributed’ and performed by persons throughout the organization” (p. 103).

While the ultimate goal of school improvement and increased student achievement is to sustain the gains, doing so requires “all hands on deck”. Many educational researchers (DuFour, 2010; Lambert, 1998; Leithwood, 2010a; Leithwood, 2010b; Leiberman, 2004; Murphy, 2005; Smylie, 2010; Spillane, 2006) describe school leadership as a distributed, rather than singular, responsibility. Reeves (2010) summarizes the implications for teacher leaders and administrators working together:

Sustained capacity building for high-impact learning depends on the development of teacher leadership....Moreover the multiple demands on leaders make clear that they must keep the focus on teaching and learning. Because administrators cannot do this alone, they must make maximum use of teacher leaders. (p. 71)

Traditional Leadership and Informal Teacher Leadership Roles

Today’s schools demand both the traditional, top-down or “role-based” approach to leadership as well as the more bottom-up, “community-based” roles for school leaders. Murphy (2005) clearly defines these two approaches in Table 2.1. Traditional leadership titles such as principal, department chair or other formal leadership roles assigned to teachers by the principal indicate that the traditional or top-down approach works only because the authority is someone’s to give away. These types of formal roles look similar to the principal’s role in that they are about telling, managing and organizing more than about collaborating. At times, especially in failing schools this authoritative, formal concept of leadership is necessary in order to bring about positive changes in an efficient

manner; however, the more modern thinking about informal leadership roles, and also where power and influence are derived from is reflective of today's schools where teacher collaboration and informal, organic types of projects and policies emerge from among the teaching ranks. When principals understand both of these concepts, are skilled at recognizing when each approach is needed, and are willing to share their leadership, power and influence, teachers, students and the school as a whole benefit.

Teacher Leadership and Student Achievement in Turnaround Schools

The pressure to turn around schools that are not serving the educational needs of their students has been felt more acutely over the last decade. The call for accountability and increased rigor and student achievement is not an American phenomenon, but one that is inspiring research on the topic worldwide. While the body of research on what works in turning around low-performing schools is small, the organizational sciences have studied corporate and governmental strategies for turning around failing organizations for over thirty years (Murphy, 2008). This body of research can be called upon to inform the strategies implemented in educational endeavors. In his review of the literature, Murphy (2008) points out that one central theme in the turnaround literature is fairly consistent--organizations must attend to efficiency and find ways to gain in this area for turnarounds to be successful. This concept should be applied to leadership within turnaround schools. Most authors have pointed to the efficiency and effectiveness of leadership distribution and the development of teacher leadership as a prerequisite for turnaround schools to avoid slipping back into decline (Chrisman, 2005; Danielson, 2006; Duke & Jacobson, 2011; Katzenmeyer & Moller, 2009; Lambert, 1998;

Leithwood, Harris, & Strauss, 2010; Lieberman & Miller, 2004; Murphy, 2005, 2009; Smylie, 2010; The Rennie Center for Education Research & Policy, 2010/2011).

In a recent study of California's reform program schools operating under that designation due to NCLB results, Chrisman (2005) compared the continued academic gains of those schools that were successful with the gains of schools that were unsuccessful. The study, which included teacher and principal interviews as part of the data collection, revealed that teacher leadership was apparent in the successful sample schools. Moreover, teacher leadership flourished when three specific criteria were met: 1) teachers were given some autonomy to make decisions about teaching and learning; 2) teachers engaged in action research to improve the school; and 3) teachers developed their own internal leadership structures. In addition, teacher leadership was strengthened in the successful schools when teachers made decisions regarding professional development. Videos of effective teacher team meetings and training in developing effective agendas and conducting efficient meetings were used to further teacher professionalism and leadership (Chrisman, 2005).

A more recent study that revealed the impact of teacher leadership on academically successful turnarounds focused on two sets of New York City middle schools and their relative success and failure in their turnaround efforts. The study included middle schools with varying success – one set with significant academic improvement and the other set which remained stagnant or produced minimal growth. The study revealed that:

Teachers in the turnaround schools received professional development from their peers in a way that was closely tied to their daily work. Turnaround

schools employed specific structures, such as Lead Teacher, peer mentoring and inter-visitation programs (in which teachers and principals visit classrooms to learn about successful instruction). The approach to professional development was collaborative in nature and thus dependent on a strong culture of sharing and professional growth. (Villavicencio & Grayman, 2012, p.37)

Teachers at one school in Boston credit their principal, Ligia Noriega, with empowering them as leaders when she took over their failing high school (The Rennie Center for Education Research & Policy, 2010/2011). Excel High School rose from decline to become the winner of an award given by the Boston Public School system which included a \$100,000 cash prize that recognizes schools, “demonstrating clear progress in accelerating student achievement.” The prize, which designated Excel High School as a *School on the Move*, highlighted, “what few other traditional urban high schools had accomplished.” (The Rennie Center for Education Research & Policy, 2010/2011, p.10). Duke and Jacobson (2011) agree, contending that, “Unfortunately, making dramatic improvements in high schools can be very challenging, which is why there are “so few examples of successful high school turnarounds” (p.34).

Duke and Jacobson (2011) have studied turnarounds extensively. They acknowledge that turning around elementary and middle schools is easier than addressing a high school in decline, but while working with the Texas Turnaround Leadership Academy, they formulated case studies, including high schools, to inspire those Texas schools in need of turning around their academic performance. One of the successful turnaround case studies highlighted South Hills High School led by Nancy Weisskopf, a

principal new to the school in 2009. Duke and Jacobson (2011) summarize many strategies Weisskopf initiated that led to school-wide improvement at South Hills, but they emphasize that “encouraging teacher leadership was high on her agenda” (p.38). Specifically, Maxcy (2009) found similar results while studying governance of Texas schools under new state accountability models for turnarounds. Maxcy studied Chavez Elementary School due to its status as the first high-poverty, majority-minority school in its district to achieve an Exemplary rating on state assessments. Teachers cited increased workplace democracy and working together within and across grade levels as leading to increased communication, all of which they believe in turn led to their achievement gains.

While the literature about the general topic of leadership in schools is abundant and varied, there has been very little investigation about how teacher leadership affects individual student outcomes. Educational researchers have been prolific on the subject of principal leadership and have begun more recently to write about teacher leadership. There seems to be agreement that leadership activities of any kind help to enhance student achievement; however, nearly all the research points to school-wide improvement, or student achievement in the broader sense. Burr (2003) found in her study focusing on the connection between teacher leadership and student achievement that while many teachers are participating in similar types of leadership activities, the research does not show these activities to be “linked specifically with individual student performance, but to school or campus improvement” (p.34). More research in this area would help to further define the impact teacher leadership has on individual students.

Turnaround Policy

A 2009 research study completed by the Center on Education Policy (CEP) focusing on school restructuring under NCLB sought to find strategies to inform the next wave of school improvement grants. This research covered six states (Michigan, California, Georgia, Maryland, New York and Ohio) and their efforts to improve the lowest performing schools during a four year period between 2006 and 2009. One question the CEP study (2009) sought to answer was, “From this knowledge, what advice can we offer for using the \$3.5 billion appropriated in 2009 for federal school improvement grants?” (p.1). One of the common successful practices found in these six states was the practice of increased on-site monitoring visits by the state departments of education. In fact, three states required it for all schools in restructuring. Another successful practice found by the study was the increased use of school and district needs assessments. In addition, all six states began leveraging other institutions within their states to partner in the restructuring efforts and targeted the funding toward the neediest of schools and districts (CEP, 2009).

On the other hand, this same study (CEP, 2009) revealed that differences in state accountability systems yielded unmanageable numbers of schools and districts in the restructuring category. State departments of education found identifying, funding and monitoring these schools to be an unmanageable task. Since assessments and criteria differed from state to state, schools that found themselves in restructuring in one state may not be in the same category in another state. This inequity, along with the other above stated observations, served to inform the strategies and requirements put forth in 2009 by the United States Department of Education through the Elementary and

Secondary Education Act (ESEA) and The American Rediscovery and Reinvestment Act (ARRA). The CEP study (2009) added to the body of research that informed the next step in School Improvement Grants. Recommendations included in the study for the next wave of funding were:

- More flexibility in state set-asides within the Title I improvement funds,
- State experimentation with successful practices identified in the 2009 CEP study,
- Improvement efforts tailored to individual school and district needs,
- Sustained support for the schools beyond the period of the grant, and
- Joint efforts among federal, state and local officials to evaluate improvement strategies.

