Teachers' Perception of the Presence of Teacher Leadership and ARMT+ Percent Proficient in Alabama's Public Elementary Schools: A Correlation Study

by

Pamela Scott Williams

A dissertation submitted to the Graduate Faculty of
Auburn University
in partial fulfilment of the
requirements for the Degree of
Doctor of Philosophy

Auburn, Alabama
May 4, 2013

Approved by

Lisa A.W. Kensler, Assistant Professor of Educational Foundations, Leadership and Technology
Carey Andrzejewski, Assistant Professor of Educational Foundations, Leadership and Technology
Joni Lakin, Assistant Professor of Educational Foundations, Leadership and Technology

Abstract

For over four decades, the concept of teacher leadership has been debated nationally and internationally with a view of establishing its role in student learning and achievements in schools. Over this period, a sizeable amount of literature has been written with regards to teacher and school administration leadership. However, studies remain inconclusive regarding teacher leadership and standardized scores. To further explore this topic, this study investigated the relationship between teachers' perception of the presence of teacher leadership and schools' state mandated test results in Alabama's elementary schools. A total of 630 teachers from 49 elementary schools in Alabama participated in the study. Results were analyzed, both as a whole and controlling for socioeconomic status and school size. A newly developed survey instrument whose underpinning was the seven domains outlined in the Teacher Leadership Model Standards garnered data. The seven domains are below:

Domain I: Fostering a Collaborative Culture to Support Educator Development and Student Learning

Domain II: Accessing and Using Research to Improve Practice and Student Learning

Domain III: Promoting Professional Learning for Continuous Improvement

Domain IV: Facilitating Improvements in Instruction and Student Learning

Domain V: Promoting the Use of Assessments and Data for School and District Improvement

Domain VI: Improving Outreach and Collaboration with Families and Community

Domain VII: Advocating for Student Learning and the Profession

 Student achievement data, 2011–2012 Alabama Reading and Mathematics Test Plus percent proficient, were gathered from participating schools. Descriptive statistics, Pearson's Correlation Coefficient, and Multiple Regression analyzed the data. The domain that was reported as most present in the sampled schools was domain 5 which focused on assessments and data. The statement that had the highest overall average in domain 5 is the statement: Teachers at my school facilitate collaborative interpretation of data results. Conversely, the domain that was reported as least present in the sampled school was domain 6 which focused on improving outreach and collaboration with families and community. The statement that was reported as least present was the statement: Teachers at my school develop a shared understanding among colleagues of the diverse educational needs of families.

Analyses demonstrated a non-significant correlation between teacher leadership and student achievement. Moreover, further testing showed that school size and socioeconomic status did not significantly predict student achievement. Potential factors might have mediated the effect of teacher leadership on student performance; specifically, teacher commitment, teacher quality, and school culture. However, Smylie found that "the most well-designed studies—those that examine longer periods of implementation, rely on more objective data, employ multiple measures, and take role performance variation into account—tend to reveal the most positive outcomes" (1997, p. 576). Recommendations for teacher leaders, school administrators, policy makers and future researchers were offered.

Acknowledgements

First and foremost, I would like to give honor to my Lord and Savior, Jesus Christ. Without his grace and mercy, I would have surely falling by the way side.

I would like to take this opportunity to thank my chair, Dr. Lisa Kensler, for her guidance, support, and encouragement throughout the dissertation process. I would also like to thank my committee members, Dr. Andrzejewski, Dr. Lakin, and Dr. Morowski for their time, commitment, and expertise.

I would be remiss if I failed to express my utmost appreciation and gratitude for my husband, Legary. His patience and understanding were my pillars of support throughout this process. I must also thank my beautiful daughter, Shamya, for her love and sacrifice and for understanding when I was absent for long hours and weekends. In addition, I express my deepest gratitude to my family for their support in obtaining this goal: Hazel, Carolyn, Susan, Tara, and Robert. I also express gratitude to my classmates at Auburn University for their encouragement and support over the past view years. Particularly, I express gratitude to Juanita James for offering support and keeping us on track. Last, but not least, I would like to thank all my family, friends, and co-workers that encouraged me along the way.

Table of Contents

List of Tables

List of Figures

CHAPTER 1: INTRODUCTION

Introduction

Ineffective teaching practice and stagnate standardized test results are increasingly drawing serious attention among practitioners, educational stakeholders, and policymakers in the educational sector. Teacher leadership is critical to ameliorating this problem. Almost thirty years since the publication of the U.S. Department of Education's explosive report entitled *A Nation at Risk*, the goal of which was "to make teaching a more rewarding and respected profession," we are still in the infancy stages of educational reform in the United States (Hayes, 2004, p. 92). *A Nation at Risk's* powerful indictment of American education initiated the biggest education-reform movement in the nation's history, paving the way for strategies and crucial educational policies and programs as diverse as the Kentucky Education Reform Act of 1990, charter schools, No Child Left Behind (NCLB) Act, and the Race to the Top competition (Hurt, 2008, p. 24). But even after an immense political and financial investment spanning two and a half decades, the country is still far from achieving the report's determined goals and objectives.

One reason for lack of educational progress is the fact that progress cannot merely be externally imposed on schools. American policymakers and educational stakeholders clearly understand the complex nature, structure, and functions of schools. Since schools are complex social enterprises and activities inspired by a number of goals and commitments, their success highly depends on countless daily personal interactions and influences (Carvalho & Paine, 2011). They are, in the end, only as good as the people in them and the culture in which those people

work. Thus, it is crucial to get everyone in a school community involved and invested in a school's mission: ownership is key. That idea comes from giving schools autonomy—in staffing, budgeting and instruction. Reform has to come from the inside out, as well as the outside-in. There is a human side of school reform that we ignore at our pitfall: classroom teachers. Clearly, important and valid organizational and systemic change and improvement cannot occur without teachers' conscious support and participation (Carvalho & Paine, 2011).

This study was designed to illuminate the relationship between teachers' perceived presence of teacher leadership and the Alabama Reading and Mathematics Test Plus (ARMT+) percent proficient. Its goal was to explore the relationship between teachers' perception of the presence of teacher leadership and schools' ARMT+ percent proficient.

Adequate Yearly Progress (AYP), according to the U.S. Department of Education, is a diagnostic instrument that ascertains or gauges the level of improvement needed by schools and where financial resources should be allocated. It is mandated by the No Child Left Behind Act and requires all public schools and school districts in the United States to achieve certain targets or goals, which are the annual measurable objectives, to ascertain whether they are exerting efforts to make adequate progress each year (Wei, 2008, p. 65). With AYP, schools and local education authorities (LEAs) are mandated to raise student achievement, and this can possibly be done through improvement of and focus on teacher leadership.

The fact that teachers influence student achievement is widely accepted. However, what has not been thoroughly explored is the relationship between teacher leadership and student achievement. This study sought to contribute to the existing literature and research by exploring whether a significant and positive relationship exists between teacher leadership and student achievement in Alabama's public schools.

Statement of the Problem

With only one year until the Elementary Secondary Education Act (formerly NCLB) policy requires that all children be on grade level in math and reading, it is imperative that there is urgency for school reform. NCLB is a reauthorization of Elementary and Secondary Education Act 1965 (ESEA). NCLB supports standards based education reform. The Act requires all public schools that receive federal funding to administer standardized tests each year to all students. The results are used to determine if a school has met the needs of their student population. Schools must make Adequate Year Progress (AYP), which is measured by standardized percent proficient. If results from a school are repeatedly poor, some steps are taken which include the following:

- Giving students options to transfer to other schools;

- Developing improvement plan,

- Offering free tutorial to struggling students,

- Replacement of staff;

- Introducing new curriculum;

- Extending time students spend in class.

However, when a school fails to meet AYP for five consecutive years, drastic steps are taken which include closing the school, hiring a private company to run the school, or turning it into a charter school.

It is generally acknowledged that promoting teacher quality is a key element to improving the quality of education in the United States. The success of students is also the teacher's success; therefore, a teacher with excellent leadership improves student performance (Martinez, 2004). Indeed, one primary goal of ESEA is to have "highly qualified" teachers in

every classroom (Harris & Tichenor, 2009, p. 376). The act defines "highly qualified" (in part) as follows (Section 9101):

> The term "highly qualified" — when used with respect to any public elementary school or secondary school teacher teaching in a state — means that 'the teacher has obtained full state certification as a teacher (including certification obtained through alternative routes to certification) or passed the state teacher licensing examination, and holds a license to teach in such state, except that when used with respect to any teacher teaching in a public charter school, the term means that the teacher meets the requirements set forth in the state's public charter school law; and (ii) the teacher has not had certification or licensure requirements waived on an emergency, temporary, or provisional basis.'

National and International Assessment Results

However, desired objectives have not been achieved fully in most public schools in the United States. As reported by the NAEP Long Term Trend Report, the United States is not making significant gains in reading or math (Sribnick, 2009, p. 200). The National Assessment of Educational Progress (NAEP) is the largest nationally representative and continuing assessment of what America's students know and can do in various subject areas. Assessments are conducted periodically in mathematics, reading, science, writing, the arts, civics, economics, geography, and U.S. history. The Mathematics and Reading Long-Term Trend (LTT) reports results in mathematics and reading since the 1970s, and are given every four years. The NAEP Math LTT (see Figure 1) average scores for 17-year-olds showed no significant improvement at any performance level. In addition, the NAEP Reading LTT (see Figure 2) shows the average reading score in 2008 was higher than in 2004, but not significantly different from those in 1971.

Figure 1. Mathematics Average Scores for 17-year-old Students

Figure 2. 1973–2008 Long-Term Trend Reading Assignments

Also, the Center on Education Policy (CEP, 2011) reported that during the school year 2010 to 2011 a number of schools nationwide failed to meet the AYP level under the No Child Left Behind Act. According to the CEP's report, the estimated percentage of all schools that failed to meet AYP was 48 percent in 2011.

How does the United States fair internationally in other levels apart from the elementary level? The 2009 PISA results are used to answer this question. The relevance of the PISA scores to this research is based on the fact it is the only well-established international assessments beyond the elementary level. Besides, the OECD Programme for International Student Assessment (PISA) provides the world's most extensive and rigorous set of international knowledge and skills of secondary school students. It allows one to compare countries on measures such as average learning outcomes, share of low-performing schools, and the extent to which socio-economic background shapes results, and how consistently their schools deliver high quality outcomes.

Based on the 2009 PISA evaluation of 15-year-olds, the U.S. education sector achieved around the average in science (ranked 17) and reading (ranked 14), and below the average score in mathematics (ranked 25) among the 34 OECD nations (OECD, 2010). On the positive side, student performance in mathematics and reading had generally not changed since 2000 and 2003, respectively, when PISA started to evaluate these trends. However, unlike other federal countries, the United States did not assess the individual performance of states on PISA. This could have helped this study in comparing the individual achievement performance of states. Table 1 shows the United State's mean score in reading, mathematics, and science scales on Pisa. As previous indicators suggest the Unites States is not making significant progress in reading or math, which means the country's performance in education is staying steady.

Table 1

United State's Mean Scores in Reading, Mathematics and Science Scales on PISA

	PISA 2000	PISA 2003	PISA 2006	PISA 2009
	Mean Score	Mean Score	Mean Score	Mean Score
Reading	504	495		500
Mathematics		483	474	487
Science			489	502

SOURCE: OECD. (2010) *PISA 2009 results: What students know and can do: Student performance in reading, mathematics and science (Volume I)*. OECD Publishing.

If the United States is to compete in the global market, then there is need to raise student achievement used in schools as well as the quality of instruction. It is also important for policymakers and schools to focus on teacher leadership, which is suggested to be one determinant of student achievement. Of the studies on teacher leadership and student achievement, approximately one-third (Bryk, Deabster, & Tum,1994; Jenkins, Ronk, Schrag, Rude, & Stowitschek, 1994; Lee & Smith, 1994; Sebring et al.,1995; Taylor & Bogotch, 1994), including both cross-sectional and longitudinal analyses, found no evidence that teacher leadership is related to student achievement on standardized tests or to teachers' reports of student academic performance. The two-thirds (Johnson, 2007; Katzenmeyer & Moller, 2001; Killion, 1996; Kurtz, 2009; Lieberman, Saxel & Miles, 1988; Leithwood, 2003; Leithwood, Jantzi & Steinback, 1999; Mortimore, Sammons, Stoll, Lewis, & Ecob, 1988; Ramey & Dornseif, 1994; Smylie & Hart, 1999) found positive relationships to academic achievement.

There seems to be inconsistency regarding research on teacher leadership and student achievement.

Reform Policies

Teachers report that they do not believe they are being utilized as leaders within the existing structure of pre-kindergarten through twelfth grade public schools in America (U.S. Department of Education National Center for Education Statistics, 1993). Underutilization leads to dissatisfaction and causes teachers to leave the profession in alarming numbers after a few short years in the classroom (Gonzales, 2004).

Reform policies have emerged to assist states in improving student achievement. One major policy is President Obama's *Race to the Top* competition. *Race to the Top* is an economic incentive that is aimed at enticing states in adopting reform goals set by the administration (Carr & Porfolio, 2011). The $4.35 billion *Race to the Top* fund represents an unprecedented federal investment in reform (Schier, 2011, p. 48). The political grant serves as an economic incentive to encourage states into adopting and implementing the Obama administration's reform initiatives, which include high-stakes testing and test-score-based accountability as well as the increase of charter schools (Carr & Porfolio, 2011, p. 201). The initial grants are supporting eleven states and the District of Columbia in their efforts to implement comprehensive, coherent, statewide education reform across four key areas:

- Adopting standards and assessments that prepare students to succeed in college and the workplace;
- Building data systems that measure student growth and success, and inform teachers and principals how to improve instruction;

- Recruiting, developing, rewarding, and retaining effective teachers and principals, especially where they are needed most; and

- Turning around their lowest-performing schools.

Although *Race to the Top* includes provisions on recruiting, developing, rewarding, and retaining teachers, teachers are often an untapped resource for change and improvement in schools (York-Barr & Duke, 2004). According to recent surveys conducted by a number of non-profit organizations like the New Teacher Center, the Center for Teacher Quality, Public Agenda and Learning Point Associates, Bill and Melinda Gates Foundation, and the MetLife Foundation, it was affirmed that teachers are willing to share new ideas and contribute to school decision-making (Teacher Leader Standards, 2011). They also want to work with their peers, particularly in conducting research, curriculum improvement, designing new teaching methods, among other things.

Distributed Leadership

Furthermore, there are teachers who do not have any ambitions of holding managerial positions such as being an administrator or principal. Such teachers simply want to teach and stay in the classroom maintaining a close connection with their students. Teachers construct professional identities long before they enter classrooms and develop that identity further as they establish, refine, and extend their practice (Collay, 2011). Teachers who stay in the classroom have the commitment that increases their potential of becoming great teacher leaders. Such teachers are willing to take new responsibilities that provide them with leadership knowledge and opportunities inside or outside the classroom (Collay, 2011).

Thus, it should be noted that distributed leadership in a school setting is the theoretical foundation of teacher leadership (Harris & Tichenor, 2009). Revolutionary policies and

education reforms are now in place to reinforce or strengthen the roles that teachers play in and out of their classrooms. This means that it is the duty of schools to motivate their teachers or personnel to become teacher leaders not only inside their respective classrooms, but also in the community where they belong. To achieve teacher leadership, school administrators and principals need and ought to share leadership and encourage teachers to share their leadership knowledge and skills with their colleagues.

Many schools observe the challenge of ensuring that all students attain skills, knowledge, as well as the disposition they require to succeed. The current economy demands that students be prepared to work and attain high standards of achievement (Lieberman & Miller, 2011). This generation of students needs to graduate with the ability to think critically and hence, to compete in a globally competitive society. Finding teachers with the leadership skills required to teach these students has proved to be a heavy load for schools (Lieberman & Miller, 2011).

A growing number of teachers want to enhance their ability to lead in a manner that facilitates student and adult learning; however, these teachers are not after the principal's, counselor's, or administrator's position. Their main aim is to create change and improve the performance of students as well as growing professionally while in the classroom (Wilmore, 2007). Such teachers want to become professionals by becoming true leaders in classrooms, among teachers and, therefore, enhance learning capacities in schools and communities (Wilmore, 2007).

Purpose of the Study

Improved student achievement continues to be a national priority. Teachers are critical to solving this problem. Past studies have purported that the "outcomes of teacher leadership can be viewed in terms of effects on relationships between teacher leaders and their colleagues and in

terms of the effects on practices at the classroom and school levels" (York-Barr & Duke, 2004).

However, no past studies have focused on determining the relationship between teacher

leadership and state mandated test results in elementary schools. The study contributes to the

gap in literature by conducting the first study to use a newly developed instrument to investigate

the presence of teacher leadership at the school level and correlate it to student achievement as

revealed through standardized test results.

Research Questions

Specifically, the following questions guided this study:

1.   To what degree do teachers in Alabama report that teacher leadership is present in

their schools?

2.   What is the relationship between teacher's perception of the presence of teacher

leadership and schools' ARMT + percent proficient?

3.   What is the relationship between teachers' perception of teacher leadership and

schools' ARMT + percent proficient when controlling for school level variables: socioeconomic

status and school size?

Significance of Study

Education research is clear – effective instruction matters. Without a doubt, teachers are

an important school-level influence on student achievement (Hoy & DiPaola, 2010). The caliber

of leadership in a school can have a substantial effect on student achievement according to

Marzano, Waters, and McNulty (2005). Teacher leaders, who have the support of their

colleagues as well as their schools, are central to learning achievement and necessary school

reform. In a review of accomplished school reform, Glickman, Gordon, and Ross-Gordon

(2001) noted characteristics of schools that were improving through documented student learning

over time. First on the list was the characteristic of shared or distributed leadership. Teachers must participate in leadership in order to advance the progress of school change (Ash & Persall, 2000; Lieberman, 1992; McCay, et al., 2001).

At the apex of education reform initiatives, a number of interconnected variables argue for the need of teacher leadership in schools. Particularly, the demands of principals are practically impossible to meet alone, principals' capabilities are restricted. Given these mediators, school improvement depends on teacher leaders. School administrators can't meet the needs of such a diverse and complex organization alone. Furthermore, this study provides information to those in the teaching and learning profession. Illuminating the relationship between teacher leadership and student achievement would assist in decisions that lead to change within the current educational structure.

Definition of Terms

Elementary and Secondary Education Act (ESEA): passed in 1965 as a part of the "War on Poverty". ESEA emphasizes equal access to education and establishes high standards and accountability. The law authorizes federally funded education programs that are administered by the states. In 2002, Congress amended ESEA and reauthorized it as the No Child Left Behind Act (NCLB).

No Child Left Behind Act of 2001 (NCLB): or Public Law 107-110 is known as NCLB. It is a United States federal law aimed to improve a number of federal programs that were created to improve the performance of America's elementary and secondary schools. The law allows parents more choices when selecting schools their children attend. It also promotes reading and re-authorized the 1965 Elementary and Secondary Education Act.

OECD Programme for International Student Assessment (PISA): provides the world's most extensive and rigorous set of international surveys of the knowledge and skills of secondary school students. It allows one to compare countries on measures such as their average learning outcomes, their share of low-performing schools, the extent to which socio-economic background shapes learning outcomes and how consistently their schools deliver high quality outcomes.

Teacher Leaders: for purposes of this study, teacher leaders are teachers who are full-time classroom teachers but assume additional leadership responsibilities. For example, Wasley (1991) defines teacher leadership as "the ability to encourage colleagues to change, to do things they wouldn't ordinarily consider without the influence of the leader" (p. 23).

Teacher Leadership: for the purpose of this study, teacher leadership is defined using Yendol-Hoppey and Dana's (2010) definition, which states that "teachers are leaders in both creating and sustaining a collaborative culture and practice of learning in schools focused on improving instructional practice (p. 27).

Limitations of the Study

A number of challenges, obstacles and limitations were faced during the study. First, the survey participants were mainly from one school district. Twenty-three of the 49 schools (47%) were from one school district; therefore; limiting teacher leadership dimensions that would possibly be revealed if the survey participation was more inclusive of other school districts.

Secondly, this survey could be laden by social desirability bias: it entails the research participants to respond to questions by giving the answers perceived by them to be those desired by the researcher (van de Mortel, 2008). Attempts were however made to minimize this limitation by making the survey responses anonymous (Czaja & Blair, 2004). Conversely,

researchers have demonstrated that up to 62% of the participants in survey researches often make their responses socially desirable even when they are assured anonymity (Fricker & Schonlau, 2002), subjecting the current research to the same limitations as well.

Another limitation is the use of the ARMT+ percent proficient as the dependent variable. The validity and reliability of the ARMT+ were not available. Additionally, the scores are recoded on a 4-point scale after the State Department grades the test.

Finally, results from Qualtrics showed that over 100 participants took less than 10 minutes to the complete the 36 item survey. With several hundred taking less than three minutes to complete the survey. It is likely that respondents were not taking the time to answer openly and honestly.

Assumptions of the Study

My assumptions for this study were threefold. The first assumption is the responses received from participating teachers accurately reflected their professional opinions. Secondly, I assumed the participants in this study answered all of the questions openly and honestly. Last, the standardized test chosen as the dependent variable is valid and reliable.

Summary

School principals are primarily burdened with the role of instructional leader, administrator, manager, and disciplinarian. This suggests that no one person can perform all of these tasks and more without the assistance of the teaching staff (Donaldson, 2006). Previous studies on teacher leadership have led to new insights and findings that clearly and objectively identified the required abilities, knowledge, skills, and characteristics of an effective, competent teacher leader. These important abilities, knowledge and skills, according to Leiberman, et al. (2000), can be taught and acquired.

Lieberman (1992) has argued that both informal and formal duties are triggering and developing new ways of leading, and each aspect or phase is undeniably contributing to the expanding participative cultures in the school setting. Harris (2003, agrees, saying "…it is clear that the head as the solitary dynamic leader is inadequate for the new directions in education…" (p. 318).

To achieve and improve teacher leadership and student achievement, education reforms must be looked and considered in-depth and must involve teacher leaders in the process. With all schools required to have 100 percent of their students proficient in reading and math by the year 2014, it is imperative that schools utilize their most valuable resource and asset in their quest for continuous improvement: teachers.

The purpose of this study is to explore the relationship between teacher leadership and a school's percent proficient (student achievement). Uncovering the relationship between teacher leadership and student achievement can undoubtedly assist educational stakeholders in understanding the importance of teacher leaders in educational reform efforts. This section concludes with the ardent words of Marilyn Wilson (1993):

> I hope the school of the future is a nonhierarchical system that nourishes informal arteries of influence, a place where the pulse and rhythm of good teaching and learning are driven by capabilities of teacher leaders… Only then will we genuinely begin the work of fashioning school environments within which it is possible for every student to achieve. (p. 27)

Structure of the Study

The remainder of this study is organized into five chapters, a bibliography, and appendices in the following manner. Chapter two presents a review of the related literature

dealing with the history of teacher leadership, its supporting theories, the characteristics of a teacher leader, the significance of collaboration and effective learning centers, among other topics. Chapter three delineates the research design and methodology of the study. The instrument used to gather the data, the procedures followed, and determination of the sample selected for study is described. An analysis of the data and a discussion of the findings are presented in chapter four. Chapter five contains the summary, conclusions, and recommendations for future research. The study concludes with a bibliography and appendices. The following chapter, chapter two, presents the review of literature as relevant to the study.

CHAPTER 2: LITERATURE REVIEW

Introduction

This literature review focuses on teacher leadership in American schools. It includes a brief review of the history and theory involving teacher leadership. There are three major undertakings for this chapter: first, it entails an in-depth review of the literature related to teacher leadership; second, it sought to show the value or importance of teacher leadership by primarily relying on empirical studies; and third, it illuminates the relationship between teacher leadership and student achievement. The review commences with a general discussion of educational leadership as in the next section.

Educational Leadership

It is important to understand that educational leadership is a broad, extensive concept that does not merely refer to principals, teachers, and other school administrators. Leadership primarily pertains to leadership practice and culture, not just teacher roles, functions, organizational structure, and managerial aspects, among others. Educational leadership is primarily concerned with the educational purpose of guiding and directing teaching and learning to improve "educational outcomes" for all students (Bush, 2003; Robinson, Hohepa & Lloyd, 2009). The secondary or consequential aspects of this concept may then refer to the key stakeholders of schools and their respective functions and roles. Educational leaders influence and manage the pedagogical goals and visions underpinning the instructional program to promote teacher learning and development for student improvement (Robinson et al., 2009).

This assertion is, in fact, very much consistent with the argument of Suleiman & Moore (1997) who have argued against the flawed supposition that 'leading' per se is intended for school administrators and teaching is designed only for teachers (p. 6). This was supported by Crowther et al. (2002) who have also contended that the notion that school administrators must assume formal leadership roles is "ill directed" (p. 49). This means that teachers, by virtue of their noble role and profession, possess inherent or intrinsic leadership functions. The emergence of the notion of teacher leadership successfully challenged the long-standing belief that educational leadership is purely hierarchical and positional that must only involve formal school leaders. Previous scholars like Killion (1996) and Whitaker (1995, p. 76) argued that the concept of teacher leadership is highly crucial in instituting significant changes and developments in a school setting, and that legitimate, long-term change proposals must involve teachers.

