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Supports for Teacher Leadership: Teachers' Perceptions in American-Sponsored Overseas Schools in Africa

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Supports for Teacher Leadership: Teachers' Perceptions in American-Sponsored Overseas Schools in Africa

by

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Dedication

Most importantly, this dissertation is dedicated to my wife, Imelda, and my children, Mateo and Amalia. I would not have made it through this journey without your love, patience and support. I love you more than I can adequately express in words.

Table of Contents

List of Tables

List of Figures

Abstract

A competitive international school market is influential to the increased pressure on American-sponsored overseas schools to recruit and retain high-quality teachers. Teachers who feel they have more input into school decisions are more likely to desire employment at such schools, or once at the school, are more likely to stay for a longer period (Ingersoll, 2001; Mancuso, 2010). Purposefully developing teacher leadership in international schools may be a way to recruit and retain the best teachers (Weston, 2014), who positively influence school effectiveness and student learning results. With this study, I aimed to support American-sponsored overseas schools with recruiting and retaining the most effective teachers to fulfill their missions and contribute to the research base on variables that support teacher leadership to enhance school effectiveness within the unique context of American-sponsored overseas schools. With a multistage census sampling methodology, I investigated the type of leadership and intensity of leadership activities teachers perform and explored the extent school level variables teachers perceived to support the enactment of teacher leadership. The findings included (a) the large majority of teachers reported a high level and intensity of teacher leadership activities; (b) teachers desired more leadership responsibility; (c) teachers generally agreed that their schools provided the necessary supports for teacher leadership; (d) significant correlations were evident between teacher leadership levels and the school supports in the areas of organizational structure collaborative leadership, professional development, school culture in which teachers support each other, and school culture of trust; (e) no significant correlations existed between levels of teacher leadership and organizational structure autonomy, time, recognition, or role clarity; and (f) teachers who reported their schools to have a school culture, in which teachers support one another, also reported a greater number of leadership activities. No other school support

variables had a significant correlation with leadership intensity. Teacher leaders feel supported, and they thrive in schools where leaders develop trusting relationships, promote an environment in which teachers support one another, establish collaborative leadership structures, and provide meaningful professional development opportunities. Teacher leadership has potentially positive implications for teacher retention and student learning.

Keywords: American-sponsored overseas schools, international schools, support, teacher leaders, teacher leadership

CHAPTER I

Introduction and Literature Review

In this quantitative study, I investigated the extent teachers in American-sponsored overseas schools in Africa perceive that their schools support the development of teacher leadership. Additionally, in this study, I explored the extent teachers' perceptions of school level supports (organizational structure, professional development, time, recognition, role clarity, and school culture) are correlated with the enactment of teacher–leadership phases in American-sponsored overseas schools in Africa. For this study, teacher leadership was operationalized into five phases on a continuum: (a) Phase 0 (zero), absence of teacher leadership; (b) Phase 1, formal leadership roles focused on administrative efficiency; (c) Phase 2, instructional leadership roles separate from classroom teaching; (d) Phase 3, collective teacher leadership; and (e) Phase 4, teacherpreneurship (Berry, 2013; Sides, 2010; Silva, Gimbert, & Nolan, 2000).

A Call for Teacher Leadership as Part of School Reform Efforts

Katzenmeyer and Moller (2009) defined teacher leadership as "…teacher leaders lead within and beyond the classroom; identify with and contribute to a community of teacher learners and leaders; influence others towards improved educational practice; and accept responsibility for achieving the outcomes of their leadership" (p. 6). The modern conceptualization of teacher leadership in the United States began to rise from the school reform efforts of the 1980s (York-Barr & Duke, 2004). Since the publication of *A Nation at Risk* in 1983, school reformers made new calls for developing teacher leadership as a key component for school improvement (Barth, 2001; Carnegie Task Force on Teaching as a Profession, 1986). Supporters of teacher leadership claim many possible benefits. Additionally, many teachers in the United States desire more decision-making participation (Conley, 1991) and leadership

responsibilities within the scope of their roles as classroom teachers, yet they do not want to become principals (Markow & Pieters, 2012).

The role of the principal in teacher leadership reform efforts. During the last two decades, the role of the principal position has increased exponentially in terms of accountability and complexity (Fullan, 2014). Elmore (2000) suggested that the expectations for principals are near impossible to reach, requiring principals to contain an exhaustive list of characteristics and skills to "… remedy all the defects of the schools in which they work" (p. 14). Historically, principals have worked in indirect managerial support roles, often resulting in conflicting roles or misunderstandings between teachers and principals (Moller & Pankake, 2013). Given that teachers and principals are first and second in terms of impact on student achievement (Leithwood, Seashore Louis, Anderson, & Wahlstrom, K., 2004; Seashore, Leithwood, Wahlstrom, & Anderson, 2010), they should work more collaboratively on instructional matters and leadership responsibilities (Moller & Pankake, 2013). In these rapidly changing and dynamic times, successful principals effectively develop teachers' professional capital (Fullan, 2014) and leadership capacity (Lambert, 2003).

Benefits of teacher leadership. Murphy (2005) described the embedded logic behind teacher leadership. Through his review of the literature, he categorized the hypothesized benefits of teacher leadership into three categories: professionalization; school health; and classroom improvement and school improvement.

Professionalization. Several educational researchers have supported the concept of teacher leadership as a way to professionalize the work of teaching (Barth, 2001; Carnegie Task Force on Teaching as a Profession, 1986; Danielson, 2006; Smylie, 1995). When teachers feel as though they are treated as professionals, that is, when they have more influence and autonomy

(Barth, 2001; Stone, Horejs, & Lomas, 1997), they have higher job satisfaction (Katzenmeyer & Moller, 2009; Ovando, 1996; Ruscoe & Whitford, 1991), demonstrate more commitment to the organization's success (Pounder, Ogawa, & Adams, 1995), and translate that commitment into a greater collective efficacy (Angelle & Teague, 2014; Marks & Louis, 1997). Additionally, teacher leadership has the added benefit of recognizing individual teachers as professionals, incentivizing and rewarding them for their leadership, and fostering a sense of teaching as a professional, long-term career (Berry, Byrd, & Wieder, 2013; Hart, 1994; Lieberman & Miller, 2004; Porter, 1986).

School health. The development of teacher leadership contributes to greater school health through the formation of professional learning communities (Danielson, 2006). Healthy schools become learning organizations, dedicated to everyone becoming better through increased collegiality, professional learning, and internal accountability (Hart, 1994; Ruscoe & Whitford, 1991). These communities of practice foster higher staff morale, shared responsibility for the students' successes, and a greater dedication to the school's mission (DuFour, DuFour, & Eaker, 2008; Hord & Sommers, 2008).

Classroom and school improvement. Classrooms and schools improve when teachers respect other teachers and they believe that working collaboratively with their colleagues contributes to their own success as teachers, ultimately improving their students' achievement (Markow & Pieters, 2010). Teacher leadership enhances overall teacher quality by sharing best teaching practices. This focus on continuous development combined with shared decision-making increases the likelihood that teachers will try new innovative teaching methods, ultimately leading to the wider implementation of more effective teaching practices and

sustaining school improvement initiatives (Harris & Muijs, 2005; Smylie, Conley, & Marks, 2002; Smylie, Lazarus, & Brownlee-Conyers, 1996).

Katzenmeyer and Moller (2009) followed Murphy's line of thinking in proposing that the rationale behind the concept of teacher leadership is to build (organizational capacity, model democratic communities, empower teachers) and enhance teacher professionalism. They acknowledge research is insufficient in terms of large-scale quantitative studies to substantiate a relationship between teacher leadership and student learning. However, they go on to state the following benefits exist: development of professional efficacy, retention of excellent teachers, overcoming resistance to change, career enhancement, improvement of individual teachers, development of teacher leaders, increasing teacher leaders' influence on other teachers, accountability for results, and sustainability of school reform efforts.

American-Sponsored Overseas Schools

Worldwide, the U.S. Department of State supports 193 American-sponsored overseas schools in 134 countries. Enrolled in these schools are 137,413 students: U.S. citizens (36,586); host-country citizens (39,984); and third-country citizens (60,843). The majority of administrators are Americans or U.S. trained; teachers typically come from the United States or the host country, with most possessing either U.S. or host-country teaching certification. The U.S. government supports these schools so that children of U.S. government employees can attend high-quality schools while stationed on foreign assignments, which are opportunities to enhance intercultural appreciation between the United States and other countries (U.S. Department of State, 2016).

One of the common variables of American-sponsored overseas schools is that all of the 193 schools receive some support and financial assistance from the U.S. Department of State.

The financial assistance is a minimal part of these schools' overall budgets, as tuition and other fees paid for by the parents or employers of parents are the predominant sources of income. However, the U.S. Department of State often offers these schools other support such as professional development grants in the United States, curriculum support, and security grants or consulting. The majority of these schools are nonprofit, independent schools set up under cooperative trusts with self-governing boards. Nonetheless, a few may be private, proprietary institutions depending on their host-country laws. The governance structure in many of these schools includes an appointed board representative from the local U.S. embassy. Many of these schools utilize an American-based curriculum with English as the primary language of instruction. The students generally come from families of a high socioeconomic status, and their families aspire for them to attend university. Therefore, most of these schools are college preparatory. According to the U.S. Department of State,

> The mission of the Office of Overseas Schools is to promote quality educational opportunities at the elementary and secondary level for dependents of American citizens carrying out our programs and interests of the U.S. Government abroad.
>
> Our efforts are to increase mutual understanding between the people of the United States and the people of other countries by upgrading educational institutions which serve to demonstrate American educational principles and methods employed in the United States. (U.S. Department of State, 2014)

American-sponsored overseas schools in Africa. The population for this study included teachers from 39 of the 40 American-sponsored overseas schools on the continent of Africa. The group of 40 schools is located in 35 countries, with enrolled 16,370 students (3,608 U.S. citizens; 3,957 host-country citizens; and 8,805 third-country citizens) and employed 2,225

professional staff (866 U.S. citizens, 512 host-country citizens, and 847 third-country citizens; U.S. Department of State, 2016).

American-sponsored overseas schools essentially operate as private, independent schools abroad. The schools are well resourced, and the administrators and teachers align much of their educational practices to the best educational research, particularly from the United States. International teachers, open to working in Africa, must be flexible, adaptable, and entrepreneurial. Opportunities for teacher leadership may be appealing for these teachers during the recruitment process and for retaining the best teachers within these schools. American-sponsored overseas schools must know how to successfully offer and develop teacher leadership opportunities within the context of their international settings, if they want to align with the best U.S. educational research and vie for the recruitment and retention of the best teachers in an increasingly competitive international school market.

Democratization of Schools Within the United States

Although the Carnegie Task Force on Teaching as a Profession (1986) and Gardner (1983) emphasized teacher leadership in the 1980s school reform efforts, the concept of teacher leadership has existed for many more years. John Dewey, one of the most renowned American educational philosophers and writers, called for the democratization of schools since the turn of the 20th century (Danielson, 2006). Dewey (1903) aspired for teachers to have regular representation to influence educational decisions and outcomes in schools. He believed in evaluating new movements in education within the context of societal needs (Dewey, 1915).

American-Sponsored Overseas Schools and the U.S. Government Support of Democracies

Perhaps one of the most important characteristics of the United States is its foundation based on democratic principles, the ability for all stakeholders to have some influence over the

decision-making process that governs their livelihood at a national and local level. Throughout its history and even in more recent years, the U.S. government has thrown its support behind the globalization of democracy. The most recent U.S. presidents, President George W. Bush and President Barack Obama, despite coming from opposing political perspectives, have championed the global expansion of democracy (Omestad, 2011; Bush, n.d.). Given the wider U.S. foreign policy on supporting democracy across the globe and the mission of the U.S. State Department in sponsoring American schools abroad, American-sponsored overseas schools have the responsibility to model democratic principles. Developing the capacity of teachers to take on leadership and to influence policy, decisions, and educational outcomes in their schools supports this wider U.S. foreign policy objective. These schools, particularly in Africa, educate the children of influential business and political leaders from the African region and the host country of each school. Modeling democratic principles for these students may have positive future outcomes in terms of developing a more democratic perspective within these African countries, as many of these students will grow up to become influential adult community leaders themselves.

Teacher Retention and Teacher Leadership

Several studies exist in the United States on school level variables influencing teacher retention. One of these variables is particularly relevant to this study on supporting the development of teacher leadership in American-sponsored overseas schools. Ingersoll (2001) identified job satisfaction, resulting from the perceived effectiveness of school leaders and teacher influence in the decision-making process, as significant indicator of teachers' desire to continue working at their schools. Pounder and colleagues (1995) found that the presence of stronger teacher leadership correlated with less teacher turnover.

American-style international schools. In a study conducted on American-style international schools in the Near East South Asia Council of Overseas Schools (NESA), Mancuso, Roberts, and White (2010) also discovered that teachers were less likely to move schools if they perceived their school head to be more effective and if they perceived that teachers had significant input into school decisions. However, retaining the best teachers is even more important than retaining teachers in general. Weston (2014) conducted a follow-up study that expanded on Mancuso and his colleagues' findings. He found a significant relationship between the retention of the top 10% of NESA teachers (as reported by their principals) and these teachers' perceptions of their school heads as transformational leaders. Transformational leaders inspire and motivate teachers through their collaborative leadership style and shared vision building. By their definition, transformational school heads share leadership and decision-making influence.

The opportunity for teachers to have input into school decisions is an important factor in developing teacher leadership in schools. American-sponsored overseas schools devote a substantial amount of financial resources, human capital, and organizational time to the recruitment, induction, and continuous development of teachers. Schools should leverage limited time and resources on the most effective strategies to retain outstanding teachers and develop teacher leadership.

Sustainable Change Initiatives

Whether discussing American-sponsored overseas schools or U.S. public schools, many examples of change efforts failed or were not sustained over time. Fullan (2008) suggested that organizations and their leaders must hire the best people, build capacity through continuous professional development efforts, allow employees to work collaboratively to solve problems,

and build a culture "… in which leadership manifests itself at all levels of the organization" (p. 109). Developing teacher leaders in schools helps to build organizational continuity, thereby addressing many of these goals. This measure is important in international schools where the turnover rate of administrators and teachers is similar to U.S.-based schools (Mancuso, 2010). Thus, one of my objectives in this study is to assist leaders in American-sponsored overseas schools in achieving their overall missions and change efforts by identifying the most critical supporting variables in the development of teacher leadership within the unique context of an American-sponsored overseas school.

Problem Statement

American-sponsored overseas schools experience several challenges. Teacher turnover, in particular, can be the cause of difficulty in sustaining change initiatives, developing professional efficacy, convincing teachers of the need for change initiatives, and holding teachers accountable for long-term student achievement results. A greater focus on developing teacher leadership may be helpful in improving teacher recruitment, teacher retention, professional efficacy, attitudes for embracing change, teacher performance, accountability for student achievement results, and a greater sustainability of reform efforts. Theoretically, all of these efforts can be accomplished when power and decision-making are extended throughout the organization.

Purpose Statement

The present literature on teacher leadership has limitations, primarily due to the lack of empirical evidence and systematic research (Reeves, 2008; Smylie, 1995). Critics argue that most studies on teacher leadership are atheoretical, descriptive, and qualitative, relying on convenience samples from a small number of study participants (Holland, Eckert, & Allen, 2014;

Murphy, 2005; Smylie, 2008; York-Barr & Duke, 2004). Additionally, wide agreement on the definition of teacher leadership is lacking due to the relative newness of the concept. Therefore, more quantitative and qualitative studies are called for to define teacher leadership, explain how teacher leadership is developed, and ideally delineate the ultimate effects of teacher leadership (Katzenmeyer & Moller, 2009; Murphy, 2005; Williams, Lakin, & Kensler, 2015); further research on teacher leadership holds several promises for increased and enhanced professionalization, school health, and classroom–school improvement (Murphy, 2005).

Furthermore, research specific to the field of teacher leadership in the context of American-sponsored overseas schools is almost nonexistent, only containing one qualitative study to date. The results of this study, in one American-sponsored overseas school, gave some interesting insights into the challenges and opportunities related to developing teacher leadership through the training of teacher leaders enrolled in an on-campus Teacher Leadership Institute (Pruitt, 2008). However, no study is a replicate of any of the findings regarding variables that support the development of teacher leadership in a wider population of American-sponsored overseas schools. A competitive international school market has been influential to the increased pressure on school heads to recruit and retain high-quality teachers. Teachers, who feel they have more input into school decisions, are more likely to desire employment at such schools, or once at the school, are more likely to stay for a longer period (Mancuso, 2010; Mancuso et al., 2010; Weston, 2014). Purposefully developing teacher leadership in international schools may be a way to recruit and retain the best teachers. With this study, I aimed to support American-sponsored overseas schools with recruiting and retaining the most effective teachers to fulfill their missions, and add to the research base on variables that support teacher leadership to enhance school effectiveness within the unique context of American-sponsored overseas schools.

Research Questions

1. In American-sponsored overseas schools in Africa, what percentage of teachers report leadership at Levels 0, 1, 2, 3, and 4?
2. What is the average number of leadership activities reported by American-sponsored overseas school teachers in Africa?
3. To what extent do American-sponsored overseas school teachers in Africa desire to take on more teacher leadership activities?
4. In American-sponsored overseas schools in Africa, to what extent do teachers perceive the following supports to be in place for the development of teacher leadership?
    - organizational structure
    - professional development
    - time
    - recognition
    - role clarity
    - school culture
5. In American-sponsored overseas schools in Africa, what is the relationship between the perceived presence of supports and teachers' reported practice of Phases 0, 1, 2, 3, and 4 of teacher leadership? The supports I measured and analyzed in the study are as follows:
    - organizational structure
    - professional development
    - time
    - recognition
    - role clarity

- school culture

6. In American-sponsored overseas schools in Africa, what is the relationship between the perceived presence of supports and teachers' reported number of teacher leadership activities? The supports I measured and analyzed in the study are as follows:
    - organizational structure
    - professional development
    - time
    - recognition
    - role clarity
    - school culture

Definition of Terms

Teacher leadership – Katzenmeyer and Moller (2009) define teacher leadership as "… teacher leaders lead within and beyond the classroom; identify with and contribute to a community of teacher learners and leaders; influence others towards improved educational practice; and accept responsibility for achieving the outcomes of their leadership" (p. 6). Teacher leadership, for this study, has five phases of teacher leadership. The Conceptual Framework includes the details of these phases.

Organizational structure – Supportive organizational structures are nonhierarchal, organic networks (Muijs & Harris, 2006; Reeves, 2008) that are more democratic in nature (Smylie, 1992b) with more opportunities for shared decision-making (Danielson, 2006; Ryan, 1999), collaborative problem-solving (Beachum & Dentith, 2004), and accountability (Wasley, 1991).

Professional development – The goal of this type of training is to develop specific teacher leadership skills either in formal or informal capacities.

Time – Two aspects of time relate to teacher leadership: (a) scheduled time to perform additional teacher leadership responsibilities not normally associated with classroom teaching duties (Fay, 1992; Ovando, 1996), and (b) time for teacher collaboration (Danielson, 2006).

Role clarity – This term refers to the extent to which teachers understand what administrators and other teacher colleagues expect of them as a leader (Hart, 1990; Murphy, 2005; Smylie, 1992a; Smylie & Denny, 1990).

School culture – This type of culture supportive of the development of teacher leadership has respectful, collaborative, and collegial relationships. In school cultures conducive to developing teacher leadership, teachers believe in the capability of their fellow teachers to be leaders, and expressions of leadership among colleagues are not perceived as threatening.

American-sponsored overseas schools – Worldwide, the U.S. Department of State supports 193 American-sponsored overseas schools in 134 countries. These schools have 137,413 student enrollments, which include U.S. citizens (36,586), host-country citizens (39,984), and third-country citizens (60,843). The majority of administrators are American or U.S. trained, and the teachers typically come from the United States or the host country, with most possessing either U.S. or host-country teaching certification. The U.S. government supports these schools so that children of U.S. government employees can attend high-quality schools while stationed on foreign assignments, consequently enhancing intercultural appreciation between the U.S. and other countries (U.S. Department of State, 2016).

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Limitations

The findings of this study may have the following limitations. First, a questionnaire as an instrument has common limitations related to the volunteer nature of participation and due to self-reporting of the respondents. In general, survey methodologies rely on people who are willing to volunteer and follow through on answering a survey. Relying on volunteers can lead to overenthusiastic responses on surveys, or can inadvertently encourage respondents to reply based on what they think the researcher seeks as a correct answer (Isaac & Michael, 1997). This study relied on volunteers (i.e., school heads) who were willing to participate, and within each school, specific teachers who were willing to participate. It is possible that the teachers that responded to the survey reported high levels of leadership to look good in the results. Also, school heads could have possibly restricted whom they sent the questionnaire too, or if they knew they do not foster teacher leadership, they may have chosen not to send out the questionnaire to their teachers in the first place. Additionally, it is possible that a survey on teacher leadership interested teachers who already exhibit more teacher leadership as opposed to teachers who are less interested in teacher leadership, resulting in an unusually high report of leadership from teachers.

Second, the return rates could have limited the generalizability or external validity of the findings. A true random sample would have been the most ideal. However, due to the small number of total schools in the target population, the goal was to achieve 100% participation on the school level. Although I did not reach this goal, I present a strong case in Chapter 3 that the study was representative of the target population.

Lastly, one of the statistical methods employed, MANOVA as a correlational model and not as a predictive model, does not allow for any directional prediction from one variable to the other. Therefore, some of the findings only show that some type of relationship exists between the presence of phases of teacher leadership and certain school level supports being in place. Further studies need to examine these variables again to try to determine any directional correlation and the possibility of causality amongst the variables.

Conceptual Framework

Evolution of Teacher Leadership

Katzenmeyer and Moller (2009) defined teacher leadership as "… teacher leaders lead within and beyond the classroom; identify with and contribute to a community of teacher learners and leaders; influence others towards improved educational practice; and accept responsibility for achieving the outcomes of their leadership" (p. 6). Much of the recent literature base on teacher leadership indicates its evolution into several "waves" of teacher leadership that have coincided with some contemporary educational reform movements in the United States (Berry, 2013; Holland et al., 2014; Silva et al., 2000). Nevertheless, the same researchers, who subscribe to this construct of waves of teacher leadership to explain the evolution of teacher leadership, caution that the chronology of educational reforms does not necessarily imply causation (Holland et al., 2014, p. 433; Sanocki, 2013). However, overlaying

the major educational reforms with common examples of teacher leadership during the same period can be useful in hypothesizing a conceptual framework to define and operationalize teacher leadership. Silva and colleagues (2000) were the first to conceptualize three waves of teacher leadership. The first wave indicates a focus on managerial tasks of teacher leaders outside of the classroom, formalized through leadership roles such as department heads, grade-level team leaders, or committee chairpersons. In the second wave of teacher leadership, teachers take on instructional leadership roles either on a full-time basis or while maintaining part-time classroom teaching duties. The third wave of teacher leadership refers to teachers who demonstrate leadership regularly and informally through job-embedded learning opportunities such as professional learning communities. Expanding on Silva and her colleagues' conceptualization of waves of teacher leadership, Sides (2010) referred to the same three waves as phases, but she also defined an additional *phase zero* (Phase 0) that preceded the others, adding to the literature base on a time or context where teacher leadership is absent. More recently, some authors have begun to postulate a fourth wave or phase of teacher leadership, such that teachers transform educational practices and improvements beyond the school, where the teachers work, yet they still have support and time to teach in the classroom (Berry, 2013; Holland et al., 2014). Building on the aforementioned conceptualizations, this study includes five phases of teacher leadership: (a) Phase 0 teacher leadership, (b) Phase 1 teacher leadership, (c) Phase 2 teacher leadership, (d) Phase 3 teacher leadership, and (e) Phase 4 teacher leadership. These phases are described next.

Phase 0: The absence of teacher leadership. Phase 0 teacher leadership shows the absence of teacher leadership. Historically, the hierarchical norms of traditional organizations are prevalent in schools, meaning a top-down leadership approach is common. In this traditional

view, principals manage and lead the school, and teachers are limited to teaching in their classrooms. Isolated from one another, teachers perform technical work managed and supervised by the principal (Lieberman & Miller, 2004).

Another body of literature indicates an unfavorable realization that society and governmental institutions do not recognize teachers as professionals. Wasley (1991) summarized the literature on professionalism as follows:

> Definitions of 'professional' practice commonly agree that professionals develop a specialized knowledge base from which appropriate decisions can be made on behalf of clients; that professionals have the ability to apply that knowledge in individual, non-routine circumstances; and that they have a strong ethical commitment to do what is best for the client. (p. 16)

However, teaching has traditionally been a flat profession (Lieberman & Miller, 2004; Sides, 2010; Wasley, 1991) in which novice and veteran teachers have performed the same duties regardless of the number of years of experience and training. Educational reform movements leading up to the early 1980s encouraged adherence to rules and standardization of practice (Smylie & Denny, 1990). In this environment, teachers do not have the professional autonomy to make decisions regarding what is best for their students, let alone be considered leaders (Wasley, 1991). Therefore, the traditional hierarchical organization of schools has impeded the professionalization of teaching (Danielson, 2006).

Phase 1: Formal leadership roles focused on administrative efficiency. The National Committee on Excellence in Education published *A Nation at Risk* in 1983, a policy report that derided the failing public education system in the United States (Gardner, 1983). In the report, Gardner (1983) cited lower educational standards and poor achievement on international

standardized tests in comparison to other countries (Holland et al., 2014). As a result, policymakers called for more accountability through implementation of a standards-based curriculum, more standardized testing (Smith & O'Day, 1991), professional development, and increased attention towards performance-based pay schemes for teachers (Berry & Ginsburg, 1990).

With the increased focus on accountability, teacher leadership emerged as one way to distribute responsibility for all the proposed reforms. The first phase of teacher leadership manifested in the role of formal teacher leader positions that performed noninstructional administrative and managerial tasks outside of the classroom in addition to regular teaching responsibilities. These included positions such as department heads, committee chairs, or union representatives. These leadership positions were often essential for the school to be efficient in its daily operational tasks (Katzenmeyer & Moller, 2009). Unfortunately, these roles frequently contributed more layers to a top-down bureaucracy (Pounder, 2006), counter intuitively limiting teachers' autonomy and control over important decisions. Oftentimes, this system was a result of administrators offloading their administrative tasks onto these teachers under the false pretense of teacher leadership (Berry et al., 2013). Additionally, by delegating these bureaucratic tasks to teacher leaders, policymakers and central district offices actually restrained any form of true leadership, autonomy, or creative enterprise (Frymier, 1987; Wise, 1989). Instead, the positions created as part of this wave of reforms focused on improving teaching and learning through standardization of practice and externally mandated reforms (Smylie & Denny, 1990; Frymier, 1987).

