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EXPLORING THE RELATIONSHIP BETWEEN TEACHER LEADERSHIP AND
STUDENT ACHIEVEMENT IN HIGH-POVERTY SCHOOLS

By
Chaundra Patrice Snuggs

A Dissertation Submitted to the
Gardner-Webb University School of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

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2021

Approval Page

The dissertation was submitted by Chaundra Patrice Snuggs under the direction of the persons listed below. It was submitted to the Gardner-Webb University School of Education and approved in partial fulfillment of the requirement for the degree of Doctor of Education at Gardner-Webb University.

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Abstract

EXPLORING THE RELATIONSHIP BETWEEN TEACHER LEADERSHIP AND STUDENT ACHIEVEMENT IN HIGH-POVERTY SCHOOLS. Snuggs, Chaundra Patrice, 2021: Dissertation, Gardner-Webb University.

This quantitative study was developed to gather an understanding of how teacher leadership may affect student achievement in high-poverty schools. This study used Angelle and DeHart's (2010) Teacher Leadership Inventory to assess teachers from two elementary schools, one low performing and the other high performing. Teacher leadership is explored through four variables including sharing leadership, sharing expertise, supra-practitioner, and principal selection. By investigating how teacher leadership may affect student achievement, this study may provide influential information for teacher leaders, principals, and other educational stakeholders who desire to learn more about student achievement in high-poverty schools. This study should add to the educational research field in addressing opportunities that teacher leaders can pursue in hopes to lessen the achievement gap among students in high-poverty schools. While data from both schools showed evidence of teacher leadership, this research revealed no significant mean differences between the two schools. However, some conclusions were drawn from the study including teachers can perceive themselves high in teacher leadership, yet student achievement levels can be low. Additionally, factors beyond the teacher leadership variables addressed in this study may impact student achievement.

Keywords: teacher leadership, high-poverty schools, teacher leaders

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Chapter 1: Introduction

Curtis (2013) defined teacher leadership as taking the most effective teachers and using their influence to improve student learning, adult learning, collaboration, and school systems. According to Derrington and Angelle's (2013) work on teacher leadership, teachers who exhibit leadership have a profound influence in their school and district with their level of expertise. Teachers can establish a highly engaging school environment that is conducive for adults and students to learn. Teachers who are leaders tend to be more self-directed and seek opportunities where others may not. For this reason, teacher leaders feel an increased value in their work and may gain the support of school leadership and peers. This empowerment of teacher leadership induces positive working relationships among staff who may become active participants in school improvement. These teachers go the extra mile to assist others, share ideas with others in the school building, remain after school to help students, and provide several layers of support for students (Derrington & Angelle, 2013).

The purpose of this research was to examine if any mean differences exist between teacher leadership and student achievement in high-poverty schools. Chapter 1 explains concepts of teacher leadership, student achievement, and high-poverty schools. This chapter also contains the background of the problem, problem statement, purpose of study, significance of the study, research questions, conceptual framework, definition of terms, assumptions, limitations, delimitations of the study, and chapter summary.

Background of the Problem

In 2018, the National Center for Education Statistics (NCES) reported an achievement gap occurs when one group of students outperforms another group of

students. Either race or gender can categorize the group. NCES (2018) also found low-socioeconomic status students are five times as likely to drop out of school in comparison to high-income students, and low-socioeconomic status students will be less likely to graduate on time. Makarewicz's (2013) qualitative analysis with 72 parents revealed low-income families do not have financial means to support their children's education. Many low-income parents in the study focused on basic needs and reported no additional funds to purchase items like technology, private tutoring, or transportation for additional school activities. Having few resources and a low-socioeconomic status may impact a child's academic progress with testing, grades, and support to continue to higher education (Makarewicz, 2013). Since 1965, laws have been in place with the Elementary and Secondary Education Act (ESEA) which was amended by the Every Student Succeed Act (ESSA) to bring educational opportunities to all students and provide funding to low-income students. Allotted federal funds offered low-socioeconomic communities with resources they needed in addition to establishing more academic accountability for student success (North Carolina Department of Public Instruction [NCDPI], 2018).

The primary purpose of ESSA was to allow states to develop a plan on how it would provide equal educational opportunities for all students. With implementation of ESSA, NCDPI struggled to fulfill requirements set by the U.S. Department of Education (USDOE), as the state had to rewrite its ESSA plans three times. USDOE was concerned that North Carolina's consolidated plan for ESSA did not include a solid foundation for high-poverty schools. Like many states across the nation, North Carolina faced the challenge of finding licensed teachers to teach at high-poverty schools. Furthermore, this predicament concerned state leaders; if local school districts are settling for unqualified

teachers in high-poverty schools, it leaves economically disadvantaged students with ineffective instruction (NCDPI, 2018).

As of 2018, roughly 2,600 schools within North Carolina contain 40% or higher low-income families (NCDPI, 2018). The U.S. Census Bureau (n.d.) reported that 14.7% of the general population is living in poverty in North Carolina. This percentage is slightly higher than the national average of 12.3% (U.S. Census Bureau, n.d.). According to research, children from poverty-stricken areas have a higher risk of low academic readiness and achievement than children from non-impooverished homes due to language stimulation differences not being present at home. In other words, high-poverty locations expose children to less cultural literacy, thereby decreasing their prior knowledge of valuable information in comparison with their peers, which has proven to negatively affect school performance (Ferguson et al., 2007).

Basch (2011) reported that nutrition influences student academic outcomes. In a study of 18,000 adolescents from The National Longitudinal Study of Adolescent Health, many youths in low-income families go to school on an empty stomach. Children in poverty areas have access to little food or food with a low nutritional value, which negatively affects the student's total health. Hence, these children will not focus or learn if they are hungry; and they tend to have high absent rates.

Problem Statement

Current roles for teachers have shifted dramatically from teacher positions years ago. Today, teachers must be an asset outside of their classroom for school organizations to be effective. Additionally, teachers must deal with various external conditions (economic, social, and personal) and state laws such as No Child Left Behind (NCLB)

that affect teacher performance (Singh, 2012). NCLB requirements included teachers being highly qualified by the end of the 2005-2006 school year with a bachelor's degree, certification, and proficiency in the subject area taught (USDOE, 2018). Guggino (2008) interviewed 740 National Board certified teachers on their perceptions of NCLB. Using over 30 interviews, Guggino found that while NCLB increased expectations and student success, there were still various adverse effects of the law. For instance, teachers felt NCLB limited their passion for teaching, eliminated teacher professional skills, and provided less instructional differentiation. Over 84% of respondents did not favor NCLB, mainly because they felt teaching would not be considered a highly skilled occupation with NCLB in place (Guggino, 2008). Furthermore, school district officials place high demands on teachers, and teachers must expand their knowledge outside their classroom walls. Unfortunately, few teachers see a need to be leaders in their school. Consequently, this creates a lack of adequate teacher leadership in schools, which has a significant relationship with low student achievement (Williams, 2015).

The problem is that many teachers in the United States do not have opportunities to influence policy in their school districts. Teachers must conform to policies such as NCLB that negatively affect teacher performance (Singh, 2012). Before NCLB, the federal government had little influence over education, and most decisions were made at state and local levels. NCLB set national standards for students, but it did not account for the time it would take for low-economic areas to grow to the same academic levels as their peers (Laws, 2019). School district officials place unreasonably high demands on teachers and fail to understand teacher perceptions of how to improve student performance. When this happens, teachers become disengaged and do not see a need to

be leaders in their school. Consequently, this creates a lack of adequate teacher leadership in schools, which has a significant relationship with poor student achievement (Williams, 2015).

Teacher leaders can influence others; therefore, when teacher leaders are not present in a school setting, their contributions can be compromised. For instance, student achievement decreases when teachers do not seek innovative ways to assist all students. As a result of poor student achievement, school administrators receive criticism for low performance and being an ineffective leader (Duncan & Murnane, 2014). If students consistently have poor academic performances, they will not be fully prepared to enter adulthood or the workforce.

At the same time, school administrators cannot be the only leaders of the school; this must be a collaborative effort with teachers. Research from The Aspen Strategic Group also supports having a shared level of responsibility with teachers and administration to educate all students. Their study stated that school administration must establish pathways for teachers to be leaders, especially since over half of the teachers leave the profession due to lack of advancement and authority (The Aspen Institute, 2014). If too many experienced teachers leave the profession, more entry level teachers will teach students who they may not professionally be prepared to teach. Hence, these students' academic levels will decrease if improper instruction exists in the classroom (Duncan & Murnane, 2014).

The opportunity to receive a quality education is vital for students to become productive citizens. Teachers interact with students for several hours each day and influence success of student outcomes. Stone et al. (2012) surveyed six teachers from

both primary and secondary educational levels and found teacher leaders play a significant role in student success and teacher leaders seek out multiple avenues to improve the overall educational process. Rowley and Wright (2011) stated that regardless of strategies used to increase academic achievement levels, both students of color and low-socioeconomic status students struggle in the educational setting. If teacher leaders are not present in schools, those students who do not want to learn will be at a significant disadvantage. When students do not take advantage of their learning opportunities, they risk paying the price in future endeavors. For example, students learn essential soft skills for communication, problem-solving skills, critical-thinking skills, and career and technical skills when completing class assignments. These are all skills students will continue to use throughout their personal and professional lives. If students do not learn how to apply these skills successfully, they may pass up significant opportunities only because they lack effective instruction. Instruction for students must come through various mechanisms that fit their needs, and teacher leaders will broaden their teaching tactics to assist students. Metlife (2013) conducted a qualitative study with 1,000 middle and high school teachers, roughly 2,000 students, 580 parents, and 300 executives from Fortune 1000 companies. Approximately 90% of teachers and 57% of parents surveyed felt schools needed to strengthen programs and resources for non-mainstream students like high-poverty, learning disabilities, and diverse learners, yet only 31% of business executives agreed that schools have more authority to remove ineffective teachers and measure teacher effectiveness in student growth.

Given the benefit of creating more teacher leaders, it is critical to understand how factors of teacher leadership contribute to increased academic achievement. This

quantitative study involves measuring how teacher leadership impacts student achievement in the classroom.

Purpose Statement

This quantitative descriptive study described statistical mean differences between teacher leadership and student achievement in high-poverty schools in North Carolina. According to Costello et al. (2015), effective teacher leaders are essential in fostering student outcomes in United States schools. Regarding teacher challenges and demands discussed earlier in Chapter 1, current schools need leadership at all levels. Teacher leaders with administrative support can positively impact school-wide policies and programs. By further investigating teacher leadership and understanding how to develop teacher leaders, schools will improve and teachers will realize their full potential (Danielson, 2007).

Definition of Key Terms

Before describing a concise analysis of the study, a list of terms and definitions is presented.

Achievement

A representation of student performance that identifies the extent to which a person has accomplished their desired goals in instructional activities in an educational setting (Steinmayr et al., 2014).

High-Poverty School

A public school where over 75% of the student population qualifies for free or reduced lunch (Institute of Education Sciences, 2017).

Sharing Expertise

Sharing classroom knowledge and expertise with other teachers (Angelle & DeHart, 2011).

Sharing Leadership

Teacher and principal willingness to collaborate in leadership responsibilities (Angelle & DeHart, 2011).

Supra-Practitioner

Teacher perceptions of behaviors that go beyond the scope of the classroom (DeHart, 2011).

Principal Selection

Administration is delegating certain teachers to fulfill leadership roles (DeHart, 2011).

Teacher Leadership

The process by which teachers work collaboratively with faculty, staff, and community members to improve teaching practices that enrich the learning environment and lead to higher achieving classrooms (University of Delaware, 2016).

Significance of Study

According to research by Haynes (2014), the United States pays over \$2.2 billion annually as half a million teachers leave the teaching profession. Teacher turnover is higher in high-poverty schools than in affluent schools (Haynes, 2014). According to NCDPI (2018), North Carolina had a 13.5% teacher turnover rate during the 2016-2017 school year. Between January 2015 and June 2017, more than 3,100 teachers found a different job in education in North Carolina, and 4,100 teachers left the profession

entirely every 9 weeks within those 2 years (Standford, 2019). High teacher turnover rates compromise high-poverty schools in ensuring that all students have equity in their classroom experiences (Haynes, 2014).

Yazzie-Mintz (2006) researched engagement of 81,000 students from 110 high schools across 26 different states. This research found students in Title 1 programs or high-poverty areas have lower engagement levels than students who are not in poverty (Yazzie-Mintz, 2006). Loeb et al. (2013) observed over 850,000 fourth- and fifth-grade students over 8 years. In both grade levels, students scored lower on their math and English language arts tests, specifically in environments with low-performing students. Since federal laws like ESSA require equal educational opportunities for all, stakeholders in high-poverty schools need resources like training for best practices to improve student achievement. This study identified three categories of people (teachers, district personnel and principals, and students) teacher leaders would affect. To delve deep into the study, it is vital to understand a glimpse of their point of view on the topic at hand.

Teachers

With so many external factors (sociological, economic, and emotional) influencing student achievement, teachers need to be equipped with resources to meet student needs. Teacher leadership produces teacher retention and creates an engaging environment for teachers to teach longer in the classroom. Teacher longevity helps improve student achievement, as these teacher leaders are willing to devote time and energy to assist the students in learning (Tomal et al., 2014). By seeking opportunities to improve schools, teacher leaders work in informal roles, and they have a long-lasting impact on school culture. One benefit of being a teacher leader is a teacher's ability to

grow in their profession while staying inside classrooms (Barnett et al., 2014). A west coast elementary school experienced increased teacher leadership when it enhanced its professional development program. As a result, this school saw tremendous gains over 3 years as English scores went from 32% to 53% and math scores increased from 50% to 72% on the state's standard test (Edwards & Hinueber, 2015). The goal of this study on teacher leadership was to assist teachers in making a better learning environment for not only their classroom but also the school and local district.

District Personnel and Principals

District personnel, principals, and school officials will benefit from insights gleaned from this research by learning how to cultivate more teacher leaders in their school districts. School officials will be able to delegate leadership tasks to teachers and focus on other imperative issues at hand.

Students

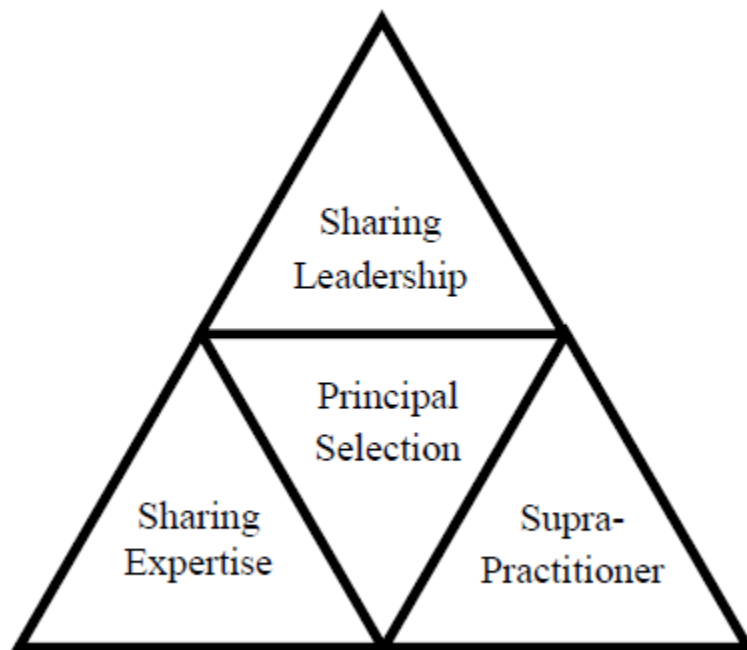
Teacher leaders may feel more empowered to make decisions. For this reason, students may benefit from higher teacher morale and gain better learning experiences in classrooms. Additionally, teacher leaders facilitate leadership roles for students, which creates an environment of democracy (Barth, 2001; York-Barr & Duke, 2004). Students learn more when teacher leadership is prevalent (Korte & Karting, 2014). Students may have better learning opportunities where they can thrive and grow. In participating in this research study, teachers will be asked to self-reflect and improve their leadership levels, and students may see improvement in their work ethic and achievements. Students may also possess more confidence and feel capable of having academic success.

Conceptual Framework

Conceptual framework for this quantitative study is outlined in the figure, the four-factor model of teacher leadership proposed by Angelle and DeHart (2010), and based upon Angelle and Beaumont's (2006) prior research and Angelle et al. (2008). The four-factor model measures perspectives on teacher leadership. Four components that comprise teacher leadership are sharing leadership, sharing expertise, principal selection, and supra-practitioner (DeHart, 2011).

Figure

The Four-Factor Model of Teacher Leadership



Four Factors of Teacher Leadership

Factors in the model entail the following:

1. Sharing leadership is a dual concept as it requires actions from both principals and teachers. Principals must be willing to share leadership with teachers, and

teachers must be willing to take on leadership responsibilities.

2. Sharing expertise is teacher willingness to collaborate and communicate their classroom knowledge with others.
3. Supra-practitioner measures a teacher's desire to act beyond their designated role.
4. Principal selection is when principals favor certain teachers who demonstrate leadership in creating an in-group. Additionally, principals can ignore teachers who do not show leadership, which creates an out-group (DeHart, 2011).