When considering the concept of educational leadership, Christie and Lingard (2001) suggested that it should be considered from three perspectives, which include leadership, management, and headship (p. 3). They further asserted that management and headship are not the same as leadership because they are more to do with structures and processes, with accountabilities, standards and responsibilities. Leaders gain their position from others – followers – but management and headship positions are specified from above by organizations; leaders function by influence (Murphy, 2005), whereas management and heads function more by compulsion.

Like Christie and Lingard (2001), Mayeski and Gaddy (2000) also purported the notion of leadership not being equivalent to management; they claimed that management, if they are to be leaders, need to adopt a 'stewardship' style or 'partnership and empowerment' style of

leadership wherein 'ownership and responsibility' are felt among the staff (p.10), and the main aim is to foster a shared vision for all.

In their study, Hallinger and Heck (1998) suggested that there is a need to understand the nature and concept of educational leadership, as they argued that any attempt at establishing a consistent structure condensing leadership issues is very limited. They do, however, offer the following suggestions— first, the notion of leadership is, in reality, swiftly evolving to satisfy and meet the needs and aspirations of society; second, in profoundly understanding the concept of leadership, there appears to be no single paradigm or theory for scrutinizing leadership traits and personalities that ought to be acceptable and applicable in all societal constructs; and third, a number of frameworks and models have been considered for examining and further researching educational leadership. This observation has a solid foundation in academic reality, as a number of scholars offer different views, concepts and studies related to teacher and educational leadership.

However the importance of teacher leadership, as far as it relates to such issues as commitment to students and learning process, continuous improvement of teachers' professional skills, participation in teaching community, effective engagement into students' learning etc., cannot be reduced to the issues of educational management. Teacher leadership touches upon complex psychological, motivational and professional aspects of educational environments and is firmly rooted in educational reform efforts.

According to Jones (2000), districts also play a significant role in influencing teacher leadership-directed policies that promote performance in schools. He argued that in the United States 'district management' plays a critical role in developing and influencing student's learning environment, thus promoting teacher leadership and student achievement (p. 75). To meet goals

and objectives, Jones (2000) explained that district management has to be effective and practical by negotiating and fixing ineffective structures of educational organizations and by adopting and implementing unambiguous student achievement objectives. Also, schools need to decentralize decision-making processes in order to encourage teacher participation and involvement. The reason for this is that a decentralized school management approach can be most effective and helpful when district and schools decentralize rewards, information, knowledge, and collaboration, including decision-making authority to teachers at the campus-level. To support his claim, Jones (2000) mentioned a study in which 12 effective school districts achieved success because of the presence of organizational dynamics, decentralized decision-making processes, instructional and curriculum focus, and good and conducive school climate and conditions.

In their study, Murphy and Hallinger (1998) identified the characteristics of instructionally effective school districts. They are shown in Table 2.

Table 2

Characteristics of Instructionally Effective School Districts

Conditions	Climate
Labor peace	Productivity focus
Board support	Improvement focus
Community acceptance	Problem-driven focus
	Data driven
	Internally focused
Curriculum and instructional focus	Organizational dynamics
Goal-driven	Rationality without bureaucracy
Established instructional and curriculum focus	Structured district control with school autonomy
Strong instructional leadership from the superintendent	Strong leadership with an active administrative team
Monitoring of instructional and curriculum focus	

Note. From Murphy & Hallinger, 1998, p. 26.

Table 2 shows that there is an intermingling, interdependent policy or relationship between schools and districts. The districts play crucial roles in affecting and pushing the extent to which the school-related policies (policies that focus on teacher leadership and student achievement) promote and guarantee teacher and student performance. Jones (2000) claimed that teacher knowledge and skills could be a single most significant determinant factor in

promoting student achievement. This is because teacher knowledge and skills characterize and ascertain the capability of schoolteachers to be efficient and effective in planning, developing, and delivering competent instruction to their students.

In an earlier study on teacher leadership, Pitner (1988) suggested that school efforts to transform teachers into leaders in order to improve student achievement requires a functional, realistic framework for conceptualizing and conducting studies on administrative effects. Like many researchers, Pitner (1988) purported that a school principal plays a significant and critical role in achieving and meeting school effectiveness. He then identified a number of significant methods that could be applied to study school administration effects. These methods or models are as follows: antecedent effects, direct effects, reciprocal effects, mediated effects, and moderated effects. It was suggested that the main importance of these models is that they could be used for understanding and knowing the impacts of the school context on administrative performance, as well as the influence of this performance, on the school as a whole and its results (Hallinger & Heck, 1998; Pitner, 1998).

The direct-effects framework, which represented the norm among principal effect studies prior to 1987, postulated that leadership practices can have a significant impact on intended school goals (Hallinger & Heck, 1998). By contrast, a mediated-effects model suggests that a school leadership program is able to meet its goals through mediated or indirect processes. This means that a number of external contributors such as other stakeholders, events and organizational factors (e.g., educational culture, instructional methods, and teacher commitment, etc.) contribute to the results desired by school administrators (Leithwood, 1994).

The reciprocal-effects framework, on the other hand, emphasizes the reciprocal relationship between the school administrators and the school culture, environment and other

22

important features (Hallinger & Heck, 1998). This type of leadership framework requires that teacher leaders adapt to the school in which they work. According to Hallinger and Heck (1998), school principals play an indispensable role by establishing a culture of leadership in the school by means of a flow of communications and dealings over a period of time solving and fixing critical school issues, such as poor student performance, teacher commitment, and staff morale, among others. For instance, teacher leaders may propose radical changes in the school's curriculum or even teaching methods causing abrupt adjustments in the school's condition and state and, in turn, attracting reactions and views that ignite reciprocal effects in educational leadership.

To further explore, the relationship between teacher leadership and school administrators, it is important to understand the history of the origin of teacher leadership, and how it has been practiced in the past. As such, the next section discusses and details the history of teacher leadership.

History of Teacher Leadership

The idea of teacher leadership is not new and it is increasingly gaining attention in this period or era of school reform and educational improvement. As early as 1943, educational practitioners and politicians understood that democratic society could greatly improve and flourish with teacher leadership as was seen in their tendencies to strengthen leadership structures in schools (Koopman, Miel & Misner, 1943, p. 165). The tendencies that were identified by the authors pointed to the fact that there was presence of teacher leadership in schools then. During the years between 1904 and 1947, researchers who conducted studies on leadership found a number of personal factors related to leadership, some of which include status, participation, responsibility, achievement or accomplishment, and capability (Yukl,

1998). However, between the 1940s and 1950s, only a few studies focused on how personality traits and capabilities were associated with leadership studies. This little attention was mainly due to the observation that the early trait or personality approach led to confusing and non-significant conclusions (Hoy & Miskel, 2001). As a result, the effort to look for common qualities of leadership of men and women in the teaching profession proved futile (Shorter & Greer, 1997, p. 18). During that period, early researchers and analysts described the early teaching profession as authoritative, bureaucratic, and hierarchical. According to John Dewey (1940), the educational structure during and before 1940s was to have "one expert dictating educational methods and subject to a body of passive recipient teachers" (p. 64). This general attitude or culture in the teaching profession, Dewey (1940) described, simply "asserted that the existing corps of teachers is unfit to have a voice in the settlement of educational matters" (p. 67). Many researchers and scholars agree with this observation, as Theodore Sizer (1983) also observed that the country's authoritative and hierarchical education system are structured in "pyramid tiers, with governing boards and administrators at the peaks and the classrooms at the base" (p. 206).

The history of teacher leadership was largely embedded in the decades-long education reforms in the United States. Silva, Gimbert, and Nolan (2000) claimed that a three-phase process characterized the nation's teacher leadership. The initial phase, which took place more than fifty years ago, focused on teachers' managerial role. It was the period in which teachers began to assume managerial functions such as union representative, master teacher, head teacher, and department chair. The second phase of teacher leadership which commenced in the early sixties emerged to supplant the shortcomings of the first phase, focused on instructional leadership. It was the period in which schools capitalized on teacher instructional skills and

knowledge. A number of leadership positions were introduced, such as staff development, curriculum developer, and team leader. Another area of leadership involves curriculum design, which in the past was not attributed to teachers; in the early twentieth century teachers were mostly women and thus not considered as able or encouraged to take responsibility for curriculum other than to teach it (Handler, 2010). By the end of the century however, many educators asked for teacher involvement in curriculum development in the realization they knew better what students required because they were in the trenches. Most of this involvement however has been limited to the specific class, program or school in which the teachers work, and according to the literature, their involvement has not induced any real change in curriculum (Handler, 2010).

These positions allowed teachers to collaborate with their colleagues to improve the school's standards or quality of instruction and methods of teaching. The last wave of teacher leadership took place during the 1990s. This phase led to the adoption of informal leadership in which teachers enabled other teachers to improve and develop and increased teacher collaboration (Silva, Gimbert, & Nolan, 2000).

According to Whitsett and Riley (2003), the leadership role of teachers in the past was one of a representative. It was only when schools expanded in the early 20th century that the concept of administrative leadership was adopted and practiced in schools across the country. However, significant changes emerged in the past two decades, as the adopted education reforms gradually established the concept of teacher leadership in American schools (Smylie, Conley & Marks, 2002). Much of these significant education reforms that changed America's educational setting were implemented about two decades ago. The reforms and initiatives sought to reinforce and improve the nation's educational system by emphasizing leadership roles of

teachers. These changes followed two critical reports: *A Nation at Risk* (1983) and *A Nation Prepared: Teachers for the Twenty-first Century* (1986). These reports challenged the effectiveness of educational system and put the United States on alert. These reports called for high standards and improved accountability. Both reports reference teacher quality as one of the major ways to improving education. The authors of *A Nation Prepared: Teachers for the Twenty-first Century* (1986) suggest that teachers become leaders in curriculum, pedagogy, school restructuring, and their own collective professional development. The core idea was teachers be enabled to take control of their profession. These reports synthesized a solid understanding of teacher quality as one of the major ways to improve education.

As mentioned, there was a shift of ideology that led to education reforms and ultimately to the reassessment and redefinition of the leadership role of teachers in schools. This ideological shift, according to Wynne (2001), was characterized by a gradual transformation from top-down, hierarchical leadership models to a shared decision-making model that seeks to involve teachers in decision-making processes, schools' leadership roles, and even community issues. Given that the history of teacher leadership is synonymous with its establishments in the subsequent years, the next section examines how teacher leadership has been established over the years.

Establishment of Teacher Leadership

During the past two to three decades, scholars and teachers began to appreciate the importance of previous teaching practices and methods. This resulted in the development and adoption of subject-centered methods, practices and theories that forever altered teacher-student interactions in classrooms (Field et al., 2000). Previous to this, during the period to the early 1980s, teachers were considered middle managers with respect to their leadership role, with one

26

individual designated as the head teacher and others considered subordinated to this "master of subject" (Field et al., 2000, p. 13).

In the 1980s, a group from the National Standards for Subject Leaders (NSSL) surfaced to facilitate subject-oriented teacher leadership (Field, et al., 2000; Teacher Training Agency, 1998). This organization recommended that students need a profusion of knowledge of a matter or an issue to perform and carry out their classroom activities and to make sure they achieve comprehension of a given topic beyond the classroom.

Apart from the establishment of NSSL, the National Board for Professional Teaching Standards (NBPTS) was created in 1987 after the Carnegie Forum on Education and the Economy's Task Force on Teaching as a Profession released *A Nation Prepared: Teachers for the 21st Century*. The primary task of the board was to direct schoolteachers in the knowledge and skills they should acquire and improve. It was also tasked to enhance student learning in school settings. It was in 1989 when the board first issued its policy that set what school mentors should know and be able to do. This policy, which was considered the board's philosophical stand, led to the development and improvement of the standards and criteria, which was used in the evaluation process for proficient teaching in each certification area.

The board's policy embraced five important. These core proposals were as follows:

- Schoolteachers need to be committed to their learning methods and to imparting important knowledge to their students.

- Teachers need to achieve proper education and to acquire competence and the required knowledge in the subject areas they teach.

- Teachers need to be responsible for supervising and handling school learning and teaching processes.

- Teachers need to possess systematic mindset with regard to their teaching practice and methods.

- Teachers need to be members and active in learning communities. (NBPTS, 1989, p. 12)

The abovementioned crucial proposals all propose teachers becoming leaders in the classroom, the education institution, and the educational community. They have helped to make teacher leadership and teacher professionalism synonymous (McCay, et al., 2001). The National Board Certification proved to be an effective reform initiative, as the number of National Board certified teachers (NBCTs) expanded to more than three percent of all teachers for the past several years (NBPTS, 2010). Today, teacher leadership has become a crucial concept in the education sector, as colleges and other educational institutions offer certifications in teacher leadership as part of their efforts to improve teacher quality.

These reforms and policies transformed the education sector from a passive organization into an active one by empowering teachers and giving them the opportunity to lead and to guide their peers or colleagues. The main objective or goal of these reform initiatives, and education programs and policies is to improve the quality of education in order to ameliorate student achievement. In other words, the policy changes and developments that focused on the education sector resulted in the creation of the "teacher leadership" concept. The acknowledgement of teacher leadership as a crucial concept in education, however, requires understanding of how its theory relates to practice in real educational settings (Darling-Hammond, 2001). The history of educational leadership formation was accompanied by simultaneous theoretical development in which various aspects of educational leadership were addressed. It assists in defining the difference between an effective teacher and a teacher leader

in the sense that effective teachers ensure achievement within the ordinary job descriptions, whereas teacher leaders are those who are full-time classroom teachers, but assume additional leadership responsibilities. In the following sub-section we study the diversity of conceptual models of educational leadership.

Leadership Models

Despite the number of conceptual frameworks that are used to examine the dynamics and nature of effective educational leadership, transformational leadership and instructional leadership are two main methods that have dominated the principle-effects research since the early 1980s (Leithwood & Duke, 1998). Leadership models are important in understanding the dynamics and effectiveness of educational leadership—how they achieve the desired outcomes or whether a particular approach works better than other leadership approaches. After studying different leadership concepts, qualities, styles and methods, Leithwood and Duke (1998) came up with six main leadership categories referred to as models.

While the leadership models done by Leithwood and Duke (1998) may not specifically be for teacher leadership, the fact that they are more suited for school environment leadership informs an understanding of why they are used in the study. The models identify the pathways for leadership practices and programs, and how they are influenced by different variables. The following are the six broad leadership models with their respective description.

Instructional leadership. This model suggests that all crucial, important decisions are guided by some critical factors (necessity, school goals, funding, etc.) to make sure that the quality of instruction is at the top of the list of activities of the school (Daresh, 1991). Andrews, Basom and Basom (1991) explained that the school principal, being the main instructional leader, should focus less on doing this right and more on "doing the right things" (p. 97). This is

because the school principal ought to know the things that can help uplift and enhance student performance and achievement. Thus, instructional leadership, according to Foriska (1994), is "critical to the development and maintenance of an effective school" (p. 33). This means that principals must be able to influence teachers, particularly instructional leaders, to contribute the necessary resources, methods and materials teachers need to employ suitable instructional activities. Smith and Andrews (1989) thus explained that an instructional leader must be a resource provider, instructional resource, effective communicator, and must have visible presence.

In their study, Blasé & Blasé (1999, p. 132) found that in an efficient principal-teacher interface on issues of instruction, certain processes tend to establish repertoires of workable alternatives rather than gathering inflexible processes. Such are the experimentation, exploration, reflection, and inquiry, teachers, strategies, and systems as found in the school contexts. Based on their research, there are two major themes related to effective instructional leadership; promotion of professional growth, and engagement with teachers to promote reflection.

In terms of talking with teachers to promote reflection, Blasé & Blasé (1999) observed that effective dialogues or communication between principals and teachers could encourage the latter to reflect on and share their individual learning and professional practice and methods (p. 133). This communication is comprised of five main talking strategies, which include:

- Offering feedback;
- Making suggestions;
- Modeling;
- Using inquiry and seeking advice and opinions; and

- Making praise.

In terms of promoting professional growth, Blasé & Blasé (1999) found that principals applied at least six core strategies to promote professional growth in their respective schools, which include:

- Stressing the study of coaching and learning;

- Assisting and involvement in collaboration efforts;

- Establishing coaching relationships among teachers;

- Assisting and encouraging redevelopment of programs;

- Using the principles of adult learning, development, and growth to all levels of staff development; and

- Supporting and employing action research (p. 135).

Transformational or transformative leadership. This leadership model demands that principals do the right thing by motivating and elevating others, initiating reform and important developments, and defining values and offering a clear vision for the school (Burns, 1978). It is the duty or responsibility of transformational leaders to motivate followers to translate school visions and goals into concrete outcomes noted by Burns (1978):

- Improving the subordinates' level of awareness concerning the value and significance of achieving desired or targeted goals.

- Encouraging subordinates to cooperate with other leaders for the sake of the organization or the team.

- Uplifting subordinates' need levels to the higher-order needs such as self-actualization.

31

According to Bennis (1983), the main advantage of transformational leaders is that they possess the following key competencies and abilities: communication and alignment; vision; focus, consistency and persistence; empowerment; and organizational learning.

Moral leadership. This type of leadership, according to Sergiovanni (1992), can convert schools into learning communities and motivate service, devotion, and commitment, key values that can nourish schools through rapidly evolving times. Sergiovani (1992) also defined moral leadership as "the authority of felt obligations and duties derived from widely shared professional and community values, ideas, and ideals" (p. 42). This definition suggests that this type of leadership can be a source of authority or influence that encourages teacher leaders to become followers rather than accepting leadership as an imposed responsibility.

Participative leadership. This type of leadership calls for teacher leaders to act as a group or a team, sharing and cooperating with each others for the achievement of a common or desired goal (Leithwood & Duke, 1998). This model postulates that teacher leaders collectively take or assume most decision-making processes.

Managerial leadership. This model postulates that the main focus of teacher leaders ought to be on behaviors, tasks or activities, and functions, and if these teacher-related functions are performed effectively the functions or responsibilities of other school members are sustained or assisted (Leithwood & Duke, 1998). It is very much evident that much of a principal's function or duty is management-driven. This means that a principal must see to it that the school complies with laws or reforms, operate effectively and on budget, and adopt consistent policies and procedures (Smith & Piele, 1996). But this is not enough to fuel or sustain a school's desire to achieve its goals. Smith and Piele (1996) argued that schools also need to achieve the three

elements of leadership—"purpose, passion, and imagination" (p. 3). This means that the main function of school principals is to "manage things and lead people" (Smith & Piele, 1996, p. 1).

Contingent leadership. This leadership model postulates that schools need to adopt the most appropriate leadership style to achieve its goals. As Smith and Piele (1996) contend, there appears to be no single leadership style that applied in isolation that is suitable for all academic institutions. Thus, it is the duty of principals to discover a leadership model or style that is most appropriate for their respective schools, goals, and objectives (Coulon & Quaglia, 2001). According to Smith and Piele (1996), "leaders may, with good results, use any of a variety of styles and strategies of leadership including transformational and participative, depending on their reading of themselves, their followers, and the organizational context" (p. 3).

The next section gives a detailed description of the concept of teacher leadership by reviewing some of the significant meanings of teacher leadership as given by renowned researchers.

Definition of the Concept of Teacher Leadership

Previous studies and researchers offered numerous definitions of teacher leadership. It should be noted that such definitions were focused on the role of the teacher as leader and some focused on the teacher's ability and potential to be a leader. However, it is understood, as previous studies have suggested, that the notion of leadership has numerous definitions, yet all depend on a similar result: the kind of authority or influence that motivates or promotes a desired action or behavior on another's part (Zaccaro & Klimoski, 2001). The term 'teacher leadership' is, thus, a broad concept used in many ways to designate or illustrate leadership roles of teachers.

Scholars and researchers defined 'teacher leadership' in the following manner:

- Teacher leadership is defined by Wasley (1991) as "the ability to encourage colleagues to change and to do things they wouldn't ordinarily consider without the influence of the leader" (p. 64).

- Bolman and Deal (1994) considered that every teacher is a leader, while Kowalski (1995) considered teacher leaders to be teachers who are authorized and given the power to make pertinent decisions that impact on educational processes and educational outcomes.

- "Teachers are leaders when they function in professional communities to affect student learning; contribute to school improvement; inspire excellence in practice; and empower stakeholders to participate in educational improvement" (Childs-Bowen, Moller, & Scrivner, 2000, p. 28).

- Teacher leadership is defined as "teachers who are leaders lead within and beyond the classroom, identify with and contribute to a community of teacher learners and leaders, and influence others toward improved educational practice" (Katzenmeyer & Moller, 2001, p. 5).

- Recognition of teacher leadership comes from new understandings about organizational development and leadership that suggests, "active involvement of individuals at all levels and within all domains of an organization is necessary if change is to take hold" (York-Barr & Duke, 2004, p. 259).

- "Teacher leadership has expanded to include roles ranging "from assisting with the management of schools to evaluating educational initiatives and facilitating professional learning communities" (York-Barr & Duke, 2004, p. 259).

- Patterson and Patterson (2004, p. 76) defined teacher leaders as those who work with other teachers with the intent of, both informally and formally, providing improvement in teaching and learning. They claimed that formal leaders are empowered by school principals, while informal leaders are those who are identified and acknowledged by other teachers because of their abilities to provide support and expertise to other teachers, as well as developing and building on relationships among their colleagues.

- According to Murphy (2005), teacher leaders hold influence outside of the classroom and are autonomous in their own work (p.18). Still, they do not engage in managerial or supervisory tasks.

- Yendol-Hoppey and Dana (2010) have also affirmed that practice and culture-based concept of teacher leadership, saying "today, we embrace a third wave of teacher leadership where teachers are leaders in both creating and sustaining a collaborative culture and practice of learning in schools focused on improving instructional practice" (p. 27).

- English (2011) has affirmed the notion that teacher leadership is a practice or culture. English has argued that "recommendations for education administrators include: (1) developing a school culture that supports culturally relevant pedagogical practices; (2) the affirmation and inclusion of all students, teachers, parents, and educational stakeholders; the effective use of data to expose miss-assessment, disproportionate suspension/expulsion rates, race-based disciplinary trends, racially biased student tracking, and so on" (p. 34).

York-Barr and Duke (2004) have claimed that the concept of leadership is neither theoretically, nor functionally, adequately defined. They considered it to be a process wherein teachers, in an attempt to improve teaching and learning outcomes for students, manipulate and inspire all educational members of staff to enhance and further develop teaching and learning systems. They further claimed that teacher leadership incorporates individual, team and organizational development (p. 287–288). Similarly, Donaldson (2006) and Killion and Harrison (2006)(as cited in National Comprehensive Center for Teacher Quality, 2010), claimed that informal teacher-leaders are those individuals who take the initiative to become the go-between between staff and administration, monitor other teachers, marshal them for a mutual purpose, and to impart their experience, knowledge and skills of teaching to others.

For the purpose of this study, teacher leadership is defined using Yendol-Hoppey and Dana's (2010) definition, which states that "teachers are leaders in both creating and sustaining a collaborative culture and practice of learning in schools focused on improving instructional practice" (p. 27). This choice is informed by various supportive arguments. For instance, Yendol-Hoppey and Dana's definition is consistent with the view that teacher leadership is an ever-evolving process to meet societal needs, aspirations, and goals. Their definition is also consistent with most of the leadership models already mentioned above, as it speaks of maintaining a cooperative or collaborative learning culture and practice that focus on enhancing instructional methods and activities. Besides, leadership increasingly is being conceptualized as an organization-wide phenomenon (Ogawa & Bossert, 1995) in which organizational structures and roles are distributed (Manz & Sims, 1993).

Yendol-Hoppey and Dana (2010) argued that in order to foster learning culture and practice, a school needs to focus on 'teacher inquiry because it emphasizes the importance of

36

teacher improvement or development. This is consistent with other views that teachers must be

heavily and holistically involved in leadership models. As Korthagen et al. (2006) argued,

"Learning about teaching requires a view of knowledge as a subject to be created rather than as a

created subject" (p. 107). This means that teacher leaders must create knowledge for themselves,

rather than simply being fed knowledge.

The concept of 'learning/teaching culture' focuses on the ability and knowledge of

teacher leaders to initiate professional development and to improve instructional methods and

learning activities in order to guarantee student achievement. One process or program that can

sustain this culture is called 'job-embedded professional development' (JEPD) that could lead to

powerful learning (Croft et al., 2010). This idea or concept supports, or is consistent with,

Yendol-Hoppey and Dana's (2010) definition of teacher leadership that essentially emphasizes

powerful professional development. Examples of JEPD programs or activities that can motivate

and improve the culture of learning in schools include observing another teacher, coaching,

mentoring, and action research about student learning and other school issues. Job-embedded

professional development can:

- Eradicate costs (e.g., travel costs, registration fees, and time) and save both time and money.

- Be economical and less expensive than conferences, workshops, and courses.

- Take place in a number of ways both as shared and individual learning.

However, to be effective, JEPD must be based on an effective model or theory of change that

considers a number of factors or aspects, such as purpose, goals or agenda, learning processes,

timeframe, etc. Yendol-Hoppey and Dana (2010) warn that "in the absence of a theory of

change, job-embedded professional development can become an unsystematic piling up of a

group of unrelated experiences for teachers as they jump from strategy to strategy and/or collect

data here and there without intentionality or purpose" (p. 63). To be effective, shared JEPD must

have certain elements, which include the following:

- Agenda;

- Leadership oversight and support;

- Clearly defined objectives and expectations;

- Trained facilitation;

- Designated meeting time and place; and

- Meeting notes and schedules.