The American Recovery and Reinvestment Act of 2009 made available to the most “*persistently lowest-achieving*” (PLA) public schools up to \$2 million per school each year for three consecutive years in the form of School Improvement Grants (SIG). As a requirement of these SIG funds, schools had to adopt one of four federally-prescribed school reform models (Dee, 2012). In 2009, the U. S. Department of Education (USDOE), now called the United States Education Department (USED), issued a press release (USED, 2009) outlining these models:

1. Turnaround Model – This model includes among other actions, replacing the principal and at least 50 percent of the school's staff, adopting a new governance structure, and implementing a new or revised instructional program.

2. Restart Model – School districts would close failing schools and reopen them under the management of a charter school operator, a charter management organization or an educational management organization selected through a rigorous review process. A restart school would be required to admit, within the grades it serves, any former student who wishes to attend.
3. School Closure – The district would close a failing school and enroll the students who attended that school in other high-achieving schools in the district.
4. Transformational Model – Districts would address four specific areas: 1) developing teacher and school leader effectiveness, which includes replacing the principal who led the school prior to commencement of the transformational model, 2) implementing comprehensive instructional reform strategies, 3) extending learning and teacher planning time and creating community-oriented schools, and 4) providing operating flexibility and sustained support (p.1).

“These SIG-funded reforms are a leading example of a long, historical trend in which the federal government has increasingly leveraged its comparatively small financial contribution to public K-12 education to bring about highly specified changes in school organizations and practices” (Dee, 2012, p. 2).

The Obama administration's strategy for turning around these persistently lowest-achieving schools included “identifying and serving the lowest-achieving Title I schools in each state; supporting only the most rigorous interventions that hold the promise of producing rapid improvements in student achievement and school culture; providing

sufficient resources over several years to implement those interventions; and measuring progress in achieving results” (p. 1). The goal of this SIG federal funding was to turn around the 5,000 lowest-performing schools over a period of five years. The overall focus of these efforts was to dramatically reduce the drop-out rate, improve high school graduation rates and increase the number of students who graduate prepared for success in college and the workplace (USED, 2009).

It is imperative that teachers in all schools become leaders and advocates for their own professional growth. Nowhere is this more critical than in those schools identified as PLA schools. While many strategies were allowed and even promoted by the federal government during the early implementation of the SIG grant process, one of the major emphases was to “improve teacher quality for all students, and particularly for children who most need good teaching in order to catch up” (USED, 2009, p. 1). Most researchers agree that increasing teacher effectiveness through professional teacher leadership has the potential to increase school-wide academic success and student achievement at the individual classroom level. This study explores the relationship between individual teacher leadership and the student achievement of students served specifically by each teacher.

CHAPTER THREE

METHODS

Purpose

The purpose of this research was to determine if teachers who perceive themselves as teacher leaders at greater levels than other teachers in their schools affect students in their own classrooms by increasing achievement, specifically in schools that have been designated as Persistently Low Achieving Schools, or a school eligible for School Improvement Grants (SIG) under the federal government's Title 1 definition. While teacher leadership has been lauded as a necessary component for successfully implementing total school reform as well as increasing school-wide academic achievement, this study sought to determine if the extent to which teachers perceive themselves as teacher leaders correlates with student achievement outcomes for students under their direct supervision, in their own classrooms.

The following research question was investigated:

- ❖ What is the relationship between teacher leadership and student achievement in turnaround middle schools?

The rationale for this study was that research is needed on teachers' levels of leadership within their schools, through self-reporting of their attitudes and experiences, and that teachers' responses need to be analyzed to ascertain the relationship with individual students' achievement levels on state criterion referenced tests used in accountability models to show any linkage between the two phenomena. The results of this research study will help to inform educational practices as they relate to teacher leadership initiatives, turnaround schools and student achievement.

Context of the Study

City Context

For purposes of anonymity, the district studied in this research is referred to as the Western School District (WSD), which is a pseudonym. The two middle schools use the pseudonyms Northern Middle School (NMS) and Southern Middle School (SMS). The city which encompasses this district is known as Mountain City. These pseudonyms ensure that student, teacher, and school data are not recognizable. In addition, the teacher responses to the survey questions contain no personal identifiers.

Northern and Southern Middle Schools are located in a large urban setting in a mountainous western region of the United States. Mountain City itself covers 110.4 square miles and has a population of 189,899 people. The median household income average between 2006 and 2011 was \$44,223 with 17.5% of the population living below the poverty level during the same time period. Residents who own their own homes equal 49.7% of the population, with the median price of an owner-occupied home equaling \$243,200.

Over fifty percent (52.5%) of the households in the city are family households with just over seventeen percent (17.4%) consisting of a married couple and their own children. Nearly ten percent (9.7%) of the households consist of a mother rearing children under the age of 18 with no father present. In addition, over forty-seven percent (47.5%) of the households in the city are non-family households, consisting of males and/or females living in a household with no children. Table 3.1 shows the breakdown of households by type.

Table 3.1.
Households by Type (2010)

Total Households	100%
Family households (families) with children under 18 years of age	52.5%
With own children under 18 years of age	24.8%
Husband-wife family	37.9%
With own children under 18 years of age	17.4%
Male householder, no wife present	4.8%
With own children under 18 years of age	2.1%
Female householder, no husband present	9.7%
With own children under 18 years of age	5.3%
Nonfamily households	47.5%
Householder living alone	34.6%
Male	17.7%
65 years and over	2.6%
Female	17.0%
65 years and over	5.8%
Households with individuals under 18 years of age	27.5%
Households with individuals 65 years of age and over	18.0%
Average household size	2.44
Average family size	3.25

The city is largely comprised of white residents; however, the number of residents of Hispanic heritage is disproportionate to many American cities at just over twenty-two percent (22.3%). Likewise, when compared to many metropolitan areas, the African

American population is unusually low at nearly three percent (2.7%). Table 3.2 summarizes the racial/ethnic demographics of the city.

Table 3.2.
City Race/Ethnicity Status (2010)

Ethnicity	% of the Total Population
White	75.1
Hispanic/Latino	22.3
Black	2.7
Asian	4.4
American Indian and Alaska Native	1.2
Native Hawaiian and Other Pacific Islander	2.0
Persons reporting two or more races	3.7

School District

During the 2010-2011 school year, at the time in which data were collected for this study, the WSD was comprised of 27 elementary schools, five middle schools, four high schools, six special schools and three charter schools. The total district population numbered 24,596 students.

The Western School District has a history of Shared Governance in their schools that has been in place for over 35 years. The book that guides this process is called the *Shared Governance Guide*. Parents, teachers and administrators are formally trained in the process. Another document titled the *Written Agreement* ensures teachers' rights. This book includes policies that govern how school-level decisions are made. These

documents do give direction to the governance of schools in WSD; however, they are ambiguous in parts and at times in conflict with local school board policy. The district implements Site-based Management, where decisions are delegated to the schools.

Within this framework, the two middle schools studied, WMS and NMS, both practice shared decision-making, allowing for stakeholder input into decisions about the school.

This is achieved by the work of two councils, the School Improvement Council (SIC) and the School Community Council (SCC), with some overlap of membership. The context of shared governance is important given the mandated structures required of SIG schools.

The WSD has a district calendar common to all schools. This calendar consists of 178 school days for secondary students and 177 days for elementary students. School councils are given the latitude to submit alternative calendars as long as they follow guidelines set forth by state statute and local union contractual language. The beginning and ending times of the school day are determined by the SIC with input from the SCC. These decisions are also subject to the approval of the Superintendent of Schools.

District achievement data show that seventy-three percent of the students in grades 3 through 8 met proficiency in Language Arts, and sixty-seven percent were proficient in Math. Even though improvement was noted in Math scores, the district did not make Adequate Yearly Progress (AYP) for the 2010-2011 school year (See Table 3.3). Criterion Reference Test (CRT) scores are one of the indicators that comprise the AYP status of schools within the WSD and the state. Other indicators include test participation rates and graduation rates. The percentages of students who scored proficient on the Criterion Reference Tests in each subject are shown in the “%

Proficient” column. The "Improvement" columns reveal if the school showed improvement over the previous year’s percentage of students scoring proficient.