Research Questions

As previously stated, Angelle and DeHart's (2010) four-factor model on teacher leadership served as the framework for this study. This study used the Teacher Leadership Inventory (TLI) to gather research on how teacher leadership affects student achievement in high-poverty schools (Angelle & DeHart, 2010). To accomplish this goal, the following research questions guided this study:

1. Do schools with different levels of student achievement differ in their teacher perceptions of sharing leadership?
2. Do schools with different levels of student achievement differ in their teacher perceptions of sharing expertise?
3. Do schools with different levels of student achievement differ in their teacher perceptions of supra-practitioner?
4. Do schools with different levels of student achievement differ in their teacher perceptions of principal selection?

Assumptions

To complete this study successfully, I had a few assumptions to consider. For this study, I assumed school administration would encourage teachers to collect sufficient data for analysis. Data collection processes must have a required number of participants for validity.

The second assumption was participants would be honest and truthful in answering survey questions; otherwise, reporting data may show shrewdness.

Scope, Limitations, and Delimitations

Due to the nature of this quantitative descriptive study, only teachers who worked in high-poverty schools were able to participate. Hence, criteria limited participation eligibility for public schools in North Carolina for the current study. Teachers who completed the survey may have had bias either in favor of or against the school system, which may influence how participants responded to survey questions. Other factors such as teacher gender or race were not included in analyzing the data. Furthermore, while there are recent studies on teacher leadership, information in those studies still contain dated information, as not many studies exist to reveal current information on teacher leadership.

Chapter Summary

NCDPI uses performance indicators such as student standardized test scores to measure endeavors of teachers and school administration. North Carolina publishes standardized test results indicating if a school is high or low performing (Glasswell et al., 2016). Children from higher socioeconomic backgrounds have higher performance levels on intelligence tests and academic achievement versus children from lower

socioeconomic backgrounds (Bradley & Corwyn, 2002; Roska, & Kinsley, 2019).

Findings from Kraft et al. (2015) found student low academic levels and lack of study skills made it difficult to teach challenging material in high-poverty schools.

Furthermore, with increasing demands on accountability and focus on student achievement, schools need the effort and knowledge of all staff members to make school more effective (NCBOE, 2018). This study may benefit teachers, school officials, and students in high-poverty school settings who seek to gain better learning experiences for students in the classroom.

Awadzi (2015) described teacher leadership as going beyond traditional duties to managing school, making decisions, and supporting all school system stakeholders.

Teacher leaders should be present in school to help develop positive student outcomes.

For teacher leaders to be successful, they need support and guidance from school administration and top school officials. Chapter 2 of this dissertation includes a literature review on teacher leadership, leadership pathways, barriers that impede teacher leadership, and student achievement in high-poverty schools. Chapter 3 provides detailed information on research methodology used in this study. Chapter 4 provides more insight into data derived in this research from both schools. Chapter 5 summarizes findings in context of the literature, provides recommendations for future research, and discusses implications for action.

Chapter 2: Literature Review

Teacher leaders develop and implement well-organized discipline strategies for other teachers to follow (Kraft et al., 2015). Lumpkin et al. (2014) associated teacher leaders with focusing on learning, collaboration, empowerment, and relationships. Teacher leaders working with school administration can transform schools, where students can utilize well-designed curriculum, have effective instructional strategies, and produce evidence of learning on assessments.

This study aimed to describe the statistical mean differences between teacher leadership variables and student achievement in high-poverty schools in North Carolina. Chapter 2 provides a background on teacher leadership, teacher leadership pathways along with pathway competencies, barriers, gaps, and overlapping competencies in teacher leadership as outlined by The Teacher Leadership Initiative, principal involvement, student achievement in high-poverty schools, and a chapter summary.

All Teachers Can Lead

Barth (2001) recalled a 1970 statement from Ron Edmonds that stated, “all children can learn” and rephrased it to say, “all teachers can lead” (p. 444). Despite criticism for his words, Barth’s rationale for this statement was if student expectations included learning in school, then teacher expectations included leading in school. Some may argue that only a few teachers can lead; nevertheless, Barth believed these statements were humiliating to the profession. Barth stood firm that every teacher has leadership abilities that are waiting for exploration and engagement within the school. According to Danielson (2006), teacher leaders earn authority in their roles as a leader from interacting with peers and students. Teacher leaders are passionate about their

volunteer roles and often exhibit a higher level of professionalism (Danielson, 2006).

Leading Educators (2014) indicated that teacher leaders can exist even if they do not have meaningful support.

Background on Teacher Leadership

For past several decades, teacher leader effectiveness in classrooms has been questionable for the education world. Bond (2015) identified teacher leadership as being an important field of study since 1980. According to research by Bastress (1980), several variations exist in defining an effective teacher leader. Some teachers can be effective leaders in one situation but not successful in the next situation. Additionally, someone's leadership style may work in one classroom but not in the next classroom. Bastress surveyed 98 high school teachers using Fielder's Group Atmosphere Scale to determine how relationship in variables may affect teacher effectiveness. Bastress's study concluded that teacher effectiveness was significantly correlated with teacher experience over teacher leadership style. Bastress's contributions supported Fiedler's model in that teacher experience is an important variable in teacher leadership.

York-Barr and Duke (2004) analyzed 140 teacher leadership studies dating from 1980 to 2004. Of 140, only 100 studies were chosen to develop a conceptual framework for teacher leadership. York-Barr and Duke defined teacher leadership as teachers working individually or together to influence educational stakeholders with the goal of improving student learning and achievement. A summary of findings suggested teachers who practice teacher leadership are accomplished teachers respected by peers who extend their knowledge to others. The whole concept of teacher leadership was based on diverse levels working together including teachers, students, administration. The role of teacher

leadership is too vague, and leaders can have more success if expectations are well-defined and trusting relationships exist in the organization. Finally, teacher leaders grow as they lead professionally and instructionally through practice and within the organization.

Teacher Leadership Roles

The Teacher Leadership Exploratory Consortium (2011) acknowledged teacher leadership could have formal and informal roles. Formal roles include when teacher leaders gain leadership knowledge with professional experience and mentoring, while others may seek advanced degrees and other forms of continued learning. Additionally, some teachers may lead informally in their classrooms or take a leadership role in a professional association. Finally, some principals may appoint teachers to formalized leadership roles at their school as a possible pathway towards school administration (Teacher Leadership Exploratory Consortium, 2011). Danielson (2007) and Barth (2011) also supported formal and informal roles in teacher leadership. Danielson's (2007) description of formal roles included teachers who are department chairs or coaches who apply for their positions and get the job based on a selection process. Formal roles of leadership require training, and these teacher leaders play a vital role within their school. Duties for formal teacher leaders include managing projects, facilitating workshops, and evaluating teachers; but these are just a few. Danielson (2007) described informal roles of teacher leadership as teachers who take the initiative in organizing efforts to meet demands of their school. Informal leaders have no authority, but they are highly respected among their peers for their expertise (Danielson, 2007). The next section describes pathways teachers can take if they desire to be in a leadership role and competencies that

correlate with each role.

Teacher Leadership Pathways

Kraft et al. (2015) stated teacher leaders must possess knowledge to teach their students beyond external circumstances. By focusing on instruction, assessment, and setting expectations, teacher leaders can help any student learn, despite their environment. Marston's (2014) qualitative study analyzed why teachers in a high-poverty setting remain in their teaching jobs despite facing challenges and included eight teachers from two high-poverty schools. Teachers expressed their job as emotionally draining as teachers had to go beyond academic measures to meet their students' needs. Most times, students were hungry, which impacted student engagement and behavior and exhausted teachers. Danielson (2007) expressed how unforeseen demands placed on schools today require leadership presence at every educational level including every department, the entire school, and even beyond the school setting. Demands within a department included inspiring colleagues to embrace school programs to benefit students. Demands in schools included influencing daily operations such as master schedule, grading, and academic and social programs. Finally, demands beyond school settings included involvement in a curriculum team, national conferences, state standard board meetings, and school board meetings (Danielson, 2007). Metlife's (2013) mixed methods study of 1,000 K-12 public school teachers revealed that despite facing challenges in education, 51% of teachers surveyed were willing to perform additional roles outside classroom settings. The following section provides potential pathways teacher leaders can explore for leadership opportunities.

Barnett et al.'s (2014) literature on teacher leadership stated that teachers can take

three different leadership pathways including instructional leadership, policy leadership, and association leadership. The outline for each pathway comes from individuals who participate in professional organizations including the Center for Teaching Quality, National Board for Professional Teaching Standards, and National Education Association (NEA). Three pathways of leadership constitute a Teacher Leadership Initiative with several competencies (Barnett et al., 2014). The next section examines background information concerning teacher leadership pathways and outlines competencies that correspond with each pathway.

Background of Pathways

Competencies for teacher leadership pathways were derived from previous research of two separate sets of teacher leadership standards, the NEA Leadership Competencies, and the Teacher Leader Model Standards (Barnett et al., 2014). The following section provides background information on both organizations.

NEA Leadership Competencies

From 2012 and through 2013, NEA organized a leadership development advisory team to assist members in leading successful associations and being better educational leaders. Team members developed a teacher leadership framework by engaging other NEA members with various interviews, focus groups, and benchmark reviews in corporate and public sector worlds. The NEA asked questions for association members centered on current and future development for leadership. Data collected from interactions helped NEA outline competencies to determine characteristics of leaders in areas of professionalism, organization, communication, governance, and leadership. Table 1 lists NEA (2015) standards used to create teacher leadership standards.

Table 1*NEA Leadership Competencies*

Standard	Explanation
Advocacy	Advancing the cause of public education as a political advocate, leading policy reform, engaging community, and acting on social justice initiatives
Business	Ensuring the effectiveness of the association through financial and fiduciary tasks. Includes managing budget, risks, and using data for decision-making
Communication	Using current media outlets to build a communication plan that promotes the association's goals
Governance and leadership	Setting a strategic plan for success including maintaining effective relationships, executing leadership responsibilities, and setting long-term goals
Leading our professions	Advocating for quality inside the professions and promoting the union's role in advancing education transformation and student learning
Organizing	Using best practices to build community partnerships, engaging in continuous growth and collective action to address pivotal issues.

Teacher Leader Model Standards

The Teacher Leadership Exploratory Consortium (2011) developed model standards also known as domains for teacher leadership. Consortium consisted of members of various educational organizations, teacher leaders, principals, superintendents, and members from colleges and universities. The model's purpose was to define knowledge, skills, and competencies teachers need for leadership roles in their profession. To develop this information, consortium participants researched previous models of formal and informal teacher leadership to gather current data, met with

researchers, interviewed teacher leaders to obtain successes and failures, and examined teacher knowledge about teacher effectiveness. Table 2 outlines the standards developed by the Teacher Leadership Consortium (Teacher Leadership Exploratory Consortium, 2011).

Table 2

Teacher Leader Model Standards

Domain	Explanation
1	Fostering a collaborative culture to support educator development and student learning
2	Accessing and using research to improve practice and student learning
3	Promoting professional learning for continuous improvement
4	Facilitating improvements in instruction and student learning
5	Promoting the use of assessments and data for school and district improvement
6	Improving outreach and collaboration with families and community
7	Advocating for student learning and the profession

As mentioned previously, standards from both NEA and the Teacher Leader Model compose three leadership pathways teachers may pursue. Barnett et al.'s (2014) research on leadership pathways and competencies serves as a reference point and inspiration for teachers who seek to take on leadership roles. Each pathway is described in following section.

Instructional Leadership Pathway

Although Remijan (2014) believed instructional leadership was best for improving student performance, the educational field lacked proper training for school

administrators to adequately train teacher leaders. Barnett et al. (2014) described an instructional leadership pathway as teachers stepping outside of their classroom to enhance an educational environment. Teachers who are effective in instructional leadership share their knowledge with other teachers and other stakeholders in the community. Key points behind instructional leadership were to benefit all students in school buildings. Shaukat and Iqbal's (2012) quantitative research surveyed 198 teachers in elementary and secondary schools pertaining to self-efficacy on engagement and instructional strategies. Data from this survey showed that while younger teachers could engage students more than veteran teachers, no significant difference was found for instructional strategies among participants. Competencies for teacher instructional leadership include coaching and mentoring, collaborative relationships, and community and provide insight into how teachers can follow the instructional leadership pathway.

Coaching and Mentoring

Padilla (2016) conducted a qualitative study with five department leaders in a school district for their perspective on instructional leadership within their assigned schools. When asked how they practiced instructional leadership within their academic departments, mentoring and coaching was a common theme among participants. Within this competency, teacher leaders allowed opportunities for self-reflection and individual growth by building a sense of trust and collaboration within their learning environment. They observed other teachers and provided meaningful feedback to help improve instruction for their students. They also encouraged other teachers to do self-evaluations to determine strengths and areas of opportunity (Barnett et al., 2014). Snell and Swanson (2000) conducted a qualitative study with 10 urban middle school teachers who worked

effectively with their peers to develop a framework on teacher leadership. Themes gained from participants included expertise, collaboration, reflection, and empowerment. Snell and Swanson found teacher leaders led both in and outside classrooms and effectively coached their peers. Additionally, teacher leaders possess genuine knowledge of successful procedures and instructional practices for student achievement. Barnett et al. (2014) stated teacher leaders shared practices with their peers and encouraged colleagues to make their own professional choices through analyzing and commenting on their work.

Kraft et al. (2015) conducted a comparative study of six high-poverty schools in a large urban district and examined how uncertainty plays a role in high-poverty schools. The study consisted of high percentages of English language learners, students with Individualized Education Programs, and several students behind in grade level. Based on 95 interviews from teachers and administration, findings from the study revealed teachers describing how they go beyond the instructor role to foster socio-emotional development for students. One teacher described her job as “doing therapy and teaching subjects” (Kraft et al., 2015, p. 12). Hence, this supported findings with Barnett et al.’s (2014) coaching and mentoring notion, as teachers must be willing to step outside their four walls to benefit the school.

Collaborative Relationships

Wenner and Campbell’s (2017) research of analyzing 72 teacher leadership studies outlined three positive outcomes for teacher leadership and collaboration including teachers felt empowered, colleagues received reliable support, and teacher leadership had a huge impact on school change. Goddard asserted that when teacher leaders encouraged leadership and collaboration, they produced strong instructional

leadership skills, which built collective efficacy that strengthened organizational methodologies (Goddard et al., 2015). According to Barnett et al. (2014), teacher leaders understood unity in working in groups to address challenges and introducing new policies or initiatives. They also used their leadership capabilities in a large school to unite a diverse group of people to work on the organization's shared mission and vision.

Community

Marston 's (2014) study of eight teachers in two high-poverty schools in a certain state found being in the same community with their students helped foster a better relationship with their students and families. Teachers could relate more to their students' needs since teachers were aware of challenges students faced daily. Finally, teachers worked hard to maintain a positive image of their schools so outside individuals would focus more on positive aspects of each school. Marston's research aligned with Barnett et al.'s (2014) conclusions that teacher leaders have a deep understanding of their stakeholders' environments, which allowed them to be successful in attaining partnerships for student needs. They utilized those connections to adhere to current and future needs of students, improve the community, and improve the teaching profession. Teacher leaders made every stakeholder feel a part of the group regardless of external circumstances such as culture, religion, or background (Barnett et al., 2014). Competencies for teacher instructional leadership are coaching and mentoring, collaborative relationships, and community. The next section has competencies under policy leadership, an alternate pathway for teacher leaders, and research that aligns to competencies within the policy leadership pathway.

Policy Leadership Pathway

Teachers can serve on local, state, and national levels in making decisions that affect student learning. Often, decisions about educational practices derive from individuals who have little knowledge about education. These decisions can negatively impact student lives for many years to come and shape delivery of education (Barnett et al., 2014). Wang (2015) used data from SASS Public School Teacher Survey with over 42,000 respondents and 9,000 schools to gather research on teacher power in making school decisions. A multistage cluster sample including Common Core of Data and Private School Survey was used to reduce the final sample size to equal no more than 20 teachers per school. Wang found that teachers had varying power with different aspects of decision-making, influenced by school's size, level, and climate. Even though schools have tried to involve teachers in the decision-making process, there were still some areas in need of change. Barnett et al. (2014) asserted teacher leaders have accomplished knowledge of teaching and learning and can use it to make beneficial decisions in the educational world. Competencies for policy leadership include implementation, advocacy, policy making, and engagement.

Implementation

Snell and Swanson's (2000) study reported teacher leaders understood how policy affects the school system and community. They also actively engaged in innovative ways to develop policies that can influence local, state, and federal levels through research and design. Wang (2015) found teachers in elementary schools have more power in policy than secondary teachers. Teachers demonstrated implementation competency by leading focus groups to analyze how current policies affect the school environment, leading a

diverse professional learning community to implement goals of specific policies, or creating an action plan that reduces harm and inequality in any policy while maximizing usefulness of equitable policies.

Advocacy

Barnett et al.'s (2014) definition of advocacy described teacher leaders advocating for improvements in existing systems and examining best practices in new policies. They created alliances with others to advocate policy issues that produced growth within the educational profession. Teacher leaders achieved advocacy by building and strengthening stakeholder relationships, drafting new policies for consideration, and providing others with empowerment to strengthen their knowledge on policy reform. Dixon's (2003) qualitative study aimed to find the impact of race, gender, and class on pedagogy; and there was also a political discovery in the research. This study contained a purpose sample of two African American teachers. There were four in all, but two teachers did not complete the study due to personal circumstances. Dixon reported both teachers felt the need to speak up for students in the community, particularly African American students. These teachers worked daily to eliminate racial components that harmed African American students. They also spoke at faculty and school board meetings to help African American students feel safe and have a chance to be successful. One of the teachers was also involved in a race relations panel in efforts to advocate more for her students (Dixon, 2003).