In the early 1990s, shared decision-making or site-based governance emerged as another outlet for teacher leadership. In this case, teacher representatives had some input into school-

wide decisions such as textbook selection, teacher evaluation, and staff development programs (Katzenmeyer & Moller, 2009). Although some of these decisions indirectly touched on instructional matters, most of these governance structures focused mainly on the managerial aspects of the day-to-day workings of the school outside of the classroom setting. Teachers prefer to be involved in decisions directly related to instructional matters. However, they are more reluctant to involve themselves in administrative matters and personnel decisions. Nonetheless, teachers' willingness to take part in site-based decision-making ultimately comes down to how positively teachers feel about their relationship with the principal (Smylie, 1992b), again demonstrating the limitations of teacher leadership within the traditional hierarchal organization of schools.

Phase 2: Instructional leadership roles separate from classroom teaching. The standards-based reform movement of the mid-1990s and early 2000s coincided with the development of Phase 2 teacher leadership roles. In particular, the legislation passed in 2001, known as No Child Left Behind (NCLB), increased accountability and demands on schools (Holland et al., 2014). As the pressure increased for schools to improve student achievement, particularly as assessed by standardized assessments, educational reformers sought to meet these increased demands by distributing responsibility for reforms through instructional leaders (Katzenmeyer & Moller, 2009). Phase 2 teacher leadership attempted to leverage teachers' expertise by tapping effective teachers for instructional leadership roles such as instructional coach, staff development leader, or team leader (Silva et al., 2000).

Phase 2 leadership indicates a range and combination of roles including full-time teaching in the classroom with additional instructional leadership duties, part-time teaching in the classroom with some release time to perform instructional leadership duties, or full-time

instructional leadership duties without classroom teaching responsibilities. Nevertheless, these instructional roles remained intertwined with the hierarchal leadership culture of schools (Silva et al., 2000). This bureaucratic school culture was problematic as the job descriptions of these instructional leadership roles were distinctly separate from the job descriptions of the standard classroom teacher, thus lacking true integration of the teaching and leadership functions (Pounder, 2006). Teacher leaders in these roles were still viewed as middle managers by their colleagues (Katzenmeyer & Moller, 2009); however, in reality, they did not have supervisory authority (Smylie et al., 2002). Rather than promote true leadership, autonomy, and professional support, district and school leaders "remote controlled" teachers by sending instructional leaders into classrooms to oversee the implementation of district-mandated curricular and instructional strategies (Darling-Hammond, 1998). As such, Phase 2 teacher leadership still did not promote the true professionalization of teaching.

Phase 3: Collective teacher leadership. When the U.S. Department of Education instituted the competitive federal grant program, Race to the Top, the concept of professional learning communities gained in popularity. Subsequently, the Common Core State Standards movement demanded even more of students than what was expected of past generations of American students. As the level of accountability and complexity of measuring student achievement continued to increase, schools needed to find new ways to distribute leadership inside and outside of the classroom (Holland et al., 2014, p. 435–436).

Phase 3 teacher leaders successfully navigate the structures of schools; foster collaborative and collegial relationships; participate in continuous professional development; support colleagues with adapting to change; and challenge the status quo in the best interests of their students (Silva et al., 2000, p. 800). The conceptualization of Phase 3 teacher leadership

was the beginning of addressing the calls for the professionalization of teaching (Pounder, 2006). Focused on collective versus individual empowerment (Angelle & Teague, 2014; Smylie et al., 2002), rather than emphasizing formal leadership roles, teachers lead and learn as a group. From this perspective, teacher leadership is the "… exercise of leadership by teachers regardless of position or designation" (Frost & Harris, 2003, p. 482). Through a process of reculturing the school (Beachum & Dentith, 2004; Silva et al., 2000), Phase 3 teacher leadership structures became an encouragement for teachers to collaborate to solve problems, or to improve instructional practice through improvement protocols such as communities of practice, professional learning communities, or action research (Murphy, 2005; Reeves, 2008; Silva et al., 2000).

Sometimes, embedded instructional leadership positions can be useful in enhancing collective teacher leadership structures. Organizational learning structures, such as communities of practice with purposefully selected teacher leadership positions (i.e., instructional coaches) distributed throughout the organization, provide an ideal blend of structure and autonomy that can be helpful for enhancing student achievement (Mangin, 2008). Teacher leader roles associated with communities of practice involve teachers remaining in classroom teacher roles on either a full- or part-time basis. They work inside and outside of the classroom with colleagues to analyze student work with the goal of enhancing instructional practices, thereby ultimately improving student achievement results (Katzenmeyer & Moller, 2009). Unfortunately, administrators, principals, and the traditional hierarchy of schools often constrain the promise that professional learning communities offer. As a result, teachers may not know what an effective professional learning community looks like (Berry et al., 2013).

Phase 4: Teacherpreneurs. Phases 1, 2, and 3 of teacher leadership all emerged as a response to increased demands placed on schools as a result of mandated educational reforms or legislation. Rather than reacting to government policies and reform agendas, some are now calling for a new type of proactive teacher leadership in which teacher leaders are an integral part of developing policy, laws, and innovations influential to the teaching profession (Berry et al., 2013; Eckert, Ulmer, Khachatryan, & Ledesma, 2014; Holland et al., 2014). Subsequently, Phase 4 teacher leaders are classroom experts and transformational leaders (Pounder, 2006) "…who teach regularly but have time, space and reward to spread their ideas and practices to colleagues, administrators, policy-makers, parents and community leaders" (Berry, 2013, p. 310). Examples of Phase 4 teacher leaders are online coaches, educational software game developers, community organizers, or policy analysts. Phase 4 teacher leaders fulfill these entrepreneurial roles while maintaining part-time teaching duties (Berry et al., 2013).

A teacher could exhibit two or more phases of teacher leadership or demonstrate a higher phase of leadership without fulfilling a lower phase of leadership. For this study, I classified teachers at the highest phase that they have achieved.

Table 1 shows the summary of the reviewed conceptualizations of teacher leadership as they have evolved over time.

Table 1

Evolution of Modern Conceptualization of Teacher Leadership

Continuum: phases of teacher leadership	Period	Types of teacher leadership roles	Functions of teacher leadership
Phase 0	Pre-1980s	Few leadership opportunities outside classroom; teacher isolation	Teachers lead students in classrooms only; teachers not treated as professionals (Lieberman & Miller, 2004; Wasley, 1991)
Phase 1	1980s	Department chairperson; team leader	Subject matter; grade-level expertise (Katzenmeyer & Moller, 2009; Smylie & Denny, 1990)
	Early to Mid 1990s	Governance leadership	Whole school reform; shared decision-making (Smylie, 1992b)
Phase 2	Mid 1990s	Instructional leaders; team leader; curriculum developer; staff developer	Standards-based reform; outside of classroom roles; coaching; mentoring; curriculum writing; remote controlling of teachers (Darling-Hammond, 1998)
Phase 3	Mid to Late 1990s	Collective teacher leadership; teacher leadership as a concept rather than position	Standards-based reform continues; professional learning communities; teaching and leading (DuFour et al., 2008; Frost & Harris, 2003; Hord & Sommers, 2008; Pounder, 2006; Silva et al., 2000)
	2000s	School-based instructional leadership as support for collective teacher leadership	Address press of accountability; aid implementation of communities of practice (Danielson, 2006; Katzenmeyer & Moller, 2009)
Phase 4	2010s	Teacherpreneurs; educational authors, educational software developers, community organizers, etc.	Address complexities of Common Core U.S. standards movement; teachers remain in classroom but have release time to influence profession outside of school (Berry, 2013; Berry et al., 2013; Eckert et al., 2014)

Table adapted from Holland et al. (2014, p. 434), Katzenmeyer & Moller (2009, p. 120), Sides (2010), and Silva et al. (2000).

Empirical Review

School Level Supports for the Development of Teacher Leadership

The literature review indicates several common variables regularly used for school level supports of teacher leadership. For this study, the six school level supports for teacher leadership are organizational structure, professional development, time, recognition, role clarity, and school culture. Nevertheless, most of the literature available is qualitative and descriptive in nature. Of the few quantitative studies already conducted on teacher leadership, most are correlational studies, with quasi-experimental and experimental studies essentially nonexistent on the subject of teacher leadership. Although these studies serve as a useful starting point in exploring the concept of teacher leadership, more quantitative studies could be useful for generalizing some of the current findings to larger populations of teachers.

Organizational structure. The structure of an organization can be either a barrier or a support to the development of teacher leadership. Organizational structures that can hinder teacher leadership are those that are hierarchical in nature, and that rely on authority and bureaucracy (Lambert, 2003; Lieberman & Miller, 2004; Reeves, 2008). Supportive organizational structures are nonhierarchal, organic networks (Muijs & Harris, 2006; Reeves, 2008) that are more democratic in nature (Smylie, 1992b) with more opportunities for shared decision-making (Danielson, 2006; Ryan, 1999), collaborative problem-solving (Beachum & Dentith, 2004), and accountability (Wasley, 1991). The focus of organizational structure for this study is on structures that support the development of teacher leadership.

Several qualitative studies exist on how certain organizational structures either support or hinder teacher leadership in schools. Beachum and Dentith (2004) conducted an ethnographic study of 25 teacher leaders in five schools (two elementary schools, one middle school, one K-8

school, and one high school) within a large, Midwestern, urban school district. All the schools in the study had enacted reform models containing forms of site-based management and teacher leadership roles. From several unstructured and structured individual and group interviews, the researchers developed transcripts for data analysis. Along with the transcripts, the researchers observed various types of teacher meetings. One of the findings from the study was that all the schools in the sample exhibited particular school structures and organizational patterns that positively supported teacher leaders. These common structures included prevalent, high-functioning teacher teaming across subjects and grade levels in addition to quasi-administrator, teacher leader roles that split time between teaching and leadership duties.

In another study, Silva and colleagues (2000) conducted a descriptive case study analysis of three teacher leaders working in a forward-thinking school district dedicated to providing robust professional development opportunities for its teachers. Using semistructured interviews and biographical descriptions of the teachers, the researchers discovered that principals and school structures were barriers more often than supports for teacher leadership. Even within these self-reported progressive professional development schools, the teacher leaders described the principals feeling threatened by the teacher leaders' questions and initiatives. The researchers also reported that district level bureaucracy impeded the efficient implementation of the teacher leaders' ideas. Finally, the researchers noted the insufficient time provided within the organizational structure for teachers to work in collaborative teams.

Other studies have shown similar structural barriers to teacher leadership. Acker-Hocevar and Touchton (1999) conducted 1-hour, in-depth phone interviews of six teachers. Recording, transcribing, coding, and analyzing the interviews, the researchers found three subthemes within the section of the study on decision-making structures of schools: (a) Teacher's involved and

committed themselves to initiatives where they perceived that their voice made a difference; where they perceived little influence, they withdrew and stayed silent; (b) teachers were more committed to decision-making input when their administrators were perceived to be more empowering versus non-empowering; some of the decisions were made by administrators but enacted as a contrived site-based decision-making protocol; and (c) teachers felt a sense of surveillance through an overemphasis on high-stakes accountability on standardized tests.

Stone and colleagues (1997) integrated three exploratory case studies to study the similarities and differences of teacher leadership between the elementary, middle, and high school levels. In examining teacher leadership at each school, the researchers investigated several subquestions related to teacher leadership. Related to organizational structure, the study showed how teacher leadership positions are designed and what structures support or impede teacher leadership. The multiple case studies included 18 peer-nominated teacher leaders, six each from the school division levels. The researchers collected qualitative and quantitative data through a series of individual teacher interviews, focus group interviews, document examination, observations, and staff surveys. In relation to organizational structure, the researchers found that teacher leaders experienced numerous challenges and obstacles due to the hierarchical structures in the school organization. The organizational structure of the schools became the cause for teacher leaders to have issues with time, power, and politics that greatly constrained their abilities to carry out teacher leadership. As a result, the researchers concluded that the schools needed to reduce hierarchical barriers to encourage more collegial interactions and teacher autonomy. The study's limitations include the small sample size, data collected from only one school year, the use of perceptive data, and the lack of ability to generalize the findings to a larger population due to the idiographic nature of case study data.

In a qualitative study, Mangin (2008) examined the influence of organizational design on instructional teacher leader positions. The study involved 63 participants from five school districts including 12 math teacher leaders, 15 principals, six district level administrators, and 30 elementary teachers (two each from the schools with participating principals). Analyzing data through inductive and deductive reasoning from interviews, Mangin discovered that one of the five school districts studied consistently surpassed the other school districts in demonstrating optimal organizational structures related to teacher leader selection and development, teacher leader distribution, and communications management. Other school districts demonstrated optimal structures in some areas but not in others. The school districts with optimal structures did not limit their hiring of instructional teacher leaders to any one pool of candidates. Rather than relying exclusively on internal candidates, the more successful school district considered the most qualified candidates internally and externally. When sufficiently qualified candidates were lacking, the more successful school districts provided robust professional development for the teacher leaders. The most successful school district was able to assign one full-time instructional leader to each school, whereas other school districts had to spread their instructional leaders over multiple schools. Interestingly, the school district with the most optimal designs also had the clearest routine and coordinated systems of communication. This school district used regular and formal communication channels to coordinate teacher leader tasks across the district; share important information and learning between teacher leaders; and set clear expectations. On the other hand, the less effective school districts thought it best to build trust and encourage autonomy through less frequent and less structured communication. Contrary to their intentions, the lack of clear communication actually proved a barrier to the successful implementation of the instructional leadership initiatives.

Seeking to learn more about the perceived impact of teacher leadership and the conditions that support or constrain teacher leadership, Ryan (1999) conducted an exploratory multisite case study interpretive analysis of 12 teacher leaders from three schools (four from each school). The 12 teacher leaders were nominated by more than 400 peers, of which 18 nominating teacher peers were included in the study along with a principal from each participating school. The study collected data from interviews, observations, and document review. Related to school structure, Ryan found that teacher leaders reported more satisfaction and influence in the schools that promoted teacher committees and shared decision-making protocols. Principals in these schools were also more comfortable with sharing power and authority, and they openly supported the schools' teacher leaders. In concluding the study, Ryan recommended that schools need to consider ways to improve decision-making and collaborative school structures.

In an exploratory multiple case study, Wasley (1991) observed three teacher leaders who held leadership positions while maintaining part-time or full-time classroom teaching duties. One teacher, Ted, taught 80% in a local high school while spending 20% of his time leading an experiential learning organization, which also worked with students within the school district where he taught. Gwen worked half-time as a teaching librarian and half-time as an instructional support teacher. This entailed observing and giving feedback to teachers, modeling for teachers, and co-teaching with teachers to share best practices based on the latest educational theories. Mary worked as an instructional support teacher in two schools 25% of the time, and she co-taught an interdisciplinary curriculum to middle school students the other 75% of the time. Drawing on interviews with the teacher leaders and their colleagues, field notes, document review, and personal conversations, several common themes emerged from the cross-case

analysis. In terms of organizational structure, the researchers concluded that all of the teacher leaders struggled to some extent to work within the hierarchical decision-making structures present in their schools. Within his normal teaching job, Ted did the best he could to follow the bureaucratic norms of the school, which entailed more top-down decision-making, and a high proportion of time on administrative, noninstructional issues. However, within his entrepreneurial experiential learning company, which essentially acted as a school within a school, Ted conducted meetings democratically with fellow faculty, and students were the focus of discussions, which in turn inspired the teachers to try out instructional strategies. In Gwen's case, she felt uncomfortable disagreeing with her principal, as she had felt punished after expressing disagreement in a previous experience. Many of the teachers resented the instructional support teacher coming into their classrooms, although they respected Gwen individually as a person. Because the superintendent and principal did not seek input from teacher leaders or teachers, the teachers engaged in overt compliance when observed, but then passively resisted when not with the instructional support teacher. Mary saw that her instructional support role was not going to work as intended; therefore, she presented a re-conceptualized role. She was able to co-teach with another teacher, learning from one another and modeling effective teaching practices for visitors throughout the school district. Wasley concluded that teacher leadership ultimately demonstrates varying levels of success based on how much influence teachers and teacher leaders have in the process of conceptualizing their roles and their participation in shared decision-making. All the reviewed qualitative studies are descriptive, potentially demonstrate researcher bias, contain small sample sizes, and cannot be generalized to any larger population.

With regard to quantitative research, Smylie (1992b) conducted a study in a small Midwestern, suburban, K-8 school district with approximately 3,100 students and 200 teachers who corroborated some of the potential findings related to organizational structure's effect on teacher leadership, in particular, teachers' willingness to participate in site-based decision-making. The school district in the study had recently dedicated itself to expanding teacher leadership outside of the classroom and to creating site-based decision-making structures that involved the participation of teachers. Through the contractual negotiation process with the teachers union, the district had committed to setting up building councils at each school. The district encouraged the school principals and building councils to make decisions through a consensus building process; however, the principals and teachers at each site had some autonomy in decision-making structures. Smylie surveyed 116 of 200 potential teachers in faculty meetings and by mail to examine the extent teachers were willing to participate in the decision-making process related to the following predictor variables: (a) the principal–teacher working relationship, (b) norms influencing working relationships, (c) teachers' perceived capacity to contribute to decisions, and (d) teachers' sense of responsibility and accountability for student achievement. The decision-making areas studied were personnel; curriculum and instruction; staff development; and administration. Smylie examined principal–teacher working relationships from five predictor variables: (a) teacher participation in school decision-making, (b) openness of expression, (c) principal's emphasis of school goals, (d) autonomy of work, and (e) principal's facilitation of teachers' work (pp. 57–58). Rating participant answers on a 4-point Likert scale (1 = *strongly disagree*; 4 = *strongly agree*), the researcher used descriptive statistics and calculated mean scores to note the following pertinent findings related to organizational structure's impact on teacher leadership: (a) Teachers are most willing to participate in decision-

making related to curriculum and instruction (3.16) and staff development (3.00); (b) they are less enthusiastic about participating in personnel (2.26) and noninstructional, administrative decisions (2.68). Additionally, employing a multiple regression analysis, Smylie found (c) principal–teacher relationships had the greatest impact on teachers' willingness to participate in either instructional (44.45, $p < .001$) or administrative decisions (15.30, $p < .001$); (d) other variables related to organizational structure that had a significant link to teachers' willingness to participate in personnel decisions were shared responsibility for student learning (7.46, $p < .01$) and teacher accountability (6.51, $p < .01$). Overall, the findings demonstrated that teachers are more likely to want to participate in decision-making if their principals demonstrate that they are supportive, flexible, collaborative, and share accountability with their teachers. Nonetheless, the findings are limited, as the study indicates reliance on teachers self-reporting their perceptions; moreover, the sample from a small, Midwestern, suburban school district does not permit any generalization to other populations.

Professional development. All teachers need continuous professional development to keep their instructional knowledge and skills current with the best practices. In addition to regular teacher professional development, teacher leaders require purposeful and regular training in leadership skills related to their specific roles (Harris & Muijs, 2005; Ovando, 1996). For this study, professional development refers to training in which the goal is to develop specific teacher leadership skills either in formal or informal capacities.

Darling-Hammond, Bullmaster, and Cobb (1995) conducted in-depth, qualitative case studies of seven mature professional development schools (PDSs) from areas of the United States to examine the potential of PDSs for fostering more widespread and egalitarian forms of teacher leadership. In this study, the researchers defined PDSs as restructured schools that had

collaborated with universities, and they were learner-centered, with professionalized teaching and empowered teachers. Rather than relying on formal teacher leader roles, teachers all shared leadership responsibilities that were organically built into the process of learning and teaching together with colleagues. Darling-Hammond and her colleagues conducted interviews, observations, document analysis, surveys, and teacher journal reviews over the course of a year to find several positive outcomes from the teacher leadership activities practiced in PDSs. First, teachers served as mentors in PDSs. As a result, the researchers discovered that (a) professional development produced a more positive school culture; (b) 70% of one school's teachers reported they had changed the way they reflected on their practice; (c) 61% reported they had changed their perception of collegial work for the better; (d) 55% reported their teaching practices improved, and they expanded their view of what knowledge they needed for effective teaching; and (e) teacher mentors took collective responsibility for preparing new teachers. Second, PDS teachers participated regularly in decision-making and developing curriculum. Related to these, the researchers observed that (a) PDS schools permitted teachers to be responsive to students' needs with the curriculum design; curriculum development was continuous and ongoing; and (b) by teachers being involved in establishing their goals and purpose, they accepted more responsibility and accountability for their work. Third, PDS teachers were problem solvers and change agents. The researchers found that (a) as a result of these schools focusing on learners and their needs rather than externally mandated prescriptions, staff development shifted from the use of outside experts to in-house collaboration to solve problems; and (b) teacher leadership roles grew organically rather than as a result of any formal appointment. Lastly, teachers in PDS schools were researchers, who (a) increased classroom and school-wide inquiry through action

research projects; (b) informed external reform agendas; and (c) led to the occurrence of more teacher reflection and instructional experimentation.

Snell and Swanson (2000) conducted a qualitative study over the course of 2 years examining the knowledge, skills, and dispositions of teachers who led inside and outside of the classroom. Additionally, they studied the factors that contributed to their leadership development. Working with 10 middle school teacher leaders in urban schools, Snell and Swanson analyzed data from in-depth interviews and the teachers' professional portfolios according to a conceptual framework identifying five dimensions of teacher leadership as empowerment, expertise, reflection, collaboration, and flexibility. In examining the contributing factors that supported these teachers' leadership dimensions, purposeful professional development was the most critical component. Through regular participation in workshops, institutes and on-site collaborative analysis of student work, the teacher leaders enhanced their content and pedagogical knowledge, developed better reflective skills, and fostered high functioning, collaborative relationships that empowered these teacher leaders and their colleagues to take more risks and to solve problems. Through their participation in these processes, the teacher leaders gained a better appreciation for the bigger picture in their schools, which, in turn, fostered their more flexible outlook.

Jackson (2009) conducted a qualitative study in a small district in an upper middle class, suburban area in Massachusetts that implemented a professional learning community (PLC) initiative, to examine the impact of the PLC on the role of teacher leaders. Jackson collected data as a participant observer from a population of 37 teacher leaders. Teacher leaders in this study constituted curriculum specialists, elementary grade-level leaders, middle school team leaders, and high school department heads. Data from interviews, document analysis, and

surveys revealed that because of the PLC initiative, teacher leaders took on more active roles, they changed their main leadership functions from daily managerial tasks towards more instructional leadership oriented tasks, and they developed a higher level of commitment towards school improvement initiatives.

In the United Kingdom, Muijs and Harris (2006) conducted a study to examine models of teacher leadership in practice, how teacher leadership is developed, and possible relationships between forms of teacher leadership and school improvement. The researchers conducted multiple case studies of 10 purposefully selected schools known to incorporate high levels of teacher leadership. Muijs and Harris collected data from several semistructured interviews with staff, teachers, and teacher leaders, in addition to reviewing school accreditation reports. From coding the data, several themes emerged, which included one showing that nearly all the schools employed innovative forms of professional development. The focus of these schools were on collective professional development rather than individual needs; several examples of mentoring and peer coaching programs were evident; and some schools sent teachers to leadership-specific training normally reserved for administrators.

Teacher leaders often develop leadership skills and are perceived as stronger leaders if they are given the opportunity to lead professional development for their colleagues. Hickey and Harris (2005) conducted an action research study of one small rural school district's professional development model to see how it contributed to developing teacher leaders, and whether teacher leaders improved professional development. Hickey and Harris surveyed the district's 62 teachers, including 53 workshop participants and nine teacher professional development presenters, using a 10-point Likert-scale questionnaire to rate their perceptions of the experience of peer-led professional development (1 = *least positive*; 10 = *most positive*). In addition to

increasing the teachers' perceived improved collegiality (8.88) and collaboration (8.89), the teacher presenters perceived that their leadership increased amongst district teachers as a result of presenting the professional development (6.45). Furthermore, the researchers concluded that teacher leader strengths be matched to professional development needs in the district, that teachers be provided time to prepare their presentations, and that the teacher presenters be given multiple informal opportunities to present, to reduce any associated stress (p. 15). The study's reliance on mostly descriptive statistics, its small sample size, and its reliance on perception data are the limitations of the findings.

Powers, Rayner, and Gunter (2001) surveyed 117 special education leaders (including 34 head teachers, 25 deputy headteachers, and 49 senior teachers with leadership duties) in the United Kingdom to study their perceptions of their needs for further professional development in leadership. The researchers calculated descriptive statistics to find the most requested topics for further training were in performance management; school self-evaluation; delegation and goal setting; evaluating data for goal setting; and information and communications technology systems. The least requested topics were in property maintenance, home-school relations, effective communication skills, personal stress management, and public relations. Additionally, the researchers surveyed the leaders to find out whether they preferred the professional development to be specific to special educational needs (SEN) to which 20% responded yes, and 62% responded that it should be partially specific to SEN. Powers and colleagues concluded that the teacher leaders preferred training with a focus on organizational leadership skills rather than personal management skills, and they preferred training specific to their SEN contexts. The limitations of the findings are the small sample size and the unclear percentage of time that the respondents spent to teaching versus leadership and management duties.

Time. Depending on its allocation, time can be either a constraint or a support in the development of teacher leadership (Stone et al., 1997; Wasley 1991). A thorough review of the literature, particularly from the 1990s, indicates time as one of the most critical variables in supporting or hindering the development and associated actions of teacher leadership (Murphy, 2005). In recent years, fewer studies have shown time as a stand-alone supporting variable for the development of teacher leadership; however, some studies have also indicated time built into organizational structures that support collaboration (Poekert, 2012). The focus of this study is on two aspects of time: (a) scheduled time to perform additional teacher leadership responsibilities not normally associated with classroom teaching duties (Fay, 1992; Ovando, 1996), and (b) time for teacher collaboration (Danielson, 2006).