Table 3.3.
2010-2011 District AYP Summary

	Participation		% Proficient		Improvement		Did Schools Make AYP?
	LA	Math	LA	Math	LA	Math	
State - Grades 3-8	100%	100%	81%	76%	Yes	Yes	No
Whole District - Grades 3-8	100%	100%	73%	67%	No	Yes	No
State - Grades 10-12	99%	99%	87%	63%	same	Yes	No
Whole District - Grades 10-12	99%	99%	76%	49%	Yes	Yes	No

Participants

Teacher Sample

All certified teachers who were full-time employees of SMS and NMS at the time this survey was administered completed the survey for a 100% completion rate. The survey was completed at a faculty meeting. SMS teachers (N=42) and NMS teachers (N=50) totaled 92 at the time of survey administration.

The educational level of the teaching staff in the two middle schools in the study varied from 2 teachers with only a bachelor’s degree to 2 teachers with a doctoral degree. The largest percentage (50%) of the teacher sample holds a master’s degree plus

additional credit hours. Table 3.4 shows the educational attainment of the teaching sample as a whole for both schools combined.

Table 3.4.
Educational Level of Teacher Sample

	Education Level	Frequency	Valid Percent	Cumulative Percent
Valid	Bachelors	2	2.2	2.2
	Bachelors + Credit	29	31.5	33.7
	Masters	13	14.1	47.8
	Masters + Credit	46	50.0	97.8
	Doctorate	2	2.2	100.0
	Total	92	100.0	

The teachers in the sample teach through a range of 6th through 8th grade levels.

Table 3.5 shows the frequency and percentage of teachers who primarily teach each grade level, as well as those who teach multiple grade levels.

Table 3.5.
Primary Teacher Grade Assignments

	Grade level primarily teach	Frequency	Valid Percent	Cumulative Percent
Valid	6 th	7	7.7	7.7
	7 th	35	38.5	46.2
	8 th	29	31.9	78.0
	More than one grade level	20	22.0	100.0
	Total	91	100.0	

While all teachers were administered the survey, only a portion of the teaching staff was responsible for subjects reported in the state accountability system.

English/Language Arts is one of the assessed core-content areas. Table 3.6 shows the frequency and percentage of teachers who responded that they were teaching in an assessed core-content area at the time the survey was administered. For the purposes of this study, only English/Language Arts teachers (N=42) are included in the final sample.

Table 3.6.
Teachers Teaching in Core-Content Area

Do you teach an assessed core-content area?		Freq.	Valid Percent	Cumulative Percent
Valid	No	36	39.1	39.1
	Yes	56	60.9	100.0
	Total	92	100.0	

Student Sample

The student sample in this research study consisted of students at SMS which houses 6th through 8th grades and NMS which serves grades 7 and 8. All students were assessed in English/Language Arts. NMS had a total student population of 813, while SMS's student population equaled 782 during the period of the study. The enrollment at both schools is similar in characteristics. Ethnic groups make up the majority of students with 88% for Southern Middle School and 85% for Northern Middle School. Other characteristics of the student sample can be found in Table 3.7. The final sample of students used in this study was 2,292.

Table 3.7
School Demographics

Characteristics	Southern Middle School	Northern Middle School
Total Enrollment	782	813
% F/R Lunch	95	89
% ELL	59	53
% AA	7	5
% Asian	3	4
% Caucasian	12	15
% Hispanic	64	68
% Native American	2	2
% Pacific Islander	12	6
% Total Minority	88	85

Research Design

In order to add to the limited body of literature on the relationship between teacher leadership and their students' achievement, this study utilized a correlational design and two sources of data to effectively answer the research question. These two sources of data allow for specific teacher perceptions about their own teacher leadership, collected through a survey, to be correlated with student achievement data from an existing dataset of test scores on a state Criterion Referenced Test (CRT) administered to all students in the two middle schools in the study. The students' scores for this study were limited to the subject of English/Language Arts since these scores substantially

contribute to each school's NCLB category. Each student's score is linked to their primary teacher in English/Language Arts.

Variables and Measures

Student Achievement Data

To answer the research question effectively, this study utilized the results from the CRT that is part of the accountability system for the state in which the WSD is located. The CRT measures academic achievement for students in the 2nd through 11th grades for the subject of English/Language Arts. These assessments, which are given in the spring semester of each year, do not count for state or federal accountability for 2nd grade students, but the results help parents and schools determine a baseline for growth and the effectiveness of instructional strategies and curricula. All results are used to determine growth and progress toward proficiency for individual students, groups of students by background characteristics, grade levels, schools and districts. In addition, the results of these assessments are used to measure the federal NCLB requirement of Adequate Yearly Progress (AYP), as well as the state's accountability rankings.

For the purposes of this study, only the English/Language Arts data were used. The English/Language Arts portion of the CRT measures skills that students need to be successful in all content areas: reading, writing and listening, which are all part of the state's Core Curriculum. On this particular CRT, English/Language Arts is assessed through multiple choice items as well as reading passages in other subject areas. This gives an overall impression of the student's ability to read and understand text in order to be successful in all subjects, not just English/Language Arts.

To assess the relationship of English/Language Arts achievement scores with teacher leadership, scale scores representing achievement at the end of the year were utilized. The scaled scores are equated across grade levels, which allows for an analysis that combines English/Language Arts achievement across grades 6th through 8th.

Teacher Leadership Perception Survey

Teachers were surveyed to quantitatively measure their perceptions about teacher leadership within their buildings, as well as whether they consider themselves to be teacher leaders. This teacher leadership perception survey (Appendix B) utilized a 6-point Likert scale with the following anchors: 6 = strongly agree; 5 = agree; 4 = mostly agree; 3 = mostly disagree; 2 = disagree; and 1 = strongly disagree. The survey consisted of eight questions referring to teacher leadership. These questions were included in a section of a larger survey administered during the evaluation of the SIG grant process in each school. All teacher leadership questions appeared in *Section V. School Climate and Working Conditions*, which was part of the larger survey, entitled *School Improvement Grant (SIG) Teacher Survey*. Teachers from both participating middle schools completed the survey in an average of 30 minutes with a response rate for each school of 100%. The survey was administered after school during a faculty meeting at each school in spring 2011. The surveys included a barcode representing a unique identifier for each teacher. This allowed individual student achievement scores to be linked to their specific teacher by each tested content area. Once district personnel merged these two sources of data, all individually identifiable information were removed from the data before it was shared with this researcher.

The eight teacher leadership items included in the teacher survey were as follows:

1. Teachers in this school are recognized as educational experts.
2. Teachers have an appropriate level of influence in decision-making.
3. Teachers in this school are encouraged to participate in school leadership roles.
4. Many teachers in this school serve in leadership roles that directly impact student learning.
5. The principal supports teachers in their development into teacher leaders.
6. Participating in teacher leadership roles enhances teaching ability.
7. Teacher leadership has a positive impact on student achievement.
8. I consider myself to be a teacher leader in this school.

Reliability of the Study

Cronbach's alpha was used to measure the internal consistency or reliability of the questions on the survey that addressed teacher leadership as it relates to this study. The resulting Cronbach's alpha = .793, indicated that the Teacher Leadership scale was a highly reliable.

Data Analyses

All data were imported into SPSS 21.0 for analyses. Descriptive statistics including means, standard deviations and frequencies are reported for each Teacher Leadership item. The mean and standard deviation for the Teacher Leadership scale are also reported. Descriptive data also are reported on the status or end of year CRT in English/Language Arts. Next, a bivariate correlation was run to assess the relationship of

teacher leadership with a scaled score in English/Language Arts. Finally, a simple linear regression was run with student achievement in English/Language Arts as the dependent variable and teacher leadership, eligibility for free or reduced lunch (0=no, 1=yes), racial/ethnic minority (0=white, 1=non-white), and disability (0=no, 1=yes) as predictor variables. Statistical significance was determined at the $\alpha=.05$ level.

Limitations of the Study

The limitations of this study include the following. First, since reading and English/Language Arts skills are taught as embedded strategies within most core classes, and some electives, there is generally a spillover effect from other classes and subjects on these test scores. However, this study isolated the effect to the primary teacher of this content. Furthermore, the effect of each teacher is likely influenced by factors other than teacher leadership that are not controlled for in this study, such as years of experience, education level, and teacher absences. Similarly, differences in student characteristics and home effects likely affect test scores. However, the populations of these schools are similar in their diversity. To assess the effect of student characteristics on English/Language Arts achievement, eligibility for free and reduced lunch, race/ethnicity, and disability are included in the simple linear regression. Next, the teacher leadership indicators are self-reported and may not reflect actual leadership behaviors. Finally, the data for this study were collected from two turnaround middle schools in one district, which limits generalizability.