Policy Making

Hartney's (2014) study on policy making with teachers suggested school board members are apt to respond to teacher policy preferences such as higher salaries and less

test-based accountability in school districts where educators are heavily active in local politics. Hartney's quantitative research addressed cause and consequences of teacher political involvement in a certain state with a sample size of over 50,000 teachers. In looking at voting elections from the 1980s to 1990s, Hartney found a strong correlation between teacher political participation and student achievement. For example, schools experienced an increase in scores on a fourth-grade math exam during a time when teachers increased their political presence more than in previous years. Regarding policy making, Barnett et al. (2014) stated that teacher leaders can identify and explain how policies relate to the work environment with others. They also establish a method for creating policies and drive policy changes for student rights and school improvement. Teacher leaders may also run for political positions outside of their current school setting or take other formal leadership positions that focus on policy making.

Engagement

In this capacity, teacher leaders successfully network with current policy makers, which opens opportunities for more communication. Teacher leaders influence policy makers with their ability to reason and foster support of other organizations that possess similar interests. Finberg (2013) performed a qualitative study with 11 distinguished elementary school teachers in North Carolina to examine their perceptions as teacher leaders along with their principals. Finberg found that while there are several benefits with teacher leaders, continuation of effective leadership opportunities requires support from policy makers. Teacher leaders also empowered other teachers to take ownership of policy making in transforming them to be active participants in policy leadership (Barnett et al., 2014). While teachers have policy leadership pathway as an option, the next section

describes competencies under association leadership, another pathway for teacher leaders, and studies that align with the competencies pathway.

Association Leadership Pathway

According to North Carolina's teacher evaluation process for leadership, Standard 1 describes teacher leaders, bringing various stakeholder voices together on behalf of students and other teachers. Teacher leaders who fall into this category can facilitate meaningful action by leading a large group to bring positive change (NCDPI, 2018). Association leadership bridges both instructional and policy leadership by seeking suitable instructional practices and desired systems to make those instructional plans happen. Listed within this section are competencies that describe association leadership. The competencies for association leadership include leading with a vision, leading with skill, organizing advocacy, building capacity, and community culture (Barnett et al., 2014).

Leading with Vision/Skill

One word that describes vision is hope. To the educational world, vision is a belief or desired outcome of mastering specific goals or skills within a desired time frame (Great Schools Partnership, 2014). Edwards and Hinuebar (2015) interviewed five teachers in different parts of the United States on teacher leadership. Research data found vision as a common theme in helping teachers become leaders in their schools. Stakeholders in schools must all share the school's vision so students and staff are heading in the same direction (Edwards & Hinueber, 2015). Under association leadership, teacher leaders used their influences to foster their peers and community (known as the association) to invest in the vision as well. Teacher leaders who wish to be involved with

association leadership will lead others toward creating meaningful change and empower others to perform beyond their traditional roles. Teacher leaders also used data to document their success rate in trying to reach their organization's vision. An effective teacher leader guides the association with skill and integrity. They understand the need to be active participants who possess a passion for completing the association's work. They are efficient in building capacity by using the association's resources, getting more individuals to work in the association, and engaging in new partnerships (Barnett et al., 2014).

Organizing/Advocacy

Teacher leaders develop healthy relationships by collaborating with others in similar associations. Collaboration is beneficial in implementing strategies to present to policy makers to create desired change that may affect schools, teachers, and other school employees (Kirkpatrick et al., 2016). Teacher leaders who are proficient in advocacy are vital players; their expertise is sought out by organizations and unions (Barnett et al., 2014).

Building Capacity

Under association leadership, teacher leaders are aware of their strengths and limitations, and they delegate responsibilities to others as necessary. They also understand knowledge and skills of colleagues and use that information to create professional development opportunities for career growth (Barnett et al., 2014). Finberg (2013) found professional development to be beneficial in their practice as a teacher leader. With constant changes to education, teachers reported their desire to stay current with new educational strategies that would help improve student achievement.

Community/Culture

Teacher leaders work to establish a dynamic culture with a positive environment for teaching and learning. By using various methods, teacher leaders work to enhance the learning environment for students, teaching conditions for teachers, and community environment for families (Barnett et al., 2014). York-Barr and Duke (2004) stated schools with teamwork and open cultures displayed positive outcomes for teacher leadership.

Awadzi (2015) studied 10 participants, nine teachers and one principal in a high-poverty elementary school. The school setting prior to using leadership interventions was negative; and descriptors included disrespectful, challenging, stressful, and inconsistent. The school implemented five quality improvement teams (Assessment Team, the PBIS/House Team, the Integrated Instructional Strategies Team, the Community Collaborations Team, and the SIT) with a teacher leader on each team. After implementing the five teams, survey participants revealed new themes in the school's culture including trust, family and teamwork, and love of school and children (Awadzi, 2015).

Teacher Leadership Influence on Student Achievement

Student outcomes rely heavily on relationships between teacher and student. Teachers know their student's abilities and needs more than anyone else in the school (Cuban, 2003). For past several years, researchers agree that teacher leadership is a key factor for improving schools and raising student achievement (Greenlee, 2007). Kraft et al. (2015) revealed that having a disciplined school culture, especially in high-poverty schools, aids tremendously in adjusting students from unstable home life to a stable

school setting. Teachers admitted that working in an open-system environment of collaboration provided more support and helped with their success, despite being in an uncertain environment (Kraft et al., 2015). Moreover, York-Barr and Duke (2004) and Wenner and Campbell (2017) reported little research exists for exactly how teacher leadership impacts student learning. Of 100 articles cited by York-Barr and Duke in a teacher leadership comprehensive study, only five studies directly correlated with how teacher leadership affects student learning. The five studies are described as follows.

Principals and Teachers Leading Together

Ryan's (1999) qualitative study identified the impact of teacher leadership as well as addressed conditions that support or contain teacher leadership. The sample for this study consisted of 12 nominated teacher leaders, 18 nominees, and three principals from three schools. Results revealed teachers had a positive influence on the teaching profession. Teacher leaders willingly shared their instructional practices with others throughout the school and assisted in handling student issues. Teacher leaders also impacted the educational environment by promoting student learning and influencing student and school policy as well as activities. They also shared authority in making curriculum decisions, assisted with professional development, and helped with new programs. Collaboration of teacher leaders and principal leadership resulted in teacher leadership success among schools in this study (Ryan, 1999).

Does Empowerment Affect The Classroom?

Marks and Louis (1997) used a hierarchical linear model to analyze data for 24 schools throughout the United States: eight elementary, eight middle, and eight high schools. This study's purpose was to learn how teacher empowerment impacted student

performance. Results showed that while empowering teachers had no direct impact on student performance, empowerment played a factor in helping students. To impact students, teachers must utilize empowerment in a student-centered manner along with collective efforts that focus on instructional methods to increase academic performance.

Teacher Participation in Decision-Making

Taylor and Bogotch's (1994) quantitative study collected data from 143 teachers from primary restructuring schools on decision-making. Results showed that teachers participating in decision-making did not have more success in job satisfaction or student achievement than teachers who did not participate in decision-making. The study showed no significant difference between the two groups regarding student behavior, attendance, and achievement.

The Relative Effects of Principal and Teacher Sources

The remaining two studies on student learning, Leithwood and Jantzi (1999, 2000), explored impacts of transformational principal and teacher leadership in a school district with approximately 1,762 teachers and 9,941 students. The replication of the study in 2000, contained a sample size of roughly 6,490. This quantitative study found principal leadership had a weak but significant effect on student engagement. Teacher leadership had no considerable impact on student engagement. Both studies' results were consistent and equal to previous studies conducted on leadership and student engagement.

Teacher leadership influence in student achievement has produced mixed results from research previously mentioned. The next section specifically addresses student achievement in high-poverty schools.

Student Achievement in High-Poverty Schools

Research has shown teacher leadership can affect student achievement; however, no study exists that addresses teacher leadership and student achievement in high-poverty schools using the four-factor model. It is my desire to discover more insight concerning teacher leadership factors in high-poverty schools and student achievement using the four-factor model. Any new insights found in research and recommendations for student achievement in high-poverty schools are described in Chapter 5. The following studies provide information on student achievement in high-poverty schools.

Brigman-Brown (2016) conducted a mixed method study of two high-poverty elementary schools with similar demographics. One school identified as School Y and the other School X, with a total sample population of 152 fourth-grade students. This study used end-of-grade reading scores as a measurement of student achievement. School Y characteristics consisted of veteran teachers with a total of 45 years of experience, advanced degrees, and high student growth. School X had minimal teaching experience with only 7 years of combined experience, no advanced degrees, and high teacher turnover rates. Results showed teachers at School Y held high expectations for their students and believed common core standards help grow their students. School X teachers were the exact opposite as they had low expectations for students and felt common core standards were too hard for their students to master. A *t* test confirmed School Y's reading data were significantly higher than School X, which indicates students can learn despite socioeconomic status. School Y invested time into their students, built relationships with them, and collaborated with parents. School Y experienced minimum interruptions during instructional times and continued to see

success in the classroom with student growth. School X students had no interest in challenging assignments; there were multiple class disruptions because of behavior; and there was a lack of parent involvement (Brigman-Brown, 2016).

Urso (2008) conducted a mixed method study to gather research on how students in high-poverty areas can be successful on achievement tests. Third-, fourth-, and fifth-grade teachers from three elementary schools served as the population for this study. Urso interviewed three teachers and a principal at each school. Results from Urso's study found a caring environment, value, and trust were critical factors in students working harder in the classroom. Another factor included small class sizes, which allowed teachers to build relationships with students. For this group of students, consistent high expectations set a structural environment for students to learn. High expectations were normal at all three schools, and teachers addressed behavioral issues. Both teachers and school administration believed all students could pass their achievement tests.

While teacher leadership may positively affect schools, some circumstances hinder teachers from stepping into the leadership role. For the study at hand, I evaluated if teacher engagement in the four-factor model impacted student achievement to determine if positive gains or yields existed. Results and implications are addressed in Chapter 5. The next section describes barriers to teacher leadership and reasons why teachers are unwilling to be in leadership positions within their schools.

Barriers to Teacher Leadership

While Barth (2001) reported that some teachers avoid taking leadership roles due to indifference from peers, Barfield (2011) included school administration does not provide leadership opportunities, leadership is not encouraged, there is an absence of

collaboration, and teachers lack leadership skills (Barfield, 2011). Furthermore, Saucedo (2014) asserted developing teacher leaders requires a supportive environment. Saucedo's study involved an expert panel of 68 principal-selected high school teachers. Group findings revealed school districts should restructure school days to permit time for teacher collaboration and provide more information on teacher leadership and professional development.

Tobias (2017) surveyed 81 teachers in 13 secondary schools on job satisfaction and leadership styles. Results from the survey indicated teachers were not satisfied with external areas where teachers had no control. Areas included pay, communication, promotions, and fringe benefits where low pay and uncertainty played a significant role in teachers feeling hopeless in the teaching profession. In the next section, I outline barriers to teacher leadership including time, turnover, compensation, and insecurity.

Time

Barfield (2011) conducted a quantitative study that consisted of 13 school districts that addressed teacher and principal perceptions on teacher leadership barriers. Population consisted of 68 principals and 141 teachers. Study data revealed both groups identified teachers are limited in time to teach and lead beyond the classroom as a main barrier to teacher leadership (Barfield, 2011). Barth (2001) also included time as being a barrier to teacher leadership. Many teachers have other responsibilities outside of schools to balance such as children of their own, spouses, other jobs, or elderly family members.

Turnover

Simon and Johnson (2015) reported teachers who are not happy with their jobs would decide to either leave their profession or move to a more supportive educational

environment. According to data from NCES (2018), turnover rates in 2016 were 50% higher in schools that serve low-income students and 70% higher in schools with a high population of students of color. Turnover rationale included low salaries, lack of job advancement opportunities, and job dissatisfaction (NCES, 2018). Robinson (2015) surveyed teachers from 171 schools in a specific school district with an investigative study. Results supported prior research on the importance of having strong school leadership for teacher retention. Strong leadership included having an atmosphere that creates trust, support, consistency, a safe environment, and teacher recognition. The previously mentioned traits are all factors that influence teacher turnover. Haynes (2014) reported 13%, or 3.4 million public school teachers, exit the profession each year. Hence, a high turnover rate may significantly limit students from receiving a quality education if teachers leave school systems (Haynes, 2014).

Compensation

Another barrier to teacher leadership is compensation (Curtis, 2013). The Teacher Questionnaire comes from the National Teacher and Principal Survey that selected a sample of over 10,000 public schools in the United States for data. According to the 2015-2016 Teacher Questionnaire, only 45% of public school teachers were happy with their salaries. Of the population of those dissatisfied, 52% lost their passion for teaching and some would leave the profession if a higher paying job were available (USDOE, 2018). NCES (2012) reported 16.1% of teachers in the United States worked another job outside their current teaching job. Teacher pay rates decreased 3% with inflation over the last 10 years, and 20% of teachers have left the profession due to low pay rates (NCES, 2012).

USDOE reported compensation should directly correlate to student achievement and every economic decision should support effective teaching (Office of Innovation & Improvement, 2018). Curtis (2013) stated teachers need compensation for additional leadership work or performance. Unfortunately, many school districts deal with financial constraints and are unable to offer teachers a higher salary. Because of a lack of funding, many school districts fail to attract and retain highly qualified young adults for teacher leaders, which could limit advancements and impact opportunities (Curtis, 2013). Additionally, Barth (2001) stated many teachers would not tackle additional duties without compensation, as those who do so may not be perceived well with unions.

Insecurity

Finally, another constraint in teacher leadership is the negative stigma that comes with being a leader. Edwards (2015) conducted a study by interviewing 10 teachers in both formal and informal leadership roles in Texas. Results from this research revealed school administration showed favoritism by limiting teacher leadership opportunities to certain teachers which created a hostile working environment, as being a teacher leader was seen as being a bully by colleagues. This study also showed several participants felt school officials did not provide enough professional development for teacher leaders. One participant in the study felt administration in his school did not clearly define teacher leader roles (Edwards, 2015). York-Barr and Duke (2004) explained that teacher leaders exhibit similar behaviors as administrators; therefore, teacher leaders will reinforce policies and procedures set by the school and may be treated differently by peers. In addition, other teachers may feel insecure or threatened by teacher leaders since teacher leaders display a sense of confidence, passion, and drive. Sanocki's (2013) qualitative

study on teacher leadership involved asking principals in a certain state to select teacher leaders in their school. Of the sample population, eight teachers were selected to participate in the study. Data were collected using face-to-face interviews and email correspondence. Sanocki found teachers feared negative teacher evaluations if a teacher stepped into a leadership role and school performance did not meet desired school goals.

Time, turnover, compensation, and insecurity were a few concerns teachers had for not entering leadership roles in schools. In addition to having barriers exist in teacher leadership, there are also gaps in teacher leadership that must be acknowledged. The following sections address current gaps in teacher leadership found in the literature thus far.

Gaps in Teacher Leadership

Wenner and Campbell's (2017) comprehensive research on teacher leadership consisted of analyzing 704 articles on teacher leadership. Of 704 total, only 72 literary works met criteria for a full review. After reviewing literature, Wenner and Campbell found teacher leadership opportunities lack a common theoretical framework, useful leadership models, teacher leadership and school reform, clear definitions, and diversity and equity.

Time management in developing and training teacher leaders needs further investigating as teacher leaders take on more leadership responsibilities along with their regular teaching duties. Consequently, this could tremendously limit teacher effectiveness and cause burnout (Curtis, 2013). Padilla's (2016) data from department leaders contended that they do not have enough time to complete tasks to run their departments effectively. Hence, Padilla recommended increasing meeting times designated for

instructional topics such as data review, formative assessments, and best instructional practices.

Teacher leaders are more than teachers, yet different from administrators. Such a concept of teacher leadership reflects an increasingly recognized hole in models of teacher professionalism that is undeveloped in professional literature (Danielson, 2006). Finally, while this study incorporates using a four-factor model framework, few studies tested the statistical relationship between a four-factor model of teacher leadership to student achievement. See Chapter 3 for more information on those studies.

Few research studies exist that reflect teacher leadership in high-poverty schools. I hope to bring awareness to how teacher leadership can impact high-poverty schools regarding student achievement. The next section covers overlapping competencies in teacher leadership created by The Teacher Leadership Initiative.

Overlapping Competencies in Teacher Leadership

The Teacher Leadership Initiative developers designed competencies with the mindset that competencies may intertwine and vary by person. As stated in Chapter 1, research for competencies included two separate teacher leadership standards. These were NEA Leadership Competencies and Teacher Leader Model Standards. Overlapping competencies for the three pathways mentioned earlier (instructional leadership, policy leadership, and association leadership) are reflective practice, personal effectiveness, interpersonal effectiveness, communication, continual learning, group processes, adult learning, and technological facility (Barnett et al., 2014). The following sections describe each overlapping competency and present research in high-poverty schools that aligns with each competency.