These learning cultures and processes are essential to increasing student performance and

achievement. This culture was aptly described in a previous policy paper as 'teacher

empowerment', as it focuses on teacher competence and teacher effectiveness initiatives (Bill &

Melinda Gates Foundation, 2010, p. 5). This policy paper identifies four major categories that

represent a readiness threshold that teachers need to consider:

- Collaborative commitment to action, vision and leadership, with the establishment or

  institution of a group of teacher leaders and to define and implement the vision of

  teacher effectiveness.

- A culture of information-fueled decision-making.

- Stakeholder cooperation and engagement.

- Reforms and policies that sustain improvement efforts.

What is clear about teacher leadership definitions is that teacher leadership primarily

relates to the ability of a teacher to assume crucial roles and to influence both his/her students

and colleagues. As Yendol-Hoppey and Dana (2010) argued, these crucial roles and influence

can be achieved through conducting teacher inquiry and job-embedded professional development programs and activities. Teacher leadership is reflected on teachers' ability to develop educational practices conducive to individual and organizational improvement. Teacher leadership, as Crowther and Olsen (1997) suggested, is also about development of progressive meaning systems and ideas that structure long-term strategies of teaching community.

The roles of a teacher are defined in many ways in terms of the society to which one belongs, the institution in which one works, the faculty room in which one prepares their lessons, and the classroom in which one teaches. This gives meaning to the teacher as a leader who goes beyond the four walls of one's classroom (Katzenmeyer & Moller, 2001). This includes one's responsibility to his/her students, faculty, and involvement in faculty development, school and classroom management and school and professional improvement (Clemson-Ingram & Fessler, 1997).

Based on these definitions, the role of the teachers focuses on three factors: namely, a student, a school principal or head, and his/ her fellow teachers (Pellicer & Anderson, 1995; Wasley, 1991). Most studies based on this definition are focused on the teacher leader's role in shaping his/her students, the teacher's relationship with his/her principal, or the role of the principal as a leader in the school in which one is a part. This leaves many areas in which there is a need to have in-depth understanding of the teacher leader as a whole, specifically, the relationship between teacher leadership and student achievement.

The literature not only exposes an overabundance of definitions of teacher leadership, but elucidates the consensus among scholars and researchers that leadership primarily refers to leadership practice and culture in schools. Also, what is clear is that scholars and researchers vary in terms of presentation, yet they agree on one thing: that teacher leadership is a practice

that needs to be recognized, developed, improved and allocated by schools in order to enhance student achievement and achieve a higher quality of education.

Important in understanding the concept of teacher leadership are the functions and roles of teacher leaders in their respective schools. As such, the next section elaborates on the roles and consequences of teacher leadership.

Roles and Functions of Teacher Leadership

Harris (2002) defined teacher leadership according to four factors: how their classroom practice benefits and improves the school overall; the extent to which their leadership is participative and provides colleagues with a sense of ownership on decision making leading to a common goal; how effectively they mediate between teachers, internal resources and outside resources; and how they create and build on relationships with and between teachers. Fullan (1992, as cited in Tse, 2006, p. 4) spoke of six roles for an effective teacher leader; they included knowledge of teaching and learning, collegiality, educational context, continuous learning, change processes and moral purposes. The next section discusses in detail the characteristics of teacher leadership.

Characteristics of Teacher Leadership

Based on existing literature, the core focus of teacher leadership is student achievement and/or learning. Various studies affirmed that teacher competency and performance have a profound effect on student achievement (Emmer & Evertson, 1979; Sanders & Rivers, 1996; Wright, Horn & Sanders, 1997). As Stronge (2012) argued, "If we want to improve the quality of our schools and positively affect the lives of the students, then we must change the quality of teaching. This is the best hope to systematically and dramatically improve education" (p. 1). This can be done by reforming the curriculum, conducting teacher evaluation, assessing student

performance, improving or developing teaching models and methods, among others. However, there are certain factors that teachers and schools need to sustain and adopt in order to achieve the core focus of teacher leadership.

According to Fullan (2007), the school principal plays a critical role in influencing teacher leaders. He argued that "the main mark of an effective principal is not just his/her impact on the bottom line of student achievement, but also on how many leaders he or she leaves behind who can go even further" (p. 95). Fullan argues that districts need to develop leaders who would replace retiring principals in many districts.

In teacher leadership models, the teacher leader accepts responsibility for activities and decisions that are made outside their classroom environment (Blasé & Blasé, 2000), and are involved in school reforms that have a bearing on the school processes and structures. They are willing and eager to work with all school staff with the aim of improving educational outcomes. In fact, the most recent roles of teacher leaders are more generalized, and according to York-Barr and Duke (2004), it is a global responsibility, which is reaching far from within the classroom walls. The aim of the teacher leader is to ensure the achievement of all teachers, students, and communities alike and reduce the role of the principal in the decision-making process (Sledge & Morehead, 2006).

In their study, Sanders, Wright and Horn (1997) examined the teacher leadership factors that significantly affect student academic gain. The researchers insinuated that evidence exists for wide variation among leader teachers with regard to their ability to influence students' achievements positively. Moreover, the researchers found that class sizes and classroom context variables of heterogeneity among students have non-significant impact on student achievement. Thus, they concluded that teachers play an indispensable role in improving student academics

and that teacher evaluation and standards can be used to monitor and improve teachers' performance.

As Yendol-Hoppey and Dana (2010) suggested, teacher leadership ought to enable teachers to create and offer a collaborative culture and practice of learning that promotes and supports student achievement. This means that teacher leadership has to establish and promote a culture in which teachers act together, collectively and collaboratively, to achieve a specific goal or purpose, with such a goal or purpose centered on student achievement. The means by which to achieve the purpose embodies all the practices, strategies, and methods that teacher leaders need to develop, adopt and practice in order to meet the school's targets or objectives. As Acker-Hocevar and Touchton (1999) stated in their study of six elementary teachers in Florida, teacher leaders need to "work within and across school boundaries and structures to establish social linkages and networks among their peers and within the community" (p. 26). This suggests that teaching personnel need to embody the characteristics of teacher leadership, which include innovation, productive relationships, professionalism, responsibility, care for students, enabling others, fairness, and advocacy.

The characteristics of teacher leadership thus embody what teachers ought to do inside the classroom. This is because teachers' awareness of their appropriate school functions and duties clearly suggest that they are responsible and caring and that they have imbibed a culture of professionalism and responsiveness. York-Barr and Duke (2004) listed a number of important functions that teachers ought to do (p. 266). Table 3 demonstrates the roles of teachers with regards to what they should do as leaders.

Table 3

Demonstration of the Roles of Teacher Leaders

Dimension of Practice	What teacher leaders need to do
Coordination management	• Coordinating daily schedules and important school events. • Partaking in important school and administrative meetings and events. • Monitoring and assessing improvement efforts; properly handling problems and issues.
School or district curriculum work	• Determining outcomes and teaching standards. • Designing, developing, selecting, and implementing school curriculum.
Professional development of colleagues	• Mentoring or coaching other teachers. • Organizing workshops. • Participating in colleague coaching. • Motivating professional growth of others.
Involvement in school improvement and changes	• Participating in school-wide decision-making processes. • Working together with colleagues for school improvement and development. • Assisting communities of mentor-learning through school-wide processes. • Involvement in research and other academic events. • Helping solve problems and dealing with the issues in the school's structures and cultures.
Parent and Community Participation	• Encouraging parent involvement; becoming involved with parents and willingness to deal with their concerns. • Encouraging and establishing alliance with community businesses and non-governmental organizations. • Working with community organizations and associations.
Pre-service teacher education	• Establishing and creating alliances or linkages with colleges and universities.

Source: York-Barr, J., & Duke, K. (2004). What do we know about teacher leadership? Findings

from two decades of scholarship. *Review of Educational Research, 74*(3), 266.

Overall, the above-mentioned teacher functions clearly suggest that the main characteristic of teacher leadership is the openness to create a school-based culture in which members have to be fully aware of their duties and responsibilities both as teachers and as leaders. This culture and awareness must, according to York-Barr and Duke (2004), translate to at least two-pronged positive actions—first, schools must openly express and communicate student learning and school development goals and associated priorities; and second, possible means and ways by which teachers can effectively perform their functions, influence others, help colleagues, and promote student achievement (p. 290).

In order to link the theoretical teacher leadership reviews and the study intentions, the study, in addition to the earlier leadership, models presents a conceptual framework upon which the study was aligned. The next section gives a detailed discussion of the conceptual framework that was used in the study.

Conceptual Framework

The framework guiding this study emerged from the Teacher Leadership Exploratory Consortium. The framework is comprised of seven major domains that interact with one another to define teacher leadership. The seven domains build a pathway to the final outcome of high student achievement. The main goal of these model standards "is to stimulate dialogue among stakeholders of the teaching profession about what constitutes the knowledge, skills, and competencies that teachers need to assume leadership roles in their schools, districts, and the profession" (Teacher Leadership Standards, 2008). The final Standards, which followed a format similar to that of the Interstate School Leaders Licensure Consortium State Standards for School Leaders, came up with a set of 'domains' that specifically define the critical context and

dimensions of teacher leadership. The Teacher Leader Model Standards' (2008) domains are as follows:

- Domain I: Fostering a Collaborative Culture to Support Educator Development and Student Learning.

- Domain II: Accessing and Using Research to Improve Practice and Student Learning.

- Domain 3: Promoting Professional Learning for Continuous Improvement.

- Domain 4: Facilitating Improvements in Instruction and Student Learning.

- Domain V: Promoting the Use of Assessments and Data for School and District Improvement.

- Domain VI: Improving Outreach and Collaboration with Families and Community

- Domain VII: Advocating for Student Learning and the Profession

Domain I: Fostering collaborative culture. In defining teacher leadership, the consortium used York-Barr & Duke (2004) definition, which states that teacher leadership is "the process by which teachers, individually or collectively, influence their colleagues, principals, and other members of the school community to improve teaching and learning practices with the aim of increased student learning achievement" This definition suggests that promotion and establishment of a collaborative culture is the number one step in supporting educator development and student achievement.

The educators also identified the nature or characteristics of teacher leadership, which are as follows (Teacher Leadership Standards, 2008):

- Teacher leadership differs from other school leader roles. The term does not refer to positional role or authority, but to the idea that schoolteachers assume leadership

roles by influencing their colleagues and their community, using their skills to improve student achievement, being approachable, being continuous learners, and being respected by their colleagues in the profession.

- Teacher leadership can improve the capacity of the principal to improve instruction and to promote best practices among their peers.

- Teacher leadership supports behaviors and strategies related to improved student achievement.

- Teacher leadership necessitates a shift in the culture of schools. This is in line with Katzenmeyer and Moller's (2001) assertion that teacher leadership can be a potential catalyst for change.

- Teacher leadership requires new organizational roles and structures that support the school's goals and aspirations.

A collaborative culture signifies that a school encourages distributed or collective leadership style, which is opposed to hierarchical or authoritative form of leadership. There are two main advantages of this leadership style: 1) it allows 'division of labor', encouraging teacher leaders to participate in decision-making processes 2) it reduces possible errors or mistakes arising from decisions and actions based on flawed or limited information (Leithwood & Mascall, 2008, p. 530). As Leithwood and Mascall argue (2008): "Distributed leadership also enhances opportunities for the organization to benefit from the capacities of more of its members; it permits members to capitalize on the range of their individual strengths; and it develops among organizational members a fuller appreciation of interdependence and how one's behavior effects the organization as a whole" (p. 530).

Domain II: Accessing and using research. Teachers' access to and use of research is one of the potential ways to improve instruction, teaching methods, teaching practice and student learning. This confirms the study conducted by Waters, Marzano and McNutty (2003), who argued that schoolteachers need to possess the tools; educational resources, strategies and techniques; skills and knowledge to improve student achievement. Under this domain, the essential functions of a teacher leaders include the following: a) helps peers in using and accessing research in order to choose the most suitable strategies to enhance student learning; b) evaluates student learning data and other teaching processes to enhance teaching and learning methods; c) supports peers in cooperating with other organizations and higher education institutions engaged in the study of important educational issues; d) supports and coaches peers to gather, evaluate, and relay data from their classrooms to enhance teaching and learning (Teacher Leadership Standards, 2008).

Blasé & Blasé (1999, p. 137) found that implementing action research is one effective way to inform instructional decision-making. They discovered that teachers were encouraged by the fact that effective principals made efforts to implement the use of action research in their respective schools as part of their staff development. This finding is consistent with a previous study (Calhoun, 1994) that without available research tools and data about learning, teachers fail to properly ascertain the impacts of what they do inside the classroom. Calhoun (1994) made the following observation:

> By centering action on the careful collection of data to diagnose problems, a disciplined search for alternative solutions, an agreement to act, and the conscientious monitoring of whether and how much the solution worked with a recycling of the process, either attacking the problem again or focusing on another one we live the problem-solving

47

process for ourselves and model it for our students. The potential is the development of a professional ethos in which members of the organization continually strive to improve their performance by learning to solve more and more problems. (p. 8)

Domain III: Promoting professional learning for continuous improvement.

Promotion of professional learning is the key to continuous improvement at school. This is supported by previous research and studies that looked into the critical role of continuous learning on the development and improvement of teaching methods, instruction, practices, and ultimately, student achievement (Sillins & Mulford, 2002, p. 425). According to the Consortium, the teacher leader has the ability to properly understand the evolving nature of teaching and learning processes, the school community, and the available and emerging teaching technologies (Teacher Leadership Standards, 2008).

This particular domain is consistent with Yendol-Hoppey and Dana's (2010) theory that teacher leadership should focus on promoting and sustaining a collaborative culture and practice of learning. Since the teaching profession requires a continuous learning process, teacher leaders must be open to the idea that they need to update themselves with the current teaching methods, instructional materials, teaching concepts, including current political and social issues. Previous research suggests that effective teacher learning emphasizes academic content (Kennedy, 1998; Yoon et al., 2007), and current studies suggest that effective instructional development and teacher learning also require teaching personnel vigorously working together to evaluate student performance and achievement records, discover effective instructional methods and systems, and institute a culture of constant enhancement and development of teaching and learning (Darling-Hammond, 1997; Gallimore et al., 2009). For instance, a research study of 15 Title I schools discovered that schools where teachers embarked on continuous learning and updating were able

to meet their desired outcomes. Teachers in nine schools met regularly in order to tackle student-learning issues, develop possible solutions, and test the solutions in their respective classrooms, and it was found that student percent proficiency improved and even exceeded district averages after five years (Gallimore et al., 2009).

Blasé and Blasé (1999, p. 135) argued that this domain can be achieved through encouraging the study of coaching and learning. Based on their study, principals who offered their teachers staff development opportunities achieved positive results. Blasé and Blasé explained that these teacher opportunities (e.g., support for innovation, teacher input, discretion in attending programs) "resulted in increased teacher innovation/creativity, risk-taking, instructional focus, as well as effects on motivation, efficacy, and self esteem" (p. 135). This strategy gave teachers voice and choice; thereby, motivating them to learn new things they need to properly perform their teaching jobs.

Domain IV: Facilitating improvements in instruction and student learning. In terms of facilitating improvements in student learning and instruction, teacher leaders, according to the Consortium (2008), has the capacity to exhibit a profound understanding of the teaching and learning methods and then apply this knowledge to improve the professional skills and capabilities of their peers. In his study, Muijs (2003) argued that continuous improvement on the part of teachers could have beneficial effects on teacher motivation and retention, teacher and school effectiveness, school improvement, and student achievement.

One way to ensure student achievement in several schools and districts in the United States is the implementation of student retention policy. In 1995, efforts were made to reform Chicago schools by retaining students at grade until they satisfy minimum passing standards (Allensworth & Miller, 2002). Under this reform, students in the third, sixth and eighth grades

who failed to meet a minimum student score on the Iowa Test of Basic Skills were either retained or required to attend academic preparatory centers. This policy, however, discouraged dropouts to attend high school, a situation that gave an overall improvement in the performance of students who attend high school. A number of studies have suggested that strict retention policies rarely generate good results and often have negative impacts on student learning and behavior (Darling-Hammond, 1998; McCoy & Reynolds, 1999; Westbury, 1994).

In their study, Newman et al. (2001) found that instructional program consistency has inspiring, positive effects on student achievement in reading and mathematics in elementary schools. The researchers defined 'instructional program consistency' as "a set of interrelated programs for students and staff that are guided by a common framework for curriculum, instruction assessment and learning climate and that are pursued over a sustained period (Newman et al., 2001, p. 297). In designing instructional program consistency, teachers need to have strong leadership, as it encourages teachers' professional collaboration and a collective devotion to the program. According to Newman et al. (2001), leadership values include the decision to design and use a common model that should be made a priority for the school, the willingness to apply that model or framework, the initiative to motivate other teachers to collaborate with their peers to apply the framework, and the ability to offer constant training for staff in the application of the framework or model.

Domain V: Promoting the use of assessments and data. Teacher leaders are knowledgeable about school-based data, design and selection of suitable summative and formative assessment methods. They are also knowledgeable about current research and share their knowledge with their colleagues. With respect to this domain, the teacher leader has the following functions: improve the capacity of peers to use and identify multiple evaluations tools

aligned to local and state standards; cooperate with peers in the design, application and evaluation of student data; promote a culture of trust and critical reflection; and work with peers to apply data findings and assessments to promote a shift in organizational structure and instructional methods to enhance teaching and learning practices.

Part of an effective culture of learning and teaching is the use of assessment and data. Crowther et al. (2002) tackled the importance of assessment practices in improving student performance and achievement. The researchers developed a six-pronged model for teacher leadership designed to capture the essence or value of how teachers lead. Using this model, the researchers described teacher leaders as achieving legitimacy in their assessment, learning, and teaching methods and strategies; communicating belief or confidence about a better world, converting practical ideas into concrete events wherein teachers lead together; establishing a culture of learning and teaching through organization-wide processes and strategies; dealing with problems and issues in the school's structures and culture; and cultivating a culture of achievement and success. Here, Crowther et al. suggested the importance of collective leadership and of developing and establishing a culture of success.

To be effective, teacher practices, which include instruction, must be properly and effectively aligned with assessment practices. In a number of previous studies, it was found that the alignment of instructional practices with evaluation practices is positively correlated with student achievement in science, reading, and mathematics (Marcoulides, Heck & Papanastasiou, 2005; Rowan et al., 2002). Furthermore, it was found that aligning instructional content with student evaluation processes distinguishes high-performing from low-performing schools. The use of formative assessment is also being encouraged by researchers, as it is associated with student achievement in reading and mathematics (Schacter & Thum, 2004), and science and

mathematics at all school levels (Wenglinsky, 2000). Normative assessment is the practice of

regularly evaluating the amount or level at which students are absorbing knowledge and

providing the necessary feedback that suggests they actually learn. This means that assessment

practices should be made part of the school's teacher leadership culture in order to guarantee

student achievement at all levels.

Domain VI: Improving outreach and collaboration. There are a number of factors

that could impact educational processes and student learning. Teacher leaders deeply understand

that some of these factors include communities, cultures, and families. York-Barr and Duke

(2004) have argued parent and community involvement, participation in school change, and

contributions to the teaching professions are essential parts of teacher leadership. In his study,

Cotton (2000) identified a number of effective-schooling attributes, which include parent and

community involvement, supportive classroom climate, and strong administrative leadership.

This shows teacher leaders know how to work with their peers in promoting community

development and collaborating with families, community leaders, and other stakeholders to

increase opportunities for student learning and enhance the educational system.

Improving outreach programs and engagement suggests the value of collective

leadership. Research strongly suggests that parental collaboration with teachers or the school has

a strong positive impact on student achievement (Jeynes, 2003; Lee & Bowen, 2006). However,

the extent and meaning of parental involvement is still unclear and undefined. According to

Wahlstrom et al. (2010),

> While some argue that parental involvement is the responsibility of the school, others
>
> conclude that 'subtle aspects' such as parenting style and parental expectations, which are

not easily influenced by schools, have a greater impact on student outcomes than more

explicit forms of involvement such as helping with homework (p. 9).

On the other hand, teacher collaboration, which is inspired by collective leadership,

encourages teacher leaders to work together and to tackle various student problems, instructional

issues, and others. In their study, Leithwood and Mascall (2008, p. 535) established a

correlation between collaborative or collective leadership and student achievement, as it enables

the following antecedents of teacher performance: professional capacity, motivation, and work

settings. The authors argued that these antecedents of performance are "variables in a general

model of employee performance and how it improves" (Leithwood & Mascall, 2008, p. 534).

Figure 3 thus shows the relationship between collaborative or collective leadership, its three

variables, and student achievement.

Adapted from Leithwood & Mascall, 2008, p. 534

Figure 3. Variables of Collective Leadership

Domain VII: Advocating for student learning and the profession. One of the

important roles of teacher leaders is to influence educational policies and advocate significant

educational reforms that can improve student learning, as well as the teaching profession. The

final paper of the group of concerned educators states that "the teacher leader understands how

educational policy is made at the local, state, and national level as well as the roles of school teachers, boards of education, legislators, and other stakeholders in formulating those policies" (Teacher Leadership Standards, 2008). According to Johnson (2007), teacher leaders should know when to voice their views and opinions on important education and policy issues that affect their profession. It is also the duty of teacher leaders to inform parents, community leaders, and other stakeholders about significant education and policy issues that can potentially affect the entire education sector (p. 42). Part of teacher leaders' functions include sharing information with their peers concerning how local, state, and national policies and programs can affect classroom practices, collaborating with peers to identify and apply research, advocating for access to professional and academic resources, including access to financial support.

A solid distinction must be made between teaching personnel as 'teachers' and as leaders. York-Barr and Duke (2004) argue that teaching personnel who act as teacher leaders are usually found to have a solid foundation of teaching expertise and experience (p. 267). Table 4 shows the qualities, qualifications and characteristics of teaching personnel as teachers, and Table 5 shows qualities, qualifications and characteristics of teachers as leaders based on existing research and studies.

Table 4

Teaching Personnel as Teachers

As Teachers
• Solid experience in their teaching fields and excellent teaching skills (Fullan, 1992).
• Extensive knowledge of context area, and curriculum, teaching and learning (Katzenmeyer & Moller, 2001; Lieberman et al., 1998).
• Solid personal philosophy of education and teaching (Katzenmeyer & Moller, 2001).
• Innovative, creative, willingness to deal with challenges and growth, take risks, and life-long learners (Wilson, 1993).
• Valued and respected by peers for his professionalism, competence, and willingness to share ideas (Little, 1988).
• Willingness to assume individual responsibility for decisions and actions (Crowther et al., 2002).
• Receptiveness and sensitivity to the ideas, feelings and thoughts of others, particularly his/her colleagues (Yarger & Lee, 1994).
• Affective and cognitive flexibility (Yarger & Lee, 1994).
• Hard-working, strong organizational and administrative aptitude and skills, and ability to manage and meet workload (Lieberman et al., 1988; Wilson, 1993).

Table 5

Teachers as Leaders

As Leaders
• Ability and willingness to build rapport and trust with peers, influence school culture and policies, work collaboratively with others, and establish meaningful relationships (Lieberman et al., 1988; Sherrill, 1999).
• Promote growth among peers, supportive of colleagues (Lieberman et al., 1998).
• Highly effective in communicating with others, including good listening skills (Yarger & Lee, 1994).
• Ability to deal with conflict, to negotiate and mediate, and to solve problems (Yarger & Lee, 1994).
• Capacity to evaluate, analyze, and prioritize school and teacher needs and concerns (Sherrill, 1999).
• Deep understanding and appreciation of organizational diagnosis, as well as the major problems and concerns that confront the organization; ability to analyze and assess the broader impact of decisions and actions implemented by school administrators and teachers (Lieberman et al., 1998).

Teacher leadership involves teamwork and shared decision-making, teacher-leaders must know how to collaborate and cooperate with their peers, students, parents, and communities. They should be willing to initiate and participate in collegiate support groups to encourage one another and reflect on their practice. They should have a voice when deciding on professional development activities, improved curriculum programs, and forms of school wide assessment. They should carry out action research to improve their pedagogy and share the findings with their colleagues.

Ingersoll (2003) explored the significance of risk-taking and active involvement in decision-making processes in school development and activities. In "*Who Controls Teachers*", Ingersoll (2003) investigated how teachers are held accountable as they discharge their duties. In his findings, Ingersoll (2003) demonstrated that American teachers have control in the areas of instruction, but have limited influence on administrative and leadership roles in their schools. He has also argued that teachers need to know how to take risk and to participate in school decision-making processes and endeavors. As York-Barr and Duke (2004) have argued, improvement in instruction necessarily entails leadership by teachers in classroom and with colleagues. Enhanced instructional performance is one of the goals of a teacher leader in order to fulfill student achievement and learning. What teacher leaders seek is not power or authority, but independence and control of their professional career (Gonzales, 2004).

Donaldson (2006) argued that teacher collaboration involves working together for a common benefit in the school. In most cases, teachers work together to improve the curriculum, assessment methods, and in many other areas which may crop up in the process of running the school. Working in a collaborative way, as stated by Darling-Hammond (2001) leads to better learning in students and to a better school management. When teacher leaders work together, the different departments of the school are not run individually but rather in a holistic way which is more productive. Teacher leaders should know how to take risk and participate in school decision-making processes and endeavors. Teacher participation eases the complexities introduced by a new curriculum or by the need to refine an existing curriculum.