Ovando (1996) conducted a qualitative study of one school district in Texas by employing a decentralized site-based management structure. The research involved the distribution of a questionnaire to 25 of 132 teacher leaders participating in a peer assistance and leadership program to study teacher leaders' perceptions related to their dual roles of teaching and leading. Time emerged as one of the most important factors in support of teacher leadership. The teachers commented that they performed their teacher leadership duties during planning periods, lunch breaks, outside of regular school hours, or during provided release time. Many complained that they used the time they would normally devote to preparing for instruction to carrying out their leadership responsibilities. As a result, although teachers had increased satisfaction overall from their role as teacher leaders, they often felt frustrated splitting time between teaching and leadership duties. The small sample size in one school district is the limitation of the study results.

However, other researchers, who conducted studies with questionnaires, support findings regarding tensions with time. Smylie and Denny (1990) surveyed 90 randomly selected teachers on several questions related to teacher leadership. From 56 responses, regarding time, the teachers rated allocation of time between classroom and leadership duties (3.59 on a 5-point Likert scale) as the biggest tension related to their leadership performance. Paulu and Winters (1998) reported from a teacher forum of 120 highly rated teachers from throughout the United States. Lack of sufficient time to perform teaching and leadership duties emerged as a major obstacle. Some of the ideas generated at the forum to reduce time constraints were (a) providing more release time to perform leadership duties, (b) increasing teaching contracts to 12 months to accommodate the extra workload, and (c) integrating more family-friendly policies, such as on-site childcare for teachers' children, to allow teacher leaders to better balance the increased home–work tensions associated with teacher leadership. Nonetheless, these studies are limited to descriptive statistics and teacher perception data.

Additionally, several of the studies reviewed under the "organizational structure" and "professional development" variables also specified time as a barrier or a support for teacher leadership. Wasley's (1991) case studies with Ted, Mary, and Gwen revealed tensions between serving students first while performing additional leadership duties. Their students were upset when their teachers missed too much time in the classroom to perform leadership responsibilities, and two of the teachers elaborated on the long hours they spent on leadership activities outside of school hours. In their analysis of three integrated case study schools, Stone and colleagues (1997) also described teacher frustration and negative impacts on student learning related to teachers missing time from the classroom to perform leadership responsibilities. At the same time, teachers commented that time provided to collaborate with colleagues and to

perform leadership roles was one of the greatest supports for teacher leadership. In Silva and her colleague's (2000) case study of Laura, she mentioned the desire to get the English and social studies departments together to design interdisciplinary units; however, the teachers did not have enough time to make this happen. Even when not the intention of the study, observations about time, or the lack thereof, appear to be prevalent throughout the extant literature base on teacher leadership.

Recognition. Acknowledgement and public appreciation of teacher leadership cultivates commitment and future desired participation in teacher leadership activities (Kahrs, 1996). Recognition can be demonstrated formally and informally. For this study, recognition refers to the processes and systems in place to recognize teachers for their leadership and contributions to the school (Katzenmeyer & Moller, 2009). Although several authors on the subject of teacher leadership recommend or postulate that recognition is supportive of teacher leadership, only a few quality empirical studies exist to support the relationship.

Moller and Katzenmeyer (1996) observed that effective principals often rewarded or recognized teacher leaders informally by providing them with requested resources, additional professional development opportunities, or release time to work collaboratively with other teacher leaders (pp. 13–14). Years later, Katzenmeyer and Moller (2009) interviewed two teacher leaders who commented that they felt recognized and rewarded when their administrators thanked them for their additional external classroom work, gave positive feedback on their teaching, asked for their opinions, and involved them in important decisions related to student learning. Although these findings are consistent with other reports in the literature about the impact of recognition on teacher leadership, it is unclear if these authors conducted a formal study, or if they were merely providing a few informal anecdotal experiences.

Birky (2002) conducted a multiple case study analysis of four high school teacher leaders purposefully selected for their reputed involvement and leadership in educational reform activities. Coding and analyzing multiple rounds of interviews and surveys, Birky found that verbal support and appreciation supported teacher leaders' motivation to continue carrying out teacher leadership acts. These teacher leaders relied on their principal's mentoring and encouragement to overcome challenges to their teacher leadership. In cases where their principals did not demonstrate verbal support and recognition, and in fact, showed lack of support, teacher leaders shunned additional leadership responsibilities.

Reporting from a teacher forum of 120 highly rated teachers from throughout the United States, as stated under the "time" variable, Paulu and Winters (1998) found that teacher leaders valued encouragement from administrators. They mentioned that teachers often lack the confidence to take on leadership roles; however, if teachers were recognized and made to feel special, many more would be willing to pursue teacher leadership activities. Many of these teachers also commented that good teachers need to be recognized in other ways, lamenting that many quality teachers are drafted to be principals even though they do not want to pursue an administrative career path. Other teachers wanted to be recognized by having release time to work in mentor programs. They considered the opportunity to support other teachers as a reward that recognized them for their expertise.

Although not robust empirical studies, a couple of educational policy reports corroborate several of the statements about ways to recognize teacher leaders. Wolfe (1992) reviewed the literature on mentor teacher programs to offer the following list of recommendations regarding incentives and recognition: (a) provide release time to observe and meet with teachers whom they were mentoring; (b) consider additional compensation through stipends, career ladder

programs, or funds for purchasing professional resources; (c) provide additional professional development opportunities; and (d) publicly recognize mentors (i.e., with titles; p. 112). Two decades later, Berry and Eckert (2012) wrote a policy report showing aspects of how incentives attract and retain exceptional teachers at high needs schools. They concluded that the literature on teacher incentives is complicated, suggesting that financial compensation alone is not effective in attracting and retaining the best teachers. Rather, the best incentives are providing (a) increased autonomy; (b) opportunities for the best teachers to mentor their colleagues; (c) quasi-administrator roles with teaching and release time to perform leadership roles; (d) additional time for collaboration with other teachers and teacher leaders; and (e) positive working conditions and safe working environments for teachers.

Role clarity. Teachers need to understand the extent of their roles, as what administrators and other teacher colleagues expect of them as a leader (Hart, 1990; Murphy, 2005; Smylie, 1992a; Smylie & Denny, 1990). The opposite of role clarity, role ambiguity, can derail otherwise good intentions toward fostering more teacher leadership within a school. When teacher leaders feel supported by their administrators, they perceive greater role clarity, which is also linked to greater professional self-efficacy (Tooher-Hancock, Roberts, & Sperandio, 2015).

Hart (1994) conducted a qualitative, comparative case study of two junior high schools in one school district with a career ladder program to learn what attitudes developed in regard to the career ladder program. Hart studied the perceived differences in the context of role theory. Career ladders referred to schools with characteristics such as peer supervision programs, shared decision-making structures, and collegial assistance. After collecting data over the course of a year from hundreds of structured and semistructured interviews, observations, field notes, and document analysis, Hart discovered that one school had positive perceptions of the career ladder

program, and the other school had negative perceptions. The schools with a more positive view showcased regular teamwork; teacher leaders were public and accountable; and an open communication existed between the teacher leaders and their principal. In these more positive schools, the faculty also had a greater influence in designing the teacher leader roles. The school with the more negative perceptions of the career ladder program did not have a high level of trust; they thought career ladders were an attempt by the school to implement merit pay; and they viewed mentor teachers as "tormentors." Hart also noted that the schools with negative perceptions of the career ladder program did not work together to design the teacher leader roles, leading to increased role ambiguity. In the school with positive perceptions, the principal constantly emphasized a vision of collaboration. However, in both schools, teachers could feel resentment about the teacher leader selection process. Teacher leader participants across both schools felt conflicted between their new teacher leader roles and the traditional egalitarian norms of equality and privacy common in the teaching profession.

Conley and Muncey (1999) interviewed four teachers in depth to write "mini-portraits" of their views about teacher teaming and teacher leadership in regard to any contradictions they identified between their roles as teacher leaders and members of a team. Two teachers were classroom teachers; the other two teachers were nonclassroom based. The two nonclassroom teacher leaders shared views more from the perspective of leaders or quasi-administrators. These nonclassroom-based teacher leaders mentioned that different skills were necessary for their roles as teacher leaders and team members. As leaders, they had to lead without creating fear in their team members so that their team members would feel comfortable to express their opinions. The two classroom-based teachers, on the other hand, commented that they downplayed their leadership roles with their teams. One described the role having more paperwork and daily

administrative jobs, as opposed to supervising the team members. The other classroom-based leader thought her role was to keep the group members on task. The classroom-based teachers emphasized teaming more, perceiving the necessary skills for teacher leader and team members as similar. The nonclassroom-based teacher leaders described the importance of leadership, organization, and decision-making; they separated the skills needed of good leaders and team members. Conley and Muncey concluded that teachers generally do not identify contradictions between teacher leadership and teaming; however, teachers prefer one or the other role. Each teacher used their preferred role to make sense of the work they were doing.

LeBlanc and Shelton (1997) conducted a qualitative study of five purposefully selected teacher leaders and their perceptions of themselves and others as they worked in their teacher leadership roles. The question categories involved defining teacher leadership, understanding teacher leadership, and supporting teacher leadership. The researchers used disposition theory and literature to analyze data collected from semistructured, individual interviews to code their findings. Relevant to "role clarity" variable, LeBlanc and Shelton found that the teacher leaders felt conflicted in their roles as leaders and teachers. As leaders, they wanted to be successful and felt they had accomplished positive results. However, as colleagues, they wanted to "fit in" with the rest of the teachers. Nevertheless, as team leaders, they enjoyed collaboration and felt proud of their work.

Galland (2008) conducted a quantitative study to examine the relationship between role clarity, physical structures (school building), organizational structure (scheduling, team structures, etc.), and teacher leader effectiveness. Of the 180 teachers, who were taking a teacher leader professional development course in a Midwestern state, 158 answered surveys related to these variables. In this study, teacher leader effectiveness was measured by impact on classroom

instruction and achievement as per responses on a questionnaire. Calculating a Pearson correlation coefficient, Galland found that role clarity had a significant correlation (.394; $p < .01$) with teacher leader effectiveness. Within role clarity, further significant correlations were discovered: role definitions (.250; $p < .01$), role understanding (.391; $p < .01$), and role acceptance (.290; $p < .01$). Using forward multiple regression, Galland also found that role clarity was the greatest predictor of teacher leader effectiveness ($r = .385$; r square = .148). Combining organizational structure and role clarity, Galland discovered an even more significant prediction of teacher leader effectiveness ($r = .432$; r square = .187). The researcher recognized certain limitations to the study given the unknown reliability and validity of the questionnaire. Additionally, the limitations of the study findings are the perception data and the sample size restricted to one group of teachers taking a particular teacher leadership professional development course in one Midwestern state. Nevertheless, the findings clearly demonstrate that when teachers understand their roles within the school, teacher leaders perceive that they are much more effective at positively contributing to improved teaching and student performance in their schools.

School culture. The development of teacher leadership exists within a school culture supportive of respectful, collaborative, and collegial relationships. Teachers and administrators do not work in isolation. Rather, they contribute to a positive culture of professional inquiry with a focus on constantly improving their craft and ultimately, student learning (Danielson, 2006; Katzenmeyer & Moller, 2009). In school cultures conducive to developing teacher leadership, teachers believe in the capability of their fellow teachers to be leaders, and they do not perceive the expressions of leadership among colleagues as threatening.

Drawing from a large group of schools in a government-commissioned study in the United Kingdom, Muijs and Harris (2007) conducted a multiple case study analysis of three schools from the larger sample to examine how teacher leadership looked in practice, including the variables that supported the development of teacher leadership. The researchers purposefully selected the three schools based on demographic diversity and levels of reputed teacher leadership (developed, emergent, and restricted). Muijs and Harris held multiple interviews with representatives from groups across each school including staff, board members, and administrators. They coded the responses into several themes to analyze the data, revealing several findings that overlap with many of the variables discussed in this literature review: (a) teacher leadership was developed through a deliberate process, (b) teacher leadership developed more prominently in collaborative schools, (c) schools with more prevalent teacher leadership had sent their teacher leaders to specific leadership training, (d) the school culture displayed high levels of trust, and (e) they developed shared goals.

In their qualitative, ethnographic study, Beachum and Dentith (2004), as reviewed earlier under the variable of organizational structure, found that trustful relationships amongst teachers, and between administrators and teachers, contributed greatly to teachers taking on leadership roles and responsibilities. The 25 teacher leaders in this study reported that they felt respected; administrators and colleagues sought their opinions; and they were encouraged to take risks without having to fear the consequences of failure. Many of the teacher leaders were a part of important decisions, including hiring of new teachers. Because their focus was always on what was best for the students, these schools fostered a culture where teachers could openly express ideas and share concerns, demonstrating a high level of trust and moral imperative amongst the faculty, and between the faculty and the administration (pp. 280–281).

Angelle and Teague (2014) conducted a multisite quantitative study of three school districts in a suburban area of a southeastern U.S. state to examine the relationship between teachers' perceived sense of collective efficacy and teacher leadership. Collective efficacy in this study referred to teachers' belief in the teaching abilities of their colleagues. The researchers distributed two questionnaires, a teacher leadership inventory and a teacher efficacy belief scale, to the teachers in the three school districts, and 363 teachers responded. Calculating descriptive statistics and ANOVA, the researchers found a visual pattern in the data that possibly demonstrates a relationship between collective teacher efficacy and teacher leadership. However, the statistical methods and analysis could have led to a false conclusion. Instead, the researchers should have conducted a multilevel regression model to analyze the data further for correlations. Additionally, sampling the three school districts separately is not a random sample across the data. Teachers within the same school district tend to be more alike compared with teachers from other districts. The researchers should have entered District as one of the covariates. Moreover, because the researchers only examined the mean scores for each of the three school districts, they reduced the sample size from 363 to three, eliminating any powerful conclusions from the data. The researchers also did not correctly set up a hypothetical causal model, which leads to confusion when reviewing the study.

Talbert and McLaughlin (1994) conducted a study of 16 high schools in California and Michigan. Part of the study examined the relationship between the level of teacher community (i.e., those with more collaboration, support, and innovation) and teacher professionalism. Teacher professionalism in this study referred to a shared technical culture, service ethic, and professional commitment. The researchers defined technical culture as shared standards for curriculum and instruction; relationships with students; and school goals. Service ethic indicated

caring for students and maintaining high student expectations. Professional commitment referred to commitment to teaching and professional growth. The researchers surveyed teachers for three years, using the third year data for this study's statistical analysis (623 teachers; 77% response rate). Calculating several steps of statistics including descriptive statistics and multivariate analysis, Talbert and McLaughlin found that the data fit their original hypothesis, meaning teacher community significantly correlated with higher levels of technical culture ($r = .53$; $p \leq .01$) and professional commitment ($r = .52$; $p \leq .01$). In turn, technical culture had a significant relationship with teacher community ($r = .43$; $p \leq .01$) and professional commitment ($r = .34$; $p \leq .05$). Caring for students had a significant relationship with teacher community ($r = .34$; $p \leq .01$), expectations ($r = .39$; $p \leq .05$), and professional commitment ($r = .29$; $p \leq .10$). High expectations had a significant relationship with teacher community ($r = .32$; $p \leq .01$), technical culture, ($r = .12$; $p \leq .10$), and caring ($r = .42$; $p \leq .01$). Lastly, professional commitment had a significant relationship with teacher community ($r = .47$; $p \leq .01$), technical culture ($r = .16$; $p \leq .10$), caring ($r = .41$; $p \leq .01$), and expectations ($r = .29$; $p \leq .01$). This means that teachers who participate in an effective teacher community are more likely to demonstrate strong levels of professionalism. The small sample size, however, is the limitation of the study findings. To address this issue, Talbert and McLaughlin recommended a more robust, nested sampling design; however, they note the major financial investment to conduct a study of this level is an obstacle. Nevertheless, the positive relationships demonstrated in this study show some promise for schools using professional communities to develop teacher leaders, who, by their definition, have high levels of professionalism.

Smylie (1992a) analyzed 116 teacher surveys (66% response rate) across seven schools in a small, K-8, Midwestern suburban school district in the United States testing for relationships

between teachers' interactions with teacher leaders regarding classroom instruction and the following variables: (a) opportunity for interaction, (b) school social context, and (c) teachers' beliefs concerning teachers' working relationships and interaction. Each of the seven schools in the study had one school-based lead teacher who also maintained classroom teaching responsibilities. Lead teachers worked with individual teachers at their school in addition to working with other teacher leaders across the district. Smylie conducted an ordinary least squares multiple regression analysis to identify the significance of each variable on teacher-leader interactions. Three variables had a statistically significant relationship with the interactions of teachers with their team leaders as follows: (a) extent to which advice implied obligation, $f = 8.59$; $p < .005$; (b) extent of assumed professional equality among teachers, $f = 6.63$; $p < .01$; and (c) opportunities available for teacher interactions with teacher leaders, $f = 5.99$; $p < .01$. The findings show that if advice from teacher leaders implies obligation, if teachers have strong beliefs about norms of professional equality (all teachers are equal regardless of experience, expertise, etc.), and if opportunities are lacking to access teacher leaders, then teachers are less likely to interact with teacher leaders (York-Barr & Duke, 2004, p. 309). Due to the small sample size, the findings are limited to one small, Midwestern, K-8 school district. Additionally, the limitations of data include the use of teacher perception data and the correlational data do not allow for causal inference.

American-Sponsored Overseas and International Schools

To date, only one study specific to teacher leadership exists related to its implementation in American-sponsored overseas schools. Pruitt (2008) carried out a qualitative study of one American-sponsored overseas school in a country in South America that had created a Teacher Leadership Institute (TLI) that was implemented through a university partnership to train

teachers in developing their teacher leadership skills. Integrating a combination of ethnographic and multiple narrative case studies techniques, Pruitt conducted teacher and administrator interviews, document analysis, and journey mapping to describe the key events teacher leaders experienced while assuming teacher leadership responsibilities. Additionally, he examined the supports and barriers to the carrying out of teacher leadership, as reported by the teacher leaders and school administrators.

Pruitt (2008) performed a cross-case analysis of responses from four of 25 TLI participants, along with the school's principals and director at the time of the study. The following are the findings relevant to this current study on the variables supporting teacher leadership in American-sponsored overseas schools:

1. The teacher leaders reported the top-down, hierarchal structure of the school as a barrier; some of the teachers felt they lacked permission or authority to make particular school-wide changes. On the other hand, all of the teacher leaders reported individual, positive relationships with the administrators as a support for their leadership. They felt that the administrators wanted them to be successful, and the school organization was committed to teacher leadership. The administration demonstrated this commitment to teacher leadership by noting the positions within the school's organizational chart; teachers felt trusted and respected by administrators, and several examples show teachers and principals learning and reflecting collaboratively.
2. All of the teacher leaders in the study reported their participation in the TLI as vital to their development as teacher leaders. As a result of their participation, they developed collegial relationships and valuable support networks.

3. They reported lack of sufficient time to balance all the tasks associated with teacher leadership as a barrier. In addition, insufficient time was provided to foster meaningful conversations amongst teachers across the school divisions.
4. The teacher leaders felt recognition and a sense of pride for being selected to participate in the TLI by their administrators. The school recognized their contributions by paying their full tuition for the TLI, and it was deliberating whether to provide financial incentives for teacher leaders within the school's salary structure.
5. For the most part, the teacher leaders reported positive working relationships with teachers in their school, particularly other teachers in the TLI; however, they also recognized some tensions with other teachers. They felt these tensions arose related to teachers' jealously towards teachers participating in the TLI; additionally, some teacher leaders felt as though other teachers may have viewed TLI participants as "principals' pets," and that the teachers did not trust them as a result.
6. Finally, administrators and teachers described lack of role clarity as a concern; all parties were confused about what the expectations were for the teacher leaders; at the time of this study, the school planned to work on further developing a shared vision for teacher leader roles.

Pruitt's (2008) study contains the following limitations: First, the small sample size and qualitative data collection techniques do not allow generalization to other populations. Second, the researcher was a former administrator at the school used in the study, and he was also a student in the university that was involved in the school's TLI. As a member of these two organizations dedicated to the concept of developing teacher leadership, researcher bias could have been influential to the analysis and reporting of the results. Lastly, although the school in

the study was an American-sponsored overseas school, this body of schools varies greatly in their missions and the demographic makeup of their professional staff and student enrolment. The school in the study had a majority of host-country students and several host-country teachers; this is consistent regionally with most American-sponsored overseas schools in Latin America. Other regions contain differing ratios of U.S., host-country, and third-country staff and students. Africa, in particular, has a majority of U.S. and third-country nationals compared to host-country nationals. These demographic differences present an additional limitation to any generalization of the findings. However, Pruitt's findings are consistent with the wider body of research on school level variables that support or inhibit teacher leadership in schools. Therefore, these findings can prove useful as a basis for further examining these reported variables in a quantitative study.

A recent quantitative study examined for relationships between International Baccalaureate (IB) Middle Years Programme coordinators' (MYPCs) perceptions of their clarity of their role and their sense of their own professional self-efficacy (Tooher-Hancock, 2014; Tooher-Hancock et al., 2015). The IB MYP is an international curriculum framework adopted by 1,149 schools in 101 countries (International Baccalaureate, n.d.). Participating schools must assign an MYPC role at their school to oversee the implementation of the program. Using a stratified random sampling method, Tooher-Hancock and her colleagues (2015) surveyed 337 MYPCs on their perceived support from their instructional leaders, the MYPCs' perceived role clarity, and the MYPCs' professional self-efficacy. Based on responses from 100 MYPCs, the researchers found that when teacher leaders feel supported by their administrators, they perceive greater role clarity, which is also linked to greater professional self-efficacy. Tooher-Hancock and her colleagues examined these links using a sophisticated statistical technique called

structural equation modeling (SEM). Research that uses SEM allows for stronger causal inferences than simpler correlational modeling statistics. However, causal inferences from SEM studies are not as strong as those from experimental studies (L. Roberts, personal communication, July 13, 2015). Additionally, Tooher-Hancock (2014) asked an open-ended question to find out what MYPCs wanted more support with to fulfill their roles. The theme with the highest number of responses was greater role clarity. The second most frequent theme was a request for additional time to better balance the workload and tension between their teaching loads and MYPC leadership duties. Although the study cannot be generalized to the context of American-sponsored overseas schools, it does relate to the body of research on role clarity's support of teacher leadership. Additionally, several American-sponsored overseas schools do implement the IB MYP, in addition to many other international schools that share several common characteristics with American-sponsored overseas schools.

Table 2 presents literature on variables that support the development of teacher leadership. The table also lists examples of each type of support in bullet point format from Pruitt and other publications.

Table 2

Literature on Variables Supporting Development of Teacher Leadership

Variables which support the development of teacher leadership in a school	Citations from the wider body of literature	Pruitt study in an American-sponsored overseas school in South America
1. Organizational Structure	Traditional organizations as bureaucracies versus accountability through professionalization of teaching (Murphy, 2005)	Hierarchal barriers; those not in TLI can feel threatened and lesser than those in TLI; not one of the "chosen" inner circle of the administrator.
	Tradition hierarchal model versus a simple network (Reeves, 2008)	Teachers in TLI felt supported by principals and director.
	Principal-teacher relationships influence willingness of teachers to participate in decision-making process (Smylie, 1992b)	Principal communicated okay to make mistakes; all learning together.
2. Professional Development	Teachers shared leadership responsibilities that were organically built into the process of learning and teaching together with colleagues (Darling-Hammond et al., 1995)	Leadership and professional development opportunities were reported to be influential factors in the teachers taking on new leadership roles.
	PLCs fostered more instructional leadership-oriented tasks, and they developed a higher level of commitment towards school improvement initiatives (Jackson, 2009)	Teacher leaders reported growth in confidence and felt empowered to take on new leadership responsibilities.
		Led to better understanding of schools and big picture; better understood roles as teacher leader.
	As a result of PD, teacher leaders appreciated the bigger picture (Snell & Swanson, 2000)	
3. Time	Frustration and tension from splitting time between teaching and leadership duties (Ovando, 1996; Smylie	Time to meet with other teacher leaders assisted in

Variables which support the development of teacher leadership in a school	Citations from the wider body of literature	Pruitt study in an American-sponsored overseas school in South America
	& Denny, 1990; Wasley, 1991)	building camaraderie and professional exchanges.
	Desired more time to meet and collaborate with other teachers (Paulu & Winters, 1998; Silva et al., 2000)	Too little time provided for meaningful conversations or consensus building.
4. Recognition	Verbal support and appreciation encouraged more teacher leadership (Birky, 2002)	Teachers in TLI felt pride for being selected by administrators to be in the institute.
	Felt special if asked for their opinions and involved in important decisions (Paulu & Winters, 1998)	TLI was introduced as incentive for teachers to stay longer at school; school paid tuition expenses in return for 4-year commitment.
	Increased autonomy and additional release/collaboration time more effective than financial incentives (Berry & Eckert, 2012)	School was in process of exploring financial incentives for teacher leadership.
5. Role Clarity	Role clarity increases when teachers feel supported, and greater role clarity leads to a higher sense of professional self-efficacy (Tooher-Hancock, 2014)	Role identification; confusion on selection of TLI participants.
	Greater role clarity leads to more effective teacher leadership (Galland, 2008)	Lack of clear expectations
		Confusion about informal and formal teacher leadership roles.
		Development of shared vision led to greater role clarity.
6. School Culture	Teachers working in collaborative teams versus teachers working in isolation (Lieberman & Miller, 2004)	Relationships with teachers, relationships with administrators, leadership social norm, international context (tensions between local hires versus overseas hires)
	Teachers and administrators trust each other; work in best interests of the students (Beachum & Dentith, 2004)	Teachers felt able to openly express themselves even when not in agreement.

Teacher Leadership: Effects on Student Achievement, Instruction, and School Effectiveness

Few studies have specified a link between teacher leadership and school effectiveness; the best evidence of effectiveness is improved student achievement results. There is little evidence, in particular, when studying correlations between teacher leadership and results on standardized tests. Due to the varied, complex definitions of teacher leadership and the challenges of social science research with human subjects, researchers have found it difficult to demonstrate any correlation or causal links (Holland et al., 2014). When examining the effect of teacher leadership on student achievement, results are mixed at best (Williams et al., 2015).