Reflective Practice

Leading Educators (2014) supported reflective practice concepts with the first pillar of teacher leadership in developing self. Leading Educators' research derived from over 850 teachers who participated in the organization's training and programs. In developing self-pillar, teacher leader behaviors included reflecting on values to improve self-knowledge; reflecting on strengths, weakness, and work styles; and seeking feedback from others (Leading Educators, 2014).

Barnett et al. (2014) expanded on reflective practice as being able to influence external stakeholders to reflect on their teaching and leading roles. Teacher leaders also developed and implemented policies that encouraged reflection and helped others to understand how to reflect using data. Finally, in the transforming stage of reflective practice, teacher leaders aided the entire system to develop a culture of reflection. As a result, reflection became a consistent data-driven cycle (Barnett et al., 2014; Woods, 2016).

Personal Effectiveness

Woods's (2016) comparative case study of six educational stakeholders in North Carolina, three teachers and three administrators, found common themes for implementing teacher leadership. Beneficial themes in the study that corresponded to personal effectiveness included boosting teacher confidence and increasing instructional and professional growth (Woods, 2016). Teacher leaders understand their leadership style and passions and realize potential for adversity. For those reasons, teacher leaders will work to establish trust and support among peers and respond to adversity with resilience and humility. In the transforming stage of personal effectiveness, teacher leaders develop

new models for leadership and take risks to engage in strategic and visionary goals (Barnett et al., 2014; York-Barr & Duke, 2004). Saavedra et al.'s (2017) research on student achievement strategies attested to teacher personal effectiveness producing positive gains while working with a high-poverty population.

Interpersonal Effectiveness

Concepts of interpersonal effectiveness entails learning valuable tactics for working with colleagues. Teacher leaders use their skills to inspire others to take ownership of the organization's shared vision and build trust. The teacher leader keeps peers student centered, clearly communicates with peers, and helps others to develop their interpersonal effectiveness (Barnett et al., 2014).

Woods (2016) identified building community, producing better teachers, and building collegiality as a positive aspect of having teacher leaders. Both Woods and Barth (2001) reported that when teacher leaders are present in schools, they undergo valuable experiences that result in personal and professional satisfaction from strengthening the school. They learn new processes about their schools, students, the environment, and most importantly themselves. Teacher leaders also gather a sense of ownership within their school system with their investments and strengthen their professionalism (Barth, 2001; Woods, 2016).

Communication

In communication competency, teacher leaders define and articulate organizational needs and inspire others to seek positive changes. Teacher leaders successfully bring forth systematic change by encouraging other teacher leaders to address internal and external stakeholders at all levels (Barnett et al., 2014). Curtis (2013)

proposed visions for teacher leadership included a culture of collaboration that brings forth shared responsibility between stakeholders in the school. Highly effective teacher leaders organized and delivered information to reach the maximum number of students possible.

Continuing Learning

Teacher leaders are usually more aware of the profession's current issues, set attainable objectives, and use various methods to share personal experiences. They also set objectives and seek resources to meet those goals. They are not afraid to step outside of their comfort zone to explore learning opportunities. Engaged teachers will lead continuing education programs for others. Advanced teacher leaders will also present their research through scholarly publications and conferences while appealing to other teacher leaders to reach a mass audience (Barnett et al., 2014). Saucedo (2014) reported school districts must be willing to provide teachers with more information on teacher leadership regularly. Teacher leaders aid themselves in learning and work with peers and colleagues (York-Barr & Duke, 2004). Brigman-Brown (2016) attested that teachers with advanced degrees may see higher student achievement levels versus teachers with non-advanced degrees in a high-poverty school setting.

Group Processes

Barth's (2001) research provided scientific evidence in having safety in numbers, meaning having more perspectives in a group can create better decision-making, and teams and committees have a higher chance of influencing the organization. York-Barr and Duke (2004) indicated teacher leaders must have teamwork skills to bring positive change to a large learning community. Danielson (2006) described these skills as

building trust, developing team players, showing communication skills, and having conflict management skills. Manning's (2018) research involved cross-collaboration between two high-performing schools and two low-performing schools creating a Principal Professional Learning Community. The purpose of the Principal Professional Learning Community was to share knowledge to help with low-performing school activities such as instructional rounds and rigor for instruction, to increase student achievement. After 1 year of implementation, student growth was shown on the Education Value Added Assessment System but not on state end of the year tests.

Barnett et al.'s (2014) observation on group processes suggested teacher leaders actively participate in group settings and learning experiences. Teacher leaders respect and understand the dynamics of diversity. According to Leading Educators (2014), teacher leaders create trusting relationships and gather feedback from group members to share to adjust future planning. Martinez Saavedra (2017) analyzed 10 middle school professional learning communities to identify effective school leadership strategies for student achievement. Leadership identified four strategies including providing professional growth opportunities, focusing on improving instructional practices, differentiating instruction, and progress monitoring. All 10 schools in the study had success in being a high-performing school despite serving high-poverty students.

Adult Learning

Danielson (2007) believed working with colleagues is significantly different from working with students. Teachers may not possess essential skills to lead outside of their classroom, as many teacher preparation programs only prepare teachers to assist students. Saucedo (2014) contended peer collaboration is a fundamental task for teacher leaders;

therefore, strategies for working with adults is needed in teacher leadership.

Teacher leaders understand how adults learn and grow professionally and develop learning opportunities at varying levels of leadership. Teacher leaders use adult learning strategies to extend personal and collective growth for other teachers. Finally, teacher leader experiences in adult learning apply to a variety of contexts and communities (Barnett et al., 2014).

Technological Facility

Teacher leaders incorporate technological systems to support, manage, collaborate, and lead learning for adults and students. Expert teacher leaders are innovative in using a virtual environment in pursuing other teacher leaders for change. Technology is beneficial to teacher leaders as they network to build relationships with peers, parents, and other stakeholders; and this information is shared without geographical limitations (University of Delaware, 2016). Persinger (2016) used a quantitative design to assess the impact of one-to-one technology implementation on student achievement at a low-poverty high school. Results revealed while English scores rose by 5%, graduation rates slightly decreased, and attendance was not impacted. Additional technology produced minor changes within the school; however, they were minimum steps in the right direction (Persinger, 2016).

Principal Influences on Leadership

Curtis (2013) stated principals play a vital role in teacher leadership success. Principals were responsible for maintaining school culture, and they determined the extent of teacher leadership in their building. For example, principals can view teacher leaders as a resource or challenge to their authority; principal daily activities can support

or undermine collaborative efforts for teacher leaders (Curtis, 2013). Hence, Barth (2001) suggested principals define a clear vision for schools.

Barth (2001) believed a principal's best assistance comes from within the school itself. Kraft et al.'s (2015) research of six high-poverty schools found schools experienced more success when the principal used the teachers' ideas and knowledge on developing reforms versus the principal expecting teachers to use an instrument the principal assumed to be effective. Ford-Heywood's (2016) quantitative research measured school leadership in high-poverty schools. Data for this research derived from a 2010 Learning Condition Survey of over 2,500 schools. Ford-Heywood found leadership quality decreased as poverty levels increased in schools. Results further indicated leadership existed best in schools with low-poverty levels, demonstrating a difference in effectiveness between high-poverty schools and low-poverty schools. These differences in efficiency may result from inexperienced principals in high-poverty schools (Ford-Heywood, 2016). Moller and Pankake (2006) suggested principals protect school leadership by establishing collegiality between teacher leaders and peers and supporting all school staff members. A principal must communicate clear expectations and align teaching initiatives with current school goals to assist any leadership endeavors (Moller & Pankake, 2006).

School districts must educate principals on developing teacher leaders and recognizing teacher leaders benefits (Curtis, 2013). Principals should work smarter and encourage teachers to assume leadership roles to increase leadership presence in schools (Barth, 2001). Furthermore, Barth (2001) stated principals must be careful when selecting teacher leaders as school administration must account for everything that occurs within

their building.

Prior Uses of TLI

TLI measures a teacher's perspective of leadership in their school. This instrument is vital in this study due to its direct correlation to gaining perceptions of participants concerning teacher leadership. I analyzed data from this research with the use of the TLI instrument in other dissertations listed in the next section. Hence, I conducted a thematic analysis to quantify and report responses of participant data. The thematic analysis will allow one to determine similarities and differences in data results for sharing leadership, sharing expertise, supra-practitioner, and principal selection to determine if any connections existed between prior studies and the current study at hand. For this study specifically, thematic analysis revealed participant perceptions of those who served students with high poverty. The TLI is a newer instrument compared to others that have existed for decades and has only been used in a few studies. My hope was data from this research may have a positive impact on the educational community since there is no current research on teacher leadership in high-poverty schools using TLI. Prior research with the TLI instrument consisted of two studies: one from Bradley-Levine et al. (2014) and another with Angelle and Teague (2014). Two studies using the TLI are described in the following section with background information and statistical and research findings. Chapter 5 has connections to prior studies, if any were determined through this research.

New Tech High School Model

Bradley-Levine et al. (2014) surveyed 155 teachers with the implementation of the New Tech model. New tech model themes focus on teachers using project-based learning, technology integration, student empowerment and contributions, and connecting

with the community, to name a few. The New Tech model comes in three formats including whole school, autonomous school, or small learning community (Bradley-Levine et al., 2014).

Statistical Findings. Just as Angelle and Dehart (2010) found, the entire instrument had a Cronbach alpha of 0.848. For factor sharing expertise, results were highly reliable with a Cronbach alpha of 0.874 and consistent with Angelle and Dehart's (2010) 0.840 alpha reliability. For second factor sharing leadership, results had a Cronbach of 0.0880 which aligns with the 0.84 alpha reading from Angelle and Dehart (2010). The third factor, super-practitioner, had an alpha reading of 0.852 and was equal to Angelle and Dehart's (2010) 0.85 alpha. However, the final factor of principal selection is much lower at .251 and not highly reliable with the alpha scale of .56 from Angelle and Dehart (2010). Despite the lower reading, the principal selection factor remained in the study to stay true to the four-factor model of teacher leadership (Bradley-Levine et al., 2014).

Research Findings. Schools with more experience with the New Tech model showed high levels of teacher leadership than those with less experience. In schools where the New Tech model was in whole school format, teachers felt forced into teacher leadership. In the other two formats, teachers had an option to participate in the New Tech model. Results from the study indicated having collaborative support and teacher engagement is vital before introducing a new reform program. Also, teachers in this district believed all teachers could lead, not merely those teachers administration may choose to lead (Bradley-Levine et al., 2014).

Teacher Leadership and Collective Efficacy

Angelle and Teague (2014) surveyed teachers in three districts identified as Districts A, B, and C. The purpose of the study was to examine the relationship between teacher perception of collective efficacy and the extent of teacher leadership. Researchers used the TLI instrument and Teacher Efficacy Belief Scale instrument for data collection using descriptive statistics and an ANOVA run.

Statistical Findings. The TLI mean score for all districts was 3.16 with a standard deviation of .32.

Research Findings. Data from this study showed a strong relationship between teacher leadership and collective efficacy. Teachers perceive informal aspects of teacher leadership as a more significant indicator of collective efficacy.

The effect of teacher leadership in high-poverty schools using the TLI is not clearly defined as the TLI has only been in two prior studies previously mentioned. Data from the study at hand may bring insight to high-poverty schools regarding teacher leadership. Results from thematic analysis on the prior studies are reported in Chapter 5. The next section presents the chapter summary.

Summary

All teachers have the potential to lead. When teachers lead, they are more active in their environment which increases student engagement. As a result, the entire school benefits from teacher leadership and schools yield more success (Barth, 2001). Teachers and principals have shared responsibility for failures and successes (Barth, 2001). Research on teacher leadership by Wenner and Campbell (2017) supported teacher leadership barriers mentioned earlier including insufficient time, poor relationship with

peers and administration, and structural factors.

Mann (2014) expressed that definition of leadership varied from person to person, as everyone is a different kind of leader. Ryan (1999) described teacher leadership as an opportunity to bring school change, encourage democracy, and utilize teacher expertise. Nevertheless, perceptions of teacher leadership varied by each teacher who desired to take on leadership responsibility. Additionally, teacher leader titles are not consistent among schools, as some are coaches, specialists, or mentors (Neumerski, 2012). Barnett et al.'s (2014) research presented three pathways teacher leaders could pursue to take on leadership roles in their schools. The pathways derived from two standards, including NEA and Teacher Leader Model Standards. Each pathway contains competencies teachers should possess for consideration in teacher leadership. Additionally, Barnett's research revealed overlapping competencies in teacher leadership opportunities. Each competency provided an essential foundation for clarity on teacher leadership.

Chapter 3 contains the research method, design, population, and validity. Chapter 4 provides more insight into the data derived from both schools used in this study. Chapter 5 summarizes the findings in context of the literature, provides recommendations for future research, and discusses implications for action.

Chapter 3: Methodology

When teachers explore leadership opportunities, they can assist school administration in promoting school success (Angelle & DeHart, 2011). There is a lack of research about Angelle and DeHart's (2011) conceptualization of teacher leadership and its statistical relationship with student achievement in high-poverty schools in North Carolina. That said, this research explored if a statistically significant correlation existed between teacher leadership and student achievement in high-poverty schools in North Carolina. Chapter 3 provides information for the research method and design, sample population, data collection procedures, instrument selection, appropriateness, instrument reliability, internal and external validity, and data analysis.

Research Method and Design Appropriateness

The research method proposed for this study is a quantitative descriptive correlational study. Hopkins (2008) described a quantitative study as comparing a statistical relationship from one independent variable to another within a population. This approach will allow a deeper understanding of how teachers in high-poverty schools view teacher leadership to assist other teachers in high-poverty schools.

Research Method

This research explored if statistically significant mean differences existed between teacher leadership and student achievement in high-poverty schools using variables of Angelle and DeHart's (2010) four-factor model. This quantitative design was descriptive in nature, as a descriptive analysis is employed to explain characteristics and/or behavior of a sample population. Teachers who took the survey were surveyed once during the entire research process verses being experimental. Dudovskiy (2019) reported the purpose of descriptive studies can explained as describing and validating

research results. This is important as I used teacher responses to the TLI survey to find associations among variables (sharing leadership, sharing expertise, principal selection, and supra-practitioner) in the four-factor model. Once responses were collected and analyzed, themes were identified which allowed me to present suggestions for improvement that may be implemented for best practice. Creswell (2008) found one benefit of descriptive correlational designs is allowing the researcher to anticipate or predict future behavior. Additionally, Neuman (2009) suggested this method provides an objective and unbiased approach toward understanding relationships between variables. Leedy and Ormrod (2014) maintained that researchers use this design to predict outcomes with predictor and criterion variables.

Appropriateness of Design

For this study, research made use of quantitative survey design. According to Johnson and Onwegubuzle (2004), strengths of quantitative methods include data analysis being less time consuming, higher credibility with those in power, and the ability to test prior theories on why a phenomenon occurs. USC Libraries (2019) found main characteristics of a quantitative design are that the study can be duplicated and compared to other studies, the person conducting the research uses tools to collect data, and the data are gathered using a structural research instrument.

A qualitative design did not work for this study, as Leedy and Ormrod (2014) showed variables are not needed in qualitative studies. Qualitative designs also use words, images, and objects in data collection, whereas quantitative uses numbers and statistics. In a qualitative study, the researcher develops a new hypothesis and theory from the data collected (Leedy & Ormrod, 2014). Creswell (2008) credited qualitative

research with risk of researcher bias, extensive coding and data processing, and occupying a substantial amount of time. Findings from this study can be applied to other populations, and it tests a specific hypothesis. Therefore, a quantitative descriptive design was appropriate for this research.

Research Questions

I sought to explore if there were any mean differences among teacher leadership variables in the four-factor model and student achievement between two high-poverty elementary schools. Therefore, the following research questions guided the study:

1. Do schools with different levels of student achievement differ in their teacher perceptions of sharing leadership?
2. Do schools with different levels of student achievement differ in their teacher perceptions of sharing expertise?
3. Do schools with different levels of student achievement differ in their teacher perceptions of supra-practitioner?
4. Do schools with different levels of student achievement differ in their teacher perceptions of principal selection?

Population

To answer the research questions, the population for this study included full-time high-poverty teachers from schools in North Carolina. By definition, a high-poverty school contains a student population where over 75% of the student population qualifies for free or reduced-priced lunch. Each school in this study was equivalent such as two elementary schools, two middle schools, or two high schools. I searched NCDPI's website for schools in a high-poverty category using data from the 2017-2018 school

year. From the list of schools, I separated all qualifying schools by their school report card grade. List A contained all schools that scored a Grade B or above for at least 2 consecutive years, while List B contained schools with a Grade D or below for at least 2 consecutive years. For both lists, I identified each school's number of students, demographic information, and free and reduced lunch numbers. Finally, I grouped similar schools from each list to ensure the same school level (elementary, middle, or high) was used in the study.

School Selection

For this research, school report grades measured student achievement. School performance grades determine how well a school meets or does not meet student needs. One school had a satisfactory performance level (Grade B and above) for a school report grade as determined by the Department of Education. This school was identified as School A and labeled high performing. Moreover, the other school had a lower performance level (Grade D or below) and was labeled School B. School report card grades in North Carolina are on a 15-point scale based on 80% achievement and 20% growth. Achievement was equivalent to student proficiency, with students scoring at least a Level 3 on the end of the year tests in English and math. Growth was measured by a value-added growth tool showing the school in three categories: did not meet growth, met growth, and exceeded expected growth. Table 3 shows the distribution of grades for North Carolina schools.