Positive influence on teachers through teacher leaders are occasioned by different issues which need decision making every day in the school setting including: pedagogy, teaching materials, and learning activities. Teacher leaders should also know how to demonstrate

expertise in instruction. Enhanced instructional performance is one of the goals of a teacher

leader in order to advance student achievement and learning. According to Silva et al. (2000),

participatory governance, colleague collaboration, and shared decision-making are "positions

that capitalize on teacher instructional knowledge" (p. 780). They further argue that these new

opportunities and systems shifted teachers away "from management and toward pedagogical

expertise" (p. 780). On the other hand, Sherrill (1999) has contended that a teacher leader needs

to possess sound pedagogical knowledge and excellent classroom instruction, plus the ability to

appreciate the concept of learning and to apply efficient classroom practices. Darling-Hammond

(2001) has argued that teacher leaders should be open to new instructional methods or new

models or ways of learning.

Given that the current study focuses on the relationship between teacher leadership and

student achievements, the next section discusses the values of teacher leadership as related to the

students' achievements.

Value of Teacher Leadership as Related to Students

Previous research and studies affirm that leadership is generally linked to student

achievement (Waters, Marzano & McNutty, 2003; Witziers, Bosker & Kruger, 2003).

Researchers argued to guarantee and serve student achievement and learning, teacher leaders

need to improve teaching or instruction quality (Childs-Bowen, Moller & Scrivner, 2000; Hirsch,

2006; York-Barr & Duke, 2004). This is because teaching expertise or effectiveness is at "the

foundation for increasing teacher quality and advancements in teaching and learning" (York-Barr

& Duke, 2004). Such effectiveness is only achieved when teacher leaders collaborate and

cooperate with their colleagues, coach or mentor new teachers, share best teaching practices and

methods, and apply effective instructional models and practices. Therefore, teacher collaboration is essential in the achievement of teacher effectiveness, which is central to this research.

A school or educational institution may be able to enhance teaching quality by supporting staff development needs. To identify teachers' developmental needs, the school needs participation, collaboration, teamwork, and decision-making skills of teacher leaders. To improve teaching quality and competence, Lieberman, Saxel, and Miles (1988) have argued that teacher leaders need to build skills and confidence in others, to select effective instructional materials, to manage the leadership work, to deal with the change initiatives, and build rapport.

Meeting student achievement needs two crucial factors: collaboration and professional learning communities. In terms of collaboration, York-Barr and Duke (2004) have argued teacher collaboration leads to professional growth, because "teacher leaders grow in their understandings of instructional, professional, and organizational practice as they lead" (p.288) As for administrators and supervisors, they also need to be prepared for "collaboration and interactive leadership, dynamic leadership, and career-long professional development,"(p.277) simply because the role of superiors and principals need to be redefined "from instructional leader to developer of a community of leaders within the school" (York-Barr & Duke, 2004, p. 277). Another study also highlighted the importance of teacher collaboration in improving student achievement (Goddard, Goddard & Tschannen-Moran, 2007).

On the other hand, professional learning communities (PLC) offer and preserve the most valuable features of learning (Stoll & Louis, 2007, p. 188). The main objective of PLCs is to promote collaborative or shared learning among teaching colleagues within a particular work setting. Professional learning communities are not built or established as "superficial quick fixes

of change", but to sustain and engender sustainable developments and upgrading, as they construct the capacity that makes academic and learning success possible.

The main characteristics of professional learning communities are (Dufour, 1998):

- Shared values and vision that encourage collective commitment of teachers and school staff;

- Openness to new ideas;

- Collaboration or cooperation to achieve shared goals;

- Willingness to experiment or to discover new teaching methods or concepts;

- Continuous learning and improvement;

- Reflection of the actions taken.

Professional learning communities can have a strong impact on teaching practice and student learning. In their study, Vescio, Ross and Adams (2008) note the adoption of strong learning communities could improve students' learning habits and teaching methods (p. 80). They found that "well-developed PLCs have positive impact on both teaching practice and student achievement." This being the case, PLCs have fundamental relevance to both teacher leadership and student achievement and therefore important in the objectives, context and scope of this research.

Previous researchers and studies, therefore, support the idea that the fundamental purpose of teacher leadership is to share and promote knowledge and excellence among educators within schools and to improve student learning and achievement. Building on accountability measures and performance expectations that are spelled out in No Child Left Behind Act, studies by Leithwood and Jantzi (2000), Mazzeo (2003) and Waters (2003) all suggested association between teacher leadership behavior and the students' academic performance. For instance,

Waters (2003) investigated seventy leadership studies, and identified about twenty one teacher leadership behaviors that are positively correlated with improved student academic achievements. However, further studies are required for a conclusive argument on the effect of leadership on student achievement. Teacher leadership and student achievement has not been exhaustively investigated as a topic (Harris, 2004). Duke and York-Barr (2004) purport "There are many well-reasoned assertions and even some data based inferences about the effects of teacher leadership on student achievement, but little evidence to support these claims."

Less than 10 studies could be located that directly examined the effects of teacher leadership on students. This section highlights teacher leadership studies on students' performance including student engagement, student attendance, and other facets of student performance. This first study Louis et al. (2010) is one that is very similar to mine. Measures of student achievement were derived from school-level scores on the states' tests used for measuring adequate yearly progress. Data were school-wide results on state-mandated tests of language and mathematics at several grade levels over 5 years (2003 to 2007). One hundred eighty schools nested within 45 districts nested, in turn, in nine states participated in the study. For the purposes of this study, a school's student achievement was represented by the percentages of students meeting or exceeding the proficiency level. We assume that both principal-teacher relationships (indicated by trust, instructional leadership, and perceptions of shared leadership) and teacher-teacher relationships (indicated by professional community) will affect classroom practice. Classroom practice — particularly the type of focused instruction that thoughtfully combines elements of teacher-directed and constructivist approaches — should, in turn, affect student learning. The results indicate that student math achievement scores are

significantly associated with focused instruction, professional community, and teachers' trust in the principal.

The second study is Leithwood and Jantzi (1999). Eighteen hundred teachers and 9,900 students participated in the study. The results were no statistically significant relationship between teacher leadership and student engagement. The third study is a Ryan (1999) qualitative study that included three elementary schools and 12 teachers. The results were teacher leaders were perceived to have a positive effect on students because they influenced instructional practice and participated in school level decision making. The next study is a Mark and Louis (1997) quantitative study. This study involved 24 urban schools (8 elementary, 8 middle, and 8 high school) and employed surveys, interviews, observations, and rating scales. The results were a direct relationship between teacher empowerment and student learning was not discerned. The last study is the Taylor and Bogotch (1994) quantitative study. It was conducted in a large, urban school district indicated that teachers and students in 16 schools with high levels of teacher participation in decision making were no better off in terms of student achievement, attendance, and behavior in 17 schools with low levels of teacher participation. The results of non-significant differences were found in terms of student attendance, student achievement, or behavior between schools with high degrees of teacher participation or low degrees of participation in school level decision making.

Although theses and dissertations on teacher leadership and students were not included, it is evident just from the above studies that research on teacher leadership is inconsistent and inconclusive; therefore, more research is needed. Nevertheless, in order to achieve professional learning communities in schools, existing literature suggests that the following tasks be taken into account:

- Improve teacher quality. As already stated, teacher leaders may be able to improve teaching quality by identifying teacher development needs, delivering and providing opportunities, and assessing the results of staff development.

- Improve student learning. This task requires effective instructional teacher leadership in order to enhance students' academic performance by first developing teaching instruction.

- Ensure the success of education reform initiatives. Here, teacher leaders should know how to use their influence. The success of the education reform process lies in the hands and effective participation of teacher leaders.

- Hire, train, inspire, and reward competent teachers. The success of education reform and teacher leadership mainly depends on the competence, effectiveness, and ability of teacher leaders. York-Barr and Duke (2004) have argued that "acknowledging [teacher leaders'] expertise and contributions and providing opportunities for growth and influence can support these objectives" (p. 259). In his study, Hirsch (2006) discovered that teacher empowerment and leadership opportunities were important factors in whether teachers said they [would] work in certain schools.

- Offer opportunities for professional development and growth.

- Establish and maintain a more democratic school setting. This task is highly beneficial to both teachers and students. A learning environment needs to be democratic and free from any kinds of troubles and problems.

In relation to the value of teacher leadership, the roles and functions of teacher leadership in students' achievements' are discussed in the next section.

The Role of Teacher Leadership in Education Reform

Numerous studies focused on the impact of teachers' participation and involvement on the success of education reform (Conley & Muncey, 1999; Lieberman, 1998; Urbanski & Nickolaou, 1997). However, a number of scholars have lamented that teachers often give up their leadership roles or lack the necessary skills that make them successful leaders (Sherrill, 1999; Zimpher & Hower, 1992). Teacher leaders play an indispensable role in education reform. Education reform is a continuous process that requires the participation of teacher leaders, as they personally understand the requirements of a functional, practical and effective educational system. According to Childs-Bowen et al. (2000), teacher leaders play a crucial role in guiding their "fellow teachers as well as the school at large towards higher standards of achievement and individual responsibility for school reform" (p. 27). Since teachers are directly involved with many education reform initiatives implemented in schools, teacher leaders have more incentives and interests to participate in teacher leadership (Birky, Shelton & Headly, 2006).

The success of instructional and curricular reform initiatives mainly depends upon the commitment and full participation of teachers. Thus, policy-makers cannot simply put aside or ignore teacher leaders who are on the front lines, and who personally understand the classroom needs and concerns as well as the requirements and customs of the school and the kinds of support and help they require to perform their jobs.

The Value of Teacher Leadership

As already mentioned teacher leaders can operate both formally and informally and research shows that many teachers are capable and eager to demonstrate their aptitude for leadership within their institution and among their colleagues (National Comprehensive Center for Teacher Quality, NCCTQ, p. 2), but what does it take to become a teacher leader?

Leithwood (2003) conducted six studies in relation to teacher leadership over a period of four years. Three of his studies pertained to the 'nature of informal teacher leadership in both elementary and secondary school' (p.103), and utilized qualitative data. The other three studies focused on the way in which teacher leadership influenced particular facets of the school, and on how it impacted students; wherein comparisons were made between the outcomes of teacher leadership and those of principal leadership. The results of the studies indicated that teacher leadership is an influence process, whose execution depends on the school.

Another study undertaken by Snell and Swanson (2000) involved in-depth interviews with ten middle school teachers who were considered as having worked successfully with students and peers. The study was undertaken in order to determine the qualities the teachers possessed, and how they had attained them. They constructed a framework that captured qualities evident in the subject leaders on four levels, including collaboration, expertise, empowerment and reflection: they also found that as each teacher had acquired expertise in each of the levels over the years, they materialized as leaders; in other words their leadership traits evolved over time and thus, they emerged as leaders in an informal manner.

Kurtz (2009) claimed that effective teacher leaders are those that instigate and enthuse ideas among colleagues, are flexible, optimistic and professional; they respect other teachers, who in turn respect and trust them; their enthusiasm and optimism becomes contagious and they are able to foster growth in others; they are committed to life-long learning and have no doubt or skepticism in the capabilities and potential for all students to learn. Kurtz also asserted that respect, which has to be earned by action, is the fundamental factor for effective leadership.

In terms of instructional teacher leaders, content knowledge of the subject matter is obviously of upmost importance, as this determines the extent to which they can induce and

assist in instructional improvement ; thus, be an effective leader. Kurtz (2009) pointed out the need for procedural knowledge. Their own subject knowledge allows them to determine any deficits or inadequacies in the knowledge of others. This provides support and additional input and content in terms of skills and knowledge, thus enabling those teachers to teach better and increase their self-confidence (Manno & Firestone, 2008). It further creates an advocacy, which encourages trust, discussion and cooperation.

Curriculum teacher leaders, on the other hand, need more than just comprehensive, subject knowledge; they need a thorough understanding of curricular design and instructional practice, and an awareness of and appreciation for education as a global and social endeavor (Handler, 2010). They need to understand the connection between instruction and assessment design: the cognitive, developmental, and communicative aspects of learning, and they must be fully aware of the bias, political agendas and ideologies that impact curriculum, by whom and where (Handler, 2010). Today especially because the responsibility for curriculum has been transferred to the state (Fullan, 2001), curriculum teacher leaders need to have a thorough knowledge of educational policies and their influence at both state and national levels.

However, as already stated, teacher leadership, to be effective, needs to be based on a collaborative culture and practice of teaching and learning (Yendol-Hoppey & Dana, 2010). The value, then, of teacher leadership strongly rests upon the willingness and ability of teacher leaders to translate their leadership ideas, practices, strategies, and goals into concrete, positive outcomes, and an increase of student achievement; with student learning being the most sought after outcome.

The Value of Teacher Collaboration

According to Donaldson (2006), who is supported by Wilson (1993), teacher collaboration involves working together for a common benefit in the school. In most cases, teachers work together to improve the curriculum and any other areas involved in the process of running the school. Working in a collaborative way, as stated by Darling-Hammond (2001) leads to better learning in students and to a better school management. When teacher leaders work together, the different departments of the school are not run individually; but, rather in a way which is more productive. Teacher collaboration results in "improvements in student achievement, behavior, and attitude" according to Wilson (1993, p. 25).

Teacher collegiality reduces isolation and brings career rewards and daily satisfaction, stimulates enthusiasm, and helps the teachers to detect and celebrate a pattern of accomplishments within and across classrooms. It largely prevents the trial and error mode that beginning teachers face by bringing both beginning and experienced teachers together to reinforce the competence and confidence of the beginners.

Teacher collaboration eases the complexities introduced by a new curriculum or by the need to refine an existing curriculum by making it manageable, stimulating new ideas, and promoting coherence in a school's curriculum and instruction. Collectively, teachers have organizational skills and resources to attempt innovations that would exhaust the energy, skill, or resources of individual teachers for good causes. The accomplishments of a proficient and well-organized group are greater than the accomplishments of isolated individuals.

Apart from having the rate of influence as an important element of teacher influence, there are also different modes of influence, which are used, and they depend on the issue at hand (Donaldson, 2006). There are certain issues, which are formal, and, therefore, require formal

67

teacher collaboration while there are those which are informal, and, therefore require informal collaborative techniques. In the formal dimension, teachers may organize and hold formal meetings to discuss issues such as the curriculum, the method of teaching to be used, assessment methods, teaching materials, and other areas of improvement such as discipline policies as stated by Lieberman, Saxel and Miles (2000). There may also be formal in-service training sessions, which are aimed at equipping teachers with better skills and knowledge in their areas of specialization. Formal influences in collaborative teacher leadership are strategic in improving performance and in straightening the path of school leadership according to York-Barr and Duke (2004) and Donaldson (2006). Such influences usually last longer and require expert training and support that directly benefit the organization and the involved members of staff.

There are also informal influences and one of them is that teachers who are more experienced may take it upon themselves to influence colleagues who are less experienced and take them under their wings by giving them advice where necessary and in the different areas which were mentioned earlier. Teachers can also make suggestions informally during conversations and other informal meetings.

Teacher leadership is influenced by the ability of a teacher to be collaborative, exercise expertise, empowerment and reflection as stated by Lieberman, Saxel and Miles (2000). Effective teacher leaders impart new ideas to their colleagues; they are flexible, optimistic and professional. Collaborative interactions occur during problem solving, relationship development, and when participating in administrative duties. In order for teachers to influence one another in an effective and positive way, there are certain tools and methods, which are used. Teachers use peer relationships to influence their colleagues. In the school setting, teachers tend to develop peer groups, which may be used productively to influence one another in making the right

68

decisions. Peer groups are powerful because, as stated by York-Barr and Duke (2004), peers have a great influence on one another. Such relationships increase the teachers' opportunities for interaction and help in fostering unified and fruitful professionalism and decision-making among teachers. Peers can influence one another on the best practices in the areas mentioned earlier. Peers also influence one another in areas such as giving instructions, adopting innovations in teaching, professional development opportunities, and in exchanging knowledge and ideas (Lieberman, Darling-Hammond, & Zuckerman, 1991).

Teacher leaders can also use their positions and to influence their colleagues. This is because there are instances when decisions are made centrally, or when there is consultation, but the ultimate decision rests upon the leader of a certain docket. In such cases, some teachers may have little influence on what is said or done but their views may persuade depending on the issue at hand. As York-Barr and Duke (2004) stated, the best option is to consult with the teachers and to agree on certain positions, which reduces the chances of rejection and other problems, which may emerge from the decisions that are made.

York-Barr and Duke (2004) stated that there are also cases when teachers use force to get some of their ideas accepted. They continue to state that unnecessary resistance may occasion this type of scenario and that it is a method, which should be used with care. This is because in some cases it may lead to more harm than good. York-Barr and Duke (2004) suggested that it is important to consult colleagues and give them the impression that their ideas count even though some decisions may already be made. In such a case persuasion becomes an important technique because it enables the teacher in a leadership position to persuade others to support him/her and to see matters from his/her own point of view.

In most decisions that are made, "there are usually positive results but these may easily be countered by negative ones and teacher leaders should take it upon themselves to explain how the disadvantages of the decision to be made are avoided or are dealt with in the event that they occur" (Lieberman, Saxel & Miles, 2000, p. 57). Teacher leaders can therefore use proposals and action plans, which elaborately present and explain their ideas in order to gain favor for them. This is, in most cases, appropriate for formal ideas and presentations. Through probing such cases or ideas, teams of teachers were able to discern whether the decision which is to be made is of benefit or not. Through working together, propositions are made clearer and can be fairly weighted before being adopted.

Teacher collaboration can, however, be achieved better when other factors are considered. One of these issues is attitude. As Blasé and Blasé (2000) and Edwards (2007) claimed, it is important for teacher leaders and their colleagues to adopt positive attitudes toward collaboration for it to work. This is because there are instances when teachers may have negative attitudes towards the decisions and situations, and this has to be changed if the collaborative efforts are to be fruitful.

It is also important for teachers to embody the qualities needed for leadership and for collaboration as stated by Dozier (2007). This is because there are cases when people may not have the necessary qualities for the same. For instance, when one is selfish the collaboration may not work well and in some instances, brilliant ideas may not be shared due to selfishness. It is, therefore, vital for teachers to develop the qualities through experience in order to succeed. There are also other characteristics which are necessary for effective collaboration and they include: being visionary, believing that schools are for learning, valuing colleagues, communicating and listening effectively, and being proactive.

70

There is also need for motivation towards collaboration according to Ackerman and Mackenzie (2006) who are supported by Spillane, Halverson and Diamond (2004). These scholars also state that the environment should be suitable for the collaboration in terms of required resources and other intervening factors to the collaborative effort including interference from other parties. Teacher motivation, according to Jones (2000, p. 77), is crucial in promoting teacher leadership. This is because teacher motivation determines the degree of initiatives that schoolteachers exercise and apply in performing their functions and duties.

Effective distributed leadership and teacher collaboration are vital to the success of every school. This is because the head teacher cannot assume the role of a solitary leader in the school. The teachers on the other hand cannot work on their own because the school is a social institution. A school would experience better results and quality leadership if there was effective teacher collaboration and good distributed leadership plans.

Correlation between Teacher Leadership and Student Achievement

Previous research and studies suggest a link between teacher leadership and student achievement (Johnson, 2007; Katzenmeyer & Moller, 2001; Killion, 1996; Kurtz, 2009; Leithwood, 2003; Leithwood, Jantzi & Steinback, 1999; Lieberman, Saxel & Miles, 1988). Similarly, all of these studies seem to suggest a culture of leadership that must be strongly, deeply embedded in the school's practices, strategies, and goals. As York-Barr and Duke (2004) observed, there is a new culture more appropriate and conducive to schoolteachers that is about to replace the traditional cultures and professional norms. However, they hastened to explain that such teacher-friendly leadership cultures do not appear prevalent and widespread (York-Barr & Duke, 2004).

In his study, Stronge (2012) showed evidence and examples why teachers matter most. He argued that teacher leadership leads to teacher effectiveness, which is indispensable in guaranteeing and promoting student achievement gains. Stronge (2012) then concluded that "In terms of impact on students as well as impact on school improvement, yes, teachers matter. In fact, if we attempt to reform education without focusing on the classroom, the effort is likely be superfluous at best" (p. 3). Such an observation is consistent with previous research, which positively points to the effectiveness of the teacher as the main driver of student academic progress. As Barber and Mourshed (2007) argued:

> In fact, the available evidence suggests that the main driver of the variation in student learning at school is the quality of the teachers… Studies that take into account all of the available evidence of teacher effectiveness suggest that students placed with high-performing teachers progress three times as fast as those with placed with low-performing teachers. (p. 12)

The following findings show the correlation between teacher leadership and effectiveness and student achievement:

- Teacher leadership is the main factor influencing and guaranteeing student academic growth and achievement (Sanders & Rivers, 1996; Wright, Horn, & Sanders, 1997).

- Students placed with high-performing teachers outpaced projected degree of growth (Allington & Johnston, 2000).

- High-performing teachers perform well with both low-ability and high-ability students, while low-performing teachers are unproductive with both classes of students (Aaronson, Barrow & Sanders, 2007).

72

Table 6 shows the correlation between effective teaching and student achievement based on the findings of selected studies.

Table 6

Correlation between Effective Teaching and Student Achievement

Study	Key Findings
Emmer & Evertson (1979)	• Results indicate strong teacher leadership impacts on student attitude and achievement in both English and mathematics. • Teacher impact on student achievement varies depending on class means and subject matter.
Sanders & Rivers (1996); Wright, Horn & Sanders (1997)	• Effective teachers perform well with students of different ethnic groups. • Certain variables of heterogeneity among students have relatively little impact on student achievement.
Allington & Johnston (2000)	• Effective teachers produced levels of student literacy gains that exceeded even the most rigorous standardized tests.
Aaronson, Barrow & Sanders (2007)	• Teacher effects on student achievement are relatively stable and consistent over time.
Stronge, Ward, Tucker & Hindman, McColsky, & Howard (2008)	• Effective teachers who produced high-performing students tended to produce top-performing students in reading, math, science and social studies. Meanwhile, ineffective teachers tended to be unproductive in all four areas.

Summary

In summary, thus far we find that the formal roles within the school hierarchy where the principal is considered as both the school leader and instructional leader have been replaced by

the idea of teachers as leaders (Fullan & Hargreaves, 1996; Leithwood, Jantzi, & Steinbach, 1998; Sergiovanni, 1996). Due to education reforms schools now support teachers and allow them to exercise their capabilities in leadership positions, thereby fostering a culture of collegiality, collective voices, and shared decision making. It is clear that teachers are indispensable contributors to school organization and culture; the emphasis on teachers as teacher leaders has been a major factor in bringing about more diverse, cultural and transformational leadership (Fletcher & Kaufer, 2003). Embracing and encouraging teacher leadership provides more opportunity for student achievement and learning and reshapes the classroom, school objectives and culture. This acceptance, in turn, provides more legitimacy to teachers as leaders, which allows them to develop suitable capabilities and implementation of instructional leadership (Smylie & Denny, 1990). Thus, the education reforms that changed America's academic setting have empowered teachers to be influential members not only in the academic institutions where they work, but also in the society at large. With this new power, teachers have the potential to lead change and to steer improvement and progress within the organization. The question now is, what is the relationship between teacher leadership and student achievement?

However, education reforms are not enough to promote and support teacher leadership. This is because the real success of teacher leadership depends upon the involvement, commitment, and devotion of teacher leaders in developing and implementing effective practices, strategies, and methods that promote and sustain student achievement.

CHAPTER 3: METHODOLOGY

Introduction

As already discussed, the purpose of this study is to investigate the relationship between teachers' perception of teacher leadership and student achievement in a sample of Alabama elementary schools. Identifying the relationship between teacher leadership and student achievement could be advantageous to school leaders and stakeholders interested in improving school reform efforts and as well as improving reading and math percent proficiency. Additionally, schools can develop and implement training programs and leadership seminars for teachers that greatly boost teacher leadership skills.

This chapter outlines in detail the research methodology used in this study. The first section states the research questions for this study. The following section describes the participants in the study and discusses the research instrument used in the study. The remaining sections discuss data collection procedures, data analysis procedures, and the limitations of the study.

Design

The research is a quantitative, cross-sectional study that focuses on identifying a possible correlation between teachers' perception of the presence of teacher leadership, independent variable, and student achievement, dependent variable. Correlation research methodology was used to detail the relationship between the two variables: teachers' perception of teacher leadership and student achievement in a sample of elementary schools in Alabama. This method

was selected because it is a means that enables researchers to analyze the relationships among a large number of variables in a single study. Another advantage of correlational design is it provides information concerning the degree of the relationship between the variables being studied. Correlational research design was chosen for two major reasons: (1) to explore the relationship between teacher leadership and student achievement, and (2) to predict student achievement scores from research participants' scores regarding their perception of teacher leadership. In this study, I sought to explore if, and to what degree, a relationship exists between teachers' perception of teacher leadership and student achievement, as measured by the Alabama Reading and Mathematics Test Plus (ARMT+).

Research Questions

The following research questions guided this study:

1. To what degree do teachers in Alabama report that teacher leadership is present in their schools?

2. What is the relationship between teacher's perception of the presence of teacher leadership and schools' ARMT+ percent proficient?

3. What is the relationship between teachers' perception of teacher leadership and schools' ARMT+ percent proficient when controlling for school level variables: socioeconomic status and school size?