Ngang, Abdulla, and Mey (2010) studied six elementary schools in the Maldives testing for relationships between teacher leadership and school effectiveness. The researchers distributed questionnaires to a target population of 218 teachers from which 181 teachers responded. Drawing on the model of teacher leadership dimensions by Katzenmeyer and Moller (2009), the first part of questionnaire asked teachers to rate the model's seven dimensions in their schools: (a) developmental focus, (b) recognition, (c) autonomy, (d) collegiality, (e) participation, (f) open communication, and (g) positive environment. Teachers responded to a second part of the questionnaire on school effectiveness adapted from Brookover (1997). In addition to descriptive and inferential statistics, the study used Pearson product–moment correlation analysis to determine the relationship between the school effectiveness and each of the survey's seven teacher leadership dimensions. All seven dimensions demonstrated a significant relationship with higher levels of school effectiveness; however, the most significant predictors of school effectiveness were autonomy, collegiality, and developmental focus. Employing a multiple regression stepwise method, the researchers also found that autonomy,

positive environment, and open communication contributed greatly to the prediction of school effectiveness (47.1%, 6.5%, and 2.9%, respectively). Findings from this study have several limitations. First, the results are based on teacher perceptions, and do not correlate with any objective measures of school effectiveness (i.e., student achievement, attendance rate, student engagement). Rather, teachers were asked to rate their school's effectiveness and aspects of teacher leadership based on their own perception. Teachers in this school system responded higher than average when compared to other previous uses of the surveys; this can possibly demonstrate respondent bias. Nevertheless, the study shows some promise for how teachers believe aspects of teacher leadership may increase school effectiveness.

Seashore Louis, Dretzke, and Wahlstrom (2010) conducted two rounds of a U.S. national survey (2005 and 2008) from of a random sample of 4,491 teachers and administrators from 157 schools in nine states. After a multiple-step process, looking at schools that responded to the 2005 and 2008 surveys, the sample size was adjusted to 106 schools (50 elementary, 34 middle, 19 high, 3 K-8). The study showed relationships between the predictor variables of focused instruction, teacher's professional community, shared leadership, instructional leadership, and trust in principal and the outcome variable of adequate yearly progress on state standardized tests aligned to NCLB. Employing multiple levels of statistical analysis including paired-sample *t* tests, hierarchical multiple regression, and structural equation modeling, the researchers found a significant relationship between focused instruction, professional community, and teachers' trust in the principal and student math achievement results on state standardized tests. Further analysis was completed with regression models. Related to the topic of teacher leadership, the study found that shared leadership did not have a direct effect on instruction, but it did have an indirect effect through professional community. Building level had a strong relationship with

professional community, which had a direct effect on student achievement. The findings demonstrated stronger relationships at the elementary school level than at the secondary school level. Professional community also had significant indirect effects on school achievement through its strong relationship with focused instruction. In conclusion, Seashore Louis and colleagues found that several overlapping variables of leadership collectively demonstrated a strong relationship with higher student achievement. The findings are somewhat limited by the complexity of all the overlapping variables and some of the indirect assumptions of individual variables on student achievement. Lastly, the structural equation model may have overlooked other influential variables, which could otherwise explain the impact on student achievement.

Several other studies have shown findings consistent with the hypothesis of various elements of teacher leadership's indirect influence on school effectiveness or student achievement. In their quantitative, longitudinal, 5-year study, Smylie and colleagues (1996), found the higher the teacher participation rate in school decisions, the more teachers were likely to make instructional improvements, which, in turn, was more possible to be linked to positive growth in student standardized test scores. Data were collected from multiple sources including teacher surveys, classroom observations, and scores on standardized tests. However, the findings are limited to only one small, Midwestern, urban, K-8 school district and, therefore, not generalizable to other populations.

Marks and Louis (1997) conducted a mixed-methods study examining the extent to which teacher empowerment hypothetically influenced school instruction, authentic pedagogy, and student academic performance. Empowerment, for this study, referred to classroom autonomy and influence over school policies. The study examined 24 (8 elementary, 8 middle, and 8 high) schools that had restructured to models that were intended to empower teachers with more

participation in school decision-making. The schools in the study were from 16 states and 22 school districts. Nine hundred ten teachers (95% response rate) responded to the survey portion of the study. In addition to the survey, the researchers conducted several interviews, observations (144 teachers), and collected school documents in a case study analysis. The quantitative results and the analysis of the case study data were consistent with the hypothesis that teacher empowerment positively influenced teachers' effort to improve instruction. In terms of empowerment's effect on student achievement, the study did not find data consistent with a significant direct influence. However, when empowerment was further analyzed for whether it focused on collective efforts to improve instructional practices, the findings demonstrated a possible positive indirect relationship. Empowerment that was not focused specifically on improved instruction did not result in findings that were consistent with either direct or indirect improved student achievement. One limitation of the findings was that the demographic background of the sample population in the restructuring schools was different from the general population. The restructuring schools employed an overall younger teaching demographic, a higher percentage of females, almost a year less of teaching experience on average, and a higher percentage of master's degrees. Demographic variables may have been influential to the results instead of anything to do with teacher leadership. Additionally, the schools in the study all demonstrated a highly varied range of examples of empowerment, site-based management, decision-making, and professional communities. The complex range of variables and lack of their common definitions also limit any generalization to other populations or contexts.

Pounder and colleagues (1995) used path analysis to study the relationships between sources of organizational leadership (adaptation, goal achievement, integration, and latency) and several measures of school effectiveness (perceived organizational effectiveness, student

achievement, student absenteeism, and staff turnover rates). Using a stratified random sampling, the researchers selected a principal, a counselor, 20 teachers, two secretaries, and a custodian from 57 schools in one large urban school district. The researchers found that leadership from teachers working in groups had a significant relationship with commitment, which itself had a significant relationship with perceived school effectiveness and staff turnover. Teacher leadership did not demonstrate correlations consistent with a significant direct relationship on student absenteeism or achievement. Several limitations are present in this study. First, the lack of clear definitions of leadership in the study makes it difficult to operationalize the variable. Secondly, organizational effectiveness was measured based on participant's self-reported surveys. Lastly, path analysis can show that the data were either consistent or inconsistent with a causal model. However, path analysis does not actually test for causality.

Leithwood and Mascall (2008) studied 2,570 teachers in 90 elementary and secondary schools from 9 states and 45 school districts to test whether data were consistent with the hypothesis that collective leadership had an effect on student achievement or other teacher variables (i.e., capacity, motivation, and work setting). Collective leadership in this study referred to the combined effects of all sources of leadership (administrators, teachers, students, and parents, p. 530). The study also looked at the individual link between each source of leadership, student achievement, and the other variables. The data were consistent with the hypothesis of indirect effects of leadership on student achievement through teacher motivation and work setting. Additionally, collective leadership (.34, $p < .01$) and staff teams (.28, $p < .01$) had significant relationships with student achievement, which was measured by mean annual achievement on state standardized tests. One limitation to the findings is that teacher leadership was only measured by influence on decision-making, which does not take into account the many

varying definitions of teacher leadership. A second limitation is the use of surveys, which measure the respondents' perception of sources of leadership rather than a more objective measure. An additional limitation is the study measured the mean of student achievement over a 3-year span, which does not allow for any analysis of whether the forms of leadership actually influenced improved student achievement over more immediate periods.

On the other hand, several other studies have failed to find a significant relationship between teacher leadership and student achievement. Williams and colleagues (2015) conducted one of the most recent quantitative studies exploring the correlation between teacher leadership and student achievement. They found no significant positive relationship, as measured by student performance on the Alabama state standardized tests in reading (r = -0.035; p = 0.406) and math (r = -0.076; p = .03). In fact, the results showed a significant inverse correlation. Using a newly designed questionnaire, the teacher's perception of teacher leadership survey (TPTL), based on the seven major domains or standards of teacher leadership as espoused by the Teacher Leader Consortium, the researchers surveyed 630 teachers from 49 schools in Alabama. The researchers also sought to answer whether the TPTL accurately measured the seven domains of teacher leadership. The researchers checked for content and construct validity through a multistep process including expert review, a teacher panel interview, and pilot testing of the questionnaire. Using exploratory factor analysis, they found that the seven domains actually only measured one single construct of teacher leadership. Various limitations to the findings exist. First, an abnormally high percentage of proficiency on the standardized tests was evident. Second, limited publically available test statistics restricted further analysis of the findings. If more detailed statistics had been available, the researchers may have been able to test teacher leadership's effect on various substrands of achievement data. Additional limitations included

self-reported survey data, which possibly led to higher than normal ratings in regard to teacher leadership presence in low performing schools. Self-reported data are sometimes influenced by reporter bias, with the respondent desiring to answer "correctly" or to look good. Additionally, the authors acknowledge a broad range of definitions of teacher leadership exists. It is possible that other measurements of teacher leadership may have demonstrated a positive correlation to student achievement.

Taylor and Bogotch (1994) examined the effect of teacher participation on several potential outcomes for teachers and students. The researchers defined teacher participation in this study as decision-making about issues that affected teachers' activities and job assignments. Student achievement variables measured were student attendance, student behavior, and standardized tests results in mathematics. Drawing from two pools of schools within one school district, the researchers compared 16 pilot restructuring (high teacher participation) schools to 17 low teacher participation control group schools. They did not find any significant relationship between teacher participation and student achievement outcomes. Although they attempted to compare high teacher participation pilot schools to low teacher participation control group schools, the researchers also found that teachers in both groups of schools desired more opportunities to participate in decision-making. The fact that teachers felt that they lacked adequate influence in decision-making, even in the so-called high participation schools, limits the conclusions from the findings. In particular, the relationship between teacher participation and student outcomes cannot be meaningfully correlated.

Leithwood and Jantzi (1999, 2000) conducted two large-scale quantitative studies in separate but similar large Canadian school districts to explore the relationship between principal–teacher leadership and student engagement. Approximately 1,800 teachers responded to the

original and replication studies. Surveys were distributed to nearly 10,000 and 7,000 students, respectively. Response rates were high from teachers and students in both studies ranging from 71–100%. Teacher leadership did not demonstrate a significant relationship with student engagement in either study. Principal leadership demonstrated a significant but weak relationship to student engagement in both studies. However, principal and teacher leadership had a significant link to school organizational conditions. In turn, organizational conditions, purpose, and goals, in particular, had a small significant link to student engagement. Based on these results, it is possible that teacher leadership could have an indirect positive relationship with student engagement. Several limitations also exist with such a large-scale quantitative study. First, the researchers measured the variable based on school conditions rather than on classroom conditions. To preserve teacher anonymity, the districts would not allow the study to link individual teacher and student data. Had the researchers been able to link individual teacher and student data, they could have used hierarchal linear modeling to explore possible relationships and variation within the data. Instead, the researchers used path analysis with aggregated school-wide data, potentially limiting the results. Data were also combined across elementary and secondary school levels, not allowing for comparisons of the effects of principal and teacher leadership on students at each school level.

As stated, the teacher leadership research is mixed in terms of demonstrating a relationship between teacher leadership and improved student achievement, instruction, and school effectiveness. However, more than a handful of quantitative studies have pointed towards some indirect or direct positive effects of teacher leadership in these areas. Table 3 shows a summary of both the studies that have significant positive effects and those which have no significant positive effects.

Table 3

Links Between Teacher Leadership and Student Achievement, Instruction and School Effectiveness

Significant positive effects	No significant positive effects
Ngang et al. (2010)	Williams et al. (2015)
Seashore Louis et al. (2010)	Taylor & Bogotch (1994)
Smylie et al. (1996)	Leithwood & Jantzi (1999, 2000)
Marks & Louis (1997)	
Pounder et al. (1995)	
Leithwood & Mascall (2008)	

CHAPTER II

Methods

In this quantitative study, I investigated the extent teachers in American-sponsored overseas schools in Africa perceive that their schools support the development of teacher leadership. Additionally, in this study, I explored the extent teachers' perceptions of school level supports (organizational structure, professional development, time, recognition, role clarity, and school culture) correlate with the enactment of phases of teacher leadership in American-sponsored overseas schools in Africa. For this study, I operationalized teacher leadership into five phases on a continuum: (a) Phase 0, absence of teacher leadership; (b) Phase 1, formal leadership roles focused on administrative efficiency; (c) Phase 2, instructional leadership roles separate from classroom teaching; (d) Phase 3, collective teacher leadership; and (e) Phase 4, teacherpreneurship.

Research Questions

1. In American-sponsored overseas schools in Africa, what percentage of teachers report leadership at each of the following Levels 0, 1, 2, 3 and 4?
2. What is the average number of leadership activities reported by American-sponsored overseas school teachers in Africa?
3. To what extent do American-sponsored overseas school teachers in Africa desire to take on more teacher leadership activities?
4. In American-sponsored overseas schools in Africa, to what extent do teachers perceive the following supports to be in place for the development of teacher leadership?
    - organizational structure
    - professional development

- time
- recognition
- role clarity
- school culture

5. In American-sponsored overseas schools in Africa, what is the relationship between the perceived presence of supports and teachers' reported practice of Phases 0, 1, 2, 3, and 4 of teacher leadership? The supports I measured and analyzed are as follows:
    - organizational structure
    - professional development
    - time
    - recognition
    - role clarity
    - school culture
6. In American-sponsored overseas schools in Africa, what is the relationship between the perceived presence of supports and teachers' reported number of teacher leadership activities? The supports I measured and analyzed are as follows:
    - organizational structure
    - professional development
    - time
    - recognition
    - role clarity
    - school culture

Population and Sampling

Theoretical population. Ideally, in this study, I generalize teachers who working in Western and American-style schools worldwide. Within this population, I attempted to generalize the study findings to the teaching population in 193 American-sponsored overseas schools in 134 countries. These schools employ 18,092 professional staff and enroll 137,413 students. Of the professional staff, 7,571 are U.S. citizens, 4,923 are host-country citizens, and 5,598 are third-country citizens (U.S. Department of State, 2016). Later, 3 presents the sample population data in which I use the gradient of proximal similarity to analyze the generalizability and external validity of the findings (Trochim & Donnelly, 2008).

Accessible population. After removing the pilot school from the accessible population, the accessible population for this study was approximately 2,150 professional staff in 39 American-sponsored overseas schools on the continent of Africa. The group of 40 schools is located in 35 countries and enrolls 16,370 students. Of these professional staff, 866 are U.S. citizens, 512 are host-country citizens, and 847 are third-country citizens (U.S. Department of State, 2016).

For this research, I collected this demographic information to assist in comparing the study respondents (the sample) to the accessible population. I purposefully selected American-sponsored overseas schools in Africa as the accessible population. I also considered conducting the study on schools with membership in the Association of International Schools in Africa (AISA) or the global group of 193 American-sponsored overseas schools. However, American-sponsored overseas schools in Africa are a more homogenous group of international schools than these other groups of international schools, particularly within Africa. For example, schools belonging to AISA include 74 member schools in 34 countries, enrolling approximately 27,000

students and employing over 3,000 teachers. These schools share their membership in AISA, which requires U.S.-based accreditation, Council of International Schools (CIS) accreditation, or the IB authorization. This body of schools is slightly larger than the group of American-sponsored overseas schools in Africa; however, these schools vary more in other aspects, which makes generalization of any findings more challenging. For instance, these schools implement a range of curriculums including American, British, and IB. Additionally, some are religiously affiliated and a higher percentage of these schools are proprietary compared to those that the U.S. State Department assists (AISA, 2015a). Furthermore, some of the schools in AISA contain larger percentages of host-country students and teachers, many of which have a significantly different demographic population from the typical American-sponsored overseas school in Africa.

American-sponsored overseas schools in regions and continents also contain varying percentages of host-country, third-country, and U.S. citizens amongst their teachers and student bodies. Because I conducted this study on American-sponsored overseas schools in Africa, the generalizability of the findings has some limitations. However, conducting a study first on a smaller, more homogenous sample provided a first step in teacher leadership research within American-sponsored overseas schools in Africa. In this study, I have attempted to increase the understanding on this topic, which can be expanded later to include further studies on more heterogeneous populations such as AISA or the global population of American-sponsored overseas schools.

Sampling methodology. In this study, I targeted a population of approximately 2,150 teachers from 39 American-sponsored overseas schools on the continent of Africa. Since I

worked in three countries in Africa over several years, the study received a more than adequate participation rate by leveraging my personal contacts in the region.

In the study, I used a multistage census sampling methodology to recruit a sample from the overall population of teachers in American-sponsored overseas schools in Africa. First, I e-mailed all 39 school heads and asked them to distribute the questionnaire to all the teachers in their school (Appendices A and B). Teachers from 30 of 39 schools responded to the survey. Of the nine schools that did not have teacher representation in the survey, three school heads replied favorably to the initial e-mail request, each saying they sent or would send the survey to their teachers. One school head replied that he was not comfortable with distributing the survey to his teachers, and he declined to have his school participate in the survey. The other five school heads did not reply one way or another to the original or follow-up e-mails. I then sent every school head three e-mails including the original, a reminder, and one final e-mail announcing the closing of the survey. Eight of the nine nonparticipating schools were overwhelmingly smaller schools located in more isolated hardship postings. It is possible that lack of regular electricity or Internet connectivity were factors for these schools' nonparticipation. Therefore, in the end, this study was representative of American-sponsored overseas schools in Africa with the exception of smaller schools located in isolated, hardship postings. As such, one limitation of this study is that the findings will not generalize to the smaller, isolated schools in hardship postings.

Methods for increasing response rate. In this study, I relied on volunteers (i.e., school heads who were willing to participate), and within each school, specific teachers who were willing to participate. I took several steps to increase the survey response rate. First, I requested letters of support for the study from Mr. Thomas Shearer and Dr. Peter Bateman (Appendix C).

Mr. Shearer is the State Department Regional Education Officer for the Office of Overseas Schools. Dr. Peter Bateman serves as the AISA Executive Director. The State Department, through the Office of Overseas Schools, sponsors 40 schools in 35 countries in Africa, which are the exact same schools as the target accessible population. Mr. Shearer's support was instrumental in influencing American-sponsored overseas school heads to encourage their teachers to participate in the study. Dr. Peter Bateman also holds an influential position with a majority of the American-sponsored schools in Africa. AISA has a larger population of member schools in Africa; however, all of the 33 American-sponsored overseas schools in Sub-Saharan Africa are also members of AISA. The remaining eight schools are located in North Africa and are part of other regional organizations such as the Mediterranean Association of International Schools (MAIS) or the NESA. Mr. Shearer's and Dr. Bateman's support assisted with increased regional awareness and credibility for the study.

Another tactic I used to increase the response rate was to offer participants a chance at receiving a thank you gift (Wallen & Fraenkel, 2001). I offered study participants an equal chance at receiving 20 randomly distributed $50 thank you gift certificates to Amazon.com. The study had a required minimum of 192 participants. In the end, there were 268 completed surveys. Of the 268 completed surveys, 160 respondents applied for eligibility to be selected to receive a gift certificate. This means that each eligible participant had an equal 1-in-8 chance of receiving a thank you gift. The respondents had the option of sending a separate e-mail to be eligible for receiving a thank you gift. The e-mail address was provided in the questionnaire. E-mail addresses received were stored separately from other respondent data, and they were secured in a password-encrypted file. Mr. Tom Shearer, Regional Director of American-sponsored overseas schools in Africa, randomly selected the 20 respondents to receive a $50

Amazon thank you gift certificate. I e-mailed all the eligible participants two weeks after the closure of the survey to let them know that the thank you gift recipients had been selected. Selected individuals received a $50 Amazon e-voucher at the e-mail address they provided.

Research Instrument

I collected data using a questionnaire (Appendix D), referred to as the teacher leadership questionnaire (TLQ), to elicit information from teachers on individual descriptive data including their current and desired leadership activities. Additionally, I collected teacher perceptual data regarding the extent to which school level supports of teacher leadership are present in the teachers' schools. The survey instrument for this study was a questionnaire. I distributed the questionnaire using a web-based data collection service called SurveyMonkey. I constructed part of the questionnaire and adapted the other parts from the constructed teacher leadership questionnaires. I then tested content validity and reliability of the questionnaire before conducting the survey.

The survey instrument was comprised of three sections. The first section collected demographic and descriptive data on individual teachers and their schools. The second section collected information on teachers' current and desired leadership activities. The third section collected teacher perceptual data on six school level predictor variables hypothesized to support the development of teacher leadership.

Part I: Background information. Part I contained eight questions. The TLQ was an anonymous survey. To ensure anonymity, when I requested the 39 American-sponsored overseas school heads to distribute the questionnaire to their teachers, I assigned each school head with a randomly generated 3-digit number between 100 and 999 for their school. I used a random number generator from the Internet to assign the 3-digit numbers to each school. These

assigned numbers were stored in a separate location in a password-protected file. This allowed me to group responses by school for analyzing the data and to know the number and distribution of schools that responded from the population. Grouping school data by an assigned number allowed comparison of the study sample to the accessible population. Items 2 through 8 asked for the respondents' personal and background information including the following: their main job assignment (e.g., classroom teacher, full-time peer coach, librarian, etc.), all the grade levels they teach in, their nationality (according to the passport they use for employment), the countries where teachers completed their university degrees and teacher training, the number of years they have been working in the teaching profession, and the number of years they have been working at their current school. Item 2 allowed further analysis of each respondent's role to help determine their teacher leadership phase, particularly, any formal role that would distinguish them between Phases 1, 2, and 3 of teacher leadership. I analyzed the responses to Item 3 in the Results chapter of this study to determine how representative teacher leadership is at division levels of American-sponsored overseas schools in Africa. Additionally, this information may be useful for future research. Items 4 through 6 allowed comparison of the study sample's national and educational background to the accessible population. Items 7 through 8 provided data on respondents' total professional experience and years of experience at their current school. This provided additional general demographic background for the study, and the results may be useful for future research and analysis.

Part II: Teacher leadership. Part II contained Items 9–13. I adapted Item 9 from Sides (2010) who constructed this question based on the definitions of teacher leadership and types of activities described in the literature on teacher leadership (Katzenmeyer & Moller, 2009; Murphy, 2005; Silva et al., 2000). Data collected from Item 9 helped place respondents into

Phases 0 through 3 on teacher leadership in addition to helping to determine an overall intensity score of teacher leadership for each respondent. Additionally, Item 9 contained a contingency question, which asks respondents if they would desire to practice any leadership activities they are not currently practicing, and if so, to identify which activities they desire to practice. Item 10 lists Phase 4 teacher leadership activities based on definitions by Berry (2013) and Berry et al. (2013). Again, Item 10 contained a contingency question, which asked respondents if they would desire to practice any leadership activities they are not currently practicing, and if so, to identify which activities they desire to practice. Item 11 asked respondents if they received any stipend or remuneration for completing any of their leadership activities. Katzenmeyer and Moller (2009) argued that compensation might be a supporting factor for teacher leadership. Additionally, Sides (2010) recommended that future studies examine the potential relationship between financial remuneration and teacher leadership. Although this study excludes this predictor variable, the survey collected these data for use in a possible future study. Item 12 asked respondents if they have any release time from their teaching duties to perform their leadership activities. If they did have release time, they provided a response for the number of minutes provided per week. If they did not have release time, there was a contingency question, Item 13, asking if they would like release time for leadership activities. I copied Items 12 and 13 from Sides, which again, she developed based on definitions of teacher leadership by Katzenmeyer and Moller, as well as Silva et al. (2000).

Part III: School support for teacher leadership. Part III contained Items 14 through 20, which helped determine the extent the six-predictor variables supported the development of teacher leadership. The questionnaire asked respondents to answer a 6-point Likert scale (*strongly agree*, *agree*, *slightly agree*, *slightly disagree*, *disagree*, *strongly disagree*) on

statements listed under each predictor variable. The predictor variables were organizational structure, professional development, time, recognition, role clarity, and school culture. Organizational structure contained 10 statements, professional development contained 13 statements, time contained four statements, recognition contained six statements, role clarity contained six statements, and school culture contained 16 statements. Item 20 contained a question on whether any additional supports were necessary for teachers to add to their current leadership responsibilities. Additionally, there was an open response section where respondents could describe the specific supports desired. I copied or adapted most of the statements in Items 14 through 20 from survey instruments related to teacher leadership (Danielson, 2006; Katzenmeyer & Moller, 2005; Lambert, 2003; Williams et al. 2015).

Construct validity. This term refers to the degree to which the variable definitions in the study match the steps I take to measure them. Two of the subcomponents of construct validity are content validity and reliability (Trochim & Donnelly, 2008).

Content validity. I conducted a Delphi process (Appendix E) by asking three field experts to give feedback on whether the research instrument measured what was intended regarding teacher leadership. The field experts were Mrs. Bambi Betts, Dr. Peter Bateman, and Dr. Chris Muller.

Delphi panel biographies. Mrs. Bambi Betts, Director of the Principals' Training Center (PTC), also encompassing the Teachers' Training Center (TTC) and the Counselors' Training Center (CTC), an American citizen. The training centers provide quality professional development for aspiring and current international school leaders, counselors, and teachers. Mrs. Betts held superintendent or principal leadership positions at international schools in Venezuela and Portugal. Additionally, she has authored several articles on how to use educational research

to improve international schools. Particularly relevant to this study, the TTC offers several courses related to teacher leadership: curriculum design for international school teacher leaders; leadership tools for department heads and grade-level leaders; and instructional supervision for teacher leaders (Principals' Training Center, 2015a, 2015b). Mrs. Betts' practical leadership experience and her expertise on teacher leadership as a course developer and trainer on this topic were useful in critiquing whether the TLQ measured what was intended in regard to teacher leadership.

Dr. Peter Bateman, Executive Director of the AISA, is an Australian citizen with over 25 years of experience in international education, particularly in Africa. He holds a Ph.D. in Education from the Open University in the United Kingdom and works at the AISA, which serves its international school members on the continent by providing collaborative learning and professional development opportunities. Dr. Bateman has developed several professional development initiatives including online communities of practice, regional symposiums, and conferences based on 21st century differentiated learning principles (AISA, 2015b). In particular, under Dr. Bateman's vision and leadership, AISA created several communities of practice, two of which are relevant to this study on teacher leadership: (a) the Child Protection Working Group and (b) the Service Learning Working Group. The Child Protection group contains a team of teachers, counselors, and administrators who are leading the international school community in implementing child protection policies, procedures, and curricula. They published a Child Protection manual that many international schools are now using as principal resource in setting up their own child protection programs. The Service Learning group is a team of teachers who were some of the first teachers in a regional association of international schools to organize regional service learning symposiums for high school students. Other

international school regional associations have adapted and followed this model. Both communities of practice communicate regularly on digital platforms and meet during the academic year to continue to lead and further their causes. As such, both groups contained strong examples of Phases 3 and 4 teacher leaders, including teacher leaders from the AISA region who were real-life examples of leading within and beyond the classroom and contributing to a community of teacher learners and leaders. As the visionary for these teacher leader groups, Dr. Bateman offered valuable experience and expertise on the topic of teacher leadership.