Table 3*School Report Card Scale*

Grade	Score
A	85-100
B	70-84
C	55-69
D	40-54
F	39 or less

To determine selection for schools, I selected only two schools located in the same school district that fit the study's criteria. I contacted the district's central office personnel to set up a meeting to describe the purpose and conditions of the research and receive approval (Appendix A). Once I established school buy-in, I collaborated with the district office staff and school administrators to deliver the survey to all teachers in the school to complete. An email invitation was sent to teachers prior to delivering the survey requesting them to complete it (Appendix B). I sent out two separate email links to principals for teachers at their perspective schools. One link went to School A, and the other to School B to keep data from teacher responses separate. The principals forwarded their designated links through a staff email group inviting teachers to complete the survey. Teachers were asked to provide demographic data such as years of experience, sex, and educational level. This information served as background information for a participant's profile. Each school had a separate survey for teachers to complete and was identified as School A (high performing) or School B (low performing) respectively. The identity of each school participating in the survey was confidential, and teachers at each school were not aware they were chosen based upon being identified as high performing or low performing. Chapter 4 contains detailed data for schools participating in this

survey.

Sampling

I used Google Form to survey teachers from two high-poverty schools. Using a convenience sampling for this study, I utilized sample analysis tools such as SPSS version 26 to determine an accurate sample size for this research. Furthermore, I monitored teacher response rates and communicated weekly by phone and/or email with school administration at each site to ensure teachers completed surveys. All participants were anonymous throughout the process and were requested to answer all questions truthfully and honestly. My goal was to have at least 80% of the total population at both schools complete the survey. A minimum sample size was selected based on the number of teachers present at each school site. If the minimum sample size required was not collected during initial survey, I worked with each building administrator until the required sample size was reached. If there was no success in reaching the desired sample size, I communicated with the district superintendent, as he agreed to provide his support in the research. I reiterated to teachers the positive benefits the research may yield but still reminded participants that their participation was completely voluntary. If the addition of the area superintendent was not successful, I was randomly going to select another school from the list. Only responses from participants who completed the survey completely and by the deadline were accepted. Participants had to be willing to sign a confidentiality statement as described in the next section.

Sampling Approach and Confidentiality

The sampling approach used in this study was non-probability sampling. Creswell (2008) described this as gathering participants based on characteristics that are in the

study. He stated that participants are also available and volunteer to participate in the research (Creswell, 2008). All participants had confidentiality and privacy during and after the research period, as they were not able to view direct responses from other participants. Furthermore, participant identities were not revealed when reporting or publishing this study. This research complied with all guidelines regarding confidentiality and privacy. Participants in the study had the option to revoke their participation in the study at any time without any punishment. I received permission from the local school area superintendent to recruit participants, and school administration did not have access to responses. Additionally, participants were asked to reveal general demographics for participant profile information only, and only participants had an access link to complete the survey.

Informed Consent

All participants received a consent form sent by email (Appendix C) before agreeing to complete the TLI survey. The consent form provided a detailed explanation of research, information on confidentiality, and their voluntary participation. Participants knew participation was voluntary throughout the entire survey, and they could choose to stop at any time without a penalty. The consent form was attached to the same email as the survey for participants to read. Participants selected “I agree” to the consent form on Question 1 of the TLI survey. If a participant did not consent, the Google Form would not allow participants to submit their results. Each survey question was designed where participants were required to select an answer before submitting it.

Participant Expectations and Risks

Principals had the responsibility of ensuring they sent out surveys promptly for

teachers to complete. All participants were asked to answer every question carefully and honestly within 3 weeks of receiving the survey link. Potential risks from participants included carelessly rushing through surveys to complete them or having uncertainty about their role regarding an item. However, participants were asked to pace themselves while responding to survey questions and display integrity throughout the entire process.

Data Collection Procedures

Participants had 2 weeks to complete TLI survey (Appendix D). Principals at each school distributed surveys to teachers at their prospective schools using the school's email system. The teacher leadership survey contained 17 questions for each participant to answer. I created two separate online versions of the TLI survey using Google Forms for participants at both schools. Each participant had an online link from Google Forms to complete the survey, and all entries were anonymous. The survey remained open for 2 weeks for participants to complete. When the 2-week time frame expired, participants at both schools received a thank you note for their participation. I maintained all data collected from the survey. At the completion of the 2 weeks, all data were password encrypted in a PDF file and were only used for the study.

Instrument Selection

For this study, I used Angelle and DeHart's (2010) TLI which started in 2006 with researchers Angelle and Beaumont with a total of 65 participants, 51 teachers, and 14 administrators. The participants were located in 11 schools in a certain state. Angelle and Beaumont used open-ended questions in a comparative analysis to determine teacher leadership themes in being an educational role model, decision maker, visionary, designee, and supra-practitioner categories (Angelle & DeHart, 2011).

The second stage consisted of creating a 25-item survey to assess teacher leadership at the school level. Questions were analyzed by experts at three different universities to develop revised survey questions that were distributed to another focus group of doctoral students. In the final stage of creating the TLI, the instrument was administered twice using a two-factor analysis. The first administration, analyzed by an exploratory factor analysis, resulted in eight items being deleted from the survey. Hence, it created the four factors used in this study along with the 17 survey questions for the TLI. The second administration conducted a confirmatory analysis and supported the four-factor model (Angelle & DeHart, 2011).

The TLI used a 4-point Likert scale of never, seldom, sometimes, and routinely. The scale's purpose was to measure teacher perceptions of teacher leadership in schools based on the four-factor model of teacher leadership (Angelle & DeHart, 2010). Any common themes in participant responses were recorded in scoring data for this study. Since I sought to find data on teacher leadership, Angelle and DeHart's (2010) TLI is the desired instrument in this study. To gain a better understanding of the four-factor model, Table 4 corresponds to each survey question on the TLI instrument with its relevant factor. A copy of the items used in the TLI can be found in Appendix D and permissions granted to use the TLI in Appendix E.

Table 4*Four-Factor Model Components*

Factors	Questions
Sharing leadership	Teachers are involved in making decisions about activities such as professional development, cross-curricular projects, etc (5)
	Teachers are actively involved in finding ways to improve the school as a whole (6)
	The principal responds to the concerns and ideas of teachers (12)
	Teachers plan the content of professional learning activities at my school (13)
	Teachers have opportunities to influence important decisions even if they do not hold an official leadership position (14)
	Time is provided for teachers to collaborate about matters relevant to teaching and learning (16)
Sharing expertise	Teachers ask one another for assistance when we have a problem with student behavior in the classroom (1)
	Other teachers willingly offer me assistance if I have questions about how to teach a new topic or skill (2)
	Teachers here share new ideas for teaching with other teachers such as through grade level/department meetings, schoolwide meetings, professional development, etc (3)
	Teachers discuss ways to improve student learning (4)
	As a faculty, we stay current on education research in our grade level/subject area (7)
Supra-practitioner	Teachers willingly stay after school to work on school improvement activities (8)
	Teachers willingly stay after school to help other teachers who need assistance (9)
	Teachers willingly stay after school to assist administrators who need volunteer help (10)
Principal selection	Administrators object when teachers take on leadership responsibilities (11)
	The principal consults the same small group of teachers for input on decisions (15)
	Most teachers in leadership positions only serve because they have been principal appointed (17)

Instrument Reliability and Validity

Validity is defined as the degree to which an instrument measures what it is intended to measure. Moreover, individuals' scores from a survey instrument should be

significant, make sense, and draw sound conclusions from the sample population (Creswell, 2008). The TLI is an existing measure that researchers have tested for validity in past studies. When conducting research that utilizes surveys, it is crucial to ensure items function as intended by assessing the internal structure of the instrument; this is called reliability. For this study, I used SPSS version 26 to calculate Cronbach's alpha to determine the internal reliability of the TLI instrument. A Cronbach's alpha between .7 or more is considered evidence of adequate reliability (Field, 2013).

Angelle and DeHart (2010) reported a Cronbach α reliability of .85 for the TLI instrument. The α reliabilities for the four-factors include (a) sharing leadership with an α reliability of .84; (b) sharing expertise with an α reliability of .84; (c) supra-practitioner with an α reliability of .85; and (d) principal selection with an α reliability of .56.

Data Analysis

SPSS version 26 was used for data analysis. I conducted an independent t test for each variable to determine if there were any statistical mean differences in responses from two high-poverty schools used in the research. A two-tailed .05 level of significance was used to determine if there were meaningful differences between the grouping variables. I received data from participants answering questions based on variables in the four-factor model (sharing expertise, sharing leadership, supra-practitioner, and principal selection) for teacher leadership. Data for each item were tallied by calculating the mean of all responses assigned to each variable. Responses to Questions 1, 2, 3, 4, and 7 provided data for sharing expertise. Answers for Questions 5, 6, 12, 13, 14, and 16 offered data for sharing leadership. Responses for Questions 8, 9, and 10 provided data for supra-practitioner. Finally, Items 11, 15, and 17 offered data for principal selection.

This study used quantifiers to represent the ordinal data (never, seldom, sometimes, and routinely) from participant survey responses. A response of never was equivalent to 1 point, seldom equivalent to 2 points, sometimes equivalent to 3 points, and routinely equivalent to 4 points. For example, if variable sharing expertise has three responses of “routinely,” sharing expertise mean would be equal to 4. Since data came from two different schools, a *t* test was conducted. A *t* test evaluates the means of one or two populations using hypothesis testing (JMP, 2021). For this study, data were reported based on the percentage of teacher responses for each variable. Themes among the participant responses were identified, thereby providing a quantifiable relationship between sharing expertise, sharing leadership, supra-practitioner, and principal selection of students in high-poverty schools.

In reference to the research questions, responses from teacher perspectives on teacher leadership indicated how each factor influences student achievement. Each factor reported if a statistical relationship does or does not exist within the two high-poverty schools used in this study and student achievement. I connected the extent of statistical difference with literature in Chapter 2, and recommendations were based on the evidence of a relationship found. Chapter 4 has a report of findings, and a comprehensive explanation of results is described in Chapter 5.

Summary

Changes in schools can occur when teacher leadership is present. Additionally, a teacher leader promotes democracy in schools, teacher expertise, and collaboration (Angelle & DeHart, 2011). Research in this study required a quantitative design to determine if any statistical mean differences existed between teacher leadership and

student achievement in high-poverty schools. I identified schools based on NCDPI's definition of high-poverty schools. In this study, I addressed measures of student achievement in high-poverty schools. North Carolina used an educator effectiveness model to address effective teaching and learning. This model focused more on student growth than student proficiency. Student growth is the amount of progress a student can make by either grade level or class, whereas student proficiency determines if a student has reached a set level of mastery in a subject and is prepared for the next level. To determine these levels, North Carolina uses various assessments such as End-of-Grade testing, Career and Technical Education State Assessments, Final Exams, Analysis of Student Work, and K-3 Checkpoints (NCDPI, 2018). Participants used Angelle and DeHart's (2010) TLI survey to collect data. All participant personal data were protected with the utmost confidentiality. Chapter 4 provides more insight into the data derived in this research from both schools used in this study. Chapter 5 summarizes findings in the context of the literature, provides recommendations for future research, and discusses implications for action.

Chapter 4: Results

According to the University of Delaware (2016), teacher leadership is defined as teachers working with other educational stakeholders to improve teaching practices that promote increased levels of student achievement. The purpose of this qualitative study was to examine the statistical mean difference between teacher leadership and student achievement in high-poverty schools. Teachers from two high-poverty elementary schools electronically answered questions about teacher leadership from the TLI. Chapter 4 presents an overview of the research, presents the data analyzed from the TLI survey, and concludes with a summary. The following questions served as a guide in this study:

1. Do schools with different levels of student achievement differ in their teacher perceptions of sharing leadership?
2. Do schools with different levels of student achievement differ in their teacher perceptions of sharing expertise?
3. Do schools with different levels of student achievement differ in their teacher perceptions of supra-practitioner?
4. Do schools with different levels of student achievement differ in their teacher perceptions of principal selection?

Due to time distribution of this study, COVID-19 restrictions may have affected teacher participation. There were 17 questions total in the TLI survey teachers answered related to variables of sharing expertise, sharing leadership, supra-practitioner, and principal selection. The survey used a 4-point Likert scale of never, seldom, sometimes, and routinely. Questions 5, 6, 12, 13, 14, and 16 offered data for sharing leadership.

Answers for Questions 1, 2, 3, 4, and 7 provided data for sharing expertise. Responses for

Questions 8, 9, and 10 provided data for supra-practitioner. Finally, Items 11, 15, and 17 offered data for principal selection. The next section defines each variable in detail.

Explanation of Variables

Angelle and DeHart's (2010) four-factor model served as the conceptual framework for this study. Each factor was used to measure teacher perspectives of leadership within each school. A description of each variable is as follows.

Sharing Leadership

Sharing leadership plays a dual role in teacher willingness to take on leadership positions and school administrators providing leadership opportunities for teachers. This variable explores the extent of teacher involvement in decision-making and planning. It also examines how the principal responds to teacher concerns.

Sharing Expertise

Sharing expertise, a teacher's willingness to share their skills with colleagues, is investigated in various ways within this study. To define it more, sharing expertise looks at how often teachers ask for help with student behaviors as well as how often teachers answer questions of other teachers. Sharing expertise also refers to improving student learning, establishing collaboration with communicating new ideas with other teachers, and staying up to date with current research in subject areas.

Supra-Practitioner

Supra-practitioner describes a teacher's willingness to go beyond the scope of the classroom and regular school day; for example, when teachers stay extra hours after work for school improvement activities, help other teachers who need assistance, or volunteer to help school administration with duties.

Principal Selection

Principal selection expresses teacher perceptions of how principals control which teachers can participate in leadership activities. A description of principal selection includes if principals consult the same group of teachers for input or object when certain teachers volunteer to do leadership responsibilities. Finally, this variable addressed if teachers are in leadership positions because they were principal appointed.

Participants

Teachers from two high-poverty elementary schools within the same school district participated in the survey. Due to the nature of this study, both schools were required to be high-poverty schools and have similar demographics. Based on data from the 2017-2018 school year, School A was labeled as high performing, and School B was labeled as low performing. The following section describes each school in detail.

School A Characteristics

According to state data, School A has 300 students and is considered a Title 1 school. Nine teachers at School A have a bachelor's degree, while five teachers hold a master's degree. The average range of teaching experience at School A is 8 years. School A received a grade of B on its school report card for the last 2 years. Approximately 52.8% of students at this school were low income, and only 48% were prepared to enter kindergarten. School A received an overall math grade of 81 and an overall reading grade of 64.

School B Characteristics

School B has a total of 295 students and is considered a Title 1 school. Twelve teachers at School B have bachelor's degrees, while three teachers hold master's degrees.

The average teaching experience at School B is 35 years; however, five veteran teachers are on staff with over 19 years of teaching experience respectively. School B received a report grade of C for the 2017 school year and a grade of D the previous year.

Approximately 42.2% of this school was characterized as being at poverty level with 57.7% of students prepared to enter kindergarten. School B received an overall math grade of 53 and reading grade of 49.

Findings

An independent t test was conducted to compare variables in teacher leadership and student achievement between teachers in two high-poverty elementary schools. This research used school report grades to measure student achievement. School A had 14 participants, and School B had 15 participants. Participants completed the teacher leadership survey electronically using a google form application. Results showed no significant difference in teacher leadership and student achievement between the two high-poverty schools investigated in this study. Table 5 displays both schools' descriptive statistics for each teacher leadership variable.

Table 5

Group Statistics

Variable	School	N	Mean	Std Deviation	Std Error Mean
SL	A	14	18.50	3.87	1.03
	B	15	18.60	3.01	.77
SE	A	14	17.00	3.23	.34
	B	15	18.40	1.35	.86
SP	A	14	8.42	1.91	.51
	B	15	8.80	1.61	.41
PS	A	14	7.71	1.68	.45
	B	15	6.93	1.86	.48

Prior to running my statistical analyses, I calculated Cronbach's alpha to determine the internal reliability of the TLI. The results showed that alpha of .72, meaning the survey had adequate reliability and the items were functioning as intended. Quantifiers were used to represent ordinal data from survey responses. For example, a response of never was equivalent to 1 point, seldom equivalent to 2 points, sometimes equivalent to 3 points, and routinely equivalent to 4 points. Table 6 contains a breakdown of data for each research question and a description of each variable.

Table 6

Independent Samples Test

	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Sharing leadership	.07	27	.93	.10	1.28
Sharing expertise	1.54	27	.13	1.40	.90
Supra-practitioner	.56	27	.57	.37	.65
Principal selection	-1.17	27	.24	-.78	.66

Research Question 1

Do schools with different levels of student achievement differ in their teacher perceptions of sharing leadership? Sharing leadership is described as both the principal and teacher being willing to share leadership responsibilities. This study found no significant mean difference in sharing leadership $t(27) = .07, p = .93$. For sharing leadership, no significant difference was found between responses of School A and School B. This means responses do not differ; therefore, variable sharing leadership does not play a potential factor of influence in student achievement between School A and School B. During the time scope of this study, School A scored higher than School B on the School Report Card which is based on 80% achievement and 20% growth. Hence, higher achievement levels in School A over School B may result from other measures

than sharing leadership variable tested in this study. Teacher responses in the survey reflected their perspective of leadership at their designated school. For each question, data categories were combined to provide the percentage of participants who responded “sometimes” and “seldom”. Table 7 shows the total number of responses on how teachers rated sharing leadership for School A and School B.