Population and Sample

The population for this study included the faculty members of the elementary schools in the state of Alabama. After approval from superintendents, principals of 96 elementary schools were contacted and asked to send out the survey to their faculty. Teachers from these schools received invitations from their principal to voluntarily participate in the study. Of that number,

49 schools responded with at least 5 teachers participating in the survey. Therefore, the sample constituted a set of 49 elementary schools and represented 630 teachers from 14 school districts. Incomplete responses totaled 430, resulting in 630 usable responses. Due to the limited responses, generalizability of findings cannot be assumed.

Approximately 1,000 elementary schools exist in the state of Alabama, and are contained in 135 school districts. School systems vary in size from fewer than 750 students to more than 50,000 students. These include schools from rural, suburban, and urban settings. The Alabama State Department of Education provides a public listing of all the schools in the state. A random sample, generated from the listing, yielded the sample for the study. Participants included elementary schools only. This was my target population because the ARMT+ is only given in grades 3–8.

Participants

For this study, participating schools (N = 49) met the criteria of elementary schools serving students in grades third through eighth grades. All teachers (K–5) in each school were invited to participate. An information letter (see Appendix A) was emailed along with a consent form to the superintendents and principals. Consent was sought from the superintendents of the districts to conduct the study (see Appendix B). After I received consent from the superintendent, I sought consent from the principals (see Appendix C). Consenting principals were asked to forward an email with the survey link to the teachers. Teachers were invited to complete the electronic survey. No external rewards or offers were given to those who chose to participate.

This study examined the relationship between teacher leadership and student achievement. The survey data were gathered in the spring of 2012 and aggregated and analyzed

at the school level. The student achievement data (2011–2012 ARMT + results) were gathered

in the fall of 2012 from the publicly viewable Alabama State Department Accountability

Reporting Portal at the following website address:

https://www.alsde.edu/Accountability/preAccountability.asp

Measures

The Teacher Leadership Perception Survey is a 36-item instrument that measures

teachers' perceptions of teacher leadership in their school. It has been adapted from previous

instruments and edited and revised substantially to fit the aim of this study. Three surveys

informed the development of survey items: The Teacher Leadership School Survey

(Katzenmeyer & Katzenmeyer, 2005), Leadership Capacity Staff Survey (Lambert, 2003), and

Leadership Development for Teachers Survey (Katzenmeyer & Moller, 2001). The survey was

developed with underpinnings from the seven domains of the Teacher Leadership Model

Standards. All items are simple descriptive statements. Teachers indicate the extent to which

each statement characterizes the teachers in their school on a five point Likert-style scale that

ranges from *None* to *All*. The actual scale is None = 1; Few = 2; Some = 3; Most = 4; A11 = 5.

The overall score—also known as a total scale score—for the Teacher Leadership Perception

Survey is simply the mean score of all the items; thus, the mean score would represent the

teacher's perception of how many teachers in the school exhibit the qualities being assessed.

The appropriateness of item content was established through two rounds of expert reviews,

cognitive interviews, and a field test, while the level of reliability of the survey results was

determined by examining internal consistency reliability (Desimone, 2009; Pedhazur &

Schmelkin, 1992).

A copy of the survey is included as Appendix D. The survey includes four to six questions for each of the seven domains. Development of the instrument and analysis of the reliability and validity was conducted. Cronbach's alpha was used to determine internal consistency. Cronbach's alpha for teacher leadership was .975, indicating that the scale had acceptable internal consistency. The validity of the scale is discussed in the next section.

Content Validity

Appropriateness of item content was established in four ways, providing evidence that survey results can be interpreted with an acceptable level of validity. First, a group of two expert educational researchers in the field of teacher leadership provided feedback on the quality of survey items. Expert judgment and feedback related to the design of the instrument is an essential part of establishing content validity (Lissitz & Samuelson, 2007; Messick, 1994). The survey was sent electronically to three experts and they were asked to review the items and make suggestions and recommendations as well as sort each item into the seven domains. After reviewing the seven domains of the Teacher Leader Model Standards and the objectives of the survey, one of the three researchers provided feedback on the survey, resulting in two statements being omitted, two new statements being generated, and eight statements being revised to improve clarity. Expert number two's feedback focused on two recommendations: update the definition of teacher leadership and address the formal and informal forms of teacher leadership. Expert number two's feedback resulted in changing the definition of teacher leadership used in the study from Wasley's (1991) definition to Yendol-Hoppey and Dana's (2010) definition, "Teachers are leaders in both creating and sustaining a collaborative culture and practice of learning in schools focused on improving instructional practice." Expert number three did not respond.

The second method of item appropriateness was cognitive interviews. Three teachers were asked to participate in cognitive interviews to detect unanticipated misinterpretations of the survey statements. Cognitive interviews involve interviewing potential respondents to learn how specific statements are interpreted so that higher quality data can be gathered and the validity and reliability of surveys can be improved (Desimone & Le Floch, 2004, p. 3). Two teachers agreed to participate in the cognitive interviews, resulting in modification of two statements to improve clarity and changing the Likert scale from a six-point *Strongly Agree* to *Strongly Disagree* to a five-point *None* to *All*. The revised survey was pilot-tested with a group of five teachers. Pilot testing is an effective way of detecting errors of content, form, and clarity by giving the survey to respondents similar to ones who were included in the actual study (Sireci, 2007). These five individuals were sent the survey electronically and were asked to complete the survey and provide feedback regarding the length of the survey, the design of the survey, and the clarity of the statements. Three of the five teachers provided feedback, resulting in confirmation of appropriate survey length (average completion time under 20 minutes), and modification of three statements to improve clarity.

Surveys were distributed using Qualtrics, a commercial electronic survey service. I chose electronic distribution over traditional mail distribution for three reasons: no cost, efficiency, and manageability of returned surveys. Electronic survey has wider reach and is more convenient to both the participants and the researcher (Kiesler & Sproull, 1986) In this case, I obtained a response rate of 51% from the sampled schools. The response rate was calculated by dividing; 49, the number of schools that participated by 96; the number of schools that could have participated based on their superintendent's consent.

Reliability

Reliability refers to the extent to which scores from an instrument are repeatable and consistent (Fowler, 1993). Cronbach's alpha measures the internal consistency reliability, the extent to which survey items are related to one another and is often used by researchers collecting survey data with Likert-type scales (Shannon & Davenport, 2001). Alpha coefficients range in value from 0 to 1, with higher scores indicating greater reliability. Researchers (Santos, 1999) generally regard reliability coefficients above 0.7 to be acceptable. George and Mallery (2003) provide the following rules of thumb:

> "_ > .9 – Excellent, _ > .8 – Good, _ > .7 – Acceptable, _ > .6 – Questionable, _ > .5 –
>
> Poor, and _ < .5 – Unacceptable."

I documented the reliability of the survey by using all the questions in the survey and calculating Cronbach's alpha which computed to be .975, indicating an excellent internal consistency of items in the scale.

Procedures

Data collection began May 2012 and was completed by June 30, 2012. On May 2, 2012 superintendents were contacted via email regarding participating in the study. During this contact, superintendents were made aware of the purpose of the study and given an opportunity to participate. It was clearly explained that participation was voluntary and withdrawal at anytime would receive no penalty. Participants were given the opportunity to receive a summary of the research conclusions and were given details of how to obtain these. After receiving consent from each school system's superintendent, administrators from each participating school received information about the study and the methodology via email and/or phone. Following initial contact via email and/or phone, the personalized Qualtrics link was then provided to the

principal via email. The consent form was the first page of the survey. The principal then sent

out the link to all certified classroom teachers (K–5). Once the surveys were complete, the

researcher received notice of how many teachers completed the survey. If less than five teachers

completed the survey, a follow up email was sent to the principal asking him/her to send out a

reminder email inviting the teachers to complete the survey. Halpin (1959, p. 28) provided

evidence that average scores of descriptive questionnaire items such as the Leader Behavior

Descriptive Questionnaire (LBDQ) computed on the basis of 5 to 7 respondents per school

yielded reasonably stable scores. Neither the respondents nor the non-respondents received any

follow-up contacts following administration of the surveys, and their characteristics remain

unknown.

Participation in this study was completely anonymous and voluntary. No identifying

information was collected.

Data Analysis

Data gathered from the survey were then input into excel for descriptive analysis of

school level means only and SPSS 19.0 was utilized for inferential statistical analysis. An

analysis of the descriptive statistics was done in order to provide insight about teachers' current

perception of teacher leadership among the schools and also to compute the average student

performance scores of each school. Pearson product-moment correlation coefficient was used to

analyze and identify the relationship between independent variable teacher leadership and

dependent variable student achievement. A strong correlation between variables would indicate

that it might be possible to predict the dependent variable by using the independent variable. The

values of the correlation coefficient always show a result of -1 and +1. A correlation coefficient

of +1 signifies that two different variables are absolutely correlated in a positive linear sense. On

the other hand, a correlation coefficient of -1 signifies that two different variables are absolutely related in a negative linear sense. Meanwhile, a correlation coefficient of 0 signifies that there is actually no linear correlation or relationship between the two diverse variables. Lastly, a hierarchical linear regression was completed to address the research question asking if socio economic status, school size, and teacher leadership, the independent variables, acted as statistically significant predictors of ARMT+ percent proficient (student achievement), the dependent variable. Research has led me to believe that SES and school size are related to student achievement. Research indicates there is a medium to strong correlation between SES and student achievement (Sirin, 2005). Research also indicates that school size is correlated with students achievement but not as much as SES (Lee & Loeb, 2000). In line with research, an order of entry is suggested for my analysis; therefore a hierarchical regression is best for analysis. SES is the biggest predictor variable and should be entered first, school size next, and given that research related to teacher leadership and student achievement is inconclusive, teacher leadership should be entered last. From this analysis, I will be able to determine if the results are significant and if teacher leadership is a significant predictor of student achievement even when SES an school size are accounted for.

Limitations

The methodology applied in conducting the research and analyzing the results may have posed some limitations to the study that should be kept in consideration when judging the generalizability of the conclusions. For instance, the study was limited to participants' self-reported perceptions of teacher leadership in their school, and it does not measure the actual objective teacher leadership level of the school. Thus, the results might be subject to response bias, wherein participants would opt to choose responses that they feel would be more acceptable

to the researcher, as opposed to their actual opinion (Paulhus, 1991). Making the survey responses in this study anonymous likely decreased this source of error (Czaja & Blair, 2004), but researchers have demonstrated that participants in survey research often make their responses socially desirable even when they are assured anonymity (Fricker & Schonlau, 2002).

A number of challenges, obstacles and limitations were faced during the study. First, the survey participants were mainly from one school district. Twenty-three of the 49 schools (47%) were from one school district; therefore, this limited the teacher leadership dimensions that would possibly be revealed if the survey participation was more inclusive of other school districts.

Secondly, this survey could be laden by the social desirability response phenomenon: entails the tendency by the participants to respond to questions by giving the answers perceived by them to be those desired by the researcher (van de Mortel, 2008). Attempts were however made to minimize this limitation by making the survey responses anonymous (Czaja & Blair, 2004). Conversely, researchers have demonstrated that up to 62% of the participants in survey researches often make their responses socially desirable even when they are assured anonymity (Fricker & Schonlau, 2002), subjecting the current research to the same limitations as well. Therefore the assumption stating that respondents answered openly and honestly was likely unmet.

Another possible reason for the lack of correlation between teacher leadership and student achievement is the dependent variable, ARMT+ percent proficient. The data is sent to the State Department to be scored, resulting in normally distributed student scores; however, when it is returned it is non-normal data with students' scores being grouped into four categories: 1–does not meet the academic content standards, 2–partial meets academic content standards, 3–

meets the academic content standards, and 4–exceeds the academic content standards. The

limitations of using ARMT+ data as the proxy for student achievement are as follows: no

information regarding reliability or validity is available, the test could be bias, and a final

measurement concern about the dependent variable was that the value used for analysis

combined the values across three grade levels potentially amplifying the possibility for error.

Collectively, these measurement concerns raise questions about whether the finding of non

significance of was valid or faulty due to the dependent's variable construct validity problems.

Finally, one of the many benefits of Qualtrics is the ability to track how much time a

respondent spends answering a survey. Results from Qualtrics showed that the average response

time was 10 minutes to the complete the 36 item survey. However, with several hundred taking

less than three minutes to complete the survey, it is unlikely the respondent took the time to read

the questions. Of the 630 respondents that completed the survey, 20.7% completed the survey in

less than seven minutes. There were a few respondents from almost every school included in

the 20.7%, so no pattern could be determined. This was cause for alarm. One way to remedy the

problem was to exclude the respondent's surveys that took less than seven minute. However,

that would have caused another problem of an even smaller sample size. Several schools only

included about 5–10 respondents, so once 20.7% of the respondents were dropped, I am sure that

would have greatly reduced the number of schools as well. Therefore, the assumption stating

responses received from participating teachers accurately reflected their professional opinions

was not met.

Summary

This chapter described the research design and detailed the methodology used to answer

the research questions posed in this study. Data results were examined to explore the

relationships between the constructs tested in this study. Descriptive statistics, Pearson's

correlation coefficient, and Hierarchical Linear Regression provided the answers to the research

questions and explored the relationships between the constructs tested. Table 7 displays a

summary of the methodology which includes each research question, the data collected for each

questions, and the analysis selected to answer each research question.

Table 7

Summary of Methodology

Research Questions	Data Collected	Data Analysis
1. To what degree do teachers in Alabama report that teacher leadership is present in their schools?	Teacher Leadership Survey	Descriptive statistics from participants' perception of teacher leadership.
2. What is the relationship between the reported presence of teacher leadership and schools' percent proficient?	Teacher Leadership Survey, 2011–2012 ARMT+ data from each site	Pearson product-moment correlation coefficient
3. What is the relationship between teachers' perceptions of teacher leadership and schools' percent proficient when controlling for school level variables: socioeconomic status and school?	Teacher Leadership Survey, 2011–2012 ARMT+ data from each site, free and reduced lunch percentages, and school enrollment	Hierarchical Linear Regression

Identifying the degree to which teacher leadership is present throughout schools and its

relationship to state mandated tests could prove advantageous to school leaders and stakeholders

interested in improving percent proficient. Chapter 4 details the results of the research questions.

CHAPTER 4: RESULTS

As stated in Chapter 1, the study reported here examined in detail the correlation between teachers' perception of the presence of teacher leadership and student achievement. The chapter is organized in terms of three specific research questions posed in Chapter 1. It first reports the degree in which teachers in Alabama report that teacher leadership is present in their schools; it then, reports the relationship between teacher's perception of the presence of teacher leadership and schools' ARMT + percent proficient; and last, it concludes with the relationship between teachers' perception of teacher leadership and schools' ARMT + percent proficient when controlling for school level variables: socioeconomic status and school size.

Demographic Description of the Participants

The school served as the unit of analysis for this study. Variability within schools were consistent among teachers' perception of teacher leadership in the majority of the schools in the study. Thirty-four out of 49 schools had variance below 1.00. Tables 8 shows descriptive statistics of each schools' total leadership score.

Table 8

Descriptive Statistics of Schools' Total Teacher Leadership Score

School Code	N	Variance	Mean	SD
1	25	4.28	1.83	2.07
2	17	1.06	2.32	1.03
3	19	0.22	2.48	0.47
4	5	1.51	2.56	1.23
5	22	6.65	2.64	2.58
6	23	1.71	2.80	1.31
7	23	0.32	3.06	0.57
8	10	7.12	3.12	2.67
9	10	0.46	3.20	0.68
10	11	4.04	3.23	2.01
11	18	0.56	3.35	0.75
12	28	0.68	3.42	0.83
13	7	0.68	3.47	1.53
14	6	0.77	3.50	0.88
15	14	0.10	3.56	0.33
16	9	1.90	3.58	1.38
17	12	0.16	3.58	0.40
18	10	0.23	3.58	0.48
19	10	0.65	3.59	0.81
20	16	0.25	3.63	0.50
21	5	0.29	3.70	0.54
22	6	0.28	3.72	0.53
23	12	0.86	3.73	0.93

(table continues)

Table 8 (continued)

School Code	N	Variance	Mean	SD
24	5	1.39	3.76	1.18
25	20	0.36	3.79	0.60
26	10	3.27	3.82	1.81
27	12	0.29	3.90	0.54
28	6	0.96	3.93	0.98
29	6	4.57	3.94	2.14
30	5	0.12	3.97	0.35
31	13	0.31	3.97	0.56
32	21	0.96	4.04	0.98
33	6	1.53	4.14	1.24
34	13	0.75	4.17	0.87
36	21	0.42	4.17	0.65
37	6	1.34	4.22	1.16
38	14	0.86	4.33	0.93
39	30	0.75	4.39	0.87
40	9	0.82	4.44	0.91
41	15	0.31	4.47	0.56
42	11	0.18	4.51	0.43
43	11	0.10	4.59	0.32
44	10	0.56	4.69	0.75
45	6	0.20	4.77	0.45
46	12	0.10	4.89	0.32
47	15	0.00	4.96	0.00
48	13	0.00	5.00	0.00
49	15	0.01	4.75	0.12

Data were collected and analyzed from 630 teachers representing 49 schools across the state of Alabama. The sample was comprised of schools from urban, suburban, and rural settings. Eighty-eight percent of the schools were county schools while twelve percent were city schools. Of the 1080 elementary schools in Alabama, 706 (65%) are county schools, and 374 (35%) are city schools (Alabama Department of Education, 2012). The percentage of the schools in the sample does not represent the actual distribution of the schools in the state, due to the sampling procedure done. County schools responded more positively to the research. Additionally, two county systems dominated the study: one county system was represented by 23 schools in the study the other 6 schools together totaling 59% of the respondents. In comparison to the Alabama's average percent proficiencies in math and reading, the sampled population was lower, 84.0 and 86.1 respectively, while Alabama's percent proficient holds steady in reading at 88.4 and math 87.3.

Research Question 1

Data were collected by use of the Teacher Leadership Survey. To examine research question 1, "To what degree do teachers in Alabama report that teacher leadership is present in their schools?" range, mean, and standard deviation from the descriptive statistics were used to assess the degree in which teachers report teacher leadership.

The schools in the state that were included in the sample have recorded a perceived teacher leadership score of 3.83 (SD = .80) on a scale that ranges from 1 to 5, where 5 indicates the highest level of perceived teacher leadership. A score of 3.83 suggests participants perceive

teacher leadership to be more present than absent in their respective schools. Table 9 details the

mean, Cronbach's Alpha, and standard deviation for each of the seven domains.

Table 9

Descriptive Statistics for Each Domain

Domains	Mean	Cronbach's Alpha	SD
Domain I	4.03	.973	0.70
Domain II	3.66	.979	0.82
Domain III	3.95	.982	0.80
Domain IV	3.64	.969	0.84
Domain V	4.25	.977	0.74
Domain VI	3.58	.975	0.88
Domain VII	3.69	.978	0.85
Overall Mean	3.83	.975	0.80

The descriptive statistics generated were used to understand the respondents' perceptions

of the presence of teacher leadership in their respective schools. It was also important to look at

the level of perceived teacher leadership in the sampled schools across the different domains, in

order to assess which areas needed improvement among the sampled schools. Each domain

contributed to increasing the level of teacher leadership of the school. The following subsections

detail a brief description of each domain and the descriptive statistics obtained for each of the

seven domains of teacher leadership.

Domain I: Fostering culture of collaboration. The school's collaborative culture, or the environment encourages collective and distributed leadership, is the first domain of teacher leadership. A high score in this domain suggests that the school's authorities and teachers all work together to provide an atmosphere that includes all members in the decision-making process and in delegating tasks (Leithwood & Mascall, 2008). Table 10 lists the range, minimum, maximum, mean, and standard deviation for Domain I.

Table 10

Descriptive Statistics for Domain I

Domain I: Fostering culture of collaboration	N	Range	Minimum	Maximum	Mean	SD
Respond to others' needs	49	4.00	2.04	5.00	3.88	0.72
Talk about the curriculum	49	4.00	2.28	5.00	4.22	0.75
Diverse perspectives are welcomed	49	4.00	1.96	5.00	3.95	0.84
Share instructional strategies	49	3.00	2.12	5.00	4.04	0.77
Address student learning with colleagues	49	3.00	2.12	5.00	4.07	0.76
Overall	49	3.00	2.10	5.00	4.03	0.70

An average score of the participants in this domain is 4.03, suggesting that the schools included in the sample might have a relatively high culture of collaboration, with formal talks about the curriculum recording the highest mean score in this domain. This signifies that the schools' management and administration are keen in ensuring that the teachers work together for

a collective success of the school in terms of developing the teachers and enhancing the students' learning.

Domain II: Access and use of research. This domain deals with the availability of information and research data given to the teachers in order to give them enough resources to improve their teaching techniques and share these improvements with their peers (Teacher Leadership Standards, 2008). A high score in this domain implies that the schools in the sample provide information and access to useful research data. Table 11 lists the range, minimum, maximum, mean, and standard deviation for Domain II.

Table 11

Descriptive Statistics for Domain II

Domain II: Access and Use Research	N	Range	Minimum	Maximum	Mean	SD
Use research based practices	49	3.00	2.68	5.00	4.39	0.67
Read professional articles	49	4.00	1.96	5.00	3.49	0.81
Participate in action research	49	4.00	1.52	5.00	3.59	0.91
Learn about educational research	49	4.00	1.76	5.00	3.32	0.79
Facilitate analysis of research	49	4.00	1.56	5.00	3.50	0.89
Overall	49	4.00	1.90	5.00	3.66	.82

An average domain score of 3.66 was obtained from the sample indicating that the schools in Alabama use and have access to research. The teachers rated the schools usage of research based practices as relatively higher compared to the other items, which means were all

below 4.00. This means that the schools in the sample might need to improve on the *research use and access* domain in order to enhance practices and student learning.

Domain III: Professional learning. The third domain involves the school's effort to promote professional learning among the teachers by continuously providing opportunities to learn and develop teachers and their instructional practices, and strategies that would, in turn, improve student learning (Sillins & Mulford, 2002). A fair score of 3.95 was obtained from the participants in terms of the schools' effort to promote professional learning. Generally, the teachers perceived their schools' efforts to enhance the professionalism of the teachers as high, thus, most of them are satisfied with regard to this domain. Table 12 lists the range, minimum, maximum, mean, and standard deviation for Domain III.

Table 12

Descriptive Statistics for Domain III

Domain III: Professional Learning	N	Range	Minimum	Maximum	Mean	SD
Support the professional learning of teachers	49	4.00	1.80	5.00	3.70	0.86
Teachers work with administrators	49	4.00	1.80	5.00	3.97	0.86
Engage in professional learning	49	3.00	2.00	5.00	4.12	0.72
Direct professional learning activities	49	4.00	1.92	5.00	4.02	0.81
Seek support from specialized experts	49	4.00	1.92	5.00	4.04	0.75

	N	Range	Minimum	Maximum	Mean	SD
Model effective strategies for colleagues	49	4.00	1.80	5.00	3.84	0.80
Overall	49	4.00	1.87	5.00	3.95	0.80

Domain IV: Instruction and student learning improvement. The fourth domain includes the school's teachers' efforts to improve the quality of education of the students by developing the instructional materials and methods, and then sharing these developments with peers to collectively improve the professional skills of the teachers of the school. Table 13 lists the range, minimum, maximum, mean, and standard deviation for Domain IV.

Table 13

Descriptive Statistics for Domain IV

Domain IV: Instruction and Student Learning Improvement	N	Range	Minimum	Maximum	Mean	SD
Engage in reflective dialogue	49	4.00	1.80	5.00	3.87	0.81
Use test results to improve student learning	49	4.00	2.44	5.00	4.25	0.69
Promote diversity and equity	49	4.00	1.84	5.00	3.88	0.75
Observe each other's classroom	49	4.00	1.00	5.00	3.36	0.95
Connect with educators globally	49	4.00	1.00	5.00	2.83	0.84
Overall	49	4.00	1.62	5.00	3.64	0.84

A relatively lower score of 3.64 was obtained from the teachers, suggesting that the schools in Alabama might be lagging in terms of facilitating instructional and student learning

improvement. In particular, the teachers perceived that their schools lack the effort, or ability, to communicate with other educators in a global scale in order to improve on the instructional materials and procedures.

Domain V: Promoting the use of assessments and data. The fifth domain is the teachers' capacity to use school-based information and other research to formulate effective assessment tools that would evaluate the school's performance against local and state standards. These data and assessment tools would also be used to enhance the school structure and instructional methods, to improve student learning. Table 14 lists the range, minimum, maximum, mean, and standard deviation for Domain V.

Table 14

Descriptive Statistics for Domain V

Domain V: Promoting the Use of Assessments and Data	N	Range	Minimum	Maximum	Mean	SD
Engage colleagues in conversation	49	4.00	1.92	5.00	4.03	0.78
Facilitate interpretation of data	49	4.00	1.92	5.00	4.46	0.77
Use assessments to change instruction	49	4.00	2.24	5.00	4.34	0.73
Use a variety of data	49	3.00	2.12	5.00	4.21	0.71
Use data to differentiate instruction	49	4.00	2.40	5.00	4.23	0.70
Overall	49	4.00	2.12	5.00	4.25	0.74

Domain VII: Family and community outreach. The sixth domain deals with the

teachers' efforts to engage, communicate and collaborate with the parents of the students and

members of the community to gain their insights and inputs as to how the quality of education

would be improved. This domain showed to have recorded a relatively low mean of 3.58,

alluding that the schools might not have sufficient projects and efforts to reach out to the

community and the families, in order to address the issues of diversity and to hear out the inputs

of families and other members of the community to improve the education of the students.