CHAPTER FOUR

RESULTS

Overview of the Study

This chapter presents the quantitative results of this study on the relationship between teacher leadership and student achievement outcomes. The primary purpose of this research was to determine if teacher leadership impacts student achievement within the individual teacher's classroom. In other words, does the level of student achievement within a particular teacher's classroom increase as the level of his or her teacher leadership increases?

The quantitative results discussed in this chapter begin with the descriptive statistics of the English/Language Arts teachers who completed the survey and thus are included in the final sample. Next, the Teacher Leadership survey results are presented. Following the survey data, the reader will find the descriptive statistics for the student achievement data as well as for characteristics of the student sample included in the study. Finally, the results from the bivariate correlation and simple linear regression are presented.

Teacher Leadership and Student Achievement

The objective of this study is to assess the relationship between teacher leadership and student achievement in turnaround middle schools. English/Language Arts achievement on the state's CRT is the measure of student achievement. Turnaround schools currently are of particular interest to the educational community due to the urgency of the mission to bring about positive change in America's lowest performing

schools. Since federal, state and local funds are being expended to assist in this change, it is imperative that resources are used as effectively as possible. Since teacher leadership is often equated with whole school improvement, this study has taken the next step to determine if individual teacher leadership impacts individual student achievement.

The two data sources used in this study were a teacher leadership survey and CRT results that were tied to individual teachers at the student level. The eight survey questions that assessed teacher leadership were included in a longer working conditions survey administered in the spring of 2011 during faculty meetings at two turnaround middle schools. The student achievement data used were a part of the state-mandated CRT assessment for district and school accountability. For the purposes of this, the student achievement scores for English/Language Arts were used. The reasons for the selection of English/Language Arts were two-fold:

1. English/Language Arts scores are part of the NCLB data used to identify schools in need of turnaround strategies.
2. English/Language Arts data, unlike math data which is also part of NCLB accountability, are based on similar skills for the grade levels studied. Math skills, and therefore math achievement scores, can assess very different curricular items and skills from grade level to grade level, whereas reading and English/Language Arts skills are very similar from grade level to grade level, with only the level of text complexity changing.

The results of existing studies (Murphy 2005, Liberman & Miller 2004) stress that literature on teacher leadership is relatively new and the linking of teacher leadership to individual student achievement in turnaround schools is extremely rare. This study adds

to the existing, small body of knowledge about the topic and provides educators a basis for making important decisions about professional development funding and organizational structures to support increased student achievement, especially in turnaround schools. Leithwood et al. (2010b) emphasize that:

...a considerable portion of future educational leadership research should adopt a more limited, “laser-like” focus on discovering the leadership practices most likely to improve the condition or status of variables in schools for which there is already considerable evidence of impact on student learning (p. 698).

This study takes two variables existing in schools, teacher leadership and student achievement, and examines their relationship in order to impact future educational decisions, especially in turnaround schools.

Data Collection

The CRT data used in this study are extant data for the Western School District and Northern Middle School and Southern Middle School, pseudonyms for the district and schools represented in the study. The teacher survey was administered at a faculty meeting during the spring semester of 2011. Only those teachers who reported themselves as instructors of Reading or English/Language Arts were used in the teacher sample. Since the two schools are very similar in teacher characteristics, student demographics, and student achievement, the likelihood of a school effect is minimal and therefore, the data from both the Teacher Leadership survey and the student achievement data were combined from both schools for the analyses.

Teacher Sample Descriptive Statistics

The teachers who completed the survey and were used in the sample represented a wide range of teaching assignments, educational levels and experiences. Only teachers who identified themselves as teaching reading or English/Language Arts and who were linked to individual student outcomes were used in the teacher sample for a combined total of 41 teachers, as shown in Table 4.1. While seven of these teachers did not complete the question in the survey about their teaching assignment, they had been linked to students' scores in the data set and therefore were included in the sample (See Table 4.2).

Table 4.1.
Frequency and Percent of ELA Teachers Responding to the Teacher Leadership Survey

School	Frequency	Percent	Valid Percent	Cumulative Percent
Southern Middle School	22	53.7	53.7	53.7
Northern Middle School	19	46.3	46.3	100.0
Total	41	100.0	100.0	

Table 4.2.
Frequency and Percent for Teaching Assignments

Teaching Assignment	Frequency	Valid Percent
Missing	7	17.1
6 th Grade	1	2.4
Academic Support	1	2.4
Behavior Disorders	1	2.4
English	1	2.4
Functional Academic Skills	1	2.4
Language Arts	10	24.4
Language Arts/Math	1	2.4
Math/Reading	1	2.4
Newcomers ESL	1	2.4
Reading	3	7.3
Reading Specialist	1	2.4
Reading/AVID	1	2.4
Resource	7	17.1
Social Studies/Reading	1	2.4
Teacher	1	2.4
Teacher Intern	1	2.4
Theater/Language Arts	1	2.4
Total	41	100.0

The educational levels of the teaching staff shown in Table 4.3 represent the education for those teachers having the most influence over the English/Language Arts scores in the two middle schools. In other words, they are the teacher of record for

English/Language Arts. These teachers represent a great deal of collective education and preparation for teaching, with 52.9% having achieved a master’s degree. In addition, 44.1% had completed coursework beyond the master’s degree level, with one teacher having achieved a doctoral degree. While most teachers taught either 7th or 8th grade, or a combination of more than one grade, only 7 teachers reported teaching 6th grade (See Table 4.4). This is due to the fact that only Southern Middle School includes 6th - 8th grade students, but Northern Middle School serves 7th and 8th grades only.

Table 4.3.
Teacher’s Education Level

Education Level	Frequency	Valid Percent	Cumulative Percent
Bachelors	1	2.9	2.9
Bachelors Plus Credit	12	35.3	38.2
Masters	5	14.7	52.9
Masters Plus Credit	15	44.1	97.1
Doctorate	1	2.9	100.0
Total	34	100.0	

Table 4.4.
Grade Level(s) Taught by Teachers

	Frequency	Valid Percent
6 th Grade	7	20.6
7 th Grade	19	29.4
8 th Grade	9	26.5
More Than One Grade Level	8	23.5
Total	34	100.0

Teacher Leadership Survey Descriptive Statistics

The teacher leadership survey consisted of eight questions referring to various attributes of teacher leadership. These questions were included in a section of a larger survey administered during the evaluation of the SIG grant process in each school. All questions appeared in *Section V. School Climate and Working Conditions*, which was part of the larger survey, entitled *School Improvement Grant (SIG) Teacher Survey*. This survey used a 6-point Likert scale with the following anchors: 6 = strongly agree; 5 = agree; 4 = mostly agree; 3 = mostly disagree; 2 = disagree; and 1 = strongly disagree. Teachers from both participating middle schools completed the survey in approximately 30 minutes during a faculty meeting. When the teacher survey results were connected to student achievement scores, the data were not weighted in the analyses, meaning each student's score contributed equally in the analyses.

Three additional questions on this survey addressed teacher leadership, but those questions were not used as part of the analysis since they focused more on curriculum and the control teachers had over the curriculum they were teaching. The eight questions

analyzed in this study address the teachers' perception of their own and the collective teacher leadership within the school. For analysis purposes, the teacher perception survey data and the CRT data for both middle schools were merged into one data set.

Results for the first teacher leadership item indicate that 72.7% of the teachers responded negatively to the question about their being "recognized as educational experts within the building." Further analysis shows that 27.3% strongly disagree with the statement. Another item that showed a decidedly negative response was item number five, to which 20.0% of the teachers responded that they strongly disagree with the statement that "the principal supports teachers in their development into teacher leaders"; however, 56.7% either moderately agreed, agreed, or strongly agreed with that statement. This disparity shows deep division of opinion about the principals' support for developing teacher leadership within their buildings. This result may be one of the only items that was skewed due to the combining of results and not disaggregating the results by school and therefore principal.

Only 16.1% of the teachers responded negatively to item number six, which assessed the teachers' opinion of the value of participating in leadership activities and the positive impact it can have on teaching ability. Specifically, 83.9% of teachers agreed at some level with the statement "participating in teacher leadership roles enhances teaching ability." This opinion is reinforced by the results for question number seven which stated that "teacher leadership has a positive impact on student achievement." Teachers responded 87.1% affirmatively to that item.