Table 7

Total Responses for Sharing Leadership

	Routinely	Sometimes	Seldom	Never
School A	34	26	21	3
School B	27	46	16	1

Questions 5, 6, 12, 13, 14, and 16 on the TLI survey offered data for sharing leadership. While data revealed no significant mean differences in sharing leadership between School A and School B for student achievement, I will address other insights in teacher responses from both schools. The following tables, 8-13, will provide subcategory information for each survey question under sharing expertise. Table 8 addressed information on teacher perceptions of teacher involvement in making decisions.

Table 8

TLI Question 5

Question 5: Teachers are involved in making decisions about activities such as professional development, cross-curricular projects, etc.				
Responses	Routinely	Sometimes	Seldom	Never
School A	28.6%	28.6%	42.9%	0%
School B	20%	53.3%	26.7%	0%

A few teachers, or 28.6%, at School A agreed that teacher involvement in

decision-making was consistent. However, most teachers at School A, or 75%, ranked teacher involvement as occurring occasionally. School B had 20% of teachers who agreed with consistent teacher involvement in decision-making, while 80% of teachers believed teacher involvement occurred occasionally. Neither School A nor School B had any teachers who viewed teacher involvement as being absent in decision-making.

Despite teacher perceptions on decision-making in School A and School B, data did not indicate any significant mean differences between the two schools. While School A had a higher report card grade than School B, teacher's ratings of teacher involvement under sharing leadership variable may not have played a factor in school report card scores. Therefore, School A's higher achievement levels than School B may result from other factors than teacher perceptions of decision-making within their schools. Table 9 includes teacher perceptions of teacher participation in school improvement.

Table 9

TLI Question 6

Question 6: Teachers are actively involved in finding ways to improve the school as a whole.				
Responses	Routinely	Sometimes	Seldom	Never
School A	35.7%	28.6%	35.7%	0%
School B	33.3%	40%	26.7%	0%

School A had 35.7% of teachers who agreed with consistent teacher participation in school improvement, while 64.3% agreed participation happened occasionally. School B had 33.3% who agreed with consistent teacher participation in school improvement. There were 66.7% of teachers who agreed teacher participation in school improvement happened occasionally. Teachers in both schools agreed teacher participation in school improvement occurred to some extent, as teachers did not choose "never" as a response.

However, teacher ratings for school improvement under variable sharing leadership did not reveal any significant mean differences between the two schools, therefore, higher achievement levels for School A versus School B may result from other factors other than teacher participation in school improvement. Table 10 addresses teacher perceptions of how school administration reacts to teacher input.

Table 10

TLI Question 12

Question 12: The principal responds to the concerns and ideas of teachers.				
Responses	Routinely	Sometimes	Seldom	Never
School A	57.1%	35.7%	7.1%	0%
School B	73.3%	13.3%	6.7%	6.7%

Most teachers in School A, or 57.1%, agreed that the principal consistently reacted to concerns and ideas of teachers, while 42.8% agreed the principal reacted occasionally. All teachers in School A agreed to some extent that the principal responded to teacher concerns and ideas. At School B, 73.3% of teachers agreed that the principal reacted to teacher concerns and ideas consistently, while 20% of teachers occasional agreed that principals reacted to teacher concerns and ideas. School B also had 6.7% of teachers who believed the principal never responded to teacher concerns and ideas.

Although School B teachers rated the principal responding to teacher concerns and ideas higher than School A, School A earned a higher school report grade than School B. The principal responding to teacher concerns under variable sharing leadership did not reveal any significant mean differences: therefore, School A higher achievement levels over School B may be influenced by other factors other than principal responses to teacher concerns. Table 11 concerns teachers organizing professional development activities

within their school.

Table 11

TLI Question 13

Question 13: Teachers plan the content of professional learning activities at my school.				
Responses	Routinely	Sometimes	Seldom	Never
School A	14.3%	21.4%	50%	14.3%
School B	73.3%	13.3%	6.7%	6.7%

Only 14.3% of teachers at School A felt teachers consistently plan professional learning activities, while 21.4% felt teachers planned occasionally. There were 14.3% of teachers at School A who felt teachers never planned professional learning activities in their school. By contrast, School B teachers (73.3%) ranked consistent participation in planning professional activities higher than School A (14.3%). School B also had 19.7% of teachers who ranked planning professional learning activities occasionally occurred, while 6.7% responded teachers had no planning in the content of professional learning activities. While teacher perceptions of planning in professional activities in School B was ranked higher than School A, there was no significant difference found in planning the content of professional learning activities under variable sharing leadership. School B underperformed School A based on school report card scores. As a result, School A's higher achievement levels on the school report card may result from other factors than teachers planning the content of professional learning activities. Table 12 addresses teachers, who do not hold a leadership position, options to influence important decisions.

Table 12*TLI Question 14*

Question 14: Teachers have opportunities to influence important decisions even if they do not hold an official leadership.				
Responses	Routinely	Sometimes	Seldom	Never
School A	28.6%	42.9%	21.4%	7.1%
School B	13.3%	53.3%	33.3%	13.3%

In addressing teachers who do not hold leadership positions, School A highly rated at 64.3% that teachers occasionally influence important decisions. Only 28.6% of teachers felt that teachers had consistent influence on decision-making, while 7.1% reported no influence at all. For School B, teachers also highly ranked (86.6%) occasional influence on decision-making for teachers who do not hold a leadership position. School B ranked remaining two categories, consistent and never, equal at 13.3%. While both schools ranked occasional teacher influence higher than any other sections, this concept did not have any significant mean difference under the sharing leadership variable for student achievement. School A received higher achievement levels than School B on the school report card; therefore, higher scores in school A may result from other factors than teachers having opportunities to influence important decisions even if they do not hold an official leadership position. Table 13 addresses time for teacher collaboration.

Table 13*TLI Question 16*

Question 16: Time is provided for teachers to collaborate about matters relevant to teaching and learning.				
Responses	Routinely	Sometimes	Seldom	Never
School A	14.3%	64.3%	14.3%	7.1%
School B	53.3%	40.0%	6.7%	0%

In the final question for sharing leadership, teachers are asked their perception of time for collaboration. Most teachers at School A agreed (78.6%) that time was occasionally provided for teachers to collaborate on teaching and learning. Only 14.3% of teachers in School A agreed time for collaboration was consistent, while 7.1% felt that no time allowed for collaboration. For School B, more teachers agreed there was consistent time for collaboration (53.3%), while 46.7% of teachers agreed time for collaboration occasionally occurred. Despite teachers at School B having higher rankings than School A, there was no significant mean difference for collaboration under sharing leadership variable. School B still had lower achievement levels than School A. Therefore, higher achievement levels in School A may result from other factors than collaboration under the sharing leadership variable.

Sharing leadership variable involves both the principal and teacher's willingness to manage leadership responsibilities. Most teachers in both schools responded to having some form of sharing leadership by teachers participating in decision-making, school improvement, professional learning, and instruction. In addressing sharing leadership between two high-poverty schools in this study, no significant mean difference was found between School A and School B regarding student achievement. Therefore, School A's higher achievement levels on the school report card may result from other factors than the concepts of sharing leadership addressed in this study.

Research Question 2

Do schools with different levels of student achievement differ in their teacher perceptions of sharing expertise? Sharing expertise describes communicating classroom knowledge with other teachers. This study found no significant difference for sharing

expertise $t(27) = 1.54, p = .13$. There is no significant difference between School A and School B's responses on the factor of shared expertise. This means the responses do not differ; therefore, variable sharing expertise does not play a potential factor of influence in student achievement between School A and School B. During scope of this study, School A scored higher than School B on the school report card, which is based on 80% achievement and 20% growth; hence, higher achievement levels in School A over School B may result from other measures than the sharing expertise variable tested in this study.

Teachers answered a total of five questions on their perspective of sharing expertise within their designated school. For each question, data categories were combined to provide the percentage of participants who responded "sometimes" and "seldom." Table 14 addresses the total number of responses on how teachers rated sharing expertise for School A and School B.

Table 14

Total Responses for Sharing Expertise

	Routinely	Sometimes	Seldom	Never
School A	37	27	3	3
School B	52	21	1	0

Questions 1, 2, 3, 4, and 7 on the TLI survey offered data for sharing expertise. While data revealed no significant mean differences in sharing expertise between School A and School B for student achievement, I will address other insights in teacher responses from both schools. Tables 15-19 provide subcategory information for each survey question under sharing expertise. Table 15 includes information on teacher perceptions of asking one another for assistance.

Table 15*TLI Question 1*

Question 1: Teachers ask one another for assistance when we have a problem with student behavior in the classroom.				
Responses	Routinely	Sometimes	Seldom	Never
School A	35.7%	64.3%	0%	0%
School B	40.0%	60.0%	0%	0%

Teachers at School A and School B agreed that asking for assistance with problems or student behaviors occurred at both schools. Data for this category was somewhat equal as at least 35% of teachers at both schools agreed teachers consistently asked one another for assistance with student behavior in the classroom, while at least 60% of teachers agreed that teachers asked occasionally. There were no teachers in School A or School B who felt teachers fail to ask for assistance. While both schools ranked that teachers ask for help, this concept did not have any significant mean differences under the sharing expertise variable for student achievement. School A received higher achievement levels than School B on the school report card; therefore, higher scores in School A may result from other factors than teachers asking one another for assistance with student behavior problems. Table 16 addresses teacher perceptions of how often other teachers are willingly help their peers with a new topic or skill.

Table 16*TLI Question 2*

Question 2: Other teachers willingly offer me assistance if I have questions about how to teach a new topic or skill.				
Responses	Routinely	Sometimes	Seldom	Never
School A	35.7%	57.1%	7.1%	0%
School B	53.3%	46.7%	0%	0%

Thirty-five percent of teachers in School A agreed that teachers consistently offered assistance to others, while most teachers in School A, or 64.2%, agreed that teachers only occasionally helped. By contrast, most teachers in School B, or 53.3%, agreed that teachers consistently offered assistance. There were 46.7% of teachers in School B who agreed that teachers occasionally offered assistance. There were no teachers at either school who responded that teachers failed to answer questions about new topics or skills. While School B had a higher percentage of teachers who agreed that teachers offered help, there was no significant difference found for this concept under the sharing expertise variable for student achievement. School B underperformed School A based on school report card scores. As a result, School A's higher achievement levels on the school report card may result from other factors than teacher willingness to offer assistance with questions about a new topic or skill. Table 17 addresses teacher perceptions of how teachers share new ideas.

Table 17

TLI Question 3

Question 3: Teachers here share new ideas for teaching with other teachers such as through grade level/department meetings, schoolwide meetings, professional development, etc.				
Responses	Routinely	Sometimes	Seldom	Never
School A	64.3%	21.4%	7.1%	7.1%
School B	86.7%	7.1%	7.1%	0%

Most teacher responses at School A and School B agreed that teachers shared new ideas consistently; however, School B had 7% more teachers than School A to select teachers consistently share. Twenty-eight percent of teachers at School A responded that teachers occasionally share, while 7.1% of teachers responded teachers did not share new

at ideas at all. School B had 14.2% of teachers who felt teachers share occasionally. Even though every teacher in School B responded that teachers share new ideas to some extent, there was no significant difference found for this concept under the sharing expertise variable for student achievement. School A outperformed School B based on school report card scores. As a result, School A's higher achievement levels on the school report card may be influenced by other factors than teachers sharing new ideas with other teachers. Table 18 addresses teacher perceptions on discussing ways to improve student learning.

Table 18

TLI Question 4

Question 4: Teachers discuss ways to improve student learning.				
Responses	Routinely	Sometimes	Seldom	Never
School A	78.6%	7.1%	7.1%	7.1%
School B	86.7%	13.3%	0%	0%

Most teachers at both School A and School B responded that teachers consistently discuss ways to improve student learning; however, teachers at School B had a slightly higher percentage for this category (78.6% and 86.7% respectively). Both schools had similar ratings around 13% that teachers discuss ways to improve student learning occasionally. While most teachers at both schools agreed that teachers discuss ways to improve student learning, there was no significant difference found for this concept under the sharing expertise variable for student achievement. Despite similarities between both schools, School A earned a higher grade on the school report card than School B. As a result, School A's higher achievement levels on the school report card may be influenced by other factors than the teachers sharing new ideas with other teachers. Table 19

addresses teacher perceptions of how faculty stays current on educational research.

Table 19

TLI Question 7

Question 7: As a faculty, we stay current on education research in our grade level/subject area.				
Responses	Routinely	Sometimes	Seldom	Never
School A	50%	42.9%	7.1%	0%
School B	80%	20%	0%	0%

In addressing how often teachers stay current on education research, 50% of teachers at School A agreed teachers were consistent within their grade level or subject area. Similarly, 50% of teachers in School B also agreed teachers stayed current on education research occasionally. For School B, most teachers, or 80%, agreed teachers were consistent in keeping up with current educational research, while 20% said teachers kept up occasionally. While both schools had responses to agree that teachers stayed current on education research, there was no significant difference for this concept under the sharing leadership variable for student achievement. School A outperformed School B on the school report card, despite teachers at School B having more consistent responses than School A. Therefore, higher achievement levels in School A may result from other factors than teachers staying current on educational research in their grade/subject area.

The sharing expertise variable involves communicating classroom knowledge with other teachers. Most teachers in both schools agreed sharing expertise occurred in their schools to some extent through assisting others with student behavior inside classrooms, answering teacher questions, sharing new ideas for student learning, and staying current on education research. Although teachers at School A responded with less consistency in staying current with educational research than School B, no significant

mean difference was found between School A and School B regarding student achievement; therefore, School A's higher levels of achievement on the school report card may result from other factors than the concepts of sharing expertise addressed in this study.

Research Question 3

Do schools with different levels of student achievement differ in their teacher perceptions of supra-practitioner? Supra-practitioner is a teacher's observation of behaviors outside of the classroom. This study found no significant difference in supra-practitioner $t(27) = .56, p = .57$. There is no significant difference between responses of School A and School B on factors of supra-practitioner. This means responses do not differ; therefore, the variable supra-practitioner does not play a potential factor of influence in student achievement between School A and School B. During the time scope of this study, School A scored higher than School B on the school report card, which is based on 80% achievement and 20% growth. Hence, higher achievement levels in School A over School B may result from other measures than the supra-practitioner variable tested in this study. For each question, data categories were combined to provide percentage of participants who responded "sometimes" and "seldom." Table 20 addresses School A's and School B's total number of responses of how teachers rated supra-practitioner.

Table 20

Total Responses for Supra-Practitioner

	Routinely	Sometimes	Seldom	Never
School A	18	17	4	3
School B	8	27	9	1

Questions 8, 9, and 10 on the TLI survey offered data for supra-practitioner.

While data revealed no significant mean differences in supra-practitioner between School A and School B for student achievement, I will address other insights in teacher responses from both schools. Tables 21-24 provide subcategory information for each survey question under supra-practitioner. Table 21 includes information on the teacher perceptions of teacher willingness to stay after school to work on school improvement activities.

Table 21

TLI Question 8

Question 8: Teachers willingly stay after school to work on school improvement activities.				
Responses	Routinely	Sometimes	Seldom	Never
School A	14.3%	50%	21.4%	14.3%
School B	20%	66.7%	13.3%	0%

Most teachers in School A, or 71.4%, agreed teachers willingly stayed after school to address school improvement activities on occasion. Most teachers at School B, or 80%, also agreed teachers stay after school occasionally. School A teachers rated the remaining two categories equally (14.3%) with teachers consistently staying after work and teachers never staying after work for school improvement. All teachers in School B agreed teachers willingly stayed after work for school improvement activities. While most teachers at both schools voiced that teachers occasionally stayed after school for school improvement activities, there was not a significant mean difference for this perception under the principal selection variable for student achievement. School A still outperformed School B on the school report card; therefore, School A's higher achievement levels may result from other factors than teacher willingness to stay after

school for school improvement activities. Table 22 addresses teacher perceptions of their willingness to stay after school to help other teachers.

Table 22

TLI Question 9

Question 9: Teachers willingly stay after school to help other teachers who need assistance.				
Responses	Routinely	Sometimes	Seldom	Never
School A	7.1%	57.1	28.6%	7.1%
School B	20%	60%	20%	0%

In addressing teacher willingness to stay after school to help other teachers, most teachers at School A, or 85.7%, agreed that teachers remained after school on occasion. Likewise, most teachers at School B, or 80%, agreed teachers remained after school to help other teachers. While ratings for this concept are similar, there was no significant difference between teacher responses under the principal selection variable. School A's report card grade was higher than School B's; therefore, higher achievement levels in School A may result from other factors than teachers being willing to stay after school to help other teachers. Table 23 addresses teacher perceptions of teacher willingness to stay after school to assist administrators.