Dr. Chris Muller, recently, Director of the Bonn International School in Germany, is a citizen of South Africa and Germany. Dr. Muller is operating as an independent consultant in international education. He was born and reared in Namibia. In addition to Germany, he has held leadership and teacher positions in South Africa, the United Kingdom, the United States, France, Romania, Tanzania, and Zambia. He earned his doctorate in Educational Leadership from Columbia University's Teacher's College in New York. Dr. Muller served on the board of the Council of International Schools. He is a member of the IB Heads Council while having significant experience working in IB schools. The IB believes in distributing organizational leadership and developing teachers as leaders as part of its core philosophy. In particular, the IB aims to develop Phase 3, collective teacher leadership. In addition to having served as a director, principal, and teacher in IB schools, Dr. Muller spent several years as an IB MYP teacher trainer and curriculum developer. Furthermore, Dr. Muller has presented at several conferences on how international schools should innovate into the future, steer away from conformity, and work collaboratively with teachers to offer students experiential and differentiated learning opportunities. He believes in trusting teachers as professionals to do what is best for their students. Dr. Muller's significant teaching and leadership experience, particularly in American-

sponsored overseas schools (Tanzania, Romania, and Zambia), were also relevant to this study. Additionally, I worked with Dr. Muller for four years in Zambia. During that time, I observed Dr. Muller's daily practice, planning, and leadership, which demonstrated practical implementation of what the literature claims that school heads and schools should do to best develop teacher leaders.

Delphi feedback form. With the request for feedback, I sent the definition of the five phases of teacher leadership to each expert. I asked the experts if they thought the survey items would measure teacher leadership according to the provided framework. I also asked the experts for any feedback to make the instrument clearer or more accurate. I requested that the Delphi participants rate each section of the questionnaire according to the following: (a) Yes, the item accurately measures the intended variable; (b) no, the item does not accurately measure the intended variable; and (c) provide suggested modifications (Appendix E).

Revisions from Delphi feedback. Several changes were made through the Delphi feedback process. All three panel experts suggested a few spelling and grammar edits throughout the survey which were implemented. In the first section on background information, as per advice from one panel expert for Question 2, I changed *full-time peer coach* to *full-time instructional coach* to be more consistent with the term more commonly used in international schools. In the background information section, another panel expert expressed concern about an implicit hierarchy in Question 4 with the original demographic terms used: (a) U.S. nationals, (b) host-country nationals, and (c) third-country nationals. The expert was concerned that non-U.S. nationals might unintentionally feel relegated. As a result, Question 4 was changed to "State your nationality according to the passport/citizenship you use for your current employment." Additionally, some countries use the terms university and college differently.

Based on this reminder from one expert, Question 5 was changed to "In what country(ies) did you complete your university/college degree? List all that apply."

As a result of feedback from panel experts on Part II of the questionnaire, leading service learning initiatives that other teachers take part in what was added to Item 9. Additionally, one expert thought there could be some confusion in Item 10 about the term *community organizer* and its varied interpretation by respondents. In this part of the item, educationally related community organizer was added for emphasis. One expert suggested breaking some of the components of Item 9 into more specific detail: (a) Design common assessments, (b) lead sessions in analysis of student learning data, (c) model instructional practice, and (d) contribute to the evaluation of teachers. However, due to the already extensive length of the survey and links to the literature review, these were not added at this time. These suggestions might be considerations for future research. From Item 10 feedback, I added three new leadership tasks: (a) external examiner, (b) serve as an accreditation team member, and (c) consult for another school in your area of expertise. These external leadership activities are somewhat common leadership opportunities in international schools, and therefore, they were included.

For Part III of the questionnaire, all the panel experts commented on some potential confusion to respondents from the change back and forth between the use of the first person singular, first person plural, third person singular, and third person plural with the nouns. As a result, I revised the section to use mostly the third person. However, I allowed a few exceptions where first person plural was purposefully kept to compare to other similar statements using the third person. One expert suggested adding teachers support team decisions publically. Some of the literature on teacher leadership supports this statement; therefore, I also added it to the questionnaire. Finally, one expert also mentioned the potential confusion for using the term

principal, as this can mean a school head or a divisional head, depending on the national background of the reader. As such, all references to principals changed to *school leadership*, *school leaders*, or *administrators* to ensure similar cross-cultural understanding from the respondents.

I revised the original questionnaire with the aforementioned changes and sent it back to the three experts for a second review with a brief explanation of the changes. No changes occurred after the second Delphi round, and I sent the final version to a pilot sample.

Pilot study. The pilot study questionnaire asked respondents to provide information about clarity of the survey, time to take the survey, and suggestions for making the survey more user-friendly (Appendix F). For the pilot study, I distributed the questionnaire along with a cover letter (Appendix G) to 70 teachers at my current school of employment. Forty-four teachers started the survey, and 42 completed the questionnaire to the end. I excluded this school and its 70 teachers from the accessible population in the final study. In addition to the normal questionnaire items, the pilot study questionnaire asked respondents: (a) How many minutes did this survey take you to complete, (b) were any questions or sections unclear, and (c) what suggestions, if any, do you have for making the survey clearer or more user-friendly? Respondents ranged from 8 to 25 minutes to complete the survey with most averaging between 12–16 minutes. No major themes or suggestions emerged from the question soliciting suggestions on making the survey clearer.

Reliability. This term refers to the consistency of responses within a particular scale. I conducted the following tests on the pilot study data. I conducted a series of data reduction steps from Part III of the questionnaire to create each scale. To do this, I calculated six Cronbach alphas: (a) Organizational Structure, (b) Professional Development, (c) Time, (d) Recognition,

(e) Role Clarity, and (f) School Culture. A criterion for a reliable scale is a Cronbach alpha of .7 or higher (Norušis, 1994). All of the scales exceeded the criterion of .7 on the Cronbach alpha coefficient. Therefore, they qualified as reliable. Table 4 shows the list of the scales, number of items, and Cronbach alphas for each scale.

Table 4

Scales, Number of Items, and Cronbach Alphas

Scale	Number of items	Cronbach alpha
Organizational Structure	10	.92
Professional Development	13	.94
Time	4	.89
Recognition	6	.86
Role Clarity	6	.93
School Culture	16	.91

Component validity. As the survey instrument was new, it needed to be validated. I used Kaiser-Meyer-Okin (KMO) and principal components analysis (PCA) statistics to test the component validity of the questionnaire after the data collection on the final survey. KMOs higher than .5 and components with a variance of more than 50% are considered acceptable for validation (Norušis, 1994).

Organizational structure. The PCA solution for organizational structure was marvelous as the KMO reached .91. However, two subcomponents emerged rather than the originally hypothesized one-dimensional model. Since the unrotated solution did not clearly identify two separate subcomponents, I conducted a varimax rotation to highlight the two subcomponents. As shown in Table 5, the two subcomponents together accounted for 69% of the variance.

Table 5

Total Variance Explained for Organizational Structure and its Subcomponents

	Initial eigenvalues	Rotation sums of squared loadings		
Component	Total	Total	Variance (%)	Cumulative (%)
1	5.724	3.476	34.756	34.76
2	1.170	3.419	34.186	**68.94**
3	.765			
4	.510			
5	.459			
6	.373			
7	.310			
8	.248			
9	.237			
10	.205			

The component loadings for the first subcomponent ranged from .849 to .766 as shown in Table 6. "Teachers are free to make judgments about what is best for their students," had the highest loading of .849 in Component 1. Items 1 to 4 appeared to reveal a theme related to teacher autonomy with teaching methods and decisions regarding students. The component loadings for the second subcomponent ranged from .848 to .645. "We try to reach consensus before making important decisions," had the highest loading of .848 in the second subcomponent. Collaborative leadership and shared decision-making emerged as the subcomponent for Items 5 to 10.

Table 6

Rotated Component Matrix for Organizational Structure

	Component	
Organizational structure	1	2
Teachers are free to make judgements about what is best for their students.	.849	
Teachers have the freedom to make choices about the use of time and resources.	.807	
Teachers are encouraged to take initiative to make improvements for students.	.782	
Teachers can be innovative if they choose to be.	.766	
We try to reach consensus before making important decisions.		.848
Administrators seek teachers' opinions and ideas.		.790
Teachers and administrators share decisions about how time is used and how the school is organized.		.682
School leaders, faculty, and staff work as a team.		.680
Teachers participate in screening and selecting new faculty or staff.		.677
Teachers have input into developing a vision for our school and its future.		.645

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Professional development. The PCA solution for professional development had a KMO of .92, meeting the level of marvelous. This component was one-dimensional as originally hypothesized, and the component explained 60% of the variance as shown in Table 7.

Table 7

Total Variance Explained for Professional Development

	Initial eigenvalues	Extraction sums of squared loadings		
Component	Total	Total	Variance (%)	Cumulative (%)
1	7.832	7.832	60.249	**60.25**
2	.912			
3	.844			

4	.723
5	.555
6	.443
7	.379
8	.335
9	.240
10	.215
11	.205
12	.175
13	.142

The component loadings for professional development ranged from .848 to .669 as displayed in Table 8. "Teachers engage each other in opportunities to lead" had the highest loading of .848. Items 1 to 12 all described actions teachers take in to lead or participate in professional development. The item with the lowest loading of .669 was "Administrators actively support the professional development of faculty and staff," which was the only item without the teacher as the main subject in the statement.

Table 8

Component Matrix for Professional Development

	Component
Professional development	1
Teachers engage each other in opportunities to lead.	.848
Teachers have professional development opportunities to learn teacher leadership skills.	.840
Teachers share ideas and strategies they have gained with each other.	.822
Teachers model leadership skills.	.801
Teachers facilitate analysis of research to improve student learning.	.788
Teachers gain new knowledge and skills through staff development and professional reading.	.781
Teachers work together with the school administrators to plan professional learning that is linked with the school improvement goals.	.780
Teachers direct professional learning activities that correlate with the school's improvement goals.	.778

Professional development	Component 1
Teachers actively support the professional learning of other teachers by coaching and/or mentoring.	.771
Teachers model effective instructional practices for colleagues.	.767
Teachers participate in action research to improve student learning.	.731
Teachers seek support from professionals who have specialized experience to design learning experiences (e.g., special educators, media specialists, reading coaches, ESL specialists.	.693
Administrators actively support the professional development of faculty and staff.	.669

Time. The PCA solution for time reached a KMO of .79, meeting the level of meritorious. This component also was one-dimensional as originally hypothesized, and the component accounted for 69% of the variance as shown in Table 9.

Table 9

Total Variance Explained for Time

	Initial eigenvalues	Extraction sums of squared loadings		
Component	Total	Total	Variance (%)	Cumulative (%)
1	2.746	2.746	68.638	**68.64**
2	.594			
3	.413			
4	.248			

Table 10 shows the component loadings for time ranged from .896 to .732. "The school makes time for teacher development and learning to occur" had the highest loading of .896. The item with the lowest loading (.732) was "faculty meeting time is used for discussions and problem-solving." All of the items from this section of the questionnaire relate to time for collaboration. The study of time also included teacher release time to conduct teacher leadership

activities; however, this aspect of time was addressed in Part I of the survey, which asked teachers if they had release time to carry out leadership duties.

Table 10

Component Matrix for Time

	Component
Time	1
The school makes time for teacher development and learning to occur (i.e., faculty meetings, ad hoc groups, teams).	.896
The school makes time for ongoing reflection (i.e., journaling, peer coaching, collaborative planning.	.866
Teachers have regular time allocated for collaborative planning and problem-solving in teams or departments.	.811
Faculty meeting time is used for discussions and problem-solving.	.732

Recognition. The PCA solution for recognition reached a KMO of .83, meeting the level of meritorious. This component was one-dimensional as originally hypothesized, and the component accounted for 67% of the variance as shown in Table 11.

Table 11

Total Variance Explained for Recognition

	Initial eigenvalues	Extraction sums of squared loadings		
Component	Total	Total	Variance (%)	Cumulative (%)
1	4.041	4.041	67.344	**67.34**
2	.953			
3	.417			
4	.247			
5	.218			
6	.125			

Table 12 shows the component loadings for recognition ranged from .887 to .683. Although the component was one-dimensional, a couple of patterns emerged. Items 1 through 4

all had similarly high loadings (.887 to .850), and all four items related in some aspect to how teachers are recognized by the school leadership. Items 5 and 6 had the lowest loadings (.709 and .683), and these items both related to how teachers recognize each other.

Table 12

Component Matrix for Recognition

	Component
Recognition	1
Teachers' ideas and opinions are respected and valued.	.887
The administrators recognize teachers' professional skills and competence.	.886
School leadership recognizes faculty and staff for their work.	.883
The administrators have confidence in the teachers.	.850
Teachers celebrate each other's successes.	.709
Teachers recognize each other's professional skills and competence.	.683

Role clarity. The PCA solution for role clarity reached a KMO of .87, meeting the level of meritorious. This component was one-dimensional as originally hypothesized, and the component accounted for 71% of the variance as shown below in Table 13.

Table 13

Total Variance Explained for Role Clarity

	Initial eigenvalues	Extraction sums of squared loadings		
Component	Total	Total	Variance (%)	Cumulative (%)
1	4.271	4.271	71.191	**71.19**
2	.594			
3	.496			
4	.316			
5	.183			
6	.140			

Table 14 shows the component loadings for role clarity ranged from .901 to .701 and referred to clear expectations of teachers and teacher leaders. Faculty roles and responsibilities had the highest loading of .901, and in fact, demonstrated the highest loading of any item from

any of the components. The first four items with the highest loadings in role clarity also all related to how roles were defined and communicated. Item 5 showed the extent teachers knew about their ability to take on leadership roles. Although Item 6 was somewhat similar to the first four items in terms of defining the teachers' roles, the phrasing was significantly different and included roles in four settings (classroom, school, community, and profession).

Table 14

Component Matrix for Role Clarity

	Component
Role clarity	1
Faculty roles and responsibilities are clearly communicated.	.901
The principal or school head lets staff members know what is expected of them.	.884
Teachers know what is expected of them.	.882
Formal teacher leadership roles are clearly defined and everyone understands the roles and responsibilities of these teacher leaders.	.871
Teachers know that they can take on leadership roles.	.807
Teachers' roles include attention to their classrooms, the school, the community, and the profession.	.701

School culture. The PCA solution for school culture reached a KMO of .94, meeting the level of marvelous. However, like in organizational structure, the analysis found two subcomponents instead of the originally hypothesized one-dimensional model. Since the unrotated solution did not clearly identify two distinct subcomponents, the researcher conducted a varimax rotation to find the two subcomponents. The two subcomponents together accounted for 65% of the variance as displayed in Table 15.

Table 15

Total Variance Explained for School Culture

	Initial eigenvalues	Rotation sums of squared loadings		
Component	Total	Total	Variance (%)	Cumulative (%)
1	9.120	5.846	36.540	36.540
2	1.325	4.599	28.745	**65.29**
3	.977			
4	.674			
5	.612			
6	.512			
7	.448			
8	.398			
9	.350			
10	.310			
11	.279			
12	.264			
13	.235			
14	.188			
15	.168			
16	.138			

Table 16 shows the component loadings for the first subcomponent ranged from .808 to .551. "Teachers consult with other teachers when addressing student learning challenges" had the highest loading of .808 in subcomponent one. "Teachers support one another in their teaching practice" emerged as the theme of Items 1 through 10 in subcomponent one. The component loadings for the second subcomponent ranged from .810 to .593. "School leaders encourage teachers to take on leadership roles" had the highest loading of .848 in the second subcomponent. The next highest loading, with .789, was "Administrators try hard to help teachers be successful." The third highest loading was "Everybody talks freely and openly about feelings and opinions they have" (.771). Trust, between teachers and administrators and amongst teachers themselves, emerged as the second subcomponent for Items 11 through 16.

Table 16

Rotated Component Matrix for School Culture

School culture	Component 1	Component 2
Teachers consult with other teachers when addressing student learning challenges.	.808	
Teachers try hard to help other teachers be successful.	.801	
Teachers are supportive of each other personally and professionally.	.779	
Teachers engage in reflective dialogue to improve teaching.	.757	
Teachers respond to their own and others' needs as they advance shared goals.	.745	
Teachers create an inclusive culture where diverse perspectives are welcomed.	.722	
Teachers encourage each other to take on leadership roles.	.684	
Teachers engage colleagues in conversations about student learning data.	.635	
Teachers observe other teachers' classroom instruction to improve student learning.	.601	
Teachers and staff focus most conversations on students.	.551	
School leaders encourage teachers to take on leadership roles.		.810
Administrators try hard to help teachers be successful.		.789
Everybody talks freely and openly about feelings and opinions they have.		.771
Teachers are encouraged to take risks.		.767
When things go wrong, we try not to blame, but talk about ways to do better next time.		.764
Teachers support team decisions publicly.		.593

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Data Analysis

Table 17 shows the methods I used to measure each variable in the study. Teacher was the unit of analysis. The school was used as a control variable, leveling the playing field by eliminating any differences linked to the variable of school. I used the data from the survey instrument to assess the respondents' highest achieved phase of teacher leadership, to compute

their overall intensity of teacher leadership activities, and to identify which supporting variables are more likely to predict higher levels of teacher leadership.

Table 17

List of Variables of the Study and the Method to Measure Each Variable

Variable	Method to measure the variable
Assessment of Teacher Leadership Phase	1. If the respondent checked off any Phase 4 activities (Items 10a–10p on TLQ), the respondent was categorized at Phase 4 teacher leadership. 2. If the respondent did not check off any Phase 4 activities, I looked to see if the respondent checked off any Phase 3 activities (Items 9k–9r on TLQ). If so, I categorized the respondent at Phase 3 teacher leadership. 3. If the respondent did not check off any Phase 3 activities, I looked to see if the respondent checked off any Phase 2 activities (Items 9f–9j on TLQ). If so, I categorized the respondent at Phase 2 teacher leadership. 4. If the respondent did not check off any Phase 2 activities, I looked to see if the respondent checked off any Phase 1 activities (Items 9a–9e on TLQ). If so, I categorized the respondent at Phase 1 teacher leadership. 5. If the respondent did not check off any Phase 1 activities, I categorized the respondent at Phase 0 teacher leadership.
Assessment of the Intensity of Teacher Leadership	Sum total of all activities the respondent checked in Items 9 and 10 of the TLQ. The value of each item checked counts as one.
Supports for Teacher Leadership	First, I conducted a PCA to confirm that all the items in each area of support clustered in the predicted groupings. The PCA mostly confirmed the predicted item groupings. Organizational structure and school culture each had two subcomponents. Therefore, I created eight mean scores, the six originally hypothesized predictor variables with the additional subcomponents. All items loaded at .5 or higher, therefore I kept all items on the scale. For example, score one was computed as the mean score for the 10 items listed under organizational structure. Score two was computed as the mean score for the 13 items listed under professional development. Score three was computed as the mean score for the 4 items listed under time, etc.

Table 18 shows the data sources and methods of analyses for each of the study's six conceptual research questions. The table identifies particular items on the questionnaire, which match each research question. Methods of analyses include descriptive and correlational statistics.

Table 18

Conceptual Research Questions, Their Data Sources, and Methods of Analyses

Conceptual research question	Data source	Method of analysis
1. In American-sponsored overseas schools in Africa, what percentage of teachers report leadership at each of the following Levels 0, 1, 2, 3, and 4?	TLQ assessment of teacher leadership phase.	Frequency and percentage of teachers at each phase of teacher leadership (0–4)
2. What is the average number of leadership activities reported by American-sponsored overseas school teachers in Africa?	TLQ assessment of intensity of teacher leadership.	Mean and standard deviation of the intensity teacher leadership score.
3. To what extent do American-sponsored overseas school teachers in Africa desire to take on more teacher leadership activities?	Items 9 and 10 of the TLQ.	1. Frequency and percentage of teachers who would like to take on more teacher leadership activities. 2. For those who want more teacher leadership activities, I reported the mean and standard deviation for the number of additional activities they desire.
4. In American-sponsored overseas schools in Africa, to what extent do teachers perceive the following supports to be in place for the development of teacher leadership? a. organizational structure b. professional development c. time d. recognition e. role clarity	Eight scores from Part III of the TLQ.	I reported the means and standard deviations of each of the eight scores.

Conceptual research question	Data source	Method of analysis
f. school culture		
5. In American-sponsored overseas schools in Africa, what is the relationship between the perceived presence of supports and teachers' reported practice of Phases 0, 1, 2, 3, and 4 of teacher leadership? The supports measured and analyzed are as follows: a. organizational structure b. professional development c. time d. recognition e. role clarity f. school culture	1. Assessment of teacher leadership phase on the TLQ. 2. Eight scores from Part III of the TLQ.	I tested the assumptions of the data for conducting multiple regression. Since the data did not meet the assumptions, I conducted the multinomial logistic regression, but there was a problem with type 2 error due to the low power of the tests. Then I tried a multivariate analysis of variance (MANOVA) as a correlational model (not as a predictive model). The assumptions of the MANOVA were met. Therefore, I proceeded with the MANOVA.
6. In American-sponsored overseas schools in Africa, what is the relationship between the perceived presence of supports and teachers' reported number of teacher leadership activities? The supports measured and analyzed are as follows: a. organizational structure b. professional development c. time d. recognition e. role clarity f. school culture	1. Assessment of intensity of teacher leadership on the TLQ. 2. Six scores from Part III of the TLQ.	I computed multiple regression with the eight scores from Part III as the predictors and the intensity of teacher leadership score as the outcome.

I analyzed data from the teacher survey results using descriptive statistics, MANOVA, and regression techniques. In educational research, questionnaires are the most common instrument used to collect data (Isaac & Michael, 1997). Regression is a technique used to identify a correlation or a prediction of an outcome variable from one or more predictor variables (Glass & Hopkins, 1996). In this study, two ways of measuring teacher leadership (an assessment of teacher leadership phase and an intensity of teacher leadership score) initially made up the outcome variables. However, in the end, for conceptual Research Question 5, I had to use a correlational model and could not specifically identify either of the variables as predictors or outcomes.

The literature supports, theoretically and empirically, six components that support the development of teacher leadership. The predictor variables for this study originally comprised the following six components: organizational structure, professional development, time, recognition, role clarity, and school culture. After computing the principal components analysis, organizational structure was divided into two subcomponents: (a) teacher autonomy with pedagogy and decisions regarding students; and (b) collaborative leadership and shared decision-making; and school culture was divided into two subcomponents: (a) teachers' support of one another with teaching practice, and (b) trust amongst teachers and between teachers and administrators.

CHAPTER III

Results

The purpose of this study was to examine the extent teachers in American-sponsored overseas schools in Africa perceive that their schools support the development of teacher leadership. Additionally, in this study, I explored the extent teachers' perceptions of school level supports (organizational structure, professional development, time, recognition, role clarity, and school culture) are correlated with the enactment of phases and levels of intensity of teacher leadership in American-sponsored overseas schools in Africa. The following research questions guided the statistical methods and data analysis:

1. In American-sponsored overseas schools in Africa, what percentage of teachers report leadership at each of the following Levels 0, 1, 2, 3, and 4?
2. What is the average number of leadership activities reported by American-sponsored overseas school teachers in Africa?
3. To what extent do American-sponsored overseas school teachers in Africa desire to take on more teacher leadership activities?
4. In American-sponsored overseas schools in Africa, to what extent do teachers perceive the following supports (organizational structure, professional development, time, recognition, role clarity, and school culture) to be in place for the development of teacher leadership?
5. In American-sponsored overseas schools in Africa, what is the relationship between the perceived presence of supports and teachers' reported practice of Phases 0, 1, 2, 3, and 4 of teacher leadership? The supports I measured and analyzed are organizational structure, professional development, time, recognition, and role clarity.

6. In American-sponsored overseas schools in Africa, what is the relationship between the perceived presence of supports and teachers' reported number of teacher leadership activities? The supports I measured and analyzed are organizational structure, professional development, time, recognition, and role clarity.

Sample Description

Represented in the sample of teachers who completed the first two parts of the questionnaire were 285 teachers from 30 schools. As the researcher, I assigned the School ID numbers randomly. Table 19 shows the frequency and percentage of teachers participating at each school. Therefore, for example, four schools had only one teacher reporting; two schools had three teachers reporting; three schools had four teachers reporting, etc. Schools from the sample ranged from small schools, with as few as five teachers and fewer than 20 students, to large schools with over 200 teachers and more than 1,000 students. Of the 30 participating schools, teacher response rates ranged from 1.4% to 75%.

Table 19

Frequency and Percentage of Participating Teachers in Each School

Random school ID number	Frequency of teachers in each school	Total number of eligible teachers in each school	Teachers responding in each school (%)
507	1	58	1.7
510	1	70	1.4
565	1	45	2.2
651	1	23	4.3
462	3	20	5.0
774	3	4	75.0
495	4	125	3.2
511	4	13	30.8
938	4	58	6.9
777	5	16	31.3

Random school ID number	Frequency of teachers in each school	Total number of eligible teachers in each school	Teachers responding in each school (%)
451	6	40	15.0
309	7	90	7.8
466	7	31	22.6
615	7	40	17.5
834	7	31	22.6
135	8	65	12.3
976	8	63	12.7
518	9	61	14.8
933	9	23	39.1
631	11	88	12.5
570	12	68	17.6
361	13	66	19.7
674	13	44	29.5
590	14	91	11.0
425	17	132	12.9
839	19	102	18.6
572	20	75	26.7
820	22	117	18.8
704	24	200	12.0
725	25	71	35.2

Table 20 shows the number and percentage of participating schools from the number of schools eligible to participate in the study. Countries were classified into regions in Africa according to the United Nations Statistics Division (2013). Thirty of 39 (77%) of eligible schools participated. Northern Africa and Southern Africa had the highest participation rates with 100% participation. Eastern Africa had the largest number of schools participating with eight schools. Central African schools had the lowest participation rate (40%) and number of participating schools (2). Of the nine nonparticipating schools, three of the school heads responded that they sent out the survey, one school head declined to distribute the survey, and the remaining five school heads did not respond to the three e-mailed requests to distribute the survey. Eight of the nine nonparticipating schools were small schools in lesser developed

countries where slow Internet and unstable electricity supply could have limited participation in the survey.