Questions number three, "Teachers are encouraged to participate in school leadership roles," number four, "Many teachers in this school serve in leadership roles

that directly impact student learning”; and number eight, “I consider myself to be a teacher leader in this school” received fairly even negative and positive responses from the teachers. Another question of particular interest was item number two, which stated “Teachers have an appropriate level of influence in decision-making.” The responses of those who strongly agree and those who strongly disagree were equal at 6.1% each. Further analysis, however, shows a slight negative trend in the responses with 51.6% responding that they disagree or moderately disagree. Only 36.3% agreed or moderately agreed. Collectively, these frequencies show widespread differences in beliefs regarding teacher leadership.

The results in Table 4.5 show the valid percentages and means for the eight survey questions and represent the responses for the teacher sample (N=41) returning surveys and having English/Language Arts caseloads. The mean of all combined teacher leadership items on the survey ($M = 3.63$, $SD = .68$) shows that answers resulted in a split view as well. On average, teachers responded between moderately disagree and moderately agree across the eight items. The internal consistency for the eight items on the teacher leadership survey, Cronbach’s alpha equals .793, demonstrated the reliability of the teacher leadership scale.

Table 4.5.
Teacher Leadership Survey Results

Survey Question	SD	D	MD	MA	A	SA	MEAN
1. Teachers in this school are recognized as educational experts.	27.3	12.1	33.3	15.2	9.1	3.0	2.789
2. Teachers have an appropriate level of influence in decision-making.	6.1	15.2	36.4	24.2	12.1	6.1	3.408
3. Teachers in this school are encouraged to participate in school leadership roles.	3.0	18.2	15.2	45.5	15.2	3.0	3.573
4. Many teachers in this school serve in leadership roles that directly impact student learning.	3.1	12.5	25.0	40.6	15.6	3.1	3.628
5. The principal supports teachers in their development into teacher leaders.	20.0	6.7	16.7	46.7	3.3	6.7	3.304
6. Participating in teacher leadership roles enhances teaching ability.	0	3.2	12.9	41.9	25.8	16.1	4.367
7. Teacher leadership has a positive impact on student achievement.	0	3.2	9.7	45.2	25.8	16.1	4.450
8. I consider myself to be a teacher leader in this school.	12.1	6.1	24.2	42.4	12.1	3.0	3.543

Descriptive Statistics for the Student Sample

The student samples for each school were combined for statistical analysis due to the similarity in student demographics and characteristics. In addition, the number of students representing each school was similar. The total student sample (N = 2292) used in this study provided a large representation of 6th through 8th grade students whose student achievement scores for English/Language Arts were linked to their teachers through a coding process employed by the state and district for accountability purposes (See Table 4.6). All students from the two schools in the sample that completed the 2011 CRT in English/Language Arts were included in the study. Table 4.7 shows the largest grade level included in the sample was the 7th grade (39.9%; n = 914) with the lowest being the 6th grade (23.8%; n = 546). The 8th grade also had students (36.3%; n = 832) assessed in English/Language Arts.

Table 4.6.
Frequency and Percent of Students Taking the 2011 CRT Test by School

	Frequency	Percent	Valid Percent	Cumulative Percent
Southern Middle School	1188	51.8	51.8	51.8
Northern Middle School	1104	48.2	48.2	100.0
Total	2292	100.0	100.0	

Table 4.7.
Frequency and Percent of Students Taking the 2011 CRT Test by Grade Level

	Frequency	Percent
6 th Grade Language Arts	546	23.8
7 th Grade Language Arts	914	39.9
8 th Grade language Arts	832	36.3
Total	2292	100

The frequency of race and other demographic characteristics of the student sample are reported in Table 4.8. As the table shows, the largest racial category represented in the student sample is Hispanic/Latino (69.3%; n = 1588). The next closest racial category represented is Caucasian/White (12.2%; n = 279). Pacific Islanders rank third in representation in the student sample (8.9%; n = 205). Other important statistics shown in Table 4.8 include the descriptive statistics for Low Income students (92.2%; n = 2113), English Language Learners (65.5%; n = 1501), and Students with Disabilities (19.2%; n = 440).

Table 4.8.
Racial/Ethnic and Demographic Characteristics for the Student Sample Taking the 2011 CRT Test

	Frequency	Percent
Asian American	71	3.1
Black/African American	117	5.1
Caucasian/White	279	12.2
Hispanic/Latino	1588	69.3
Native American	29	1.3
Multiracial	3	.1
Pacific Islander	205	8.9
Low Income	2113	92.2
English Language Learners	1501	65.5
Disability	440	19.2

Student CRT Results in English/Language Arts

This study used the 2011 CRT in English/Language Arts results as its indicator of student achievement. These scores were linked to individual English/Language Arts teachers to determine if there was a relationship between teacher leadership and student achievement. Specifically, this study used the students' scaled scores in English/Language Arts. These scores are vertically equated, which allows them to be combined across grade levels for comparative purposes. Each scale score is designated as proficient or non-proficient for calculations in the state's accountability model. Table 4.9 shows the Reading ELA Proficiency Levels for students who took the 2011 CRT. Proficiency levels varied from a low for the sixth grade (50.4%; n = 275) to a high for the

eighth grade results (76.2%; n = 634). The seventh grade results fell between (65.8; n = 601). The total proficiency level for all three grades combined was (65.9%; n = 1510).

Table 4.9.

Cross Tabulation of 2011 ELA CRT Proficiency Levels

		2011 ELA Proficiency Level		Total
		Not Proficient	Proficient	
6th Grade Language Arts	N	271	275	546
	Percent	49.6%	50.4%	100.0
7th Grade Language Arts	N	313	601	914
	Percent	34.2%	65.8%	100.0
8th Grade Language Arts	N	198	634	832
	Percent	23.8%	76.2%	100.0
Total		782	1510	2292
		34.1%	65.9%	100.0

Table 4.10 presents the mean scaled scores for each grade level tested on the 2011 English/Language Arts CRT. In addition, the mean scaled scores for each demographic group within the student population are shown. The student group scoring the lowest at 153.39 (SD = 9.73; n = 440) was students with disabilities. The scaled score for students with disabilities is followed by nearly equal scaled scores for the students who were non-white at 162.32 (SD = 10.24; n = 2013), low-income at 162.33 (SD = 10.12; n = 2113) and English language learners (ELL) at 162.45 (SD = 9.80; n = 1501), all falling within 0.13 points of each other. Non-ELL students scored 163.29 (SD = 10.92; n = 791), which exceeded ELL's scores by only 0.84 points. This narrow difference is likely the result of the inclusion of former English learners (FEP) in the ELL group for two years after they

demonstrate proficiency in English. Non-disabled students scored 164.96 (SD = 8.99; n = 1852), which was 11.57 points higher than their peers with disabilities. White students scored 165.76 (SD = 9.48; n = 279), while non-low-income students scored 167.56 (SD = 10.02; n = 179). These groups ranked second highest and highest, respectively, among all groups for which disaggregated data were reported.

Table 4.10.
2011 Disaggregated Mean Scaled Scores for 2011 ELA CRT by Grade and Student Characteristics

Grade/Student Characteristics	N	Mean Scaled Score	Standard Deviation
6 th Grade	546	159.12	8.67
7 th Grade	914	163.67	10.57
8 th Grade	832	164.09	10.19
Total of 6 th - 8 th	2292	162.74	10.21
White	279	165.76	9.48
Non-White	2013	162.32	10.24
Low Income	2113	162.33	10.12
Non-Low Income	179	167.56	10.02
Disability	440	153.39	9.73
Non-Disabled	1852	164.96	8.99
ELL	1501	162.45	9.80
Non-ELL	791	163.29	10.92

Correlation Between Teacher Leadership and 2011 ELA Scores

A two-tailed Pearson bivariate correlation was conducted using SPSS software to determine if a correlation existed between the Teacher Leadership survey results and 2011 English/Language Arts scaled scores. The Pearson Correlation test revealed that there is a very weak negative correlation ($r = -.015$, $n = 2292$, $p < .05$ two tailed) between teacher leadership and student achievement scores. Given that the correlation is near 0 yet still significant, the significance is almost certainly due to the large sample size. While this finding is statistically significant, it is not practically significant given the very small effect size.