Table 23

TLI Question 10

Question 10: Teachers willingly stay after school to assist administrators who need volunteer help.				
Responses	Routinely	Sometimes	Seldom	Never
School A	21.4%	71.4%	7.1%	21.4%
School B	13.3%	53.3%	26.7%	6.7%

Twenty-one percent of teachers at School A believed teachers consistently stay

after school to help administrators. Most teachers, or 78.5%, agreed that teachers only stayed occasionally, while 21.4% responded teachers did not stay after school at all to help administrators. For School B, 13.3% of teachers agreed teachers stayed after school consistently to help school administration. Most teachers, or 80%, agreed that teachers stayed occasionally, while 6.7% of teachers responded no teachers stayed after school to help administrators. However, teacher responses for teacher willingness to help school administration did not reveal any significant mean differences under the principal selection variable regarding student achievement. School A had higher achievement levels than School B; therefore, higher achievement levels for School A over School B may result from other factors than teacher willingness to stay after school to assist administrators who need volunteer help.

Supra-practitioner involves observing a teacher's behavior outside of the classroom. The responses at both schools show, to some extent, that teachers not only work inside the classroom but also in leadership positions; however, no significant mean difference was found between School A and School B regarding the supra-practitioner variable and student achievement. Therefore, School A's higher levels of achievement on the school report card may result from other factors than concepts of supra-practitioner addressed in this study.

Research Question 4

Do schools with different levels of student achievement differ in their teacher perceptions of principal selection? Principal selection involves designating other teachers to carry out leadership roles. For this variable, the study found no significant difference in principal selection $t(27) = -1.17, p = .24$. There is no significant difference between of

School A and School B responses on the factor of principal selection. This means responses do not differ; therefore, variable principal selection does not play a potential factor of influence in student achievement between School A and School B. During the time scope of this study, School A scored higher than School B on the school report card, which is based on 80% achievement and 20% growth. Hence, higher achievement levels in School A over School B may result from other measures than the principal selection variable tested in this study. For each question, data categories were combined to provide percentage of participants who responded “sometimes” and “seldom.” Table 24 breaks down the total number of responses of how teachers rated principal selection for School A and School B.

Table 24

Total Responses for Principal Selection

	Routinely	Sometimes	Seldom	Never
School A	8	17	8	9
School B	6	15	9	14

Questions 11, 15, and 17 on the TLI survey offered data for principal selection. While data revealed no significant mean differences in principal selection between School A and School B for student achievement, I will address other insights in teacher responses from both schools. Tables 25-27 provide subcategory information for each survey question under principal selection. Table 25 includes information on teacher perceptions of school administration dispositions when teachers take on leadership responsibilities.

Table 25*TLI Question 11*

Question 11: Administrators object when teachers take on leadership responsibilities.				
Responses	Routinely	Sometimes	Seldom	Never
School A	7.1%	7.1%	28.6%	57.1%
School B	0%	13.3%	33.3%	53.3%

Most teachers at School A and School B (57.1% and 53.3% respectively) agreed administrators did not object when teachers want to manage leadership duties. For School A, a few teachers, or 35%, responded administration would occasionally object to teachers, while School B had 46% of teachers who responded that administration will occasionally object. However, 7.1% of teachers at School A believed school administration consistently objected to teachers handling administration responsibilities. While both schools had most responses for school administration never objecting to teachers taking on leadership roles, there was no significant mean difference between School A and School B for this concept under supra-practitioner for student achievement. School A outperformed School B on the school report card; therefore, higher achievement levels for School A over School B may result from other factors than teacher perceptions of administration objecting to teachers handling leadership responsibilities. Table 26 addresses the principal consulting the same group of teachers for input on decisions.

Table 26*TLI Question 15*

Question 15: The principal consults the same small group of teachers for input on decisions.				
Responses	Routinely	Sometimes	Seldom	Never
School A	14.3%	64.3%	14.3%	7.1%
School B	26.7%	46.7%	6.7%	20%

For principal consulting the same small group for input on decisions, most teachers at School A, or 78.6%, agreed it occasionally occurred. Fourteen percent of teachers responded that the principal consistently consulted the same group, while 7.1% felt that principals never consulted the same group. For School B, 53.4% of teachers agreed the principal consulted the same group occasionally. Twenty-six percent of teachers felt the principal consistently consulted the same group, while 20% responded that the principal never consulted the same group for input on decisions. While teachers at School B rated their principal the least number of times for consulting small groups, School B did not perform as well as School A on the school report card. There was no significant mean difference between School A and School B under supra-practitioner for consulting the same group of teachers for input; therefore, higher achievement levels in School A may account for other factors than teacher perceptions of who school administrators contact for input on decisions.

Table 27 addresses teachers serving in leadership positions because they were principal appointed.

Table 27*TLI Question 17*

Question 17: Most teachers in leadership positions only serve because they have been principal appointed.				
Responses	Routinely	Sometimes	Seldom	Never
School A	35.7%	50.0%	14.3%	0%
School B	13.3%	46.7%	20%	20%

A few teachers in School A, or 35.7%, consistently agreed teachers served in leadership positions because they were principal appointed. Most teachers, or 64.3%, agreed teachers only served because they were principal appointed on occasion. There were no teachers in School A who responded teachers served only because they were principal appointed. By contrast, School B had 13.3% of their teachers who consistently believed teachers only served in leadership positions due to being principal appointed, while 66.7% believed it was consistent. Only 3% of teachers in School B responded that teachers served only because they were principal appointed. There was no significant mean difference between Schools A and B for this concept under supra-practitioner for student achievement. However, School A still performed higher than School B on their school report card. As a result, higher achievement levels in School A over School B may result from other factors than teacher perceptions of most teachers serving in leadership positions because they were principal appointed.

Principal selection involved designating other teachers to serve in leadership roles including staying after school to carry out school improvement tasks, helping other teachers who need help, and helping school administration. Both School A and School B ranked most responses under the principal selection variable as occurring occasionally within their respective schools. There were also a few teachers in each school who

perceived consistent elements of principal selection. Despite ratings for the principal selection variable at each school, School A still outperformed School B on the school report card. As a result, School A's higher achievement levels on the school report card may be influenced by other factors than the principal selection concepts addressed in this study.

Summary

This chapter presented data from teacher responses to the TLI survey, a 17-question instrument from Angelle and DeHart (2010). School A had 14 participants and School B had 15 participants who electronically took the survey. Both schools had similar demographics regarding the number of students and being identified as a high-poverty school and were located in the same school district. This research used quantifiers to represent the ordinal data from teacher responses. In addressing the total number of responses for each variable, School A had more teachers who answered "consistent" for variables of sharing leadership, principal selection, and supra-practitioner than School B. School B had more teachers who answered "consistent" only for variable sharing expertise.

Under the sharing leadership variable, most teachers in School A agreed teachers were involved in decision-making and school improvement. They also believed teachers who are not in leadership positions can influence decisions. For School B, the majority of teachers believed the principal responded to teacher concerns and ideas. They also agreed that teachers plan content for professional learning activities and that time is provided for collaboration.

School B had more teacher responses of "consistent" than School A for all

questions under the sharing expertise variable including most teachers believe teachers ask each other for assistance with classroom management, teachers offer assistance with a new topic or skill, teachers share new ideas for teaching, teachers discuss ways to improve student learning, and teachers stay current on educational research. Although teachers in School B answered with a higher percentage of “consistent” responses for questions under the sharing expertise variable, School A’s percentage of responses was always slightly less than less School B.

For the supra-practitioner variable, most School A teachers agreed to willingly stay after school to assist administrators who need volunteer help. In School B, most teachers agreed to stay after school to work on school improvement activities as well as help other teachers when needed. For principal selection, teachers in School A agreed administration does not object when teachers take on leadership roles. For School B, teachers agreed the principal does not consult the same group for input on decisions and most teachers only serve in leadership positions because they are principal appointed.

In all four variables used in this study’s framework, sharing leadership, sharing expertise, supra-practitioner, and principal selection, data revealed no significant mean difference between School A and School B regarding student achievement; therefore, higher achievement levels in School A over School B may result from other measures than variables tested in this study.

Chapter 5 provides some insights and conclusions derived from the data in this chapter. While there was no significant difference between the variables and student achievement in this study, other considerations are addressed from teacher responses regarding student achievement. Chapter 5 includes an overview of the study, a summary

of findings, prior connections to the TLI instrument, limitations, recommendations, and a conclusion.

Chapter 5: Discussion

Teacher leadership comes in formal and informal roles, from being a mentor, a department chair, or a more professional role desired by school administration (Shillingstad & McGalmery, 2019). As a 12th-year teacher with experience working in high-poverty schools, I know challenges teachers face when working with low-economic populations. Therefore, I wanted to provide knowledge for educational stakeholders to use to improve student achievement. The purpose of this study was to examine if there were any significant mean differences in teacher leadership and student achievement between two high-poverty elementary schools. The following questions served as a guide in this study:

1. Do schools with different levels of student achievement differ in their teacher perceptions of sharing leadership?
2. Do schools with different levels of student achievement differ in their teacher perceptions of sharing expertise?
3. Do schools with different levels of student achievement differ in their teacher perceptions of supra-practitioner?
4. Do schools with different levels of student achievement differ in their teacher perceptions of principal selection?

This chapter contains an overview of the research, a summary of findings, discussions of teacher leadership literature, limitations, recommendations for future research, and a conclusion.

Overview

This study addressed if any mean differences existed between variables of teacher leadership and student achievement between high-poverty schools. Schools were

identified as School A, a high-performing school, and School B, a low-performing school. Both schools resided in same district and had similar demographics. Teachers electronically answered questions from Angelle and DeHart's (2010) TLI to provide their perceptions of teacher leadership within their school. A four-factor model served as the conceptual framework for this study with variables of sharing leadership, sharing expertise, supra-practitioner, and principal selection. The TLI had 17 questions that guided responses to four variables of teacher leadership. Teachers answered questions on a 4-point Likert scale of never, seldom, sometimes, and routinely. Each answer choice was assigned a quantifier to represent the ordinal data. Responses were analyzed for the percent of teachers who agreed with each statement given, and categories were combined to provide the percentage of participants who responded "sometimes" and "seldom." A summary of findings is in the following section.

Summary of the Findings

This study used a *t* test to analyze teacher responses between School A and School B. In all teacher leadership variables, sharing leadership, sharing expertise, principal selection, and supra-practitioner, data revealed no significant mean differences between School A and School B regarding student achievement. While teachers agreed that teacher leadership was present at both schools, School A outperformed School B with school report card scores. Hence, School A's higher achievement levels over School B's may result from other factors than variables of teacher leadership addressed in this study. The next section contains a discussion of each variable of teacher leadership.

Sharing Leadership

Ryan's (1999) literature on teacher leadership referred to teachers sharing

authority in curriculum decisions, professional development, and new programs. This study's results are consistent with Ryan's research, as most teachers expressed sharing leadership present at both schools. Additionally, all teachers at both schools felt they were involved in making decisions about activities such as professional development and cross-curricular projects. In addressing teacher perceptions of professional development, School B had more teachers who felt they were consistently planning learning activities than teachers in School A. Despite School B's higher response, School B's teacher perceptions of planning professional learning activities did not influence student achievement.

Wang (2015) referred to teachers having varying opinions on decision-making; and even though some schools try to incorporate teachers in decision-making, there is room for improvement. In this study, teacher responses varied as some teachers felt they were routinely involved, yet most teachers felt they were occasionally involved. However, no teacher indicated they felt slighted in being able to make decisions. More importantly, this study found no significant difference in decision-making under the sharing leadership variable regarding student achievement. This study's results are consistent with the conclusions found by Taylor and Bogotch (1994), which also showed no significant difference between teachers participating in decision-making and student achievement. This potentially means that no matter how involved teachers perceived themselves to be in decision-making in a high-poverty school, teacher involvement in decision-making may not affect student achievement.

Most teachers at School A and School B agreed that school administration responds to teacher concerns and ideas. This notion agrees with other researchers as

Kenjarski's (2015) research revealed that school administration should support teacher leadership activities and administrators should provide opportunities for teachers to practice in leadership roles. Kraft et al.'s (2015) research on high-poverty schools showed schools experienced better success when principals used teacher strategies for reform instead of using the principal's idea. While questions in this study did not directly address if the principal used teacher strategies, data revealed that School B had many teachers who answered with a response of consistent for the statement, "the principal responds to teacher concerns and ideas," while School A only had a few teachers who answered with the same response for this statement. This means more School B teachers felt the principal responded consistently to teacher concerns and ideas than School A. However, School B did not have better success than School A in student achievement. As a result, teachers can have a high perception of principals responding to teacher concerns and ideas, yet high perception can still yield low student achievement scores.

Sharing leadership involves finding ways to improve the school as a whole. All teachers in School A and School B agreed with this concept. Teachers at both schools also had similar ratings for responses of "consistent" involvement and "occasional" involvement in finding ways to improve the school. These responses align with Marston's (2014) research with teachers at a high-poverty school who worked tirelessly to keep a good school image. Teacher efforts in Marston's study ensured external stakeholders focused more on the school's positive aspects. Teacher responses from both schools are also consistent with Awadzi's (2015) study of a high-poverty elementary school. In Awadzi's research, teachers addressed improvement in five different areas including assessments, PBIS, instructional strategies, and community collaborations.

While teachers in my survey did not address specific areas for school improvement, all teacher responses concluded teachers are active in improving the school as a whole. However, no matter how teachers rated their involvement in school improvement, this concept did not influence student achievement between School A and School B.

Brigman-Brown's (2016) results of two high-poverty schools showed School Y had success in student achievement when teachers set high student expectations, built relationships with students and parents, and invested time in their students. School X did not have success in learning, as teachers had low opinions of their students and felt students could not handle common core. My study results conflicted with Brigman-Brown's, as teachers in both School A and School B supported school improvement initiatives. School B had lower achievement levels than School A; however, most School B teachers answered with a response of "consistent" for most concepts under the sharing leadership variable. As a result, this may mean a school with high perceptions of teacher leadership may have low student achievement outcomes. The next section addresses variable sharing expertise.

Sharing Expertise

Emphasis on teachers asking for assistance is consistent with what is in the literature regarding student behavior. Teachers at School A and School B unanimously agreed that teachers ask each other for assistance when they have issues with student behavior in the classroom. Urso's (2008) study of a high-poverty elementary school revealed students worked harder when there was structure, high expectations were set, and teachers addressed behavioral issues. While School A's results align with Urso's study (School A had a higher school report card grade), School B's results conflicted

with this notion. All teachers at School B agreed teachers ask for assistance with student behavior, yet School B had a low grade on the school report card. This may mean schools that address student behavior may have low achievement levels even if they correct student behavior.

Ryan (1999) and Barnett et al. (2014) found teacher leaders willingly shared their instructional practices with others throughout the school and helped handle student issues. Kraft et al. (2015) expressed teachers working in an open environment of collaboration provided more support and helped with student success in times of uncertainty. This study at hand supports literature, as most teacher responses at School A and School B agreed teachers willingly offer peers assistance when they have questions about a new topic or skill. However, only School A student achievement levels supported that teacher collaboration helps with student success, while School B student achievement levels conflicted with this concept. School B did not have student success even though all teachers at the school agreed with providing each other assistance with a new topic or skill. This may indicate even when teachers assist one another, students may not succeed.

The Teacher Leadership Consortium identified coaching and mentoring as a competency for the instructional leadership pathway (Barnett et al., 2014). Padilla's (2016) study also revealed coaching and mentoring was a common theme among participants. This research supports literature as most teachers in both schools agreed teachers discussed ways to improve student learning. Teachers at School B had more responses of "consistent" than School A for this concept, and all teachers in School B agreed teachers discussed ways to improve student learning. While most teachers in

School A answered with a response of “consistent,” the percentage of consistent responses was not as high as School B. A few teachers in School A shared teachers occasionally discussed ways to improve student learning, while one teacher expressed teachers never discussed ways to improve student learning. Consequently, even though most School B teachers discussed how to improve student learning, this concept did not positively affect student achievement. This means that even if teachers frequently discussed ways to improve student learning, schools may end up with low achievement levels.

Finberg’s (2013) research found teachers desired to stay current with new educational strategies to improve student achievement. This study is consistent with current literature as all teachers in both schools agreed they stayed current on educational research in their area. School A teachers were split in their responses with half responding they were consistent in keeping up with education research, while the other half responded they occasionally kept up with education research. By contrast, almost all teachers in School B responded they were consistent in keeping up with current research, yet School B achievement levels were not as high as School A. As a result, this may indicate even when teachers keep up with current research in their area, student achievement levels may not always be positively influenced. The next section addresses the supra-practitioner variable.

Supra-Practitioner

Kraft et al. (2015) found that teachers go beyond instructor role to foster student’s socio-emotional development. Snell and Swanson (2000) found teachers lead inside and outside the classroom. Hartney’s (2014) research found an increase in student

achievement scores when teachers increased their involvement in local politics. For School A and School B, most participants in this study responded teachers willingly stay after school to work on school improvement activities on occasion. Only a few teacher responses stated teachers consistently stayed after school to work on school improvement activities. Results from School A did not align with the literature. School A's teacher willingness to stay after school did not influence student achievement as teachers only stayed after school on occasion. School A's teacher involvement in after school hours was limited, yet students performed well and School A earned sufficient school report card grades. For School B, only a few teachers voiced that teachers consistently stay after school to work on school improvement activities. School B experienced a low score on the school report card. Based on previous literature, this may indicate that if teachers in School B were more involved in after work school improvement activities, student achievement scores might increase.