Table 15 lists the range, minimum, maximum, mean, and standard deviation for Domain VI.

Table 15

Descriptive Statistics for Domain VI

Domain VI: Family and Community Outreach	N	Range	Minimum	Maximum	Mean	SD
Model communication with families	49	4.00	1.48	5.00	3.78	0.88
Address needs of diverse students	49	4.00	1.76	5.00	3.71	0.87
Address diverse educational needs of students	49	4.00	1.08	5.00	3.31	0.93
Promote collaboration with families	49	4.00	1.68	5.00	3.53	0.89
Overall	49	4.00	1.50	5.00	3.58	0.88

Domain VII: Advocating for the profession. The last domain dealt with the teachers'
advocacy or commitment to improving the teaching profession, by influencing policies and
reforms, in order to increase teaching motivation and student learning. A mean score of 3.69
was obtained from the participants with regards to their perception of how well their school
advocates for the rights students and the teachers. This indicates the sampled schools efforts to
promote the well being of the students and professionals are present, but could still be improved.
Table 16 lists the range, minimum, maximum, mean, and standard deviation for Domain VII.

Table 16

Descriptive Statistics for Domain VII

Domain VII: Advocating for the profession	N	Range	Minimum	Maximum	Mean	SD
Advocate for teaching at the local, state, and national level	49	4.00	1.52	5.00	3.33	0.88
Advocate for access to professional resources	49	4.00	1.52	5.00	3.46	0.88
Advocate for rights of students	49	4.00	1.84	5.00	4.05	0.79
Advocate for teaching and learning processes	49	4.00	1.92	5.00	4.06	0.77
Share local, state, and national policy information	49	4.00	1.56	5.00	3.57	0.91
Work in partnership with organizations	49	4.00	1.68	5.00	3.64	0.85
Overall	49	4.00	1.67	5.00	3.69	0.85

Research Question 2

To examine research question 2, "What is the relationship between teachers' perception of the presence of teacher leadership and schools' ARMT + percent proficient?", a Pearson product moment correlation was conducted to assess if the presence of teacher leadership was significantly related to the percent of students in a school who were classified as proficient based on reading and math ARMT+ percent proficient.   The results of the descriptive statistics are presented in Table 17; correlations are presented in Table 18. Table 18 shows no correlation between teacher leadership and reading or math percent proficiencies. Data were analyzed to explore whether there were correlations between the variables: independent variable (teacher leadership) and dependent variable (math and reading percent proficient).

Table 17

Descriptive Statistics of Reading and Math Percent Proficient and Teacher Leadership

	Mean	SD	N
Teacher Leadership	3.82	0.74	49
Reading	86.09	9.21	49
Math	84.03	10.22	49

Table 18

Correlation between Teacher Leadership and Reading and Math Percent Proficient

		Reading	Math
Teacher Leadership	Pearson Correlation	-0.07	-0.03
	Sig. (2-tailed)	.30	0.40
	N	49	49

Teacher leadership and reading percent proficient. The mean percent proficient obtained by the students in the schools that were included in the sample were 86.09 (SD = 9.21), a rather significant variability could also be observed as evidenced by the 9.21 standard deviation value. A standard deviation this large indicates a great variability within the reading percent proficient. The range of possible scores was 0–100%. This suggests that there is still more room for improvement in terms of this subject among the students in schools in Alabama.

Teacher leadership and math percent proficient. The mean score in mathematics of the schools in the sample was 84.03 (SD = 10.23). As with the reading scores, it could be observed that there is also a large variability in terms of the scores suggesting that there are certain schools that score well while others do not. These results are shown in Table 17. A histogram of reading percent proficient is included as Figure 4. The interesting thing to note is the distribution is skewed to the left indicating that most reading proficiencies are toward the upper end of its range. The range of the schools' percent proficient is also varied ranging from 66% to 100% with most of the sampled populations' reading proficiencies falling in the range of 80–90% proficient. Figure 5 shows a scatter plot of teachers' perception of the presence of teacher leadership and reading percent proficient.
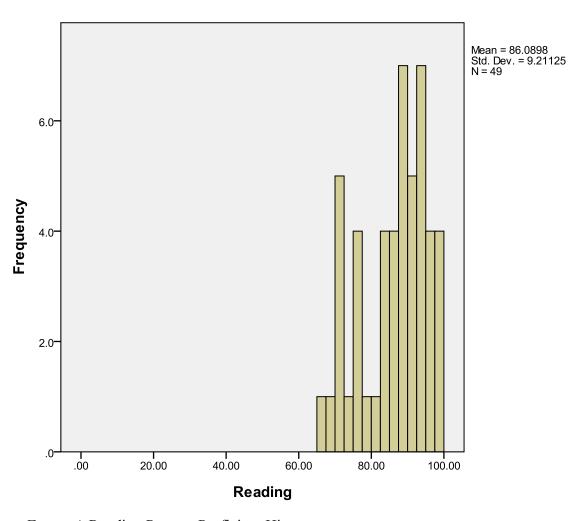
Mean = 86.0898
Std. Dev. = 9.21125
N = 49

Figure 4. Reading Percent Proficient Histogram

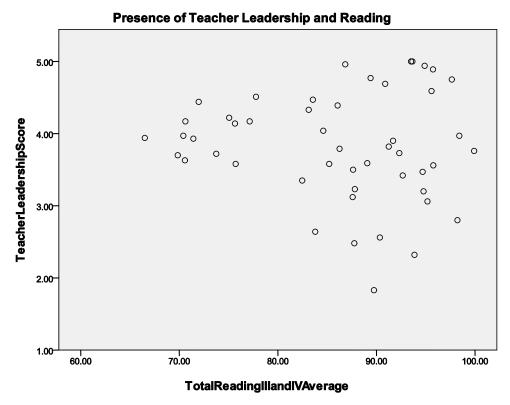**Presence of Teacher Leadership and Reading**

Figure 5. Teacher Leadership and Reading Percent Proficient

After running the Pearson correlation, the results show that any relationship between the two variables that might be observed from the graph is non-significant and is only due to chance, $r = -.07$, $p = .30$. This means that the perceived level of teacher leadership within a school is not related to the student's performance in reading. Due to the fan shape of the points in the scatter plot, it is evident that my data shows some heteroscedasticity; therefore, it would be harder to detect a relationship if there was one. Heteroscedasticity, one of the four principal assumptions for regression was violated, meaning the forecasts and confidence intervals yielded by the regression model may be inefficient or seriously biased or misleading (Fields, 2009).

Specifically, heteroscedasticity refers to the distribution of numbers for one variable in relation to the distribution of numbers for another variable (Fields, 2009). Particularly,

heteroscedasticity means the variance of teacher leadership scores is different for various levels of reading percent proficient. There are several reasons that the data could have shown heteroscedasticity but the three main reasons include teachers not wanting to give an accurate picture but present their school in the best possible light. Secondly, the schools that have lower test scores have more reason to bias their scores to try to "show" that what they are doing that is aligned with research. Thirdly, the schools that have high test scores don't have a need to misrepresent the presence of teacher leadership, so there is a possibility those schools felt they could be brutally honest. The results are shown in Figure 6.
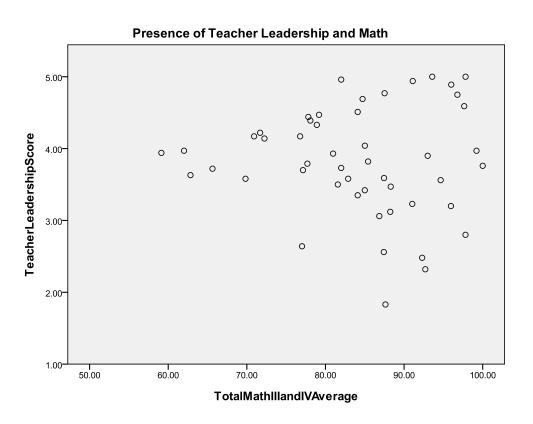

Figure 6. Teacher Leadership and Math Percent Proficient

The Pearson correlation test showed that any possible relationship between the perceived level of teacher leadership and math percent proficient are only due to chance, and is, therefore, non-significant, $r = -.035$, $p = .406$. These results are shown in Table 17.

The scatter plot of the math percent proficient against the perceived level of teacher leadership is presented in Figure 6. A wide scatter of points could be observed along the x-axis or the average math percent proficient. Similar to reading, the math scatter plot showed no correlation and the fan shape indicates heteroscedasticity. The explanations for this occurrence are the same as in reading. No particular pattern could be inferred from the graph, thus, it depicts that there is not a relationship between the two variables. Additionally, Figure 7 shows a non-normal distribution indicating one of the four principal assumptions for regression was violated, meaning the forecasts and confidence intervals yielded by the regression model may be inefficient or seriously biased or misleading. The major effect of using non-normal distribution in this analysis is under- or over-estimating the uncertainty for particular values of math and reading proficiencies.
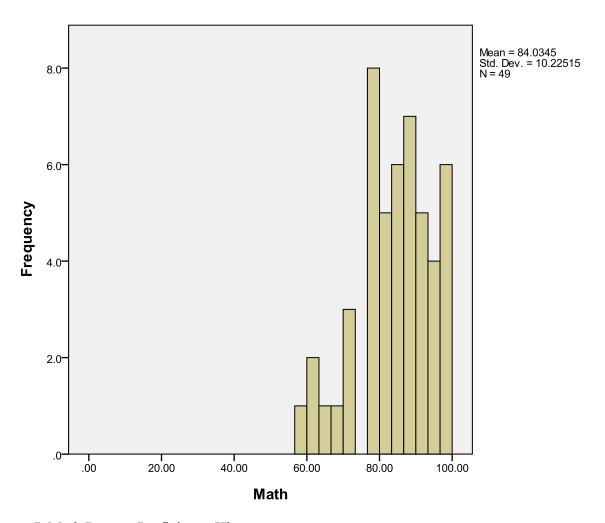
Figure 7. Math Percent Proficiency Histogram

Summary of research question 2. In response to the second research question, "What is the relationship between teachers' perception of the presence of teacher leadership and schools' ARMT + percent proficient?", the results of this current study found a non significant relationship between perceived level of teacher leadership and student achievement in math and reading. However, a number of factors could have potentially masked the relationship between teacher leadership and math and reading percent proficient including the survey didn't measure teacher leadership or that measurement that was chosen for achievement wasn't the right one.

Research Question 3

The third research question, "What is the relationship between teachers' perception of the presence of teacher leadership and schools' ARMT + percent proficient when controlling for school level variables of socioeconomic status and school size?" Although the data suggests there is no relationship between teachers' perception of teacher leadership and ARMT+ percent proficient, a hierarchical linear regression analysis (blockwise entry) was performed because any possible relationship might have been obscured by other variables. Variables that explained student achievement were entered all in one step. Math and reading percent proficient were the dependent variable and (a) socioeconomic status, (b) school size, and (c) teacher leadership were the independent variables. For socioeconomic status, the proxy variable was the percentage of students eligible for free or reduced lunch. Similarly, for school size, the proxy variable for school size was student enrollment. In order to ensure that the regression model would be effective in predicting the dependent variable, a correlation test was performed between all the variables that would be entered in the regression analysis. The results of the correlation are shown in Tables 19 and 20.

Table 19

Correlations of Factors

		Collaborative Culture	Use of Research	Professional Learning	Instruction Improvement	Assessments and Data	Community Outreach	Student Learning Avocation
Factor 1	Pearson Correlation	1	.898**	.978**	.967**	.944**	.946**	.958**
Factor 2	Pearson Correlation	.898**	1	.908**	.951**	.929**	.966**	.973**
Factor 3	Pearson Correlation	.978**	.908**	1	.975**	.945**	.957**	.967**
Factor 4	Pearson Correlation	.967**	.951**	.975**	1	.947**	.982**	.980**
Factor 5	Pearson Correlation	.944**	.929**	.945**	.947**	1	.939**	.953**
Factor 6	Pearson Correlation	.946**	.966**	.957**	.982**	.939**	1	.982**
Factor 7	Pearson Correlation	.958**	.973**	.967**	.980**	.953**	.982**	1

Note: *p< 0.05, **p<0.01

Table 20

Correlation of Teacher Leadership, School Size, SES, Reading, and Math

		Teacher Leadership Score	School Size	SES	Total Reading 3 and 4 Average	Total Math 3 and 4 Average
Teacher Leadership Score	Pearson Correlation	1	-.033	.071	-.076	-.035
School Size	Pearson Correlation	-.033	1	-.375**	-.164	-.190
SES	Pearson Correlation	.071	-.375**	1	.139	.097
Total Reading 3 and 4 Average	Pearson Correlation	-.076	-.164	.139	1	.889**
Total Math 3 and 4 Average	Pearson Correlation	-.035	-.190	.097	.889**	1

Note: *p<0.05,**p<0.01

Upon inspecting the correlation table, it was indicated the correlation among math and reading percent proficiencies with teacher leadership, SES, and school size are very weak and non-significant. The absolute value of the correlation coefficients were found to be less than .2, this means that there are non-significant relationships between schools' percent proficient in math and reading, and school's SES, school size and perceived teacher leadership. The results of the hierarchical linear regression are shown in Tables 21 and 22.

Table 21

Hierarchical Linear Regression with SES, School Size, and Teacher Leadership Predicting Reading Percent Proficient

Source	β	*t*	*p*	R	R^2	R^2Change
SES	.190	1.325	<.191	.190	.036	.036
School Size	.033	.209	<.421	.192	.037	.001
Teacher leadership	.032	-.808	<.500	.225	.051	.014

Table 22

Hierarchical Linear Regression with SES, School Size, and Teacher Leadership Predicting Math Percent Proficient

Source	*β*	*t*	*p*	*R*	R^2	R^2Change
SES	*.173*	*1.201*	*<.236*	.173	*.030*	.030
School Size	-.014	-.089	*<.497*	*.173*	*.030*	.000
Teacher leadership	-.096	-.654	*<.610*	*.198*	*.039*	.009

To assess the hypothesis that teacher leadership predicts reading and math percent proficient after controlling for the effects of SES and school size, a hierarchical multiple regression analysis was employed to test the relative influence between the dependent variables (math and reading percent proficient) and the independent variables (SES, school size, and teacher leadership; entered in that order). Analysis was performed using SPSS. Results indicated SES does not significantly predict ARMT+ reading percent proficient, $R = .190$, $p = .191$. The R^2 change indicated that approximately 0.036% of the variance in ARMT+ reading percent proficient can be accounted for by its linear relationship with SES. Additionally, in step 2, school size was added and resulted in an R^2 change of .001. The R^2 change indicated that approximately 0.1% of the variance in ARMT+ reading percent proficient can be accounted for by its linear relationship with school size. That means school size accounts for .1% of the variance in our dependent variable (student achievement) above and beyond what the first independent variable (SES) accounted for. Results indicated, school size does not predict ARMT+ reading percent proficient, $R = .192$, $p = .421$. Lastly, in step 3, teacher leadership was added and resulted in an R^2 change of .014. The R^2 change indicated that approximately 1.4% of the variance in ARMT+ reading percent proficient can be accounted for by its linear relationship with teacher leadership. That means that teacher leadership accounts for 1.4% of the variance in our dependent variable (student achievement) above and beyond what the first two independent variables (SES and school size) accounted for. Results indicated, teacher leadership does not significantly predict ARMT+ reading percent proficient, $R = .225$, $p = .500$.

Similar to reading, results indicated, SES does not significantly predict ARMT+ math percent proficient, $R = .173$, $p = .236$. The R^2 change indicated that approximately 0.030% of the variance in ARMT+ math percent proficient can be accounted for by its linear relationship

110

with SES. That means SES accounts for 3 % of the variance in our dependent variable (student achievement) Additionally, in step 2, school size was added and resulted in an R^2 change of .000, indicating, school size does not significantly predict ARMT+ math percent proficient, $R =$ .173, $p = .497$. Lastly, in step 3 teacher leadership was added and resulted in an R^2 change of .009. The R^2 change indicated that approximately 0.9% of the variance in ARMT+ math percent proficient can be accounted for by its linear relationship with teacher leadership . That means teacher leadership accounts for 0.9% of the variance in our dependent variable (student achievement) above and beyond what the first two independent variables (SES and school size) accounted for. Results indicated, teacher leadership does not significantly predict ARMT+ math percent proficient, $R = .198, p = .610$.

Regression analysis revealed the model does not significantly predict math and reading percent proficient. In conclusion, the school's socioeconomic status, school size and perceived level of teacher leadership does not influence students' reading or math average percent proficient, thus, these variables could not be used to predict student ARMT+ percent proficient.

Summary

The results of the study have shown that the sample from the state of Alabama has a fairly high perception of teacher leadership in schools; it alluded that most teachers believe that teacher leadership is more present than absent in their school. This is evident with only six schools teacher leadership average scores falling below 3 indicating low variability of responses to the survey. However, the standardized math and reading proficiency percentage of the students from the sample school ranged anywhere from 65%–100% indicating high variability of average percent proficient among each of the schools. Thus, it could be inferred that the percent proficient of the students in each school is independent of the level of perceived teacher

leadership as measured by the survey used in the study. Other factors might have mediated the

potential effect of teacher leadership on student achievement, but these factors do not include the

school's socioeconomic status, or size, since these factors did not seem to have any effect on the

average percent proficient of the students in each school.

CHAPTER 5: DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS

This study investigated the relationship between teacher leadership and reading and math percent proficient (student achievement). This chapter summarizes the extent of the study and reviews the findings. The chapter concludes with implications for school leaders, recommendations for future research, and closing remarks.

Discussion

This research aimed to conduct the first study to employ a newly developed survey instrument whose underpinning was the seven domains outlined in the Teacher Leadership Standards. This study sought to investigate the presence of teacher leadership at the school level and correlate it to standardized test results, in order to, quantitatively analyze any association between the perceived presence of teacher leadership and student achievement as measured by ARMT+ reading and math percent proficient. It is widely accepted that principals have an indirect impact on student achievement (Waters, Marzano & McNutty, 2003; Witziers, Bosker & Kruger, 2003), so the premise that teachers would have a relationship with student achievement is a logical hypothesis.

Three research questions were developed in order to achieve the study's general objective. The results of the study have shown that the level of perceived teacher leadership, size of the school and SES do not have a positive correlation with students' academic achievement. This section will explain these findings, suggest directions for future research, and discuss potential implications of these findings for school practitioners.

One of the research questions of the study involves the investigation of the correlation between the perceived presence of leadership in a school and the percent proficient of students in mathematics and reading. The results of the study showed that there is no significant relationship between the perceived presence of teacher leadership and student achievement, which is contrary to previous research, like that of Louis et al. (2010), who concluded from their US-wide survey of teachers that as leadership increases, it is also likely that student achievement does. Sebastian and Allensworth (2012) suggested that student learning has a mediated pathway and that leadership only affects student achievement by influencing the learning climate across different schools, thus, it is possible that learning climate is the only area wherein teacher leadership might be effective in improving student performance. The results of the study did not show any correlation between teacher leadership and school achievement, possibly because of the wide scope of leadership that was included in the measure of teacher leadership. Ross and Gray (2006) reported that it is the level of transformational leadership practices, not teacher leadership per se, that has an association with student achievement, which is also a possible explanation as to why there was no direct correlation found between teacher leadership and student achievement in this study. This factor reaffirms the significance of conducting this study to address the discrepancies in previous research involving the correlation between teacher leadership and student achievement.

It is important to note that many previous research studies have pointed out the association between student achievement and specific teacher leadership facets and achievement. For instance, teacher preparation and training programs have been seen to have a significant effect on student achievement on standardized tests (Gimbert et al., 2007). Teacher collaboration also was seen to have an effect on student achievement according to the study by Williams and

114

Matthews (2005). Langer (2000) even identified several leadership factors that have an association with student learning, specifically on literacy scores, these factors include: the teacher's collaboration to improve learning, professional commitment, concern for peers and students, and desire to learn continuously. It is probable that the teacher leadership environment, considered holistically, may not be a very good determinant of student achievement; rather, it is the specific elements that make up an environment that encourage teacher leadership. It is possible that teacher leadership may be mediated by other factors that were not studied in this research. For instance, an effective teacher leadership environment might pave the way for a learning culture and practice that would not only involve the learning of the students but also the development of teachers by interacting and collaborating with their peers; thus, the teachers could grow holistically which would lead to better teaching practices that would in turn influence the students' performance (Yendol-Hoppey & Dana, 2010). It is possible that, although some schools may have exhibited an environment that encourages teacher leadership, the factors that mediate teacher leadership and student achievement, which are more directly related to student learning such as teaching strategies, learning culture, and instruction quality, among others (Childs-Bowen, Moller & Scrivner, 2000; Hirsch, 2006; York-Barr & Duke, 2004), might have greater bearing in predicting student achievement than the teacher leadership culture set by the school administration and the state provisions. These more direct factors could have more pronounced influence on student achievement but are not directly related to a strong presence of teacher leadership. They could have been a result of a multitude of interacting factors, like the knowledge, skills and attitude of the teacher, the recruitment process of the school, the resources given to the students and teachers, and others (Edwards, 2007; Jones, 2000; Waters, Marzano &

McNutty, 2003; York-Barr & Duke, 2004), thus, no correlation was found between teacher leadership and student achievement.

Another research question was aimed at investigating the potential effect of socioeconomic status and size of the school on the relationship between teacher leadership and student achievement. Once again, a non-significant relationship was found, and it has been seen that these factors are not strong or reliable predictors of student achievement in this sample. The probable explanation offered earlier could also be applied on this observed result in the sense that there are schools with more present and more absent leadership skills, but both "good" ARMT schools and "bad" ARMT schools reported a relatively high presence of teacher leadership. There are more direct factors that might have mediated the predicted effect of SES, school size and teacher leadership. This provides support to the study by Sanders, Wright and Horn (1997), which concluded that classroom size and other contextual factors of heterogeneity have non-significant effects on student performance. Rather it is the teacher factors that could influence the level of student learning. They further explained that there exists huge variability in the practices of teacher leaders and their effects on student learning. Thus, another possible explanation for the lack of correlation found in this study is the variable effect of teacher leadership among the teachers. For instance, an atmosphere that encourages teacher leadership in a school would result in varying outcomes due to the individual differences of the teachers and students, and the specific dynamics between the people involved. Thus, if one school has high presence of teacher leadership and collaboration, it does not necessarily mean that the students learn better, as opposed to a school where the teachers are highly knowledgeable and has more effective strategies and better resources, but are not given opportunity to contribute to decision-making processes.

The result of the current study did not show any significant effect of SES on the influence of teacher leadership on student achievement, providing support to Ross and Gray's (2006) findings that, although SES correlates with student achievement, it did not seem to be associated with leadership.

The results on Domain I involving fostering collaborative culture have shown that the sampled schools in Alabama scored 4.03 on a scale from 1–5 in terms of how well they foster an environment that encourages teacher leadership. It is difficult to assess how this score fares with schools of other states, since this questionnaire was developed for the purposes of this research. For this research, this score suggests that most of the teachers in the school exhibit a specific quality of teacher leadership. Thus, the rating of perceived teacher leadership environment in the sampled schools of Alabama ranges from "Some" to "Most", suggesting that there are still some teachers who do not exhibit the qualities of a teacher leader. The results also show that there is not a very large variability of scores among the schools, indicating that the standards of the schools in the state might be similar to each other. This might be a result of the protocols set by the state that deal with the domains of teacher leadership. This also suggests that in terms of the level of teacher leadership present in the sampled schools in Alabama, the participants have almost the same opinions even if they work for different schools. Domain I has the highest overall mean score of the seven domains suggesting that this is an area that school leaders focus on and expend resources cultivating.

According to the results of Domain II involving assessing and using research, the schools of the state could benefit by enhancing the access and use of research to enhance the school's practices and facilitate learning. Currently, the teachers believe that the use of research in improving teaching practices is missing in their schools as evidenced by the lower domain rating

given by the teachers. Waters, Marzano and McNutty (2003) argued that research tools and other resources are essential in improving student achievement; thus, teacher leaders could be encouraged to help their fellow teachers in researching strategies and assessment measures to gain insight as to how to improve their teaching techniques, and which areas need improvement (Blasé & Blasé, 1999; Teacher Leadership Standards, 2008). Accessibility of research materials, tools and resources allows the teachers to make more informed decisions about their teaching strategies, techniques and assessments, giving them the knowledge to evaluate and predict the potential outcome of their teaching decisions and allowing them the opportunity to share their knowledge with their peers (Calhoun, 1994). As far as the assessment of the teachers goes, the schools may make an effort to make research and other resources available to the teachers; however, this is not enough. Teachers need to apply the research to their daily practices.

Results concerning promoting professional learning for continuous improvement, Domain III, had the second highest mean score indicating that teachers understand the evolving nature of teaching and learning. Their knowledge is used to promote, design, and facilitate job-embedded professional learning aligned with school improvement goals.

According to the perception of the teachers, another domain that Alabama schools have been found to be falling behind in, as compared to the other domains, was Domain IV, the facilitation of improvement in instruction and student learning. In accordance to Muijs (2003), this domain is important in improving teacher motivation, the effectiveness of their teaching practices and increasing student academic performance. However, the schools in Alabama, as represented by the sample, have reported to lower initiative to develop programs and models that would improve the effectiveness of the curriculum in the long run, as evidenced by the lower domain score compared to the other domains. This suggests that teachers and administration of

the schools may be lacking in the ability to collaborate, motivate and train each other to develop and apply a design that could essentially be implemented throughout the school the for a long period of time in order to provide consistency in the curriculum (Newman et al., 2001); hence, improving the collective performance of the students in the school.