Table 20

Number of Eligible Schools Participating or Not Participating in Study from African Regions

Regions	Number of eligible schools for participation in study	Number of participating schools	Number of eligible nonparticipating schools	Eligible schools participating (%)
Northern Africa	6	6	0	100
Western Africa	13	8	5	72
Eastern Africa	10	9	1	91
Central Africa	5	2	3	40
Southern Africa	5	5	0	100
Total	39	30	9	77

I conducted an analysis of variance (ANOVA) to test whether there were mean differences across schools on average number of leadership activities reported by teachers. Table 21 shows no correlation between the number of leadership activities and school.

Table 21

Evidence of No Correlation Between Number of Leadership Activities and School

Source	*df*	*F*	Sig.
Corrected model	29	1.20	.230
Intercept	1	477.49	.000
School ID	29	1.20	.230
Error	255		
Total	285		
Corrected total	284		

I conducted an ANOVA to test whether there were mean differences across schools on the level of teacher leadership reported. Table 22 shows no correlation between the level of teacher leadership and school.

Table 22

Evidence of No Correlation Between Level of Teacher Leadership and School

Source	*df*	*F*	Sig.
Corrected model	29	1.09	.349
Intercept	1	3454.69	.000
School ID	29	1.09	.349
Error	255		
Total	285		
Corrected total	284		

Number of years in teaching. Of the 305 teachers who started the survey, on average, they had been teaching for 14.89 years with a standard deviation of 8.42. Of the 268 teachers who completed all three sections of the questionnaire, on average, they had been teaching for 15.12 years with a standard deviation of 8.29. Therefore, the teachers who completed the questionnaire resemble the entire group who started the survey on the variable "years of teaching." The State Department Office of Overseas Schools does not have similar comparative data for the entire population of American-sponsored overseas schools in Africa. However, these data will help with comparisons to future studies. Additionally, these data may be used in a future study to test for relationships between total numbers of years of teaching experience and teacher leadership.

Number of years at current school. Of the 305 teachers who started the survey, on average, they had been teaching at their current school for 3.9 years with a standard deviation of 3.85. Of the 268 teachers who completed all three sections of the questionnaire, on average, they had been teaching at their current school for 3.76 years with a standard deviation of 3.53.

Therefore, the group of teachers who completed the questionnaire resembled the entire group who had started the questionnaire on "years teaching at your current school." The State Department Office of Overseas Schools does not have similar comparative data for the entire population of American-sponsored overseas schools in Africa. However, these data can be helpful for comparisons to future studies. Additionally, these data may be useful for future study to test for relationships between total numbers of years of a teacher's school employment and teacher leadership.

Grade levels taught. Table 23 shows the frequency and percentage of teachers who teach at divisional levels of the school. Figure 1 is a visual representation of the frequency of teacher participants from each school division. Where possible, I grouped teachers in separate elementary, middle, and high school divisions. Some teachers had assignments covering multiple divisions, especially in smaller schools. I grouped these teachers into (a) elementary and middle school; (b) middle and high school; or (c) elementary, middle, and high school. Elementary teachers made up the largest group (107) and percentage (39.9%). Teachers who teach in elementary and middle school made up the smallest group (4) and percentage (1.5%).

The State Department Office of Overseas Schools does not have similar comparative data for the entire population of American-sponsored overseas schools in Africa. However, one can assume by looking at the frequency and percentage of teachers in the three major divisions that they are representative of the accessible population. For example, elementary school has six grade levels; high school has four grade levels; and middle school has three grade levels. The number of actual responses represents a reasonable proportion of teachers from each division when compared to distribution of grade levels in each division.

Additionally, studies (Sides, 2010; Stone et al., 1997) have shown the differences in the performance of teacher leadership activities at school levels (i.e., elementary teachers, middle school teachers, and high school teachers). These data can also be helpful with comparisons to past and future studies. In particular, these data may be useful for future study to test for relationships between a teacher's school level assignment and teacher leadership.

Table 23

Frequency and Percentage of Teachers Who Taught at Each Grade Level

	Grade level	Frequency	%	Valid (%)	Cumulative (%)
Valid	Elementary (PK-5)	107	39.9	40.2	40.2
	Middle School (6-8)	42	15.7	15.8	56.0
	High School (9-12)	54	20.1	20.3	76.3
	Elementary and Middle school (PK-8)	4	1.5	1.5	77.8
	Middle and High School (6-12)	47	17.5	17.7	95.5
	Elementary, Middle, and High School (PK-12)	12	4.5	4.5	100.0
	Total	266	99.3	100.0	
Missing	System	2	.7		
Total		268	100.0		

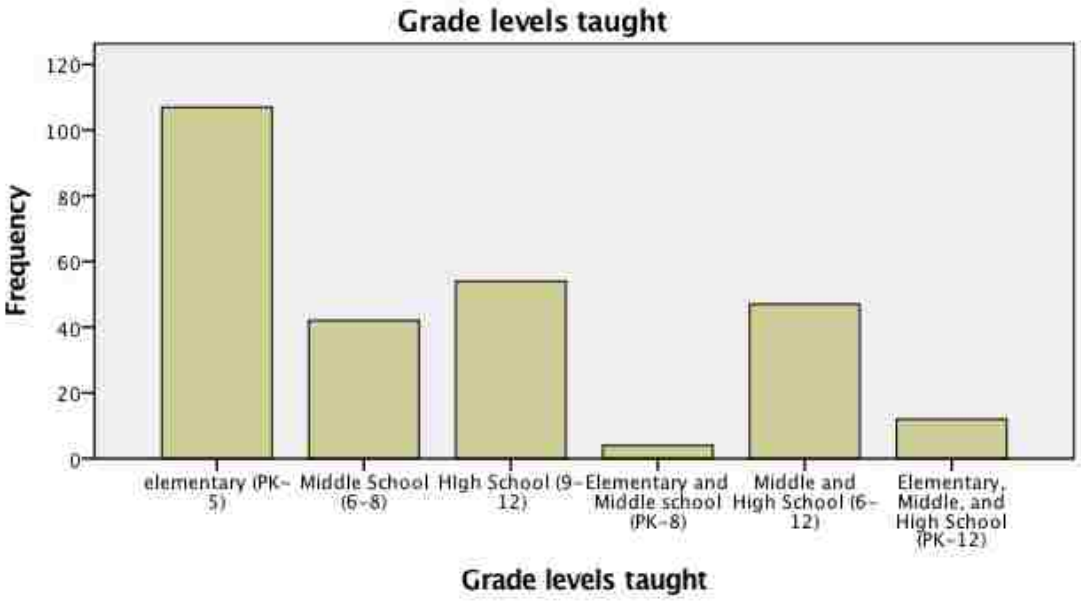

Figure 1. A bar graph showing the frequency of teachers who taught at each grade level.

Nationality on passport. The State Department of Overseas Schools (2016) provides demographic statistics for their schools in groups labeled U.S. citizens, host-country citizens, and third-country citizens. The original survey question reflected these available statistics. Due to some Delphi panel experts' concerns about unintended harm caused towards non-U.S. citizen study participants, I changed the original survey question to ask for the teacher's passport used for employment. However, it is possible to use logic to make relatively close estimates comparing the sample to the theoretical and accessible populations.

For the group of respondents who completed all three sections of the questionnaire, 145/268 or 54% is composed of U.S. citizens. This compares to 7571/18092 or 42% U.S. citizens in the theoretical population. These percentages are close; however, U.S. citizens are slightly overrepresented in the sample. One can make a similar argument with the accessible population. For the accessible population, 866/2225 or 39% are U.S. citizens. In the sample,

54% were U.S. citizens. Therefore, again, U.S. citizens are somewhat overrepresented in the sample.

To compare the African and other citizens groups to host-country and third-country demographics, one has to assume that the African sample is slightly larger than it would be if it contained only host-country citizens as some African nationals work outside of their country. The opposite is true for comparing the other citizens group to third-country nationals. The other citizens group will be slightly smaller than it would be if it were categorized as third-country nationals, as it is likely missing some African nationals who are from other countries. Considering this, one can observe that 34/168 or 12.7% of the sample is African. This compares to the theoretical population (4,923/18,092; 27%) and accessible population (512/2,225; 23%). Therefore, African or host-country citizens are slightly underrepresented in the sample. On the other hand, other citizens make up 88/268 or 38% of the sample. This compares to third-country nationals in the theoretical population (5,598; 31%) and accessible population (847/2,225; 38%). Although the "other citizens" group represents slightly fewer teachers than it would if it had included African citizens working in other countries; the difference would be minimal. Therefore, the number of other citizens in the sample closely represents the theoretical and accessible populations. Table 24 shows the frequency and percentage of teachers from each passport group in the sample. Figure 2 represents the frequency of each passport group in the sample.

Table 24

Frequency and Percentage of Teachers in Each Passport Group

		Frequency	%	Valid	Cumulative
				%	
Valid	Africa	34	12.7	12.7	12.7
	Other	88	32.8	33.0	45.7
	USA	145	54.1	54.3	100.0
	Total	267	99.6	100.0	
Missing	.	1	.4		
Total		268	100.0		

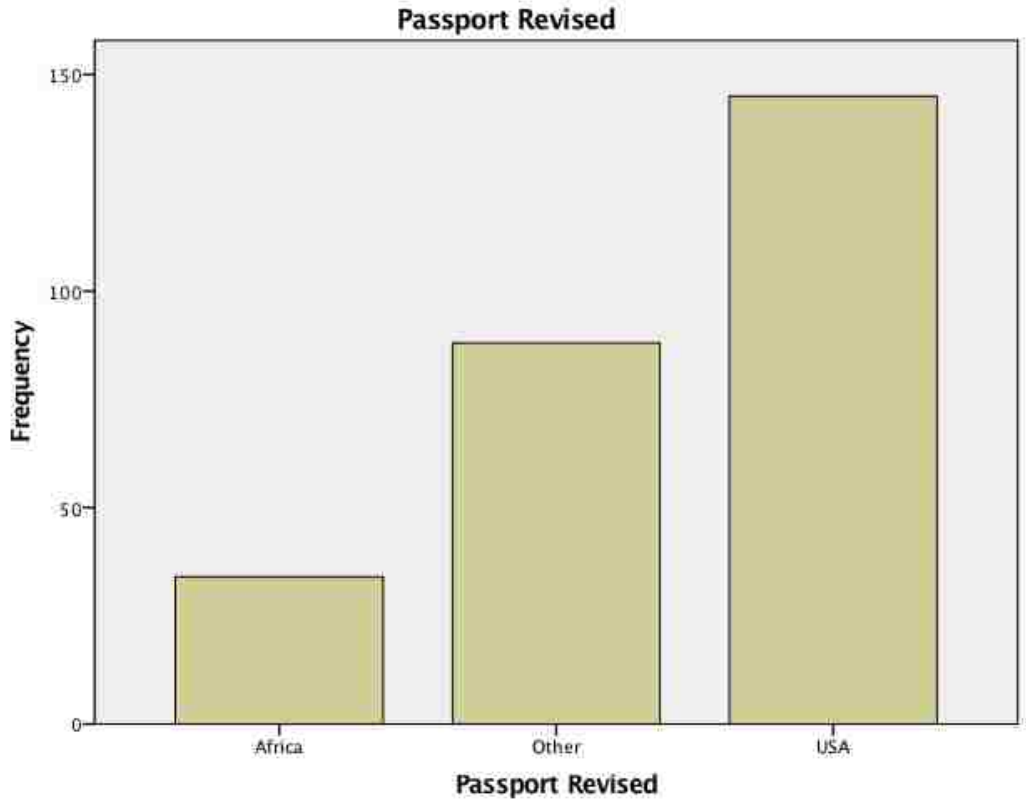

Figure 2. A bar graph of the frequency of teachers in each passport group.

External validity. This term refers to the extent to which the sample represents the accessible population and, therefore, the extent to which the results can be generalized to the accessible population. In this study, I examined external validity through the number and

percentage of schools participating from American-sponsored overseas schools from the total group of schools in Africa and from regions within Africa. Additionally, I compared the nationalities of teachers in the sample to the accessible population. These comparisons demonstrated similarity between the sample and the accessible population, allowing generalizability of the findings to teachers and schools in Africa and possibly to some American-sponsored overseas schools or international schools with similar teacher demographics in developing countries outside of Africa.

Limitations to external validity. The findings of this study may have the following limitations. First, a questionnaire as an instrument has common limitations related to the volunteer nature of participation and due to self-reporting of the respondents. In general, survey methodologies rely on people who are willing to volunteer and follow through on answering a survey. Relying on volunteers can lead to overenthusiastic responses on surveys, or can inadvertently encourage respondents to reply based on what they think the researcher seeks as a correct answer (Isaac & Michael, 1997). This study relied on volunteers (i.e., school heads) who were willing to participate, and within each school, specific teachers who were willing to participate. Teachers in this sample reported very high levels of teacher leadership compared to what the literature on teacher leadership normally reports, which has many possible explanations. However, related to relying on volunteers and the impact on external validity, it is possible that the teachers that responded to the survey reported high levels of leadership to look good in the results. Also, school heads could possibly restrict whom they sent the questionnaire too, or if they know they do not foster teacher leadership, they may have chosen not to send out the questionnaire to their teachers in the first place. Additionally, it is possible that a survey on teacher leadership interested teachers who already exhibit more teacher leadership as opposed to

teachers who are less interested in teacher leadership, resulting in an unusually high report of leadership from teachers.

Second, the return rates could have limited the generalizability or external validity of the findings. Approximately 2,150 teachers in 39 schools were eligible for participation in the study. The goal was to recruit as many teachers as possible from the 39 eligible schools to complete the survey. The minimum number of participants necessary for the study was 192 (Kraemer & Thiemann, 1987). In the end, the study received 268 completed questionnaires. Therefore, approximately 12.5% (268/2150) of the accessible population completed all three sections of the questionnaire. 285 teachers (or 13.3%) completed the first two parts of the questionnaire. At the school level, 30/39 participated in the survey resulting in a 77% response rate. This represented a large majority of the accessible population on the school level, adding strength to the external validity. Of the 30 participating schools, teacher response rates within each school ranged from 1.4% to 75%.

Data Analysis

Question 1. In American-sponsored overseas schools in Africa, what percentage of teachers report leadership at Levels 0, 1, 2, 3, and 4? For this question, I labeled teachers at the highest teacher leader phase, as indicated in the acts of teacher leadership they currently perform while employed at their school. Table 25 shows the descriptive data regarding the frequency and percentage of teachers at each of their highest leadership levels. A majority of teachers (176/285 or 57.7%) reported performing at least one Phase 4 teacher leadership activity. On the other hand, only one teacher (.4%) responded that he performed no leadership activities.

Table 25

Frequency and Percentage of Teachers at Each Leadership Level

	Leadership level	Frequency	%	Valid	Cumulative %
Valid	Leadership Absent (0)	1	.3	.4	.4
	Formal Leader Role (1)	6	2.0	2.1	2.5
	Instructional Leader (2)	3	1.0	1.1	3.5
	Collective Leader (3)	99	32.5	34.7	38.2
	Teacherpreneur (4)	176	57.7	61.8	100.0
	Total	285	93.4	100.0	
Missing	System	20	6.6		
Total		305	100.0		

Question 2. What is the average number of leadership activities reported by American-sponsored overseas school teachers in Africa? Table 26 shows that the mean number of leadership activities performed per teacher was 9.63 with a standard deviation of 4.95. Figure 3 shows the distribution of the number of leadership activities for the sample of 285 teachers.

Table 26

Descriptive Statistics for Number of Leadership Activities in Which Teachers Are Currently Engaged

N					
Valid	Missing	*M*	*SD*	Minimum	Maximum
285	20	9.63	4.95	.00	24.00

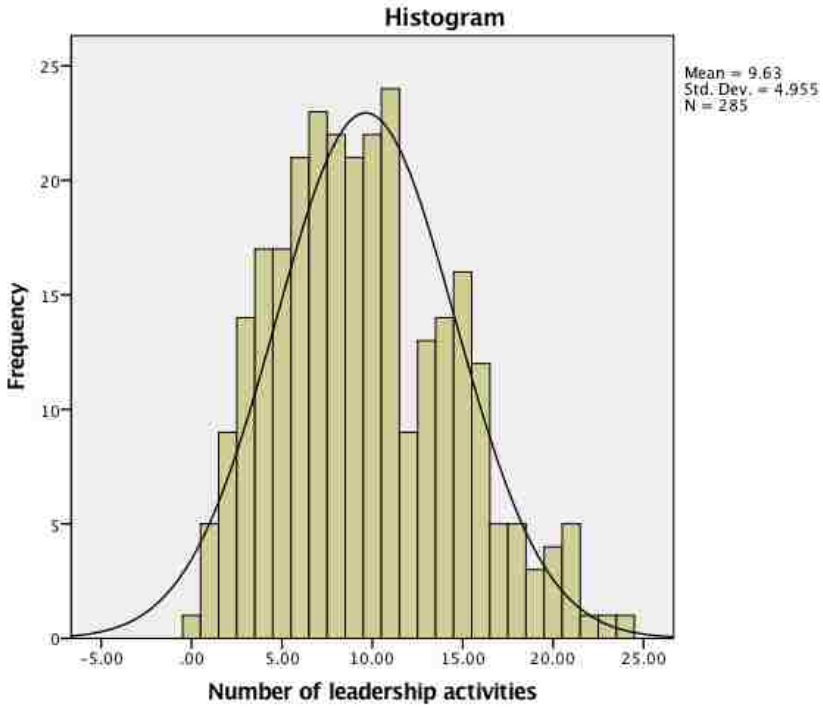

Figure 3. Distribution of the number of leadership activities in which teachers are currently engaged.

Question 3. To what extent do American-sponsored overseas school teachers in Africa desire to take on more teacher leadership activities? The mean for additional leadership activities teachers desired to perform was 11.62 as shown in Table 27.

Table 27

Descriptive Statistics for the Number of Additional Leadership Activities Desired

N					
Valid	Missing	*M*	*SD*	Minimum	Maximum
285	20	11.62	6.82	.00	31.00

Table 28 indicates that nearly all teachers (273/285 or 96%) desire to be engaged in more leadership activities. Conversely, only 12/285 or 4% of teachers do not desire to be engaged in

additional leadership activities. Figure 4 represents the distribution of the number of additional leadership activities teachers desired (m = 11.62, SD = 6.821, n = 285).

Table 28

Frequency and Percentage of the Number of Additional Leadership Activities Desired

Additional leadership activities desired		Frequency	%	Valid	Cumulative
				(%)	
Valid	.00	12	3.9	4.2	4.2
	1.00	8	2.6	2.8	7.0
	2.00	3	1.0	1.1	8.1
	3.00	12	3.9	4.2	12.3
	4.00	8	2.6	2.8	15.1
	5.00	10	3.3	3.5	18.6
	6.00	14	4.6	4.9	23.5
	7.00	21	6.9	7.4	30.9
	8.00	12	3.9	4.2	35.1
	9.00	22	7.2	7.7	42.8
	10.00	14	4.6	4.9	47.7
	11.00	11	3.6	3.9	51.6
	12.00	12	3.9	4.2	55.8
	13.00	17	5.6	6.0	61.8
	14.00	20	6.6	7.0	68.8
	15.00	12	3.9	4.2	73.0
	16.00	9	3.0	3.2	76.1
	17.00	12	3.9	4.2	80.4
	18.00	11	3.6	3.9	84.2
	19.00	13	4.3	4.6	88.8
	20.00	6	2.0	2.1	90.9
	21.00	2	.7	.7	91.6
	22.00	2	.7	.7	92.3
	23.00	4	1.3	1.4	93.7
	24.00	3	1.0	1.1	94.7
	25.00	5	1.6	1.8	96.5
	26.00	1	.3	.4	96.8
	27.00	2	.7	.7	97.5
	28.00	4	1.3	1.4	98.9
	29.00	2	.7	.7	99.6

Additional leadership activities desired		Frequency	%	Valid	Cumulative
				(%)	
	31.00	1	.3	.4	100.0
	Total	285	93.4	100.0	
Missing	999.00	20	6.6		
Total		305	100.0		

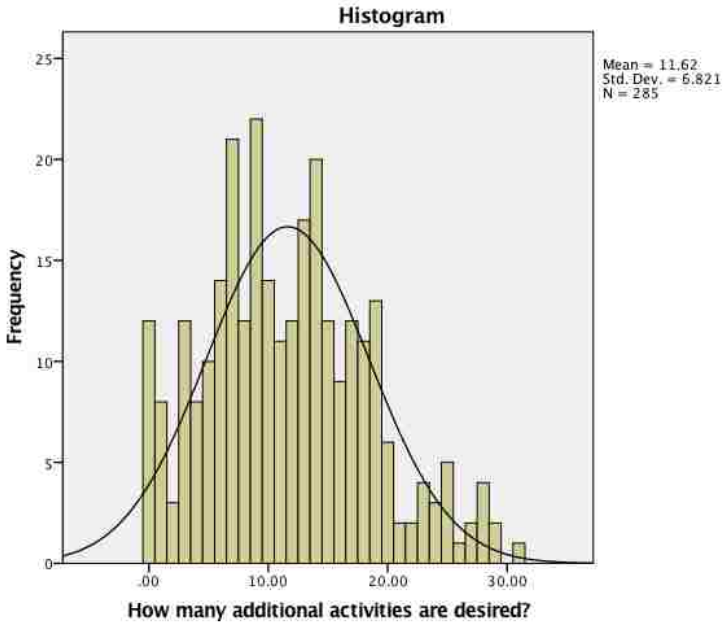

Figure 4. Distribution of the number of additional leadership activities in which teachers desire to be engaged.

Question 4. In American-sponsored overseas schools in Africa, to what extent do teachers perceive the following supports (organizational structure, professional development, time, recognition, role clarity, and school culture) to be in place for the development of teacher leadership? Table 29 shows the means and standard deviations (SD) for the eight areas of support, showing the extent to which teachers perceive these supports to be in place in their schools. The table includes the various areas of support from the most strongly in place to the least strongly in place. I reversed the scores so that higher scores are associated to more strongly in place and lower scores are associated to less strongly in place. The new values

are as follows: 1 = *strongly disagree* (this support is not in place), 2 = *disagree* (this support is not in place), 3 = *slightly disagree* (this support is not in place), 4 = *slightly agree* (this support is in place), 5 = *agree* (this support is in place), and 6 = *strongly agree* (this support is in place). As such, the area where teachers perceive the most support to be in place is Organizational Structure Autonomy, with a mean score of 4.83 (*SD* = .9). This mean score is very close to 5 (*agree*). Therefore, on average, teachers agree that support in the form of Organizational Structure Autonomy is in place in their school. The area where the teachers perceive the next highest level of support is Recognition, with a mean score of 4.5 (*SD* = .91), which is half way between 5 (*agree*) and 4 (*slightly agree*). Again, teachers, on average, agree or slightly agree that support in the form of Recognition is in place in their school. Role Clarity (*SD* = 4.4), School Culture Teachers Support Each Other (*SD* = 4.39), School Culture Trust (*SD* = 4.2), Professional Development (*SD* = 4.07), Time (*SD* = 4.01), and Organizational Structure Collaborative Leadership (*SD* = 3.82) all have mean scores closest to 4 (*slightly agree*). Therefore, on average, teachers slightly agree that their school has supports in place in the form of Role Clarity, School Culture Teachers Support Each Other, School Culture Trust, Professional Development, Time, and Organizational Structure Collaborative Leadership.

Table 29

Descriptive Statistics for the Presence of Supports for Teacher Leadership in Schools

Scale	*n*	*M*	*SD*
Organizational Structure Autonomy	268	4.83	0.9
Recognition	268	4.5	0.91
Role Clarity	268	4.4	0.92
School Culture Teachers Support Each Other	268	4.39	0.82
School Culture Trust	268	4.2	1
Professional Development	268	4.07	0.92
Time	268	4.01	1.1

Organizational Structure Collaborative Leadership	268	3.82	1.1

Teachers slightly agreed that Professional Development, Time, and Organizational Structure Collaborative Leadership are present in their schools. However, statistically these supporting variables had the lowest level of agreement from teachers. In an open response question at the end of the teacher leadership questionnaire, respondents were asked, "Are additional supports necessary in order for you to add to your current leadership responsibilities and activities?" Respondents to this question were 102/268 teachers. The majority of the responses did not actually add new information to what was already asked in the sections devoted to the eight school level supporting variables. However, the majority of these free response answers re-emphasized wanting more professional development opportunities, time for collaboration and teacher leadership activities, or they commented on the need for more collaborative leadership structures. Additionally, some of the individual free responses commented on two or three of these areas within the same comment. Table 30 shows some teacher responses highlighting room for improvement with each of these supporting variables. (See Appendix H for complete table of 102 responses.)

Table 30

Examples of Teacher Responses on Additional Supports Needed to Perform Teacher Leadership Activities

Support	Sample teacher responses on additional support needed
Time	"The support of having more time for these responsibilities and activities. Time always seems to be the challenge, whether that is time to meet with colleagues or time to do research or time to observe each other, etc."
	"If the time were provided, and needs assessed, I would enjoy and be able to assist elementary teachers in better understanding math content and pedagogy. Also, were there time and identified needs, I could offer great support to other teachers in differentiating for high ability children."

Support	Sample teacher responses on additional support needed
	"Time. I teach five preps and also have a two leadership positions, one I am paid for and the other I am not. It takes a lot of time."
Professional Development	"More access to PD opportunities i.e., conferences. This is a challenge however, considering that we live in West Africa."
	"We need mentoring to learn new skills, develop teachers, but there is no system in place to identify those in need (skills or individuals), nor are teachers ever trained to be effective mentors."
	"Supports include administration training in building a professional learning community among teachers, time is needed, open policies about trainings and job postings, and other changes in structure, routine and communication that would allow teachers to feel confident and secure in seeking leadership positions."
	"More attention should be given to professional development."
Organizational Structure Collaborative Leadership	"More opportunity to be part of the development of aims rather than a select committee that drives a top down approach to school aims and objectives."
	"More collaboration/discussion with senior administration (rather than top-down approach). Leadership roles are only given to those with experience. It is almost impossible to rise up the ladder within the school."
	"Responsiveness and problem-solving methods, approaches, and processes that administratively address the results of collaboration, team work and group processes outlining needs assessment, strategies for improvement and recommendations for constructive changes that teacher and departmental teams present to leadership. There needs to be an orienting perspective that all teachers can be leaders for their inclusion in 'leadership team' or 'administrative team' decision-making."