Regression Analysis

Following the bivariate correlation, a simple linear regression was run with student achievement in English/Language Arts as the dependent variable and teacher leadership, low-income, disability and racial/ethnic minority as predictor variables. The model was significant ($F=169.6$, $df=2287$), $p=.000$. In other words, student characteristics and teacher leadership predict student achievement in English/Language Arts better than chance alone. Collectively, the four predictor variables explained 22.7% of the variance in English/Language Arts achievement. All three of the student characteristics were statistically significant, with disability ($\beta=-.453$) being the most powerful predictor of English/Language Arts achievement and roughly four times more powerful than the other significant predictors, race/ethnicity ($\beta=-.117$) and low income ($\beta=-.453$). Teacher leadership ($\beta=-.027$, $p=.114$) was the only non-significant predictor. In summary, students who are in groups for which NCLB requires reporting of disaggregated data score lower on the state's English/Language Arts assessment, especially students with

disabilities, and teacher leadership is unrelated to these English/Language Arts achievement scores.

Table 4.11.

Regression of Teacher Leadership and Student Characteristics on Student Achievement

Variable	Stand. β	Significance
Disability	-.453	.000
Low-Income	-.095	.000
Racial/Ethnic Minority	-.117	.000
Teacher Leadership	-.027	.141

The following chapter discusses the results of this study. Implication for policy, practice and future research are highlighted.

CHAPTER FIVE

DISCUSSION

In order to reorient the reader to the problem examined, this chapter begins with an overview of the purpose of the study, including the specific research question the study sought to answer. Next a discussion of the findings of the study is presented. The third section of this chapter examines the limitations of the study. Finally, related topics for future study and recommendations for policy and practice are included as a summary to the chapter.

Purpose of the Study

This study examined the relationship between teacher leadership and student achievement within the classrooms of English/Language Arts teachers in two turnaround middle schools. These middle schools are located in a large urban city in the Western United States. The two middle schools had very similar demographics and achievement levels which enabled the teacher data and the student achievement from both schools to be combined. Student achievement data were tied through state and district coding to the teachers that were primarily responsible for the English/Language Arts instruction of each individual student. The teachers' self-reported levels of teacher leadership were connected to their specific students' English/Language Arts achievement at the student level. The study was completed to answer the following research question:

- ❖ What is the relationship between teacher leadership and student achievement in turnaround middle schools?

The increasing focus on those schools that find themselves under state and federal consequences has increased the research on what it takes to turn around schools deemed

Persistently Low Achieving schools. The related body of research is relatively small and emerging, but several key strategies have been put into practice and studied across the country in order to elevate the achievement levels within these schools. Unfortunately, the research has not revealed a consistent template or key strategy for school turnaround. It has identified some critical variables, however, such as effective school leadership. Due to the differences in school size, location, demographics, and culture, it may be impossible to develop a “recipe” for turning around the nation’s lowest performing schools. However, if new research can reveal empirical evidence on strategies or practices that increase student achievement, then shrinking federal, state and local funds can be targeted to their maximum effectiveness. In addition, if teacher data can be linked to individual student growth data on a broad basis, it may be possible to more effectively identify which teachers are in need of assistance and which teachers could be used as models for other teachers to follow.

Several researchers have effectively chronicled teacher leadership and its connections to collective, school wide improvements in student achievement, as well as overall school health (DuFour, 2010; Lambert, 1998; Leithwood, 2010a; Leithwood, 2010b; Leiberman, 2004; Murphy, 2005; Smylie, 2010; Spillane, 2006). Continuing to study those schools that have successfully turned around and sustained their gains will help educators to know which strategies are their best hope, at least to the extent that those practices are effective across differing school contexts. One recent, federally funded examination of successful turnaround schools found that individual teachers stepping up to leadership far surpasses the effectiveness of the principal carrying the load. Referring to one successful turnaround school, the report contended that, “Instituting a

‘plurality of leadership’ drew on the strengths of various individuals at the school and district level and did not rest restructuring success on a single leader” (Brinson & Rhim, 2009, p. 27). But research focused on individual teacher leadership and the potential effects on individual student achievement is practically non-existent. This study adds to the limited research that exists by using data from a Teacher Leadership survey and student achievement data in English/Language Arts linked to their individual teachers.

Findings

The major finding of this research study was that individual levels of teacher leadership do not predict increased levels of student achievement for students under their care. In fact, the relationship between student achievement and teacher leadership was statistically significant and a slight negative one. However, given the extremely small effect size, the relationship can be viewed as insignificant at a practical level. A simple linear regression yielded the same conclusion-teacher leadership is not related to student achievement. As might be expected, student characteristics predicted achievement in English/Language Arts. Specifically, disability, race, and income were all negative predictors of student achievement. Disability was four times more powerful than race and income as a predictor of English/Language Arts achievement.

The significant number (N = 1501) of English Language Learners attending the two schools in this study would seem at face value to be an important variable to study. However, the state in which this district and these schools reside includes students who are in “monitoring” status and Former English Learners in the English Language Learner group for two years after they demonstrate proficiency in English. Due to this state definition, theoretically these students are functioning bilingual students when they are

placed on monitoring status. For this reason, English language proficiency was not included as a student characteristic in the simple linear regression.

There are several possible reasons for the lack of findings in this study that support a meaningful relationship between teacher leadership and student achievement. One obvious explanation is that no such relationship actually exists. Other reasons are embedded in the limitations of this study discussed below and the challenges of assessing the construct of teacher leadership. Teacher leadership is elusive. The definitions are fleeting and vary with the focus of the leadership initiatives or strategies undertaken, undoubtedly shaded by the experience of each educator.

Limitations

Several possible limitations existing in the design and implementation of this study should be noted. While none of the following limitations seriously impair the results of this research, these factors must be taken into account when studying the results for future decisions about policy and practice.

- Teachers in this study self-reported their level of teacher leadership on eight survey questions embedded in a section of a larger survey administered during the evaluation of the SIG grant process in each middle school studied. All questions appeared in *Section V. School Climate and Working Conditions*, which was part of the larger survey, entitled *School Improvement Grant (SIG) Teacher Survey*. It is quite possible that the teachers' perceptions of their leadership levels were much higher than they are in actual practice. How would the administrators in the buildings of the two middle schools in this study assess the leadership quotient of these same teachers? Would teachers in a traditionally high performing school be more self-critical? These

are questions that one must raise when analyzing the Teacher Leadership survey results associated with this study. Future studies of this type would also enhance the knowledge of teacher leadership in a school if they included a 360 degree survey, asking questions of teachers, students and administrators about the leadership level of the staff.

- The questions on the Teacher Leadership survey used in this study represent only the primary researcher's interpretation of teacher leadership. Given another primary researcher's perception of teacher leadership, the questions could look very different and may yield very different results. This is especially important, given the lack of a universal definition of teacher leadership. Depending on the researchers' understanding of teacher leadership, the questions could lean toward shared leadership, formal and traditional roles, or informal roles and reflect the preferred definition.
- Culture and demographics are always at play in studying educational topics since educational research revolves around the study of human behaviors. The two schools in the study were closely aligned in demographic make-up, achievement and size. Moreover, their location was strictly urban as opposed to rural or suburban, and they were both designated as turnaround schools. This similarity in achievement levels and teacher and student characteristics made it possible to combine the data for manipulation and analysis and to increase the sample size of English/Language Arts teachers in particular; however, the similarities between the two schools could inhibit the generalizability of the findings. Generalizability is further limited to the data representing only two schools and one district. For the findings to be used to support

new policies and practices, further research including the use of a more heterogeneous sample of schools from across the nation should be completed. Schools studied should include all grade levels rather than only 6th through 8th. These characteristics would alleviate any concerns about the relatively homogeneous sample in this study.

- As alike as these two schools are, there is one difference that can't be denied when studying the Teacher Leadership survey results. The responses to one specific question on the teacher survey pointed to a possible disparity between the schools when it comes to principal leadership. The response to question number five, *The principal supports teachers in their development into teacher leaders*, showed the teacher responses to be especially divided. While 56.7% moderately to strongly agreed with the statement, 43.4% moderately to strongly disagreed. In fact, 26.7% of the teachers surveyed disagreed or strongly disagreed with the statement. The fact that so many responses were on one end of the scale could indicate a divided perception, or perhaps reality, that the principals at each school had a very different approach to developing teacher leaders. In this instance, combining the data could have masked a confounding variable between the two schools' levels of teacher leadership. So, what if this assumption is true and the principals of these two schools have greatly differing leadership styles? The relationship between principal leadership styles and the level of teacher leadership in a school is undoubtedly a strong one. Schools where authoritarian principals routinely practice top-down control over their staff never reach their full potential because teachers never learn to become problem solvers or even problem identifiers. If solutions to problems are

designed within the main office suite and delivered top-down to staff it is possible that the incorrect problem is actually being addressed. Who better to identify problems of practice, their root causes and possible solutions than the teachers who are in the trenches on a daily basis working with those problems? Allowing teachers the latitude to be problem solvers can increase the potential for all stakeholders in the school. Principals must not only allow this independence but foster it and ensure that teachers are trained and supported in their efforts to be leaders of their peers.