Domain V, that deals with the use and promotion of assessment tools and data to improve the schools in the district, was the domain that the teachers perceive to be present in their schools. This means that the teachers have measurements to assess the development of the learning of the students and research data that would be essential in formulating, amending and updating these assessment tools. Teacher leaders collaborate with their peers by sharing research, data and knowledge to design effective assessment tools, strategies and processes that would suit the school's specific culture and needs, which influences the students' academic performances (Crowther et al., 2002). However, despite this effective assessment design found among the schools in Alabama, the instructional practices among the teachers have been seen to be lagging. Rowan, Correnti, and Miller (2002) and Marcoulides, Heck and Papanastasiou (2005) reported that in order for evaluation processes to be effective in increasing student achievement in science, reading and mathematics, these practices should be aligned with effective instructional practices. Unfortunately, the teachers reported that the instructional and student learning domain of the schools in Alabama is lagging. Thus, it is possible that although teachers collaborate to come up with effective assessment tools, the lack of collaboration to design effective instructional tools and strategies might lessen the effectiveness of the assessment tools in terms of improving student performance.

The scores on Domain VI, improving outreach and collaboration with families and community, were the lowest. Outreach and collaboration with the families and school's

community was the domain rated to be most in need of improvement among the Alabama schools, as evidenced by the lowest domain rating from the teachers, suggesting that only some of the teachers of each school exhibit this quality. This suggests that the teachers rarely involve the community members and the students' families in making decisions and designing their strategies and techniques because of the absence of involvement or efforts to communicate with the community and families to improve student-learning opportunities. Teacher leadership environment among the schools might be negatively affected (York-Barr & Duke, 2004). Jeynes (2007) concluded that the collaboration between parents of the students and teachers is very important in promoting student learning and achievement. It was clear that collective leadership among the teachers and their peers, along with the families and community members is not present in the area; thus, this might have a negative impact on the students' school performances as evidenced by the percent proficient (Leithwood & Mascall, 2008). In addition, there is limited effort from schools and teachers to develop the community and engage their peers and members to come up with collaborative projects that would improve the education system or at least improve the relationship between the school personnel and the community; these might have been affecting the student's academic achievement negatively (York-Barr & Duke (2004).

In relation to community involvement, there is also some room to improve the domain that involves the advocacy for the profession, Domain VII. The results suggest that this is another domain in the schools of Alabama that does not seem to be given enough attention. The schools, or the state, did not seem to foster an atmosphere where the teachers are given enough influence to express their demands or suggestions in order to formulate better policies that would improve the teaching conditions and their profession in general. According to the Teacher Leadership Standards (2008), part of the teacher leader's duty is to communicate with parents

120

and the community to educate them of the important policies and programs that might have an impact on the teaching profession and classroom practices. In addition, teacher leaders need to collaborate with their peers in order to discuss and apply research that might directly affect the teachers and students, such as materials, resources and information needs of the profession. These activities did not seem to be prevalent among the teacher leaders in Alabama, suggesting that the opinions of the teachers might not be a priority of the local, state or national policy makers. This deficiency of resources, benefits, opportunities and attention being paid to the teachers in Alabama, might have affected the teachers' motivation and efficacy (Blasé & Blasé, 1999), also impacting negatively on the students' learning and performance. In turn, the absence of teaching motivation and a supportive and encouraging collaborative atmosphere, could also influence the teacher leaders of the state to become unmotivated to collaborate with their peers to improve the quality of education for the students and teachers (Ackerman & Mackenzie, 2006; Spillane, Halverson & Diamond, 2004).

As reported by Ingersoll (2003), American teachers have enough control in the areas of instruction. This may be the case among the teachers of the schools in Alabama; however, collaboration between teacher leaders is misplaced due to the limited authority given to the teachers in administration and leadership. Thus, teachers do not always share their research, knowledge and techniques with their peers, which could result in hampering of instructional development (York-Barr & Duke, 2004). The development of the teaching profession is also hampered due to the need for collaboration with peers and authority and control given to teacher leaders (Gonzales, 2004).

Implications and Recommendations

Although the research has shown non-significant relationships between teacher leadership and student achievement, it has provided insights as to which specific domains need improvement among the sampled schools of Alabama. By improving the domains that the schools lack, it could help in improving the conditions of the schools, which could benefit the students. This section provides the study's recommendations to schools, school administration and management, and policy makers according to the domains that need improvement among the sampled schools of Alabama.

For Teacher Leaders

Although there was non-significant correlation between teacher leadership, in general, with student achievement, it is important to note that certain specific domains of teacher leadership could help teachers develop individually. This could translate to better teaching methods, improved skills and thus, improved student learning school wide. Collaboration with peers in order to develop teaching techniques, design instructional materials, conduct and analyze pertinent research, formulate assessment tools, and discuss professional concerns are important in order for the teachers and schools to build an atmosphere that encourages teacher leadership (Lieberman et al., 1988; Sherrill, 1999). Although teacher leadership may not have a direct effect on improving percent proficient of the students, it would be very helpful in improving the teaching quality and motivation of the schools toward a shared goal of enhancing the quality of education given to the students. That would, in turn, translate to improved learning (Ackerman & Mackenzie, 2006; Blasé & Blasé, 1999). However, teacher collaboration with peers would be more effective if teachers would develop a positive attitude towards working with others (Blasé & Blasé, 2000; Edwards, 2007).

For School Administration and Management

By giving the schools access to useful information and research that they can share with their teachers, schools could come up with better instructional designs and share the information and data that they gather achieve an effective collective leadership (Leithwood & Mascall, 2008). In addition, it is also recommended that teachers in schools conduct projects in the community that would serve as communication channels between schools and community members. By doing so, the schools and therefore teachers would have better insight into the demands, suggestions and concerns of the parents (York-Barr & Duke, 2004). This could lead to the establishment of closer ties with the community organizations and businesses that might be able to help with the school's needs.

For Policy Makers

Whether local, state, or national policy-makers, it is important to establish a rapport with the school community by creating an effective communication channel to take notice of their demands, concerns and problems. It is important for policy-makers to know the current condition of schools in order to come up with provisions that would benefit schools. This could then lead to higher motivation among the school's faculty. Teacher leader collaboration should be rewarded by giving teachers the voice to express their opinions and valuing their decisions. In addition, in order for policy-makers to make sound decisions about budget allocations, financial support, and privileges, they need to commission research that would benefit the teaching community. The data gathered should be readily available to the schools for them to study and apply. Policy-makers should also pave the way for giving teachers in schools more access to information and research to guide them in their teaching practices.

Recommendations for Future Research

This study is the first study of its kind to examine teacher leadership constructs at the elementary school level in the state of Alabama using the underpinning of the seven domains of teacher leadership developed by the Teacher Leadership Exploratory Consortium. Though research on teacher leadership and student achievement is expanding, research on the relationship between the two is still lacking. Clearly, more work needs to be done in this area. As mentioned in the previous section, several factors may have come into play in determining the level of student achievement. This study only focused on the seven domains of teacher leadership; however, it has not explored the potential intervening factors that may have a more direct effect on the student achievement variable such as type of assessment, instructional strategies, and teacher's ability to motivate students . Findings of this study encourage researchers to further examine the constructs of teacher leadership. Future researchers could further explore these potential factors using mixed methods research design in order to gain some insight as to which factors are directly affected by teacher leadership, and which of these factors directly affects student achievement. It would be helpful to include a qualitative component in this study. Having teachers elaborate on their understandings of teacher leadership would also be insightful. A better conceptual map could be developed from these exploratory studies. These could lead to more longitudinal studies to confirm the causes and effects of factors that could be helpful in determining which areas teachers need to focus on in order to increase student learning.

In addition, the study made use of the teacher's perception of teacher leadership as the independent variable, as opposed to using an objective measure to assess the level of teacher leadership within a school. Thus, it is recommended for future researchers to design a more

objective measure of teacher leadership presence within a school, rather than relying on a potentially biased opinion of the teachers. However, future research may consider using others values in perceptions to avoid such bias. This could be done by using a checklist that would be assessed by a non-biased third party observer.

The percent proficient in math and reading are good indicators of student achievement; however, it is focused on only two subject matters. The level of learning of the students in other subjects and non-academic domains was not investigated. It is possible that teacher leadership might have a more remarkable effect on developing the students' behavior and soft skills like leadership skills, in addition to learning the curriculum. Thus, the research could benefit from using a more encompassing or wider dependent variable that would include more subjects and even soft skills that are essential for the students' future.

Lastly, another important aspect of this study was that it was dominated by county schools. Therefore, another area of exploration would be controlling for school settings: urban, rural, and suburban. Although, all schools have the same goal of developing a prepared graduate, it is possible that school settings influence the dimensions of teacher leadership that are practiced. For example, a rural school may not have the technological advances that a suburban school has, so the rural school teachers would be less likely to connect with other teachers around the globe.

It is hoped that the results of this study will prompt researchers, school policymakers, and leaders to grapple with teacher leadership. School leaders can begin both to evaluate the needs of the systems in which teachers learn and work and to consider how student achievement can be further supported.

REFERENCES

Aaronson, D., Barrow, L., & Sanders, W. (2007). Teachers and student achievement in the
Chicago public high schools. *Journal of Labor Economics, 25*(1), 95–135.

Acker-Hocevar, M., & Touchton, D. (1999, April). *A model of power as social relationships:
Teacher leaders describe the phenomena of effective agency in practice.* Paper presented
at the annual meeting of the American Educational Research Association, Montreal,
Quebec, Canada.

Ackerman, R., & Mackenzie, S. (Eds.). (2006). *Uncovering teacher leadership: Essays and
voices from the field*. Thousand Oaks, CA: Corwin Press.

Allensworth, E., & Miller, S. (2002). *Declining high school enrollment: An exploration of
causes.* Chicago: Consortium on Chicago School Research.

Allington, R. L., & Johnston, P. H. (2000). What do we know about effective fourth grade
teachers and their classrooms? Albany, NY: The National Research Center on English &
Achievement. (Policy Information Center Report). Princeton, NJ: Educational Testing
Service.

Andrews, R. L., Basom, M. R., & Basom, M. (1991). Instructional leadership: Supervision that
makes a difference. *Theory Into Practice*, *30*, 97–101.

Ash, R. C., & Persall, J. M. (2000). The principal as chief learning officer: Developing teacher
leaders. *NASSP Bulletin*, *84*, 15–22.

Barber, M., & Mourshed, M. (2007). *How the world's best performing school systems come out on top.* London: McKinsey & Company.

Bennis, W. (1989). *On becoming a leader*. New York: Addison Wesley

Bennis, W. (1989). *Why leaders can't lead: The unconscious conspiracy continues*. San Francisco: Jossey-Bass.

Bill & Melinda Gates Foundation. (2010). Empowering effective teachers: Readiness for reform. *Bill & Melinda Gates Foundation.* Retrieved from http://www.gatesfoundation.org/united-states/Documents/empowering-effective-teachers-empowering-strategy.pdf

Bill & Melinda Gates Foundation/Scholastic Inc. "Primary Sources: America's Teachers on America's Schools." (http://www.scholastic.com/primarysources/pdfs/ Scholastic_Gates_noapp_0310.pdf).

Birky, V. D., Shelton, M., & Headley, S. (2006, June). An administrator's challenge: Encouraging teachers to be leaders. *NASSP Bulletin*, *90*(2), 87–101.

Blasé, J., & Blasé J. (1999). Effective instructional leadership: Teachers' perspectives on how principals promote teaching and learning in schools. [On-line]. *Journal of Educational Administration, 38*(2), 130–41. Retrieved 18 March, 2011 from http://www.emeraldinsight.com/journals.htm?articleid=839169andshow=pdf

Bolman, L. G., & Deal, T. E. (1994). *Becoming a teacher leader: From isolation to collaboration*. Thousand Oaks, California: Corwin Press.

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

Bush, T. (2003). Theories of educational management: Third Edition. London: Sage.

Calhoun, E. (1994). *How to use action research in the self-renewing school.* Alexandria, VA: Association for Supervision and Curriculum Development.

Carnegie Forum on Education and the Economy. (1986). *A nation prepared: Teachers for the 21st century: The report of the Task Force on Teaching as a Profession, Carnegie Forum on Education and the Economy, May 1986*. Washington, DC: The Forum.

Carr, P. R., & Porfolio, B. J. (2011). *The phenomenon of Obama and the Agenda for Education: Can hope audaciously trump neoliberalism?* Charlotte, NC: IPA

Carvalho, A. M., & Paine, S. L. (2011). Strategies for rescuing failing public schools. Retrieved Jan. 9, 2012, from McGraw Hill Research Foundation website, http://mcgraw-hillresearchfoundation.org/wp-content/uploads/2011/09/Strategies-For-Rescuing-Failing-Public-Schools_whitepaper_Sept2011.pdf

Center on Education Policy (CEP). (2011). AYP results for 2010–11. Retrieved Jan. 15, 2011, from the Center on Education Policy website, http://www.cep-dc.org/displayDocument.cfm?DocumentID=386

Childs-Bowen, D., Moller, G., & Scrivner, J. (2000, May). Principals: Leaders of leaders. *NASSP Bulletin*, *84*(616), 27–34.

Christie, P., & Lingard, B. (2001, April 10–14). *Capturing complexity in educational leadership*. Paper presented at the Annual Meeting of the American Educational Research Association, Seattle, WA. Retrieved 17 March, 2011 from http://eric.ed.gov/PDFS/ED461930.pdf

Clemson-Ingram, R., & Fessler, R. (1997, Fall). Innovative programs for teacher leadership. *Action in Teacher Education, 19*(3), 95–106.

Collay, M. (2011). Everyday teacher leadership: Taking action where you are. San Francisco, CA: John Wiley & Sons.

Conley, S., & Muncey, D. (1999) Teachers talk about teaming and leadership in their work. *Theory Into Practice, 38*(1), 46.

Cotton, K. (2000). *The schooling practices that matter most*. Washington, DC: Association for Supervision and Curriculum Development.

Coulon, S. C., & Quaglia, R. J. (1989). A comparison between the behavior of effective principals and effective teachers. *Education*, *1*(110), 130–136.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Croft, A., Coggshall, J., Dolan, M., Powers, E., & Killion, J. (2010). *Job-embedded professional development: what it is, who is responsible, and how to get it done well.* Washington, DC: National Comprehensive Center for Teacher Quality.

Crowther, F., & Olsen, P. (1997). Teachers as leaders — An exploratory framework. *International Journal of Educational Management*, 11(1), 6–13.

Crowther, F., Kaagen, S. S., Ferguson, M., & Hann, L. (2002). *Developing teacher leaders: How teacher leadership enhances school success.* Thousand Oaks, CA: Corwin Press.

Czaja, R., & Blair, J. (2004). *Designing surveys: A guide to decisions and procedures* (2nd ed.). Thousand Oaks: Sage, Pine Forge Press.

Daresh, J. C. (1991). Professional formation and a tri-dimensional approach to the preparation of school administrators. In F. Wendel & M. Bryant (Eds.), *Reform in administrator preparation: Individual perspectives*. University Park, PA: University Council for Educational Administration.

Darling-Hammond, L. (1997). *The right to learn: A blueprint for creating schools that work*. San Francisco: Jossey-Bass Publishers.

Darling-Hammond, L. (1998). Alternatives to grade retention. *The School Administrator, 55*(7), 18–21.

Darling-Hammond, L. (2001). The right to learn: A blueprint for creating schools that work. San Francisco: Jossey-Bass.

Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, *38*(3), 181–199.

Desimone, L. M., & Le Floch, K. C. (2004). Are we asking the right questions? Using cognitive interviews to improve surveys in education research. *Educational Evaluation and Policy Analysis,* 26, 1–22.

Donaldson, G. A. (2006). *Cultivating leadership in schools: Connecting people, purpose, and practice* (2nd ed.). New York: Teachers College Press.

Dozier, T. (2007). Turning good teachers into great leaders. *Teachers as Leaders, 65*(1), 54–59. Retrieved 13 April, 2011 from http://www.ascd.org/publications/educational-leadership/sept07/vol65/num01/Turning-Good-Teachers-into-Great-Leaders.aspx

DuFour, R. (2004). Schools as learning communities. *Educational Leadership, 61*(8), 6–11.

Edwards, T. (2007). *Classroom teacher perceptions of leadership in the classroom, school, and educational community*. PhD Thesis. Oklahoma State University. Retrieved 13 April, 2011 from *gradworks.umi.com/32/74/3274957.html*

Emmer, E. T., & Evertson, C. M. (1979). Stability of teacher effects in junior high classrooms. *American Educational Research Journal, 16*(1), 71–75.

English, F. W. (2011). *The SAGE handbook of educational leadership.* London: SAGE.

Field, K., Holden, P., & Lawlor, H. (2000). *Effective subject leadership*. London: Routledge Falmer.

Fields, A. (2009). Discovering statistics using SPSS. Thousand Oaks, California. SAGE

Fletcher, J. K., & Kaufer, K. (2003). Shared leadership: Paradox and possibility. In C. L. Pearce, & J. A. Conger (Eds.), *Shared leadership: Reframing the hows and whys of leadership* (pp. 21–47). Thousand Oaks, CA: Sage.

Foriska, T. J. (1994). Breaking from tradition: Using learning styles to teach students how to learn. *Schools in the Middle*, 2(1), 14–16.

Fowler, F. J., Jr. (1993). *Survey research methods* (2nd ed.) (pp. 69-93). Newbury Park, CA: Sage.

Fricker, R. D. Jr., & Schonlau, M. (2002). Advantages and disadvantages of internet research surveys: Evidence from the literature. Field Methods, 14(4), 347–367.

Fullan M. (1992). *What's worth fighting for in leadership: Strategies for taking charge of the headship.* Buckingham: Open University Press.

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

Fullan, M., & Hargreaves, A. (1996). *What's worth fighting for in your school?* New York: Teachers College, Columbia University.

Gallimore, R., Ermerling, B., Saunders, W., & Goldenberg, C. (2009). Moving the learning of teaching closer to practice: Teacher education implications of school-based inquiry teams. *The Elementary School Journal*, 109(5), 537–553.

George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update* (4th ed.). Boston: Allyn & Bacon.

Gimbert, B., Bol, L., & Wallace, D. (2007). The influence of teacher preparation on student

achievement and the application of national standards by teachers of mathematics in

urban secondary schools. *Education and Urban Society, 40*(1), 91–117.

Glickman, C., Gordon, S., & Ross-Gordon, J. (2001). *Supervision and instructional leadership:*

A developmental approach. Boston, MA: Ally & Bacon.

Goddard, Y. L., Goddard, R. D., & Tschannen-Moran, M. (2007). Theoretical and empirical

investigation of teacher collaboration for school improvement and student achievement in

public elementary schools. *Teachers College Record, 10*9(4), 877–896.

Goleman, D., Boyatzis, R., & McKee, A. (2002). *Primal leadership: Realizing the power of*

emotional intelligence. Cambridge MA: Harvard Business School Press.

Gonzales, L. D. (2004). *Sustaining teacher leadership: Beyond the boundaries of an enabling*

school culture. Lanham, MD: University Press of America.

Hallinger, P., & Heck, R. (1998). Exploring the principal's contribution to school effectiveness:

1980–1995. *School Effectiveness and School Improvement, 9*(2), 157–191.

Halpin, A. W. (1959). *The leader behavior of school superintendents.* Chicago: Midwest

Administrative Center.

Handler, B. (2010). Teacher as curriculum leader: A consideration of the appropriateness of that

role assignment to classroom-based practitioners. *International Journal of Teacher*

Leadership, 3(3), 32–42.

Harris, A. (2002). *School improvement: What's in it for schools?* London: Falmer Press.

Harris, A. (2003). Teacher leadership as distributed leadership: Heresy, fantasy or possibility?

School Leadership and Management, 23, 313–324.

Harris, A., & Muijs, D. (2005). *Improving schools through teacher leadership*. Cornwall, UK: MPG Books, Bodmin.

Harris, R. A., & Tichenor, D. J. (2009). *History of the United States political system.* Santa Barbara, CA: ABC-CLIO

Hayes, W. (2004). *Are we still a nation at risk two decades later?* Maryland: R&L Education.

Hirsch, E. (2006, February). *Recruiting and retaining teachers in Alabama: Educators on what it will take to staff all classrooms with quality teachers*. Hillsborough, NC: Center for Teaching Quality. Retrieved November 1, 2007, from http://www.teachingquality.org/pdfs/al_recruitretain.pdf

Hoy, W. K., & Miskel, C. G (2001). *Educational administration: Theory, research and practice* (4th ed.). New York: McGraw-Hill.

Hoy, W. K. & DiPaola, M. (2010). *Analyzing school contexts: Influences of principals and teachers in the service of students.* Greenwich, CT: Information Age.

Hurt, C. J. (2008). *Principals and teacher leaders co-constructing theories in practice: Empowerment and accountability exchange through school leadership.* Cambridge: ProQuest.

Ingersoll, R. M. (2003). *Who controls teachers' work?* (p. 345). Cambridge, MA: Harvard University Press.

Jeynes, W. H. (2003). A meta-analysis: The effects of parental involvement on minority children's academic achievement. *Education and Urban Society, 35*(2), 202–218.

Johnson, R. (2007). *Teacher leadership: A case study of an elementary principal.* Cambridge: ProQuest

Jones, B. A. (2000). *Educational leadership: Policy dimensions in the 21ˢᵗ century.* Maryland: Greenwood Publishing Group.

Katzenmeyer, B., & Katzenmeyer, M. (2005). Professional Development Center, Inc.

Katzenmeyer, M., & Moller, G. (2001). *Awakening the sleeping giant: Helping teachers develop as leaders* (3ʳᵈ ed.). Thousand Oaks, CA: Corwin.

Kennedy, M. (1998). *Form and substance in inservice teacher education. Research Monograph No. 13.* Madison: National Institute for Science Education, University of Wisconsin-Madison.

Kiesler, S., & Sproull, L. S. (1986). Response effects in the electronic survey. *Public Opinion Quarterly, 50*(3), 402–413. Retrieved March 9, 2012, from JSTOR database.

Killion, J. (1996). Moving beyond the school: Teacher leaders in the district office. San Francisco: Jossey-Bass.

Killion, J., & Harrison, C. (2006). *Taking the lead: New roles for teachers and school-based coaches.* Oxford, OH: National Staff Development Council.

Koopman, G. R., Miel, A., & Misner, P. J. (1943). *Democracy in school administration.* New York: Appleton-Century-Crofts, Inc.

Korthagen, F., Loughran, J., & Russell, T. (2006). Developing fundamental principles for teacher education programs and practices. *Teaching and Teacher Education, 22*(8), 1020–1041.

Kowalski, T. J. (1995). Preparing teachers to be leaders: Barriers in the workplace. *Educating teachers for leadership and change: Teacher education yearbook 3.* Thousand Oaks, CA: Corwin.

Kurtz, S. (2009). *Teacher leadership: Teacher leaders can be key to a school's success in achieving goals for students. Here are some ways principals can help teachers become*

instructional leaders. Leadership. Retrieved 18 March, 2011 from http://findarticles.
com/p/articles/mi_m0HUL/is_1_39/ai_n39989076/pg_5/?tag=content;col1

Langer, J. (2000). Excellence in English in middle and high school: How teachers' professional
lives support student achievement. *American Educational Research Journal*, *37*(2), 397–
439.

Lambert, L. (2003). *Leadership capacity for lasting school improvement.* Alexandria, VA:
Association for Supervision and Curriculum Development.

Lee, J., & Bowen, N. (2006). Parent involvement, cultural capital, and the achievement gap
among elementary school children. *American Education Research Journal, 43*(2), 193–
218.

Lee, V. & Loeb, S. (2000). School size in Chicago elementary schools: effects on teacher's
attitudes and students' achievement. *Amercian Educational Research Journal, 37(1),* 3-31

Leithwood, K. (1994). Leadership for school restructuring. *Educational Administration
Quarterly, 30*(4), 498–518.

Leithwood, K. (2003). Teacher leadership: Its nature, development, and impact on schools and
students. *Leadership in education* (pp. 103–107). New York: Routledge.

Leithwood, K., & Duke, D. L. (1999). A century's quest to understand school leadership. In K.
S. Louis & J. Murphy (Eds.), *Handbook of research on educational administration* (2nd
ed., pp. 45–72). San Francisco: Jossey-Bass.

Leithwood, K., & Jantzi, D. (2000). The effects of different sources of leadership on student
engagement in school. In K. A. Riley & K. S. Louis (Eds.), *Leadership for change and
school reform: International perspectives* (pp. 50–66). New York: Routledge Falmer.

Leithwood, K., Jantzi, D., & Steinbach, R. (1999). *Changing leadership for changing times*.

United Kingdom: Open University Press.

Leithwood, K., & Mascall, B. (2008). Collective leadership effects on student achievement.

Educational Administration Quarterly, 44(4), 529–561.

Lieberman, A. (1992). Teacher leadership: What are we learning? Washington, DC: National

Education Association.

Lieberman, A. Darling-Hammond, L & Zuckerman, D. (1991). *Early Lessons in Restructuring*

Schools. Nova Iorque: National Center for Restructuring Education, Schools and

Teaching (NCREST).