Curtis (2013) suggested that teacher leadership included a collaborative culture that brings forth shared responsibility between stakeholders. My study results agreed with the literature, as most teachers in School A and School B responded they were occasionally willing to stay after school to help other teachers who need assistance. More teachers at School B than School A responded that they consistently stay after school to help other teachers. Based on the school report card grade, School A had higher achievement levels. Therefore, School A's lack of consistency in staying after school to help other teachers did not affect the school's achievement levels. By contrast, School B responded with more teachers agreeing to stay after school to help, yet the school had a lower school report card grade. This may indicate, in the case with School A, even when

teachers do not stay after to help other teachers, the school may experience successful achievement progress. Alternatively, in the case of School B, even when teachers stay after school to help other teachers, the school can have low student achievement. The next section discusses the principal selection variable.

Principal-Selection

Moller and Pankake's (2006) research supported principals establishing collegiality between teacher leaders and peers and supporting all school staff members. This study supports literature as most School A and School B teachers responded that school administration does not object when teachers take on leadership responsibilities. Barth's (2001) research suggested principals should encourage teachers to take on leadership roles, while being mindful of the accountability that comes with the task.

Most teacher responses from School A and School B revealed the principal occasionally consulted the same group of teachers for input on decisions. A few teachers in School A and School B felt the principal routinely consulted the same group, while a small percentage felt the principal never consulted the same group. Findings from this study were consistent with prior literature. Edwards (2015) found that having favoritism in limiting who can serve in leadership roles created a hostile environment. While effect of selecting certain teachers for leadership roles was not addressed in this study, both schools had a high percentage of teachers who agreed the principal only selects certain teachers for leadership roles. Teacher responses did not influence student achievement, as no significant difference was found between School A and School B; however, Curtis's (2013) research asserted that school districts must educate principals on developing teacher leaders and understanding teacher leader benefits. However, notions that

principals consult the same group of people did not have an influence on student achievement between School A and School B.

Research shows that all teachers can lead and not only those assigned by school administration (Bradley-Levine et al., 2014). Most School A and School B teachers occasionally felt teachers only served in leadership positions because they were principal appointed. Study results did not reveal a significant difference between School A and School B regarding student achievement for this concept. This study is consistent with literature as Marks and Louis (1997) showed that empowering teachers had no direct impact on student performance, but it can help students.

Prior Uses of TLI Connections

TLI prior use is limited, as it is a young instrument and has been used in only two previous studies. Bradley-Levine et al. (2014) used TLI to explore teacher leadership in implementing the New Tech model. Research revealed collaboration, support, and teacher engagement was vital before introducing new programs. This research supports Bradley-Levine et al.'s study, as all teachers from School A and School B agreed teachers asked one another for assistance and teachers were willing to help with questions about a new topic or skills. Angelle and Teague (2014) examined relationships between teacher perceptions of collective efficacy and the extent of teacher leadership. Results revealed a strong relationship between teacher leadership and collective efficacy. However, more information is needed from participants in the study at hand to determine if a connection can be made with Angelle and Teague's research.

Limitations

No previous studies exist that used TLI to compare teacher leadership and student achievement. During the scope of this study, COVID-19 restrictions set tremendous

limits on the educational environment. Teachers worked virtually at home away from their regular classroom setting. This may have caused uncertainty with teachers, as there were so many unknown factors and uncharted territories teachers had not experienced. As a result, effects of COVID-19 restrictions may have influenced some teacher responses, as responses may have differed if teachers were working in their classroom instead of learning how to teach from home.

Due to this study's requirements, only teachers working in high-poverty schools with similar demographics were able to participate. As a result, the availability in selection of schools was limited. This also affected the sample size, as a school with a large student population would have more teachers and could not be analyzed with a school with a low student population with fewer teachers. Hopkins (2008) stated that a sample size should be big enough to determine the smallest connection between variables in the study 80% of the time. This study had a low teacher population sample which may have contributed to no significant differences being found between variables of teacher leadership and student achievement. School student population also lacked diversity in both schools.

Teacher perceptions of their school or school system may also factor in how participants responded to survey questions. If a teacher has bias against their school or district, bias may be reflected in teacher responses.

Recommendations

This study was addressed cross-sectional or at one point in time, which may have influenced teacher responses, as data did not reveal any significant difference among any variables in teacher leadership and student achievement. However, it may be beneficial if

data are observed in a longitudinal study over a more extended period to see if different outcomes are possible.

This study used a quantitative descriptive approach. This method was appropriate as this study tested mean differences between teacher leadership variables and student achievement. However, there are areas left unexplored. School A and School B are both high-poverty schools with similar demographics yet different achievement levels. Based on the conclusions provided earlier, this study does not detail teacher individual experiences. Future research can include focus groups and interviews to get in-depth details from the respondents. Therefore, a qualitative narrative research approach combined with the study may clarify the disparity of achievement levels between School A and School B.

Only two schools served to provide data in this survey. Future research can include more schools to broaden participant numbers. Research can expand to include multiple levels such as middle and high school schools or even other elementary schools. Middle and high school teachers' daily operations vary from elementary school teachers; therefore, including these teachers in the sample population may provide more insights into teacher leadership in high-poverty schools. This increases the sample population and may allude to more knowledge on how teacher leadership may or may not affect student achievement.

In addressing school report card grades, scores in this study may be too closely related to reveal any significant mean differences between variables of teacher leadership and student achievement. The high-performing school scored a B for 2 consecutive years, while the lower performing school scored a C and D respectively. A more significant gap

difference in school report card letter grades may reveal more data among participants for future studies. Future research could select a school with an A grade for high performing and select a school with an E grade for low performing to see if more connections may be inferred from research.

For final recommendations, many stakeholders may possibly influence student achievement other than teachers such as principals, instructional coaches, and district personnel. Future research may explore perceptions of teacher leadership from other educational stakeholders (Kenjarski, 2015). The TLI questions can be used with school administrators, district department directors, and district superintendents. The results can be evaluated with teacher perceptions in this study to explore how teacher leadership variables may influence student achievement.

Recommendations for Practice

According to data collect and presented, one may conclude that teacher leaders are essential. While teacher leaders are essential to educational settings, schools will always face demands that may affect student achievement. Outcomes found in this study are beneficial to teachers and other school personnel as research seeks to discover how teacher leadership may influence student achievement levels. The following section provides recommendations for practice drawn from this study.

For teacher leaders, this study shows that teacher leadership had a dual effect on student achievement. In some cases, teacher leaders may be able to impact high-poverty populations and show positive student achievement levels. By contrast, teacher leaders may also experience low student achievement levels with high-poverty populations. Teacher leaders should not get discouraged when continued practices of teacher

leadership do not produce sufficient student achievement levels. Steagall's (2012) research of three high-poverty schools proved that building relationships with stakeholders, having a positive school culture, establishing a supporting environment, and making students aware of future opportunities helped three schools thrive over similar high-poverty schools. Teacher leaders must be willing to build relationships with students. While this process may take time and effort, school administration must be willing to allow opportunities to foster positive student-teacher relationships. Teachers must also be willing to develop relationships with parents and other individuals in the community to form a collaboration that will promote student success. Teacher leaders must also be willing to reflect a positive school culture as described in Marston's (2014) study. Students may have a greater chance of success in environments where they feel comfort and security and they find a purpose for being at school. Finally, lack of knowledge in potential career or educational opportunities may prevent students from working to their full potential. Teacher leaders must guide students through career pathways or postgraduation options so students may have a foundation in what they need to succeed.

Teacher leaders should take a more hands-on approach to school policy. Hartney (2014) found that when teachers got involved in policy making, student scores increased. In this study, only a few teachers stated they consistently stayed after school to assist other teachers or administrators. Teachers usually have a preset schedule during a normal school day which may not be enough time to discuss all factors that may directly affect achievement, such as policies. Therefore, teachers must be willing to stay after school to discuss policies that directly affect student achievement. Kenjarski (2015) found teacher

leaders may help policy makers craft effective policies in various areas including curriculum and instructional design, technology software, and determining proficiency levels.

Teacher leaders must possess confidence. As noted throughout this study, both schools established teacher leadership was present. However, only one school showed sufficient student achievement levels. Mackiewicz-Wolfe (2013) indicated that some teachers were not confident in teacher leadership knowledge and skills even though they engaged in teacher leadership responsibilities. Woods (2016) found that implementing teacher leadership included boosting teacher confidence. As a result, teacher leaders are aware of their leadership style and will engage in leadership roles with a greater sense of ownership.

This study showed principals tend to consult the same teachers when making decisions; however, research continues to show principals need to foster a sense of community and develop a collaborative school culture. Principals must be supportive in developing teacher leaders, as principals are not solely responsible for operating schools and many stakeholders contribute to a school's day-to-day operation. Teachers can work in formal and informal roles so principals have flexibility in addressing areas where teacher leaders can serve. Castilleja Gray (2016) suggested that principals should establish a unified vision and trust to encourage leadership from all teachers that will evoke a culture where constructive criticism and accountability are desired.

Summary

Kenjarski (2015) stated that teacher leadership is a multi-functional concept that provides structure, communication, support, and professional development. Teacher

leaders worked to improve instruction, encouraged one another in achieving common goals, found ways to unify different levels of the school's organization structure, and were active change agents.

Teachers at two high-poverty elementary schools, identified as School A and School B, participated in the TLI survey to provide their perceptions of teacher leadership at their schools. Each teacher answered questions for sharing leadership, sharing expertise, supra-practitioner, and principal selection. While most teachers at both schools agreed to have aspects of teacher leadership in their school, this study showed teacher leadership variables addressed in this study did not influence student achievement. However, a few aspects can be inferred from both schools.

Teachers in School A were involved in decision-making, received support from school administration, and found ways to improve the school. School A teachers also supported one another, shared new ideas, and occasionally remained current with educational research. Teachers discussed student learning and would sometimes remain after school to help other teachers.

Teachers at School B were also involved in decision-making, consistently stayed after school to help other teachers, and felt the principal always responded to teacher concerns and ideas. Teachers at School B found ways to improve student learning and address student behavior.

School A had a higher achievement level than School B, yet some teacher perceptions of teacher leadership in School A ranked lower than School B. For School A, this study suggested teachers can rate teacher leadership low within the school yet successfully have adequate achievement levels. Conversely, this study also implied a

school can rate teacher leadership high in the case with School B, yet the school can yield low achievement levels. This may mean no matter how involved teachers are in their school, results can fall in either direction. This study also shows that other factors outside of teacher leadership may affect student achievement. Schools, teachers, and other educational stakeholders must be willing to further investigate those areas that hold back high-poverty students. It my desire for educational stakeholders to find this study beneficial to help improve student achievement in high-poverty schools.

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Appendix A

School Site Permission

[REDACTED]
[REDACTED]
Superintendent

December 12, 2019

Dear Ms. Chaundra Snuggs,

This letter is to provide you written documentation concerning my approval to partner with [REDACTED] district in conducting your requested survey to teachers in the district, specifically [REDACTED].

Individual identifiers and data will remain confidential to the researchers only and names will not be reported. A copy of the research results and final paper can be provided to the district so that we might learn from the research.

Please contact me if I can answer any questions or be of further assistance.

Sincerely,

[REDACTED]
[REDACTED] County Schools Superintendent

Appendix B

Teacher Invitation Email

Date: (insert date here)

Greetings!

I, Chaundra Snuggs, a doctoral student at Gardner-Webb University (GWU) am conducting a study on teacher's perception of teacher leadership within their schools. I have 11 years of experience as a Career and Technical Education Teacher in [REDACTED] County Schools. As a doctoral student at GWU, I am looking to describe the statistical relationship between teacher leadership and student achievement. The study will be conducted based on the four-factor model framework of teacher leadership prepared by Angelle & DeHart, 2010.

I recognize the tremendous impact teachers can have to influence student achievement, and my hope is information from this study will provide support for principals in their development of teacher Leaders. This study may also benefit teachers as a resource for operating in leadership capacities within their schools and hopefully positively impacting student achievement. There are no known risks associated with this research, and all responses will be completely confidential. All responses will be recorded using google forms, with all responses destroyed upon completion of the study.

In approximately three days, I will send you a consent form along with an email link that will take you to a survey. The survey will ask you to identify your beliefs and self-assess your abilities in the areas of being a teacher leader. The survey will also ask you to assess the effectiveness of your educational preparation and support as instructional leaders.

Your participation in the study is completely voluntary. All information will remain confidential with all data destroyed after being analyzed and reports are written. Please remember you can choose to withdraw yourself from the survey at any time.

I hope that you will consider participating in the study, and I want to thank you for your service to educating our youth and the communities you serve. If you have any questions you can contact me at [REDACTED].

Sincerely,

Chaundra Snuggs Gardner-Webb University Graduate Student- School of Education

Appendix C

Consent Form

Gardner-Webb University IRB
Informed Consent Form for Online Survey
*Exploring the Relationship Between Teacher Leadership and Student Achievement in
High-Poverty Schools*

The purpose of this research is to describe the statistical relationship between teacher leadership and student achievement in high-poverty schools. As a participant in the study, you will be asked to complete a 17 question survey on your perspective of teacher leadership in your school. It is anticipated that the study will require about 15 minutes of your time. Participation in this study is voluntary. You have the right to withdraw from the research study at any time without penalty. You also have the right to refuse to answer any question(s) for any reason without penalty. The information that you give in the study will be handled confidentially. Your data will be anonymous which means that your name will not be collected or linked to the data. There are no anticipated risks in this study. You will receive no payment for participating in the study. You have the right to withdraw from the study at any time without penalty by exiting the survey. Data from this study will be used or distributed for future research studies.

If you have questions about the study, contact:

[REDACTED]

[REDACTED]

[REDACTED]

Clicking the link below to continue on to the survey indicates your consent to participate in the study:

[REDACTED]

If you are not 18 years of age or older or you do not consent to participate, please close this window.

Appendix D
TLI Instrument

Teacher Leadership Inventory

Teachers often take on leadership responsibilities in schools. Sometimes teachers are appointed to fulfill these responsibilities by the principal. Other times, teachers naturally take on leadership responsibilities because of their interest or expertise. Understanding teacher leadership, whether appointed or natural, is important to understanding how schools function effectively. The items which follow ask your opinion about various aspects of teacher leadership. There are no wrong answers so feel free to respond to each statement candidly. Your responses will be completely anonymous. No one who completes this survey will be identified. Thank you for your cooperation.

I wish to participate in this study.

☐ Yes ☐ No

For each statement below, indicate how often this occurs in your school. Mark only one response per item.

	Routinely	Sometimes	Seldom	Never
Item 1: Teachers ask one another for assistance when we have a problem with student behavior in the classroom.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Other teachers willingly offer me assistance if I have questions about how to teach a new topic or skill.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Teachers here share new ideas for teaching with other teachers such as through grade level/department meetings, schoolwide meetings, professional development, etc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Teachers discuss ways to improve student learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Teachers are involved in making decisions about activities such as professional development, cross curricular projects, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Routinely	Sometimes	Seldom	Never
Item 6: Teachers are actively involved in finding ways to improve the school as a whole	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 7: As a faculty, we stay current on education research in our grade level/subject area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 8: Teachers willingly stay after school to work on school improvement activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 9: Teachers willingly stay after school to help other teachers who need assistance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 10: Teachers willingly stay after school to assist administrators who need volunteer help.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 11: Administrators object when teachers take on leadership responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 12: The principal responds to the concerns and ideas of teachers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 13: Teachers plan the content of professional learning activities at my school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 14: Teachers have opportunities to influence important decisions even if they do not hold an official leadership position.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Routinely	Sometimes	Seldom	Never
Item 15: The principal consults the same small group of teachers for input on decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 16: Time is provided for teachers to collaborate about matters relevant to teaching and learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item 17: Most teachers in leadership positions only serve because they have been principal appointed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How many total years of experience in teaching do you have?

How many years have you taught at your present school?

If you are an administrator, how many years have you been in administration at your present school? If you are a teacher, please proceed to the next question.

Highest degree earned.

☐BA/BS ☐Masters ☐Masters +30 ☐Masters +45

☐Specialist ☐PhD/EdD ☐ Other

Are you certified to teach in your present assignment?

☐ Yes ☐ No

Gender

☐female ☐ male

Race/Ethnicity

☐Caucasian ☐African-American ☐Hispanic/Latino

☐Asian ☐Mixed ☐ Other

Do you hold a leadership position at your school?

☐yes ☐ no

What teacher leadership position do you hold?

Additional comments (optional):

Appendix E
TLI Permissions

Chaundra Snuggs
Graduate Student
Gardner-Webb University

December 3, 2019

Dear Chaundra,

With this letter, I grant permission to use the quantitative instrument, the Teacher Leader Inventory, for your research study. You have my permission to disseminate the instrument either through an online or hard copy format. You do not have permission to modify the instrument without additional permission.

This permission is granted with the following terms:

- The instrument will be used for research purposes only, barring any monetary profiting from the instrument.
- Author citation is included on all copies.
- Links to subsequent manuscripts generated from the study will be forwarded to me.
- A summary of research results is forwarded to me upon completion of the study.

Best wishes for your research and I look forward to seeing the results.



Professor and Director of Graduate Studies
Department of Educational Leadership and Policy Studies