Question 5. In American-sponsored overseas schools in Africa, what is the relationship between the perceived presence of supports and teachers' reported practice of Phases 0, 1, 2, 3, and 4 of teacher leadership? The supports I measured and analyzed are

organizational structure, professional development, time, recognition, role clarity, and school culture. First, as the researcher, I had to transform the "teacher leadership levels" variable because the individual sizes for Levels 0, 1, and 2 were too small for valid tests. As such, I transformed the data by combining Levels 0, 1, and 2. Table 31 shows the combined group sizes for the transformed variable.

Table 31

Frequency and Percentage for Transformed Teacher Leadership Levels

Teacher leadership levels		Frequency	Valid (%)
Valid	0, 1, 2	10	3.5
	3	99	34.7
	4	176	61.8
	Total	285	100.0

I ran the inferential statistics in several ways to find a method that would work for these data. Since the residuals showed a non-normal distribution, the data did not meet the assumptions of the multiple regression of teacher leadership level regressed on school supports. In a second attempt, I conducted the multinomial logistic regression, but there was a problem with Type 2 error due to the low power of the tests. Then I attempted a MANOVA as a correlational model (not as a predictive model). The question was whether there was a relationship between the presence of school supports and the three teacher leadership levels. The test met all of the following assumptions of the data: (a) Box's $M = 116.91$, $p = .06$, which demonstrated that the null hypothesis of equal covariance matrices was accepted; (b) Bartlett's test of sphericity was significant ($p < .0005$) allowing me to conclude that the eight school structure variables were sufficiently correlated to allow a multivariate test; and c) Levene's tests showed that the error variances were equal across teacher leadership groups ($p > .05$). It was possible to continue with the MANOVA since the tests of the data satisfied all the assumptions.

Bartlett's test of sphericity is a test of how strongly correlated the dependent variables are with each other. One of the assumptions of a MANOVA is that the dependent variables are well correlated. If they were not well correlated, we would not be treating them as dimensions of a single construct, which is what MANOVA does. If the probability (p) level associated with Bartlett's test is less than .05, this means the dependent variables were correlated well enough to warrant a multivariate test. Levene's test shows whether the variances of the dependent variables are similar across the teacher leadership groups. One of the assumptions of MANOVA is that the dependent variable has a similar variance for each of the levels of the predictor variable. Since p was greater than .05, this means the variances did not differ significantly for the three teacher leadership groups.

The MANOVA indicated a significant relationship at the multivariate level (Hotelling's Trace = .104, $p < .05$). A significant effect at the multivariate level allows the researcher to take a closer look at the individual univariate effects. As shown on Table 32, this technique demonstrated significant correlations between teacher leadership levels and school supports in the following areas: Organizational Structure Collaborative Leadership ($p < .03$, $h_p^2 = .028$), Professional Development ($p < .001$, $h_p^2 = .05$), School Cultures in which Teachers Support Each Other ($p < .0005$, $h_p^2 = .063$), and School Culture of Trust ($p < .03$, $h_p^2 = .028$). The effect sizes, reported as partial eta squared (h_p^2), are considered small at about .01, medium at about .06, and large at about .13 (Cohen, 1973; Cohen, 1988). Therefore, levels of teacher leadership had a small significant association with Organizational Structure Collaborative Leadership and School Culture Trust. Levels of teacher leadership had a medium sized, significant association with Professional Development and School Cultures in which Teachers Support Each Other.

Table 32

MANOVA for the Relationship Between Teacher Leadership Level and Presence of School Supports

Presence of School Supports in Each Area	*df*	*F*	*p*	Partial Eta Squared
Organizational Structure Autonomy	2	1.15	.32	.009
Organizational Structure Collaborative Leadership	2	3.76	**.03**	**.028**
Professional Development	2	6.93	**.001**	**.050**
Time	2	2.43	.09	.018
Recognition	2	2.90	.06	.021
Role Clarity	2	2.08	.13	.015
School Culture Teachers Support Each Other	2	8.95	**.0005**	**.063**
School Culture Trust	2	3.80	**.03**	**.028**

Table 33 shows the means for school supports for each level of teacher leadership. The significantly higher means appear in bold font and the significantly lower means appear in shaded background. For Organizational Structure Collaborative Leadership, the mean for Level 4 teachers was greater than the mean for teachers at Levels 0, 1, and 2 ($p < .05$). For Professional Development, the mean for Level 4 teachers was greater than the mean for teachers at Levels 0, 1, and 2 ($p < .006$). Level 4 teachers' mean was also greater than the mean for Level 3 teachers ($p < .04$). For School Culture in which Teachers Support Each Other, the means for teachers at Levels 3 and 4 were greater than the means for teachers at Levels 0, 1, and 2 ($p < .002$ and $p < .0005$, respectively). Lastly, for School Cultures of Trust, the mean for teachers at Level 4 was greater than the mean for teachers at Levels 0, 1, and 2 ($p < .05$).

Table 33

Means and Standard Deviations on School Supports at Each Teacher Leadership Level

School supports	Teacher leadership level	*M*	*SD*
Organizational Structure Collaborative Leadership	0, 1, 2	3.12	1.12
	3	3.68	1.15
	4	**3.93**	1.05
Professional Development	0, 1, 2	3.3	0.99
	3	3.91	0.98
	4	**4.2**	0.84
School Culture Teachers Support Each Other	0, 1, 2	3.41	0.92
	3	**4.33**	0.86
	4	**4.48**	0.75
School Culture Trust	0, 1, 2	3.52	0.96
	3	4.09	0.99
	4	**4.3**	0.99

Question 6. In American-sponsored overseas schools in Africa, what is the relationship between the perceived presence of supports and teachers' reported number of teacher leadership activities? The supports I measured and analyzed are organizational structure, professional development, time, recognition, role clarity, and school culture. I regressed the number of leadership activities (leadership intensity) on the eight school support scores. The multiple regression met the assumption with normally distributed residuals (Appendix I). The results in Table 34 show that the only school support score that was a significant predictor of leadership intensity was School Culture in which Teachers Support Each Other ($F[1] = 8.16$, $p < .005$). The relationship was positive; therefore, when teachers perceived a culture in which they support each other, they were more likely to take on additional leadership activities. In contrast, when teachers did not perceive a culture in which they support each other, they were less likely to take on leadership activities. The unstandardized regression coefficient (*b*) was 1.61. This coefficient means that a 1-point increase on the School Culture in which

Teachers Support Each Other variable was associated with a 1.61-point increase on the leadership intensity variable. None of the other school support variables correlated with leadership intensity.

Table 34

Results of the Regression of Leadership Intensity on the Eight School Support Variables

Source	*df*	*F*	Sig.
Corrected Model	8	4.72	.000
Intercept	1	3.16	.077
Organizational Structure Autonomy	1	1.65	.200
Organizational Structure Collaborative Leadership	1	2.34	.127
Professional Development	1	.66	.417
Time	1	.16	.688
Recognition	1	.75	.387
Role Clarity	1	2.33	.128
School Culture in which Teachers Support Each Other	1	8.16	**.005**
School Culture of Trust	1	.96	.327
Error	259		
Total	268		
Corrected Total	267		

Summary

In conclusion, the large majority of teachers in this sample of American-sponsored overseas schools in Africa reported involvement in Phases 3 and 4 teacher leadership. Additionally, teachers in the sample participated in an average of 9.63 leadership activities. Despite the already high number of teachers involved in several leadership activities, the average teacher desired involvement in an additional 11.62 leadership activities. Teachers generally agree that their schools provide supports by allowing teachers the autonomy to make decisions about instruction and the needs of their students, and show recognition for teachers'

contributions and leadership. Additionally, teachers slightly agree that their schools provide supports for teacher leadership in the forms of role clarity, a school culture in which teachers support one another, a school culture of trust amongst teachers and between teachers and administrators, professional development, time for collaboration and problem-solving, and a collaborative leadership structure.

In the study, I also sought to investigate the relationship between eight school supports and the level of teacher leadership that teachers reported. In examining these relationships, I found significant correlations between teacher leadership levels and the school supports in the areas of Organizational Structure Collaborative Leadership, Professional Development, School Culture in which Teachers Support Each Other, and School Culture of Trust. No significant correlations exist between levels of teacher leadership and Organizational Structure Autonomy, Time, Recognition, or Role Clarity.

Lastly, conducting a multiple regression in the study, I investigated relationships between the intensity, or number of teacher leadership activities reported by teachers, and eight school level supports. Teachers who reported their schools to have a school culture in which teachers support one another, also reported a greater number of leadership activities. No other school support variables had a significant correlation with leadership intensity.

CHAPTER IV

Findings, Discussion, and Implications

A competitive international school market has increased the pressure on American-sponsored overseas schools to recruit and retain high-quality teachers. Teachers, who feel they have more input into school decisions, are more likely to desire employment at such schools, or once at the school, are more likely to stay for a longer period (Ingersoll, 2001; Mancuso, 2010). Purposefully developing teacher leadership in international schools may be a way to recruit and retain the best teachers (Weston, 2014). A strong argument can be made to support the idea that the best teachers positively influence school effectiveness and student learning results.

This study aimed to support American-sponsored overseas schools with recruiting and retaining the most effective teachers to fulfill their missions, and to add to the body of research base on variables that support teacher leadership to enhance school effectiveness within the unique context of American-sponsored overseas schools. Specifically, in this study, I sought to discover (a) the leadership activities American-sponsored overseas school teachers in Africa currently perform, (b) the additional leadership activities these teachers desire to participate in, and (c) the extent these teachers perceive that their schools support them in the areas of organizational structure, professional development, time, recognition, role clarity, and school culture. Lastly, in this study, I explored (d) the extent teachers' perceptions of these school level supports relate with the enactment of phases and levels of intensity of teacher leadership in American-sponsored overseas schools in Africa. This chapter includes the discussion on the most significant findings in this study, recommendations for future practice, and implications for future research.

Sample and Population

The study included 268 of a possible 2,150 teachers, or 12.5% of the accessible population, who participated in the full teacher leadership study. These teachers represented 30 of 39 of the targeted American-sponsored overseas schools in Africa. Additionally, the sample represented all or nearly all of the schools in each region of Africa with the exception of Central Africa. Eight of the nine nonparticipating schools were small schools in lesser developed countries where slow Internet and unstable electricity supply could have been reasons for their nonparticipation in the survey. The percentage of participating teacher nationalities closely resembled the ratios of U.S. citizens, third-country citizens, and host-country citizens in the accessible population. However, the sample slightly overrepresented U.S. citizens, and it slightly underrepresented host-country citizens. The sample also accurately reflected the percentages of teachers from each division (i.e., elementary, middle and high). Additionally, the sample represented balanced, heterogeneous groups of teachers according to teaching experience and the number of years employed in the current school.

For the research questions that required inferential statistics and identified significant relationships, generalizations apply to the following populations (in order of strength):

a. teachers in the following (b – e) populations who have volunteer type personalities;
b. teachers at American-sponsored overseas schools in Africa with the exception of smaller hardship posting schools in isolated regions or countries;
c. teachers at schools in the AISA which contain similar teacher demographics to the study sample;
d. teachers at American-sponsored overseas schools in developing countries on other continents with similar teacher demographics to the study sample;

e. teachers at American-style international schools in other developing countries and continents, but with similar teacher demographics to the study sample.

Discussion of Findings

High levels of Phases 3 and 4 of teacher leadership. Research Question 1 in this study indicated the percentage of teachers who reported performing teacher leadership activities at the highest phase for each individual teacher. The hypothesis was that the study would unveil higher levels of Phases 2 and 3 of teacher leadership and lower levels of Phases 0, 1, and 4 of teacher leadership. Before conducting the data collection, I anticipated the lowest numbers of teachers in the Phase 4 teacher leadership category. However, the study showed that there were larger percentages of Phases 3 (34.7%) and 4 teachers (61.8%) than all of Phases 0, 1, and 2 combined (3.6%).

Based on personal experience, I predicted very few teachers would not exhibit any teacher leadership at all. Phase 1 teacher leaders define formal teacher leader titles, often paid stipends, which also are not normally associated with more than a few teachers per school. Phases 2 and 3 teacher leaders are formal and informal leaders focused on instructional tasks and learning. Many American-sponsored overseas schools now employ instructional coaches, team leaders, and other instructionally focused formal leadership positions. Additionally, professional learning communities (PLCs) are buzzwords in education today, with many international schools known to implement PLC structures.

Several case studies described Phase 3 teacher leaders' attributes and activities (Beachum & Dentith, 2004; Lieberman & Miller, 2004; Silva et al., 2000; Reeves, 2008). However, Sides (2010) conducted the first and only other study that included an empirical analysis of the numbers of teachers performing phases of teacher leadership, particularly, Phase 3 teacher

leadership. Examining Phases 0 through 3 of teacher leadership, Sides studied teachers from 11 school districts in Pennsylvania in which she surprisingly found that 507/625 or 81% of teachers were Phase 3 teacher leaders.

In this study, I extended Sides' (2010) study to include an analysis of a fourth phase of teacher leadership or those teachers "… who teach regularly but have time, space and reward to spread their ideas and practices to colleagues, administrators, policy-makers, parents and community leaders" (Berry, 2013, p. 310). Although examples of Phase 4 teacher leaders have existed longer than the conceptual theory recently identifying them formally as Phase 4 teacher leaders, the literature identifies a shortage of these teacher leaders and advocates the need to encourage much more Phase 4 teacher leadership development. Essentially, the current literature infers that Phase 4 teacher leadership is not commonplace in the United States (Berry, 2013; Berry et al., 2013). The findings represented in this study are contrary to this assumption in the United States. The majority of teachers in American-sponsored overseas schools in Africa identified themselves as performing some Phase 4 teacher leadership activities.

In Sides' (2010) study and this study, the majority of teachers reported themselves as carrying out leadership activities in the highest phase of teacher leadership included in the study. Some limitations exist to these findings. Due to the voluntary nature of this study, it is possible that teacher leaders are overrepresented in the sample compared to the accessible population for a couple of reasons. First, volunteer respondents may have tried to guess the "right" answer, desiring to show off their high levels of teacher leadership. Second, teachers who are inclined to be teacher leaders could have been motivated to participate in a survey about teacher leadership. As shared earlier, Katzenmeyer and Moller (2009) stated that "… teacher leaders lead within and beyond the classroom; identify with and contribute to a community of teacher learners and

leaders; influence others towards improved educational practice; and accept responsibility for achieving the outcomes of their leadership" (p. 6). By participating in this study on teacher leadership, one might argue that the respondents were demonstrating teacher leadership merely by voluntarily responding to a teacher leadership questionnaire. Lastly, since a relatively low percentage (12.5%) of teachers responded from a small number (30) of schools, one must be aware of other potential response bias. For example, it is possible that teachers who are perceived to be in the "in-crowd" are the ones who responded to this survey. Nevertheless, this does not seem to be the case given the 102 free responses displayed in Table 30 and Appendix H. In these responses, teachers generally complained about various aspects of how their schools did not adequately support teacher leadership.

High intensity of teacher leadership. In Research Question 2, I explored the intensity or average number of teacher leadership activities performed by each teacher. Here, the hypothesis was that there would be a high intensity of teacher leadership activities, particularly within Phase 3 teacher leadership activities. The results were a confirmation to this prediction with teachers in the sample performing a mean of 9.63 teacher leadership activities. The same limitations apply as in Research Question 1 due to the volunteer nature of the survey.

As the researcher, I was confident that the study would show that teachers in American-sponsored overseas schools in Africa perform quite a number of teacher leadership activities. Nevertheless, a mean of nearly 10 teacher leadership activities was higher than expected. However, it makes sense, in hindsight, since most teachers in these schools are expatriate teachers on temporary international contracts. International teachers, open to working in Africa, must be flexible, adaptable, and entrepreneurial. Based on my personal experience, these teachers most likely value autonomy and influence that may be unavailable to them in their home

country public schools. Therefore, they may seek out international opportunities and schools that afford them more teacher leadership opportunities such as American-sponsored overseas schools in Africa.

Teachers desire more teacher leadership responsibilities. In Research Question 3, I explored the extent to which teachers desire to take on more teacher leadership activities. I hypothesized that large numbers of teachers would desire to take on additional teacher leadership responsibilities; however, this was also in relation to expecting to find slightly lower overall reports of teacher leadership already taking place in American-sponsored overseas schools in Africa. As mentioned in the finding for Research Question 1, teachers actually reported high levels of teacher leadership.

Despite their current high level of involvement in leadership activities, American-sponsored overseas school teachers still aspire to have more leadership opportunities, desiring a mean of 11.62 more teacher leadership activities. This is not surprising as studies show teachers' desire to influence school decision-making (Conley, 1991) and participate in leadership activities without having to leave the classroom to take on a full-time principal role (Markow & Pieters, 2012). Nevertheless, these same studies seemed to indicate that teachers had limited leadership opportunities; therefore, they wanted access to leadership responsibilities. The study findings in this area are somewhat surprising in that even though the teachers already exhibited a high intensity of leadership activities, they still desired more leadership involvement.

Teachers perceive their schools to support teacher leadership. In Research Question 4, I explored the extent teachers perceive the presence of different school level supports, from the literature, to be in place for the development of teacher leadership. American-sponsored overseas school teachers generally agree that the school supports for teacher leadership from the

literature are in place at their schools. The hypothesis was that teachers would have agreed that some supports are in place, but they would also disagree that other supports are in place.

The overall responses about school supports being in place were much more positive than originally anticipated. On a Likert scale of 1 = *strongly disagree* (this support is not in place) to 6 = *strongly agree* (this support is in place), teachers agreed that supports in the form of Organizational Structure Autonomy ($M = 4.83$) and Recognition ($M = 4.5$) are present in their schools. They agreed or slightly agreed that Role Clarity ($M = 4.4$), School Culture in which Teachers Support Each Other ($M = 4.39$), School Culture of Trust ($M = 4.2$), Professional Development ($M = 4.07$), Time ($M = 4.01$), and Organizational Structure Collaborative Leadership ($M = 3.82$) are present at their schools. Nevertheless, there are some differences of note in the range of slight agreement of the latter supporting variables. Additionally, some of the teachers' answers on the free response portion of the questionnaire conflict with the notion that teachers agreed that all of these supports are currently in place at their schools.

Supports teachers agree are in place: Organizational Structure Autonomy and Recognition. Teachers in this study agreed that their schools provided support in the form of Organizational Structure Autonomy. Several authors and case studies show the hierarchical structures of schools as a major impediment to teacher leadership development (Acker-Hocevar & Touchton, 1999; Murphy, 2005; Reeves, 2008; Silva et al., 2000; Stone et al., 1997; Wasley, 1991). However, American-sponsored overseas school teachers in Africa are much more satisfied with their level of autonomy and the collaborative leadership structures in their schools than are U.S. teachers mentioned in educational literature. In some ways, this makes sense. International school teachers, especially ones that have been overseas for an extended period, often anecdotally comment that they will never go back to work in their home country schools

because of the lack of autonomy they have, the overemphasis on standardized tests, and the top-down mandates from governments and school district administrators. International school teachers generally appreciate having more autonomy to make decisions that they feel are best for their students.

Although several authors on teacher leadership have conducted qualitative or descriptive research that showed teacher leaders' appreciation of recognition for their leadership (Birky, 2002; Kahrs, 1996; Katzenmeyer & Moller, 2009; Moller & Katzenmeyer, 1996; Paulu & Winters, 1998), studies measuring the extent to which teacher leaders are recognized for teacher leadership do not exist. This study indicated that American-sponsored overseas school teachers overwhelmingly agreed that their schools, the administrators, and teacher colleagues positively recognize the contributions, successes, and skills of the teachers in their schools. This was mostly an exploratory question to expand on the limited literature in this area; therefore, there was no hypothesis one way or another. However, it is positive news to find that teachers feel that their leadership contributions are generally valued within their schools.

Supports teachers slightly agree are in place: Role clarity, school culture in which teachers support each other, and school culture of trust. Teachers slightly agreed that supports in the forms of role clarity, school culture in which teachers support each other, and school culture of trust are in place at their schools. Although other studies in various educational research literature show the existence of each one of these variables in schools, this study's main purpose for collecting data on these variables was to explore the extent of their relationship with teacher leadership in the subsequent research questions. Most of the studies reviewed in this study's literature review for these variables were qualitative, describing teacher leaders' satisfaction or dissatisfaction with these areas of support. No previous quantitative teacher

leadership studies indicated the extent to which these supports were in place within their study samples.

However, the findings are not necessarily surprising. Role clarity is an area that many international schools have addressed through their accreditation processes. Schools must have clear job descriptions for all their formal roles. If they do not, accreditation teams usually require that the schools remedy this. Additionally, in regard to school cultures that support one another and maintain an environment of trust, one might expect these supporting variables to be somewhat in place. International school teachers are a transient population, and they generally move on to different schools if they are not happy. American-sponsored overseas schools in Africa have to provide supportive and trustful working environments. Otherwise, these schools would not be able to satisfy their long-term teacher recruitment and retention needs.

Supports teachers slightly agree are in place, but with less enthusiasm. Teachers slightly agreed that professional development, time, and organizational structure collaborative leadership are present in their schools. However, statistically, these supporting variables had the lowest level of agreement from teachers. Interestingly, in an open response question of which 102/268 teachers responded to at the end of the teacher leadership questionnaire (TLQ), participants were asked, "Are additional supports necessary in order for you to add to your current leadership responsibilities and activities?" Table 30 in the previous chapter shows some examples of these responses and their corresponding themes. Appendix H provides all 102 original responses.

Even though teachers somewhat agreed that these three supports are in place in their schools on the Likert-scale section of the TLQ, the majority of the 102 free responses commented on a need for an improvement in these areas. This was an interesting conflict within

the findings, which possibly indicates some weakness or inconsistency in these areas across American-sponsored overseas schools in Africa.

School supports and their relationship with teacher leadership level. In Research Question 5, I examined the relationship between the perceived presence of supports and teachers' reported practice of Phases 0, 1, 2, 3, and 4 of teacher leadership. I anticipated the presence of a relationship between some levels of teacher leadership and, at least, some of the school supports mentioned in teacher leadership literature. In particular, previous quantitative studies had suggested strong relationships between autonomy (Smylie, 1992b), collaborative leadership structures (Smylie, 1992b), role clarity (Galland, 2008; Tooher-Hancock, 2014; Tooher-Hancock et al., 2015), and school culture (Angelle & Teague, 2014; Smylie, 1992a; Talbert & McLaughlin, 1994). I hypothesized that these same variables would demonstrate a significant relationship with teacher leadership. All of the other variables in the study had been the focus of previous qualitative and descriptive studies. Therefore, the hypothesis was that some of these might demonstrate a significant relationship with teacher leadership, but with less confidence than the previous variables where quantitative studies had already showed significant relationships.

Levels of teacher leadership had a small significant association with Organizational Structure Collaborative Leadership ($p < .03$, $h_p^2 = .028$) and School Culture of Trust ($p < .03$, $h_p^2 = .028$). Levels of teacher leadership had a medium-sized, significant association with Professional Development ($p < .001$, $h_p^2 = .05$) and School Cultures in which Teachers Support Each Other ($p < .0005$, $h_p^2 = .063$). The findings related to Organizational Structure Collaborative Leadership, School Culture of Trust, and School Cultures in which Teachers Support Each Other confirmed similar findings from previous studies in other populations and

teacher leadership contexts. Many qualitative and descriptive studies have indicated professional development as a crucial support for teacher leadership, but the findings of this quantitative study added empirical evidence to support the claim. However, the findings have some limitations. The statistical method employed, MANOVA as a correlational model and not as a predictive model, does not allow for any directional prediction from one variable to the other. The data did not meet the assumptions of the preferred statistical methods, multiple regression, or multinomial logistic regression. Therefore, the findings only show that some type of relationship exists between the presence of phases of teacher leadership and these school level supports being in place. Further studies need to examine these variables again to try to determine any directional correlation and the possibility of causality amongst the variables.

Organizational Structure Autonomy, Time, Recognition, and Role Clarity did not demonstrate a significant relationship with teacher leadership levels. The lack of a significant relationship with Time and Recognition may be associated with the design of the questions, or possibly, these supports might actually be a part of other variables (i.e., Time could be under Collaborative Leadership or Professional Development; Recognition could be under School Culture in which Teachers Support Other Teachers). In recent years, fewer researchers have examined time as an individual support for the development of teacher leadership; however, some have also addressed time built into organizational structures that support collaboration (Poekert, 2012). Although previous quantitative researchers have not studied or confirmed a relationship of Time or Recognition with teacher leadership, several qualitative researchers have stressed their importance in fostering teacher leadership (Birky, 2002; Katzenmeyer & Moller, 2009; Ovando, 1996; Paulu & Winters, 1998; Silva et al., 2000; Smylie & Denny, 1990; Stone et. al., 1997; Wasley 1991).

Not finding a significant relationship between Role Clarity and phases of teacher leadership was somewhat surprising. Although not specific to phases of teacher leadership, previous quantitative studies indicated a positive relationship between role clarity and teacher leader effectiveness (Galland, 2008), and role clarity and teacher leaders' professional self-efficacy (Tooher-Hancock, 2014; Tooher-Hancock et al., 2015). Using logic, one might predict that role clarity would also affect other areas of teacher leadership. However, this was not found in relation to phases of teacher leadership demonstrated by teachers in this study.

School level supports and their links to teacher leadership intensity. In Research Question 6, I examined the relationship between the perceived presence of school level supports and teachers' reported number of teacher leadership activities. Similar to the hypothesis in Research Question 5, I anticipated the presence of a relationship between intensity or number of teacher leadership activities performed and some of the school supports mentioned in teacher leadership literature, particularly, in relation to the aforementioned variables supported by quantitative studies.

However, the study showed only one variable associated with supporting intensity of teacher leadership activities, School Culture in which Teachers Support Each Other ($F[1] = 8.16$, $p < .005$). Unlike the data analysis challenges in Question 5, the multiple regression met the necessary assumptions for Question 6 with normally distributed residuals. Therefore, when teachers perceived a culture in which they support each other, they tended to take on more leadership activities. In contrast, when teachers did not perceive a culture in which they support each other, they tended to take on fewer leadership activities. None of the other school support variables in the study correlated with teacher leadership intensity. Lastly, School Culture in

which Teachers Support Each Other was the only variable significantly associated with both phases of teacher leadership and intensity of teacher leadership.