Lieberman, A., & Miller, L. (2005). Teachers as leaders essays. *The Educational Forum, 69*(2),

151–162. Retrieved 13 April, 2011 from

http://pdfserve.informaworld.com/214548__790169945.pdf

Lieberman, A., Saxel, E. R., & Miles, M. B. (2000). Teacher leadership: Ideology and practice.

In (Editor?), *The Jossey-Bass reader on educational leadership* (pp. 348–365). San

Francisco: Jossey-Bass.

Lieberman, A., Saxel, E., & Miles, M. (1988). *Teacher leadership: Ideology and practice*. New

York: Teachers College Press.

Lissitz, R. W., & Samuelsen, K. (2007). A suggested change in terminology and emphasis

regarding validity and education. *Educational Researcher*, *36*(8), 437– 448.

Little, J.W. (1988). Assessing the prospects for teacher leadership. In A. Lieberman (Ed.),

Building a professional culture in schools (pp. 78–106). New York: Teachers College

Press.

Louis, K., Dretzke B., & Wahlstrom, K. (2010). How does leadership affect student
achievement? Results from a national US survey. *School Effectiveness and School
Improvement: An International Journal of Research, Policy and Practice, 21*(3).

Manno, C. M., & Firestone, W. A. (2008). *Content is the subject: How teacher leaders with
different subject knowledge interact with teachers*. New York: Teachers College Press.

Manz, C., & Sims, H. (1993). *Business without bosses: How self-managing teams are building
high performance companies*. New York: Wiley.

Marcoulides, G. A., Heck, R. H., & Papanastasiou, C. (2005). Student perceptions of school
culture and achievement: Testing the invariance of a model. *International Journal of
Educational Management, 19*(2), 140–152.

Marks, H. M., & Louis, K. S. (1997). Does teacher empowerment affect the classroom? The
implications of teacher empowerment for instructional practice and student academic
performance. *Educational Evaluation and Policy Analysis, 19,* 245–275.

Marzano, R. J., Waters, T., & McNulty, B. (2005). School leadership that works: From research
to results. Aurora, CO: Mid-Continent Research for Education and Learning.

Mayeski, F., & Gaddy, B. (2000). *Leadership for school improvement* (rev. ed.). Aurora, CO:
Mid-continent Research for Education and Learning.

Mazzeo, C. (2003). *Improving teaching and learning by improving school leadership* (Issue
brief). Washington, DC: National Governors Association Center for Best Practices.

McCay, L., Flora, J., Hamilton, A., & Riley, J. F. (2001). Reforming schools through teacher
leadership: A program for classroom teachers as agents of change. Retrieved Jan. 15,
2012, from http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_

&ERICExtSearch_SearchValue_0=EJ624301&ERICExtSearch_SearchType_0=no&accn
o=EJ624301

McCoy, A. R., & Reynolds, A. J. (1999). Grade retention and school performance: An extended
investigation. *Journal of School Psychology, 37*(3), 273–298.

Messick, S. (1994). The interplay of evidence and consequences in the validation of performance
assessments. *Educational Researcher*, *23*(1), 13–23.

MetLife Survey. (n.d.). Retrieved Jan. 15, 2011, from MetLife website,
http://www.metlife.com/about/corporate-profile/citizenship/metlife-foundation/metlife-
survey-of-the-american-teacher.html?WT.mc_id=vu1101

Muijs, D. (2003). Teacher leadership— Improvement through empowerment: An overview of
the literature. *Educational Management Administration Leadership, 31*(4), 437–448.

Murphy, J. (2005). *Connecting teacher leadership and school improvement*. Thousand Oaks,
CA: Corwin Press.

National Board for Professional Teaching Standards (2010). Technical Analysis Report Annual
Supplement. Submitted by Educational Testing Service, Teaching and Learning Division.
Princeton, New Jersey.

National Commission on Excellence in Education. (1983). *A nation at risk.* Washington, DC:
U.S. Government Printing Office

National Comprehensive Center for Teacher Quality. (2010). *Teacher leadership as a key to
education innovation* (Policy-to Practice Brief). Washington, DC: Author. Retrieved 17
March, 2011 from http://www.tqsource.org/pdfs/TQ_Policy-to-
PracticeBriefTeacherLeadership.pdf

Newman, F., Smith, B., Allensworth, E., & Bryk, A. (2001). Instructional program coherence:
What it is and why it should guide school improvement policy. *Educational Evaluation
and Policy Analysis,* 23(4), 297–321.

OECD. (2010). Retrieved Jan. 15, 2011, from OECD website, from
http://www.oecd.org/dataoecd/35/15/46579895.pdf

Ogawa, R. T. and Bossert, S. T. (1995) Leadership as an organizational quality. *Educational
Administration Quarterly*, 31 (2), 224–243.

Patterson, J., & Patterson, J. (2004). Sharing the lead. *Education Leadership*, *61*(7), 74–78.
Retrieved March 17, 2011 from
http://www.ascd.org/ASCD/pdf/journals/ed_lead/el200404_patterson.pdf

Paulhus, D. (1991). *Measurement and control of response bias*. In J. Robinson, P. Shaver, & L.
Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17–
59). San Diego, CA: Academic Press, Inc.

Pedhazur, E. J., & Schemelkin, L. P. (1991). *Measurement, design, and analysis: An integrated
approach*. Hillsdale, NJ: Erlbaum.

Pellicer, L., & Anderson, L. (1995). *A handbook for teacher leaders.* Thousand Oaks, CA:
Corwin Press.

Pitner, N. J. (1988). The study of administrator effects and effectiveness. In N. Boyan (Ed.),
Handbook of research in educational administration (pp. 99–122). New York: Longman.

Robinson, V., Hohepa, M., & Lloyd, C. (2009). School leadership and student outcomes:
Identifying what works and why best evidence synthesis. New Zealand Ministry of
Education (www.educationcounts.govt.nz/publications/series/2515/60169/60170)

Ross, J., & Gray, P. (2006). School leadership and student achievement: The mediating effect of teacher beliefs. *Canadian Journal of Education,* 29(3).

Rowan, B., Correnti, R., & Miller, R. J. (2002). What large scale, survey research tells us about teacher effects on student achievement: Insights from the Prospects study of elementary schools. *Teachers College Record, 104,* 1525–1567.

Ryan, S. (1999, April). *Principals and teachers leading together.* Paper presented at the annual meeting of the American Educational Research Association, Montreal, Quebec, Canada.

Sanders, W. L., & Rivers, J. C. (1996). Cumulative and residual effects of teachers on future student academic achievement. Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center.

Sanders, W. L., Wright, S. P., & Horn, S. P. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education,* 11(1), 57–77.

Santos, J. R. A. (1999). Cronbach's alpha: A tool for assessing the reliability of scales. *Journal of Extension, 37*(2).

Schacter, J., & Thum, Y. M. (2004). Paying for high- and low-quality teaching. *Economics of Education Review, 23*(4), 411–430.

Schier, S. E. (2011). *Transforming America: Barack Obama in the white house.* Maryland: Rowman & Littlefield.

Sebastian, J., & Allensworth, E. (2012). The influence of principal leadership on classroom instruction and student learning: A study of mediated pathways to learning. *Educational Administration Quarterly, 48*(4), 626–663

Sergiovanni, T. J. (1992). Why we should seek substitutes for leadership. *Educational Leadership, 49*(5), 41–45.

Sergiovanni, T. J. (1996). *Leadership for the schoolhouse: How is it different? Why is it important?* San Francisco: Jossey-Bass Publishers.

Shannon, D. M., & Davenport, M. A. (2001). *Using SPSS to solve statistical problems*. New York: Prentice Hall.

Sherrill, J. (1999). Preparing teachers for leadership roles in the 21st century. *Theory Into Practice, 38*(1), 56.

Shorter, P. M., & Greer, J. T. (1997). *Leadership in empowered schools: Themes from innovative efforts.* Columbus, OH: Prentice-Hall.

Sillins, H., & Mulford, B. (2002). Schools as learning organizations: The case for system, teacher and student learning. *Journal of Educational Administration, 40*(5), 425–446.

Silva, D., Gimbert, B., & Nolan, J. (2000). Sliding the doors: Locking and unlocking possibilities for teacher leadership. *Teachers College Record, 102*(4), 779–804. Retrieved 13 April, 2011 from http://www.tcrecord.org/Content.asp?ContentId=10504

Sireci, S. G. (2007). On validity theory and test validation. *Educational Researcher, 36,* 477–481.

Sirin, S. R. (2005). Socioeconomic status and academic achievement: a meta-analytic review of research. *Review of Educational Research*, 70(3), 417-453.

Sizer, T. (1984). *Horace's compromise: The dilemma of the American high school.* Boston: Houghton Mifflin.

Sledge J. R., & Morehead, P. (2006). Tolerated failure or missed opportunities and potentials for

   teacher leadership in urban schools? [Online]. *Current Issues in Education*, 9(3).

   Retrieved 19 March, 2011from http://cie.ed.asu.edu/volume9/number3/

Smith, S. C., & Piele, P. K. (1996). *School leadership – Handbook for excellence* (3rd ed.).

   Eugene, OR: ERIC Clearinghouse on Educational Management.

Smith, W. F., & Andrews, R. L. (1989). *Instructional leadership*: *How principals make a*

   difference. Association for Supervision and Curriculum Development. (ERIC Document

   Reproduction Service No. ED 314826).

Smylie, M., Conley, S., & Marks, H. (2002). Exploring new approaches to teacher leadership for

   school improvement. In J. Murphy (Ed.), E*ducational leadership challenge: Redefining*

   leadership for the 21st century (pp. 162−188). Chicago, IL: NSSE.

Smylie, M. (1997). Research on teacher leadership: Assessing the state of the art. In B. J. Biddle,

   T. L. Good, & I. F. Goodson (Eds.), *International handbook of teachers and teaching*

   (pp. 521−592). Dordrecht, The Netherlands: Kluwer

Smylie, M. A., & Denny, J. W. (1990). Teacher Leadership: Tensions and Ambiguities in

   Organizational Perspective. *Educational Administration Quarterly, 26*(3), 235−259.

   Retrieved 13 April, 2011 from Questia.

Snell, J., & Swanson, J. (2000). *The essential knowledge and skills of teacher leaders: A search*

   for a conceptual framework. Paper presented at the Annual Meeting of the American

   Educational research Association. New Orleans, LA. April, 24. Retrieved 17 March,

   2011 from http://eric.ed.gov/PDFS/ED444958.pdf

Spillane, J. P., Halverson, R., & Diamond, J. B. (2004). Towards a theory of leadership practice: a distributed perspective. *Journal of Curriculum Studies, 36*(1), 3–34. doi:10.1080/0022027032000106726

Sribnick, E. G. (2009). *A legacy of innovation: Governors and public policy.* Pennsylvania: University of Pennsylvania Press

Stoll, L., & Louis, K. (2007). *Professional learning communities: Divergence, depth and dilemmas.* New York: McGraw Hill.

Stronge, J. H. (2012). Why teachers matter most: The impact of teachers on student achievement. *Learning & Teaching in Educational Leadership,* 20(1), 1–4.

Stronge, J. H., Ward, T. J., Tucker, P.D., Hindman, J. L., McColsky, W., & Howard, B. (2008). National board certified teachers and non-national board certified teachers: Is there a difference in teacher effectiveness and student achievement? *Journal of Personnel Evaluation in Education, 20*(3/4), 185–210.

Suleiman, M., & Moore, R. (1996). *Teachers' roles revisited: Beyond classroom management.* Paper presented at the Summer Workshop of the Association of Teacher Educators, Tarpon Springs, FL. (ERIC Document Reproduction Service No. ED 401 277).

Taylor, D. L., & Bogotch, I. E. (1994). School-level effects of teachers' participation in decision making. *Educational Evaluation and Policy Analysis, 16,* 302–319.

Teacher Leader Standards. (2011). Retrieved Jan. 15, 2011, from Teacher Leader Standards Website: http://www.teacherleaderstandards.org/downloads/TLS_Brochure.pdf

Teacher Leadership Standards. (2008). Retrieved April 21, 2010, from Teacher Leadership website, http://www.teacherleaderstandards.org/downloads/TLS_Brochure.pdf

Teacher Training Agency. (1998). *National standards for subject leaders.* Washington, DC: Author.

Tse, To-hung. (2006). *How teacher leadership leads to school improvement: A case study*. Paper presented at School Improvement and University-School Partnership Conference. Hong Kong. June, 3. Retrieved 18 March, 2011 from http://www.fed.cuhk.edu.hk/~cthk/paper/b3.pdf

U.S. Department of Education. (1986). *A nation prepared: Teachers for the twenty-first century*.

U.S. Department of Education National Center for Education Statistics. (1993). *Who's in charge? Teachers' views on control over school policy and classroom practices.* (Office of Research Rep. No. 0491). Washington, DC: U.S. Government Printing Office.

Urbanski, A., & Nickolaou, M. (1997). Reflections on teachers as leaders. *Educational Policy,* 11(2), 243–254.

van de Mortel, T. 2008. Faking it: Social desirability response bias in self‑report research. *Australian Journal of Advanced Nursing,* 25(4), 40–48.

Vescio, V., Ross, D., & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education,* 24(1), 80–91.

Wahlstrom, K. L., Louis, K. S., Leithwood, K., & Anderson, S. E. (2010). *Investigating the links to improved student learning.* Minnesota: University of Minnesota- Center for Applied Research and Educational Improvement.

Wasley, P. (1991). *Teachers who head: The rhetoric of reform and the realities of practice*. New York: Teachers College Press.

Waters, J. T. (2003, November). *School leadership that works: What we can learn from 25 years of research.* Paper presented at the Council of Chief State School Officer's Fall Policy Conference, Indianapolis, IN.

Waters, T., Marzano, R., & McNutty, B. (2003). Balanced leadership: What 30 years of research tells us about the effect of leadership on student achievement. *McREL Working Paper, 5*(1), 19–25.

Wei, X. (2008). *Accountability stringency, incent4es and student performance.* New York: ProQuest

Wenglinsky, H. (2000). *How teaching matters: Bringing the classroom back into discussions of teacher qualit*y.

Westbury, M. (1994). The effects of elementary grade retention on subsequent school achievement and ability. *Canadian Journal of Education, 19*(3), 241–250.

Whitaker, T. (1995). Middle school programs in Indiana. *In Focus, 1*(1), 19–20

Whitsett, G., & Riley, J. (2003). *Defining and applying leadership: Perceptions of teacher leader candidates*. Paper presented at the Annual Meeting of Mid-south Educational Research Association. Retrieved 13 April, 2011 from http://www.eric.ed.gov/PDFS/ED482549.pdf

Williams, E., & Matthews, J. (2005). The liberty elementary story: Confronting the challenge of falling student achievement, low teacher morale, and community disengagement. *Journal of Cases in Educational Leadership, 8*(3), 101–119

Wilmore, E. L. (2007). *Teacher leadership. Improving teaching and learning from inside the classroom*. Thousand Oaks, CA: Corwin Press.

Wilson, M. (1993). The search for teacher leaders. *Educational Leadership, 50*(6), 24–27.

Witziers, B., Bosker, R. J., & Kruger, M. L. (2003). Educational leadership and student achievement: The elusive search for an association. *Educational Administration Quarterly,* 39(3), 389–425.

Wright, S. P., Horn, S. P., & Sanders, W. L. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education, 11*, 57–67

Wynne, J. (2001). *Teachers as leaders in education reform*. ERIC Digest. Washington, DC: ERIC. (ERIC Document No. ED462376). Retrieved December 15, 2005, from http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/2a/35/28.pdf

Yarger, S. J., & Lee, O. (1994). The development and sustenance of instructional leadership. In D. R. Walling (Ed.), *Teachers as leaders: Perspect4es on the professional development of teachers* (pp. 223–237). Bloomington, IN: Phi Delta Kappa Educational Foundation.

Yendol-Hoppey, D., & Dana, N. F. (2010). *Powerful professional development building expertise within the four walls of your school*. London: Corwin Press.

Yoon, K-S., Duncan, T., Lee, S., Scarloss, B., & Shapley, K. (2007). *Reviewing the evidence on how teacher professional development affects student achievement.* (Issues & Answers Report, REL 2007–No. 033). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. Retrieved February 23, 2010, from http://ies.ed.gov/ncee/edlabs/regions/southwest/pdf/REL_2007033.pdf

York-Barr, J., & Duke, K. (2004). What do we know about teacher leadership? Findings from two decades of scholarship. *Review of Educational Research*, *74*(3), 255–316.

Yukl, G. A. (1998). *Leadership in organizations* (4th ed.). Englewood Cliffs, NJ: Prentice.

Zaccaro, S. J., & Klimoski, R. J. (2001). The nature of organizational leadership (pp. 3–41). San Francisco: Jossey-Bass.

Zimpher, N. L., & Howey, K. R. (1992). Policy and practice toward the improvement of teacher education: An analysis of issues from recruitment to continuing professional development with recommendations.

APPENDIX A

RESEARCH STUDY INFORMATION LETTER

INFORMATION LETTER

for a Research Study entitled

"Teacher Leadership and Student Achievement in Alabama's Elementary Schools: A Correlation Study"

You are invited to participate in a research study to explore and research teachers' perceptions of teacher leadership at their school. The study is being conducted by Pamela Scott -Williams, Doctoral Student under the direction of Dr. Lisa Kensler in the Auburn University Department of Educational, Foundations, Leadership, and Technology in the College of Education. The purpose of this study is to elucidate the relationship between teacher leadership and state mandated student test results. You were selected as a possible participant because you are a certified teacher in an elementary school in the state of Alabama and your school principal has agreed to have your school participate in the study.

What will be involved if you participate? Your participation is completely voluntary. If you decide to participate in this research study, you will be asked to complete a 35 item survey. Your total time commitment will be approximately 20 minutes.

Are there any risks or discomforts? Data will be collected anonymously. Information will be reported in an anonymous manner and NO identifiable information traceable to the ind4idual will be used.

Are there any benefits to yourself or others? There are no direct benefits to you. However, this study will contribute to the knowledge of teacher leadership and student achievement scores.

Will you receive compensation for participating?

If you decide to participate, there will be no compensation g4en.

If you change your mind about participating, you can withdraw at any time by closing your browser window. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University, the Department of Educational, Foundations, Leadership, and Technology, or your school.

Any data obtained in connection with this study will remain anonymous. We will protect your privacy and the data you provide by collecting anonymous data. Information collected through your participation may be used to fulfill an educational requirement, published in a professional journal, and/or presented at a professional meeting.

If you have questions about this study, please contact Pamela Scott Williams at 334-695-0227 or Dr. Lisa Kensler at 334-844-3020.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334) 844-5966 or e-mail at hsubjec@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION ABOVE, YOU MUST DECIDE IF YOU WANT TO PARTICIPATE IN THIS RESEARCH PROJECT. YOU MAY PRINT A COPY OF THIS LETTER TO KEEP.

_____
Investigator   Date

_____
Co-Investigator   Date

APPENDIX B

SITE AUTHORIZATON DISTRICT LETTER

SCHOOL LETTERHEAD

May 2, 2012

Institutional Review Board
c/o Office of Human Subjects Research
307 Samford Hall
Auburn University, AL 36849

Dear IRB Members,

After reviewing the proposed study, ""Teacher Leadership and Student Achievement in Alabama's Elementary Schools: A Correlation Study", presented by Mrs. Pamela Scott Williams, a graduate student at Auburn University, I have granted permission for the study to be conducted in name of district.

The purpose of the study is to explore what relationship exists between teacher leadership and student achievement. The primary activity will be survey distribution via Qualtrics. Only teachers in elementary schools K-6 or any combination of elementary schools are eligible to participate.

I understand that survey collection will occur for one week and teachers will be allowed to use work time to fill out the 20 minute survey. I expect that this project will end not later than June 10, 2012. Mrs. Williams will contact the principal who will then send an email containing the survey link to teachers. Mrs. Williams has permission to collect data in all name of system elementary schools.

 Mrs. Williams has agreed to provide to my office a copy of all Auburn Un4ersity IRB-approved, stamped documents before she recruits schools.   Any data collected by Mrs. Williams will be kept confidential and will be stored in a locked filing cabinet in his AU advisor's office, Dr. Lisa Kensler. Mrs. Williams has also agreed to provide to us a copy of the aggregate results from his study.

If the IRB has any concerns about the permission being granted by this letter, please contact me at the phone number listed below.

Sincerely,
Printed Name
Title
Phone Number
Date

APPENDIX C

SITE AUTHORIZATION SCHOOL LETTER

SCHOOL LETTERHEAD

May 2, 2012

Institutional Review Board
c/o Office of Human Subjects Research
307 Samford Hall
Auburn University, AL 36849

Dear IRB Members,

After reviewing the proposed study, ""Teacher Leadership and Student Achievement in Alabama's Elementary Schools: A Correlation Study", presented by Mrs. Pamela Scott Williams, a graduate student at Auburn University, I have granted permission for the study to be conducted in name of school.

The purpose of the study is to explore what relationship exists between teacher leadership and student achievement. The primary activity will be survey distribution via Qualtrics. Only teachers in elementary schools K-6, or any combination of elementary schools, are eligible to participate.

I understand that survey collection will occur for two weeks. I expect that this project will end not later than June 10, 2012. Mrs. Williams will send me an email containing the survey link which I will forward to teachers. Mrs. Williams has permission to collect data in name of school.

 Mrs. Williams has agreed to provide to my office a copy of all Auburn University IRB-approved, stamped documents before survey is sent out.   Any data collected by Mrs. Williams will be kept confidential and will be stored in a locked filing cabinet in his AU advisor's office, Dr. Lisa Kensler. Mrs. Williams has also agreed to provide to us a copy of the aggregate results from his study.

If the IRB has any concerns about the permission being granted by this letter, please contact me at the phone number listed below.

Sincerely,

Printed Name
Title
Phone Number
Date

APPENDIX D

TEACHER LEADERSHIP PERCEPTION SURVEY

Directions: We would like to ask about your perceptions of your school and the role of teachers in your school. Please answer the following background questions using the scale provided.

Please use the scale provided to indicate the option that best reflects your agreement with the statement.

	None	Few	Some	Most	All	
Domain I: Fostering a Collaborative Culture to Support Educator Development and Student Learning						
Teachers at my school respond to their own and others' needs as they advance shared goals.						
Teachers at my school talk with other teacher about the curriculum.						
Teachers at my school create an inclusive culture where diverse perspectives are welcomed.						
Teachers at my school share successful instructional strategies.						
Teachers at my school consult with other teachers when addressing student learning challenges.						
Domain II :Accessing and Using Research to Improve Practice and Student Learning						
Teachers at my school use research based practices.						
Teachers at my school gain new knowledge through reading professional articles.						
Teachers at my school participate in action research to improve student learning.						
Teachers at my school learn about educational research from reading journal articles or books.						
Teachers at my school facilitate analysis of research to improve student learning.						

	None	Few	Some	Most	All	
Domain 3: Promoting Professional Learning for Continuous Improvement/						
Teachers at my school actively support the professional learning of other teachers by coaching and/or mentoring.						
Teachers at my school work together with school administrators to plan professional learning that is linked to school/district improvement goals.						
Teachers at my school engage in professional learning experiences aligned with their needs.						
Teachers at my school direct professional learning activities that correlate with school's improvement goals.						
Teachers at my school seek support from professionals who have specialized expertise (e.g., special educators, media specialist, reading coach, ESL specialist) to design learning experiences.						
Teachers at my school model effective instructional practices for colleagues.						
Domain 4: Facilitate the Improvements in Instruction and Student Learning						
Teachers in my school engage in reflective dialogue to improve teaching.						
Teachers at my school use school based student test results to identify opportunities to improve instruction and student learning.						
Teachers at my school use instructional strategies that promote diversity and equity in the classroom.						
Teachers at my school observe other teacher's classroom instruction to improve student learning.						
Teachers at my school connect with other educators around the globe to improve teaching and learning.						
Domain V: Promoting the Use of Assessments and Data for School and District Improvement						
Teachers at my school engage colleagues in conversations about student learning data.						
Teachers at my school facilitate collaborative interpretation of data results (e.g., data meetings, data rooms).						
Teachers at my school use assessment data results to promote changes in instructional practices.						

	None	Few	Some	Most	All	
Teachers at my school use a variety of data (e.g., systematic observation, information about learners, research) to evaluate the outcomes of teaching and learning.						
Teachers at my school use data to differentiate instruction.						
Domain VI: Improving Outreach and Collaboration with Families and Community						
Teachers at my school model and/or teach effective communication and collaboration skills with families.						
Teachers at my school develop a shared understanding among colleagues of the diverse educational needs of families.						
Teachers at my school collaborate with families to develop comprehensive strategies to address the diverse educational needs of students.						
Teachers at my school collaborate with community members to develop comprehensive strategies to address the diverse educational needs of students.						
Teachers at my school work with colleagues to promote ongoing systematic collaboration with families.						
Domain VII: Advocating for Student Learning and the Profession						
Teachers at my school advocate for the profession in contexts outside of the classroom (local, state, or national level).						
Teachers at my school advocate for access to professional resources (e.g., financial support, human, and other material resources).						
Teachers at my school advocate for the rights and needs of students.						
Teachers at my school advocate for teaching and learning processes that meet the needs of all students.						
Teachers at my school share information with colleagues within and/or beyond the district regarding how state policies can impact classroom practices.						
Teachers at my school work in partner-ship with organizations engaged in researching critical educational issues (e.g., universities, Alabama Education Association [AEA]).						