- An additional variable that would be important to examine in relation to teacher leadership but that was not included in this study is the array of strategies used to teach the embedded skills of reading and writing in the English/Language Arts classes included in the sample. While the sample was created by teacher self-identification and district data confirmation, self-reported course assignments were extremely varied and teaching strategies were not examined. Many districts use a coherent, sequential English/Language Arts curriculum that builds from course to course and grade level to grade level. This study did not seek to confirm or deny if this phenomenon was true. Additionally, individual teaching practices and techniques likely varied from teacher to teacher which could account for a wide range of student achievement scores. Digging deeper to account for gains in English/Language Arts student scaled scores on the CRT might have revealed successful and ineffective techniques and helped account for a portion of the student growth.
- The selection of English/Language Arts scaled scores as a dependent variable might be considered another limitation of the study. While the core components of the English/Language Arts curriculum likely vary little from grade level to grade level

these assessed components differ mainly in text complexity. This is one of the reasons for the selection of English/Language Arts scores as the dependent variable. In addition, in recent years and especially since the introduction of NCLB accountability, schools have chosen to identify literacy as a school wide initiative worthy of cross-curricular professional development and regular monitoring by administration. For this reason it is nearly impossible to totally isolate any gains in English/Language Arts scaled scores to only the students' teacher of record for the associated courses. In fact, some of the most challenging reading and writing secondary students practice while in school can be found in the technical and elective courses students complete in many high schools. Especially in high schools, and to a lesser degree in middle schools, isolating a variable to one teacher is more difficult since some students may have upwards of six or seven teachers on any given day. If each teacher is participating in professional development, being monitored by administrators and practicing embedded literacy strategies in their curriculum then English/Language Arts scores will likely improve, despite other independent variables.

Schools that have successfully turned around and sustained their student achievement should be studied longitudinally to identify teacher PD strategies that show long-term promise and to reveal if teacher leadership development is among them. As we move forward from NCLB accountability to the Common Core standards and end of course exams it will become increasingly important for researchers to study these successful schools for the strategies that have proven to yield consistent success. Nearly all states are now participating in the Common Core movement and may eventually sign

on to Common Core assessments. It would be efficient to rely on research from around the country to inform practices for all schools since many will be working toward preparing students for the same assessment.

The Paradoxes of Teacher Leadership in Low Achieving Schools

One of the paradoxes of studying teacher leadership in Persistently Low Achieving schools is that by virtue of the school's status it is fairly safe to assume that many among the teaching staff may lack the leadership skills or the vision to lead effectively. Therein lay one of the strongest challenges of this study.

The dilemma state and local education entities are routinely faced with is how to empower teachers in low performing schools without leaving important decisions that affect future student achievement to ineffective practitioners. The schools are amongst the lowest achieving in the state, and given the fact that teachers exert one of the largest effects on student achievement, the teachers share some of the responsibility for the exceptional low achievement levels in these schools. This begs the questions: should reformers try to enhance the teacher leadership of arguably ineffective teachers? If not, should reform models emphasize moving teachers from PLA schools, and if so, to where?

Most state models for intervention in low performing schools include the addition of educational experts or consultants to the school environment. These external resources are highly valued by most schools; however, the way these resources are embraced (or not) by building and central office administrators has a tremendous impact on whether they are accepted by the staff. Too often "lip service" is given to the external resource personnel assigned to Persistently Low Achieving schools. If this were the case in the

two middle schools in the study this would be a confounding variable to add to the limitations of the research.

Added to the already overwhelming workload of teaching in a Persistently Low Achieving school, external experts and state and federally mandated improvement plans and the monitoring that goes with them can many times lead the best staff in a school to seek employment elsewhere to be free to teach without multiple forces directing their work. Of course this exodus could negatively impact the levels of teacher leadership and student achievement in a school. These external factors (mandates, monitoring and educational experts) are often met with resistance from staff that can't or don't want to move from the school. This can create a toxic environment for any leader to face. In situations like these, development of human capital and teacher leadership are not necessarily priorities. In many situations like these, top down leadership by the principal or other district staff may be the best course of action.

The delicate balance between leading from a top down, authoritative approach and a more collaborative shared leadership approach takes skill on the part of principals and other administrators. Mastering this balance eludes many administrators but there is no need to determine where a teaching staff is as far as being receptive to the directives hoisted upon them and treating them with a one-size-fits-all approach. As we encourage teachers to do with students, administrators should treat each teacher and/or team as individuals with an assessment of where they are on the teacher leadership scale. Treating each individual teacher and specific departments or teams with the approach that is best for them would ensure that each is getting what is needed to move forward toward independence. Isn't this what we want for our students...differentiation? Administrators

must be sensitive to the needs of individuals and teams or departments. Those who have demonstrated their proficiency levels and can function in an exemplary fashion have earned the right to some autonomy and to proceed on their own without strict oversight and direction. This concept of earned independence would ensure that high functioning staff members take ownership of their areas of responsibility and are free to lead their peers toward school improvement. Effective leaders will be able to implement this type of differentiated professional assessment and growth. Given the paradox of teacher leadership in a failing school, the differentiated approach would be an effective approach.

Also, state and federally mandated school improvement plans that are prescriptive in nature must be written and monitored. Such strategies are inconsistent with Dufour's claim that, "In the on-going debate of the efficacy of strategies to improve school districts – top-down versus bottom-up – it is apparent that top down is losing" (p. 341). Will these external directives only worsen the performance of these schools? That seems unlikely given their exceptionally low performance. However, stakeholders must reflect on the following question: if bottom-up reform is generally more effective, at what point are top down directives appropriate and more likely to enhance the achievement levels of students, especially those in Persistently Low Achieving schools?

As in the case of the teacher responses to the Teacher Leadership survey in this study, the question of whether the responses reflect reality must also be considered. Do the teachers responding truly understand what exemplary teacher leadership looks like, and have they ever seen or experienced it? Or are they simply providing socially desirable answers?

Where the teachers in this study were in their level of professional development and participation with these external interventionists was not a part of this study and would be an important factor to consider in future research. Also, school improvement plans were not reviewed as a part of this study. If the development of teacher leadership was a specific strategy for either school as they planned for improvement, this phenomenon would have added to the knowledge gained by the study of these two schools. While following the mandates forced upon them by virtue of their status as Persistently Low Achieving schools, the staff is given less freedom to chart their own course as a school; therefore, the teacher leadership levels reported also could be a reaction to increased authority and control by the local, state and federal education agencies. Delving deeper into the thoughts of the staff on these issues would be helpful qualitative information to add to this work.

Summary Recommendations

The time has never been more right to take advantage of those educators who want to be teacher leaders and to encourage those who have the leadership skills to take on roles and responsibilities beyond the classroom. The Common Core Standards have presented a unique opportunity for teachers to be allowed to take on such necessary leadership roles. The standards are clearly defined but leave much of the decision-making about curricular and instructional resources and strategies to the local states and districts. Most principals and central office staff do not have the time or the interest in writing curriculum, especially in isolation; therefore, using the professional expertise and leadership of our teachers makes perfect sense and is critical to having the level of human capital required to complete such tasks.

After analysis of the data involved in this study, obvious questions arise that could inform future research and educators interested in the implications of teacher leadership as a strategy for increasing student achievement, especially in failing schools. One such study that would add depth to the findings of this research would be a qualitative study specifically targeting those English/Language Arts teachers who were in the sample. Hearing their stories about how they perceive teacher leadership in their schools as well as how they define and enact teacher leadership for themselves would lend much more clarity to the findings of this study. It is obvious teachers in this study believed that teacher leadership is a strong predictor of student achievement, even though the findings did not bear this out. The information that one can glean from an eight question survey however, can in no way be considered comprehensive. Probing the thoughts and observations of these teachers would certainly add to the understanding of how much teacher leadership affects student achievement, or if it does at all.

Additional qualitative studies on teacher leadership from the perspective of teachers from around the country and in various school settings and grade levels would certainly add to the collective knowledge of teacher leadership. Specific research questions that would be informative to study would center on how teacher leadership plays out in other schools. Looking at formal structures and how effective they are in relation to building a well-informed staff or in carrying out the school's vision for itself would be an effective direction for future research studies.

Conducting future longitudinal studies would also add valuable information to the collective body of teacher leadership research. Following a school, a district or even a sample of teachers through the growing pains of developing into a staff that leads in

conjunction with the administrators in the building would provide insight into the effectiveness of teacher leadership over the course of time. Documentation of this professional growth could lead to future understandings of the dynamics of change when a school is growing as a community of leaders. Future administrators and teachers could draw from this research to determine if problems they encounter along their journey are typical or if their situation is unique. Having this data to rely on and use as a roadmap would enlighten the way for educators as they strive to develop into a collaborative culture of leaders of learning. In addition, correlation of the student growth results over the same period of time would be an effective way to determine if teacher leadership really does affect student achievement outcomes. Due to the brief time allotted for this study, the information that would come from collecting data over a longer period of time was not obtained. For comprehensive analysis of teacher leadership and its effects on student achievement, longitudinal work on the topic should be completed.

As states continue to explore the practice of linking teacher evaluations to student achievement and/or student growth over time, those linkages should be explored to inform federal, state and local policies on evaluation of teacher performance. Particularly in Kentucky the process has been set in motion to include student growth in the performance evaluation system at a date in the near future. Educators across Kentucky and other states that are taking the lead in this area are understandably nervous about the outcomes of the work toward that end. Teacher leaders across the nation are getting involved in this debate. If more reliable information about the connection between teacher leadership and student achievement were available and educators felt these new performance evaluation systems reflected this research, the educational community and

legislative oversight groups would all be in synch and moving at the same pace toward a mutual goal. Currently this is not the case in Kentucky school districts. Teachers are wary of these impending changes, as they should be. Change is not always for the better even when the stakeholders are involved in designing the change.

In 1985, General Motors decided to develop and market a new employee-driven subsidiary of their car company. They assumed that engaging employees as full team members and problem solvers would assure success of this new company. Despite buyer enthusiasm and customer satisfaction, twenty-five years later, according to Hanna (2010), General Motors shut down this employee led business model due largely to “a dysfunctional corporate culture and hostility from more traditional GM divisions” (as cited in Goodwin, 2013). Goodwin compares this venture to the state of teacher leadership today:

In many ways, the concept of teacher leadership may not be so different from that of Saturn: an appealing, commonsense idea that, despite its seeming promise of creating a different kind of teacher, is by no means guaranteed to succeed. (p. 78)

As with most educational improvement strategies, only time will tell.

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APPENDIX A:

IRB Approval

Graduate Education and Research
Division of Sponsored Programs
Institutional Review Board

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NOTICE OF IRB EXEMPTION STATUS

Protocol Number: 14-049

Institutional Review Board IRB00002836, DHHS FWA00003332

Principal Investigator: Sally Sugg **Faculty Advisor: Dr. Charles Hausman**

Project Title: The Relationship between Teacher and Leadership and Student Achievement

Exemption Date: 10/3/2013

Approved by: Dr. Jonathan Gore, IRB Member

This document confirms that the Institutional Review Board (IRB) has granted exempt status for the above referenced research project as outlined in the application submitted for IRB review with an immediate effective date. Exempt status means that your research is exempt from further review for a period of three years from the original notification date if no changes are made to the original protocol. If you plan to continue the project beyond three years, you are required to reapply for exemption.

Principal Investigator Responsibilities: It is the responsibility of the principal investigator to ensure that all investigators and staff associated with this study meet the training requirements for conducting research involving human subjects and follow the approved protocol.

Adverse Events: Any adverse or unexpected events that occur in conjunction with this study must be reported to the IRB within ten calendar days of the occurrence.

Changes to Approved Research Protocol: If changes to the approved research protocol become necessary, a description of those changes must be submitted for IRB review and approval prior to implementation. If the changes result in a change in your project's exempt status, you will be required to submit an application for expedited or full IRB review. Changes include, but are not limited to, those involving study personnel, subjects, and procedures.

Other Provisions of Approval, if applicable: None

Please contact Sponsored Programs at 859-622-3636 or send email to tiffany.hamblin@eku.edu or lisa.royalty@eku.edu with questions.



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APPENDIX B:
Teacher Leadership Survey

Research Question & Survey Questions

Research Question:

What is the relationship between teacher leadership and student achievement in a turnaround school?

Survey Questions and Corresponding Numbers*:

1. Teachers in this school are recognized as educational experts. (#24)
2. Teachers have an appropriate level of influence on decision making. (#52)
3. Teachers in this school are encouraged to participate in school leadership roles. (#25)
4. Many teachers in this school serve in leadership roles that directly impact student learning. (#26)
5. The principal supports teachers in their development into teacher leaders. (#27)
6. Participating in teacher leadership roles enhances teaching ability. (#28)
7. Teacher leadership has a positive impact on student achievement. (#30)
8. I consider myself to be a teacher leader in this school. (#31)

*All questions appear in the School Climate and Working Conditions (Section V) of the School Improvement Grant (SIG) Teacher Survey for Southern Middle School and Northern Middle School.

VITA
SALLY SUGG

EDUCATION

- Superintendent Endorsement, Eastern Kentucky University, 2006
- Rank 1 in Administration, Western Kentucky University, 1992
- Master's Degree, Western Kentucky University, 1987
Major: Secondary Education, Minor: English
- Bachelor's Degree, Murray State University, 1979
Major: English, Minor: History

LICENSES AND CERTIFICATES

- Superintendent's Endorsement
- Endorsements for Elementary and Secondary Principalship (K-12)
- Endorsements for Supervisor of Instruction (Elementary & Secondary)
- Kentucky Association of School Councils Endorsed SBDM Trainer
- Kentucky Teaching Certificate – English/Language Arts; History
- Kentucky Real Estate License

EMPLOYMENT HISTORY

January 2012–Present **Henderson County Public Schools, Henderson, KY**
Principal, Henderson County High School

June 2011–May 2013 **Western Kentucky University, Bowling Green, KY**
Facilitator, Principals' Leadership Academy for the WKU Center for Learning
Excellence (CLE)

October 2011 **Edvantia Inc, Nashville, TN**
Independent Consultant, Project to retranslate and calibrate new teacher evaluation
system

August 2008–December 2010 **Kentucky Department of Education, Frankfort, KY**

- Director of District 180, Office of Guiding and Support Services
- Associate Commissioner, Office of Leadership and School Improvement

January 2007–August 2008 **Shelby County Public Schools, Shelbyville, KY**
Assistant Superintendent for Student Achievement

July 2004–January 2007 **Kentucky Department of Education, Frankfort, KY**
Highly Skilled Educator

July 1998–July 2004 **McCracken County Schools, Paducah, KY**
Principal, Hendron/Lone Oak Elementary

August 1980–July 1998 **Henderson County Public Schools, Henderson, KY**

- Principal, Seventh Street Elementary (1995–1998)
- Teacher, Henderson County High School (1980–1995)

August 1979–July 1980 **Sikeston Public Schools Sikeston, MO**
Teacher, Sikeston Junior High School

AWARDS

- Finalist for Kentucky Administrator of the Year (to be selected at Kentucky Music Educators Conference – Feb. 2014)
- Region 2 Administrator of the Year – Presented by the Region 2 Kentucky Music Educators - 2013
- Kevin P. Noland Award, Kentucky Board of Education, 2010
- WOW Award (What Outstanding Work), Shelby County Public Schools Board, 2008
- United Way Community Spirit Award, 1998
- Welcoming Schools Award, 1995
- Principal’s Award, 1995
- Principal’s Award, 1992
- Who’s Who Among America’s High School Teachers, 1990

PROFESSIONAL SERVICE

- Kentucky Leadership Academy (KLA) Advisory Board, 2006–2010
- Co-Coordinator, “Unbridled Learning Summit” – Louisville, KY, March 2010
- Represented Kentucky and met with Congressional staff studying Statewide School Performance Rubrics at the Aspen Institute – Washington, DC, May 2010
- KDE Team Lead, Statewide P-20 Professional Development Planning for Senate Bill 1, 2009–2010
- Co-Coordinator, KDE Statewide Assessment for Learning Initiative, 2009

PROFESSIONAL MEMBERSHIPS

- Kentucky Association of School Administrators
- Kentucky Education Association
- Association for Supervision and Curriculum Development
- KDE Member of Educational Development Leadership Collaborative 2008-2010
- Member of Appalachia Regional Comprehensive Center (ARCC) at Edvantia (formerly AEL) Advisory Board 2008-2010
- Member of Kentucky’s SACS/CASI Board of Directors 2010-2013