Recommendations for Practice

Teachers in American-sponsored overseas schools in Africa view themselves as actively engaged teacher leaders, who generally agree that their schools support them in developing as teacher leaders. This strength should be recognized and leveraged further to achieve maximum benefit for these schools' missions and ultimately, their students' learning. Despite the high levels of reported teacher leadership, these same teachers still desire many more leadership opportunities. Schools need to continue to develop new opportunities for teacher leadership. Additionally, although teachers feel generally supported, this study indicates some areas where schools may want to focus more energy to improve and maximize teacher leadership in their schools.

Based on the results in this study, school leadership teams should focus the most energy into developing a school culture where teachers support one another. This variable was significantly associated with both levels and intensity of teacher leadership. Additionally, of all the school supports studied, school cultures in which teachers supported one another had the strongest relationship with levels of leadership, and it was also the strongest among teachers of the highest level of teacher leadership.

After School Culture in which Teachers Support Each Other, Professional Development had the next most significant relationship with higher teacher leadership phases. This makes some sense in that effective professional development structures put teachers in positions to share and learn from each other. Therefore, some relationship may exist between professional development in a school and promoting a school culture in which teachers support each other.

Schools should develop effective professional development programs and structures in their schools to promote supportive school cultures, and ultimately, more teacher leadership.

Although the study findings did not show directional correlations for teacher leadership phases or intensity with any of the other school supports identified in the literature, the findings showed that higher phases of teacher leadership are in some way associated with the presence of collaborative organizational structures; professional development for teacher leadership and instruction; and a school culture of trust amongst the teachers and between the teachers and the administrators (or vice versa). The data are also consistent with the study's hypothetical causal model that the presence of these school level supports brings about higher levels of teacher leadership. Individual schools should be aware of these relationships to develop teacher leaders with higher phases of teacher leadership in their schools, or they should hire and promote teacher leaders to foster collaborative schools with high levels of professional development and trust.

Additionally, this study indicated teacher leadership and potential supports for teacher leadership in American-sponsored overseas schools in Africa. Given that professional development appears to have a positive relationship with teacher leadership, schools may want to pool their resources together through their professional associations such as the AISA or the State Department of Overseas Schools to provide training for administrators and teachers on creating school environments conducive to developing teacher leadership.

In particular, organizational structures that promote collaborative leadership need more emphasis. School leaders may benefit from more training on how to develop organizational structures that encourage collaborative leadership. Collaborative organizational structures were significantly associated with teachers with higher phases of teacher leadership. Although teachers slightly agreed that this support was in place in their schools, it was also the weakest

area of agreement. Given that this study showed reliance on self-reporting, which is often associated with inflated scoring, one might deduce that this is an overall area of weakness or inconsistency that American-sponsored overseas schools in Africa might be able to improve.

Recommendations for Future Research

Only a few teacher leadership studies exist and are related to any international school populations. Therefore, numerous opportunities are available to investigate how international schools cultivate teacher leadership, to describe forms of teacher leadership that take place in international schools, to examine the effects of teacher leadership on various outputs of the schools, and ultimately, to study the extent to which teacher leadership might affect student learning. The following list includes 11 areas for further research on teacher leadership in international schools. Some of these research areas can be conducted on additional raw data collected during this study. Other research suggestions expand into further areas of teacher leadership or other populations.

1. Future research should test for any relationships between years of teacher experience and teacher leadership. Sides (2010) discovered a significant relationship between teachers' years of teaching experience and their practice of Phases 0 through 2 of teacher leadership. Phase 0 teacher leaders had significantly fewer years of experience than Phase 2 teacher leaders. However, years of teaching experience did not have a significant relationship with Phase 3 teacher leadership. Future research studies could further explore any relationship between years of teaching experience and all the phases of teacher leadership, including Phase 4 teacher leadership which is a new area of interest in the subject.

2. Future studies should test for relationships between teachers' years of employment in their school and their levels or intensity of teacher leadership. American-sponsored overseas schools and international schools have transient teacher and student populations. Is there an ideal number or range of years that international schools need to hold on to their teachers in order to foster teacher leadership?
3. Future studies should test for any correlation between teacher release time for teacher leadership activities and teacher leadership. This study included testing for relationships between time for collaboration and teacher leadership; however, it did not include an analysis of data collected on teachers with release time versus no release time and any effect on teacher leadership. Several teachers in this study and other studies have commented anecdotally that they need more time allocated outside of the classroom for performing teacher leadership duties effectively. Furthermore, Berry (2013) advocated for more Phase 4 teacher leadership, or teacherpreneurs, who maintain teaching duties while also having time, support, and incentives to influence educational innovation and programs.
4. Although studies on merit-based compensation schemes and their relationship with teacher effectiveness have been controversial and inconclusive, several authors have called for further research to test for any relationship between stipends or compensation schemes and teacher leadership (Berry & Eckert, 2012; Katzenmeyer & Moller, 2009; Sides, 2010). If teacher leaders are some of the most effective teachers, schools need to continue to look for all the possible ways to foster more teacher leadership. Future studies should include tests on whether compensation systems have any significant relationship with promoting teacher leadership.

5. Future studies should include American-sponsored overseas schools or international schools for any differences between teacher divisional level (elementary, middle, and high) and teacher leadership. Other studies have indicated some minor differences in the types of teacher leadership teachers at divisional levels perform, the kind of leadership activities divisional teachers desire to perform, and how teachers at divisional levels perceive teacher leaders (Sides, 2010; Stone et al., 1997). Are there differences in perceptions about teacher leadership or desires for teacher leadership from teachers at divisional levels in international schools? If there are significant differences, international school leaders should know about these differences. If relevant, they should know how best to cultivate teacher leadership at school divisional levels within the unique context of an international school.
6. Why do American-sponsored overseas school teachers engage in such high levels and intensity of teacher leadership? Literature on teacher leadership usually infers that teacher leadership opportunities are scarce, or that school administrators and policymakers do not adequately support teacher leadership (Berry et al., 2013; Lieberman & Miller, 2004; Wasley, 1991; York-Barr & Duke 2004). Future researchers should conduct qualitative research studies on American-sponsored overseas schools in Africa or globally to identify why such high levels of teacher leadership exist in these populations. Are these schools doing something right to encourage more teacher leadership? If so, how might other school populations replicate these successes?
7. Future studies should replicate all of this study, or parts of this study, on larger populations to confirm and extend the study findings. Examples of populations for further research are American-sponsored overseas schools in other regions and globally,

and other international school populations (i.e., AASAA, EARCOS, ECIS, IB, American-style international schools, etc.).

8. Future studies should include testing for more specific correlations between teacher leadership, as defined in this study or other teacher leadership studies, and its effect on teacher turnover or retention of teachers across international school populations. In particular, do facets of teacher leadership help retain the best teachers? Previous studies have found relationships between retention of teachers in some international school populations (Mancuso, 2010; Mancuso et al., 2010) and more specifically, the best teachers (Weston, 2014) and teachers' perceptions of their decision-making influence in the school and their confidence in the transformational leadership abilities of the school head. However, teachers' decision-making influence in a school is one narrow aspect of teacher leadership. Future researchers could expand on this line of study by examining for the potential effects of specific types, acts, or phases of teacher leadership on teacher turnover or retention in international schools.
9. Future studies should include an examination of the school level supports researched in this study in more depth. Researchers for these studies should confirm or explore new correlations between these supports and teacher leadership. The teacher leadership questionnaire used in this study had a limited number of questions on each supporting variable. Perhaps, with a more detailed survey instrument, researchers could more closely examine particular areas of support to reveal more detailed findings about their relationship with phases or intensity of teacher leadership. Looking more specifically at the relationship between facets of trust in schools and teacher leadership would be an example. Researchers of previous studies have examined relationships between facets of

trust and areas of school effectiveness. The promising results of these studies have inspired calls for more quantitative studies to examine the impact of trust in schools. Researchers have already demonstrated a significant relationship between trust and teacher collaboration; trust and teacher collective efficacy; and trust and improving academic achievement (Bryk & Schneider, 2002; Tschannen-Moran, 2014). However, trust is best cultivated in schools with stable teacher and student populations (Bryk & Schneider, 2002). Since international schools are transient populations, is it possible to cultivate high levels of trust in schools? Based on the findings in this study, American-sponsored overseas school teachers in Africa somewhat agreed that their schools cultivated support for teacher leadership in the form of trust. If this is true, how are successful international schools fostering trust despite teacher and student turnover? Researchers of these aforementioned studies have developed and employed survey instruments on trust with high levels of validity and reliability. Using these, or similarly validated instruments, to measure trust or other school level supports to examine their relationship with teacher leadership may uncover more robust data for analysis.

10. Future studies should more closely examine the effect of different forms of professional development on teacher leadership in the context of American-sponsored overseas schools and international schools. This study's findings added empirical evidence to previous claims about the importance of professional development as a crucial support for teacher leadership. Due to the high financial costs, investment in human capital and time devoted to professional development, schools have the obligation to make well-informed decisions about professional development programs based on available research (Wayne, Yoon, Zhu, Cronen, & Garet, 2008). Researchers should pay special attention to

job-embedded professional development structures. Several forms of job-embedded professional development have the inherent characteristic of involving teachers in setting goals and determining their research focus (Yendol-Hoppey & Fichtman Dana, 2010; Zepeda, 2013; Zepeda, 2015). Giving teachers this type of control over their professional development may have positive implications for teacher leadership, which, in turn, may also improve teacher retention and student learning.

11. Finally, all research conducted in schools should ultimately include an attempt to measure for its positive impact on student learning. Only a handful of studies have indicated significant indirect or direct relationships between teacher leadership and school effectiveness, student achievement, or student learning. There is little evidence, in particular, when studying correlations between teacher leadership and results on standardized tests (Holland et al., 2014; Williams et al., 2015). Future studies should examine the relationship between teacher leadership and student achievement, as shown by standardized test data or other student learning data. The teacher leadership inventory section of the teacher leadership questionnaire used in this study, or another instrument used for measuring teacher leadership, could be used to test for correlations between teacher leadership in American-sponsored overseas schools or international schools, and school or regional results on standardized tests commonly used in international schools (i.e., NWEA MAP, IB, ISA, PSAT, SAT, etc.). International and regional norms already exist for some standardized test data (Northwest Evaluation Association [NWEA], 2013). Interestingly, students in American-sponsored overseas schools and students in AISA schools outperformed several other international school populations on the NWEA MAP. Most of the schools in this study sample were American-sponsored overseas schools and

AISA schools. Could there be a relationship between these schools' level of teacher leadership and student achievement?

Conclusion

Since the schools in the sample were American-sponsored overseas schools, one might expect their similarities to schools in the United States. However, in relation to teacher leadership, the findings showed that teachers in American-sponsored overseas schools in Africa report that they perform more teacher leadership responsibilities than what is often anecdotally reported in the United States, yet they still want the opportunity to perform more leadership responsibilities. School leaders need to develop trusting relationships in their schools, promote an environment in which teachers support one another, establish collaborative leadership structures, and provide meaningful professional development opportunities. Teacher leaders feel supported, and they thrive in schools with these characteristics. School leaders should work deliberately to foster and promote teacher leadership, which potentially has positive implications for teacher retention and student learning.

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Appendices

Appendix A. Cover Letter to School Heads

March 17, 2016

Dear *School Director:*

My name is Sean Areias, and I am the Elementary School Principal at the American International School of Lagos, Nigeria. I am currently a doctoral candidate in Educational Leadership at Lehigh University. As such, I am conducting a research study that will investigate the type of leadership and number of leadership activities teachers currently perform in their schools. Additionally, the study will explore to what extent different school level factors teachers perceive to support the development of teacher leadership.

Teacher turnover is a challenge for all international schools. Some research has shown that providing opportunities for teacher leadership within schools can assist with the recruitment and retention of the best teachers. This study aims to assist school heads by providing data on the best ways to develop teacher leadership in schools in order to compete for the recruitment and retention of the best teachers in an increasingly competitive international school market.

This study will be conducted in U.S. State Department sponsored schools in Africa. It is for this reason that I am writing to you. Will you please help me with this study? Your role in this study is the following:

1. **I will ask you to forward this e-mail or the survey link https://www.surveymonkey.com/r/X6G8SC9 and to encourage your teachers' voluntary participation.** The letter to teachers in the survey link contains information regarding informed consent and instructions for the survey instrument. It will take a teacher approximately 15 minutes to complete the survey.
2. **Your school is assigned the following 3-digit confidential number XXX. You will need to share this number with your teachers** when you e-mail them the survey link. This confidential number will ensure anonymity of the school while allowing for proper analysis of the data.

Strict confidentiality will be maintained throughout this study in accordance with the *Federal Policy for the Protection of Human Subjects* (Federal Register, 1991) and the *Ethical Principles in the Conduct of Research with Human Participants* (APA, 1982). There are no distinguishing data on the survey that would identify the participant or his/her school, and participation is totally voluntary.

As a demonstration of gratitude to the participants in this survey, I will ask teachers if they would like to be eligible for a thank you gift. **Twenty $50 Amazon gift certificates will be randomly distributed amongst the participants.** In order to be considered for a thank you gift, participants need to send a separate e-mail to sma5@lehigh.edu within one week of submitting

the survey acknowledging their desire to be eligible to receive a thank you gift. The study seeks to obtain a minimum of 192 participants. The maximum pool of participants is approximately 2,000 teachers. Therefore, all participants will have an equal chance to receive a thank you gift. The probability of receiving one of the gifts is between 1% and 10%. E-mails will be securely stored separately from other survey response data in a password-protected file so that there is not a breach of confidentiality. Mr. Tom Shearer, Regional Director for State Department sponsored schools in Africa, will assist with the random selection of thank you gift recipients within two weeks of the closing of the survey.

I will be sharing my findings with AISA (Dr. Peter Bateman) and the U.S. Office of Overseas Schools (Mr. Tom Shearer). Also, you may e-mail me if you would like your own copy of the findings at the conclusion of the study. If you have any questions about this study, please contact me at sma5@lehigh.edu. You may also contact my adviser, Dr. Floyd Beachum (fdb209@lehigh.edu), at Lehigh University. Any problems or concerns that may result from participation in this study may be reported to Naomi Coll, Officer of Research and Sponsored Programs, Lehigh University (nac314@lehigh.edu).

Thank you for your support.

Sincerely,

Sean Areias
Elementary Principal
American International School of Lagos

Doctoral Candidate
Lehigh University

Appendix B. Cover Letter to Teachers

March 17, 2016

Dear Teacher,

My name is Sean Areias, and I am the Elementary School Principal at the American International School of Lagos, Nigeria. I am currently a doctoral candidate in Educational Leadership at Lehigh University, and I am conducting a research study that will investigate the type of leadership and number of leadership activities teachers currently perform in their schools. Additionally, the study will explore to what extent different school level factors teachers perceive to support the development of teacher leadership in their schools. This study will be conducted in U.S. State Department sponsored schools in Africa; thus, you are receiving this participation request.

Your participation is important for this study, and I would be most grateful if you would consider completing this survey. To enter the survey, you will click NEXT at the bottom of this letter. Please complete the survey without discussing it with other teachers.

You could be eligible to receive a $50 Amazon.com thank you gift certificate! Although you will not be compensated for completing this survey, you may choose to be eligible to receive a limited number of $50 Amazon thank you gift certificates. All participants will have an equal chance to receive a thank you gift. The study aims for a minimum of 192 respondents. The maximum number of potential respondents is approximately 2,000. Therefore, all participants will have an equal chance to receive a thank you gift. The probability of receiving one of the gifts is between 1% and 10%.

In order to share your desire to be eligible to receive one of the thank you gifts, you should **e-mail Sean Areias at sma5@lehigh.edu by April 15, 2016. Please type THANK YOU GIFT in the subject line of the e-mail**. Instructions for participation are also repeated at the end of the survey. It will take approximately 15 minutes to complete the survey. Mr. Tom Shearer, the State Department Regional Director for schools in Africa, will randomly select the recipients of the thank you gifts by April 29, 2016. E-mails will be securely stored in a password-protected file separately from other survey response data so that there is not a breach of confidentiality.

For the first question, **you will need the 3-digit school number provided to your school director**. S/he should e-mail you the number along with this survey link. This 3-digit number will ensure anonymity of teachers and the school while allowing for proper analysis of the data.

Strict confidentiality will be maintained throughout this study in accordance with the Federal Policy for the Protection of Human Subjects (Federal Register, 1991) and the Ethical Principles in the Conduct of Research with Human Participants (APA, 1982). Your school's name and identifying number will not be stored together, and all data will be stored in password-protected files. There are no distinguishing data on the survey that would identify you personally, and participation is totally voluntary.

I will be sharing my findings with AISA and the U.S. Office of Overseas Schools. Also, you may e-mail me if you would like your own copy of the findings at the conclusion of the study. If you have any questions about this study, please contact me at sma5@lehigh.edu. You may also contact my adviser, Dr. Floyd Beachum (fdb209@lehigh.edu), at Lehigh University. Any problems or concerns that may result from participation in this study may be reported to Naomi Coll, Officer of Research and Sponsored Programs, Lehigh University (nac314@lehigh.edu).

Thank you for your support.

Sincerely,

Sean Areias

Elementary Principal
American International School of Lagos

Doctoral Candidate
Lehigh University

Appendix C. Letter of Support from Regional Directors

March 18, 2016

Colleagues,

Greetings from AISA. By now you may have received a letter from Sean Areias regarding his research project. I just wanted to write to encourage you to participate in his study. AISA actively supports research in our region and Sean has indicated he will be willing to share the data with us to inform our Professional Learning programming.

And besides – what else might you be doing this weekend ☺

Kind Regards

Dr. Peter Bateman
Executive Director
Association of International Schools in Africa

Appendix D. Teacher Leadership Questionnaire

Teacher Leadership Questionnaire

Part I: Background Information

Part I of III; Items 1-8 (of 20 items total)

* 1. What is the 3-digit number that your school head provided for your survey?

* 2. What is your main teaching assignment?

- Classroom Teacher
- Librarian/Media Specialist
- Full-time Instructional Coach
- Technology Integration Specialist
- Inclusion Specialist
- Other (please specify)

* 3. What grade level(s) do you teach? List all that apply.

* 4. State your nationality (according to the passport/citizenship you use for your current employment).

* 5. In what country(ies) did you complete your university/college degree? List all that apply.

* 6. In what country(ies) did you complete your teacher training? List all that apply.

* 7. How many years have you been working in the teaching profession?

* 8. How many years have you been working at your current school?

Teacher Leadership Questionnaire

Part II: Teacher Leadership

Part II of III; Items 9-12 (of 20 items total)

* 9. In addition to teaching students, what other responsibilities or **activities inside of school** are you engaged in?
(Check yes to all that apply). If yes, go to next item. If no, would you like to be engaged in this responsibility or activity?

	Yes. Go to the next item.	No, but I would like to be engaged in this activity.	No, I do not care to be engaged in this activity.
Ordering supplies	○	○	○
Planning team or grade level meetings	○	○	○
Managing budgets	○	○	○

	Yes. Go to the next item.	No, but I would like to be engaged in this activity	No, I do not care to be engaged in this activity.
Representing your colleagues through your Educational Association	○	○	○
Coordinating schedules and special events	○	○	○
Leading staff development	○	○	○
Mentoring new teachers	○	○	○
Curriculum writing and coordination	○	○	○
School decision-making	○	○	○
Peer coaching as part of formal job description	○	○	○
Peer coaching outside of formal job description	○	○	○
Action research	○	○	○
Participating in professional learning community	○	○	○
Organizing one or more professional learning communities	○	○	○
Modeling and encouraging professional growth	○	○	○
Participating in school improvement	○	○	○
Creating community or business partnerships	○	○	○
Leading service learning initiatives that other teachers take part in	○	○	○

Other leadership activity (please specify)

* 10. In addition to teaching and other responsibilities or or activities at your school, which of the following leadership activities, **outside of school** and related to the education profession, have you engaged in while employed as a teacher in your current school? (Check yes to all that apply). If yes, go to next item. If no, would you like to be engaged in this responsibility or activity?

	Yes. Go to next item.	No, but I would like to be engaged in this activity.	No, I do not care to be engaged in this activity.
Conference workshop presenter or speaker	○	○	○
Online workshop instructor or coach	○	○	○
Author educational materials	○	○	○
Edugame or educational software development	○	○	○
Community organizer (education related)	○	○	○
Develop local, state, national or international curricula and/or assessments	○	○	○
Author or coauthor policy reports, white papers, research, articles or books	○	○	○
Publish educational blog	○	○	○
Mentor university students and teacher interns for teacher training programs	○	○	○
Local community, state, regional or national policy writer/contributor	○	○	○
Facilitate/lead virtual professional learning network	○	○	○
Serve on the board of another educational institution or organization	○	○	○
Discuss policy or educational issues on a radio or television show	○	○	○
External examiner (i.e. International Baccalaureate)	○	○	○
Serve as an accreditation team member	○	○	○
Consult for another school in your area of expertise	○	○	○

Other leadership activity (please specify)

* 11. Does your school pay you a stipend or any additional remuneration to complete any of these leadership responsibilities and activities?

- Yes
- No

* 12. Do you have any release time from your teaching duties at your school to complete any of these leadership responsibilities or activities?

- Yes
- No

Teacher Leadership Questionnaire

Part II: Teacher Leadership

Part II of III; Item 13 (of 20 items total)

* 13. You answered yes to question 12. How many minutes of release time are you provided a week for these leadership responsibilities or activities?

Teacher Leadership Questionnaire

Part II: Teacher Leadership

Part II of III; Item 13 (of 20 items total)

* 14. You answered no to question 12. Would you like to have release time for leadership activities?

- Yes, I would like to have release time for leadership activities.
- No, I do not want release time for leadership activities.

Teacher Leadership Questionnaire

Part III: School Support for Teacher Leadership

Part III of III; Items 14 - 20 (of 20 items total)

* 15. To what extent do you agree or disagree with the following statements within the context of your own school?

Organizational Structure

	Strongly agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
School leaders, faculty and staff work as a team.	○	○	○	○	○	○
Teachers are free to make judgements about what is best for their students.	○	○	○	○	○	○
Teachers have the freedom to make choices about the use of time and resources.	○	○	○	○	○	○
Teachers are encouraged to take initiative to make improvements for students.	○	○	○	○	○	○
Teachers have input into developing a vision for our school and its future.	○	○	○	○	○	○
Teachers can be innovative if they choose to be.	○	○	○	○	○	○
Teachers and administrators share decisions about how time is used and how the school is organized.	○	○	○	○	○	○
Teachers participate in screening and selecting new faculty and/or staff.	○	○	○	○	○	○
Administrators seek teachers' opinions and ideas.	○	○	○	○	○	○
We try to reach consensus before making important decisions.	○	○	○	○	○	○

* 16. Professional Development

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Teachers actively support the professional learning of other teachers by coaching and/or mentoring.	○	○	○	○	○	○
Teachers work together with the school administrators to plan professional learning that is linked with the school improvement goals.	○	○	○	○	○	○
Teachers direct professional learning activities that correlate with the school's improvement goals.	○	○	○	○	○	○
Teachers seek support from professionals who have specialized experience to design learning experiences (e.g. special educators, media specialists, reading coaches, ESL specialists).	○	○	○	○	○	○
Teachers model effective instructional practices for colleagues.	○	○	○	○	○	○
Administrators actively support the professional development of faculty and staff.	○	○	○	○	○	○
Teachers gain new knowledge and skills through staff development and professional reading.	○	○	○	○	○	○
Teachers share ideas and strategies they have gained with each other.	○	○	○	○	○	○
Teachers engage each other in opportunities to lead.	○	○	○	○	○	○
Teachers model leadership skills.	○	○	○	○	○	○

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Teachers have professional development opportunities to learn teacher leadership skills.						
Teachers participate in action research to improve student learning.						
Teachers facilitate analysis of research to improve student learning.						

* 17. Time

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Faculty meeting time is used for discussions and problem solving.						
Teachers have regular time allocated for collaborative planning and problem solving in teams or departments.						
The school makes time for teacher development and learning to occur (i.e. faculty meetings, ad hoc groups, teams).						
The school makes time for ongoing reflection (i.e. journaling, peer coaching, collaborative planning.						

* 18. Recognition

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
The administrators have confidence in the teachers.	○	○	○	○	○	○
The administrators recognize teachers' professional skills and competence.	○	○	○	○	○	○
Teachers recognize each other's professional skills and competence.	○	○	○	○	○	○
Teachers' ideas and opinions are respected and valued.	○	○	○	○	○	○
Teachers celebrate each other's successes.	○	○	○	○	○	○
School leadership recognizes faculty and staff for their work.	○	○	○	○	○	○

* 19. Role Clarity

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Teachers know that they can take on leadership roles.	○	○	○	○	○	○
The principal or school head lets staff members know what is expected of them.	○	○	○	○	○	○
Teachers know what is expected of them.	○	○	○	○	○	○
Faculty roles and responsibilities are clearly communicated.	○	○	○	○	○	○
Formal teacher leadership roles are clearly defined and everyone understands the roles and responsibilities of these teacher leaders.	○	○	○	○	○	○
Teachers' roles include attention to their classrooms, the school, the community, and the profession.	○	○	○	○	○	○

* 20. School Culture

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Teachers are supportive of each other personally and professionally.	○	○	○	○	○	○
Teachers try hard to help other teachers be successful.	○	○	○	○	○	○
Administrators try hard to help teachers be successful.	○	○	○	○	○	○
Teachers respond to their own and others' needs as they advance shared goals.	○	○	○	○	○	○
Teachers create an inclusive culture where diverse perspectives are welcomed.	○	○	○	○	○	○

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Teachers consult with other teachers when addressing student learning challenges.	○	○	○	○	○	○
Teachers engage in reflective dialogue to improve teaching.	○	○	○	○	○	○
Teachers observe other teachers' classroom instruction to improve student learning.	○	○	○	○	○	○
Teachers engage colleagues in conversations about student learning data.	○	○	○	○	○	○
Teachers are encouraged to take risks.	○	○	○	○	○	○
When things go wrong, we try not to blame, but talk about ways to do better next time.	○	○	○	○	○	○
Everybody talks freely and openly about feelings and opinions they have.	○	○	○	○	○	○
Teachers and staff focus most conversations on students.	○	○	○	○	○	○
School leaders encourage teachers to take on leadership roles.	○	○	○	○	○	○
Teachers encourage each other to take on leadership roles.	○	○	○	○	○	○
Teachers support team decisions publicly.	○	○	○	○	○	○

* 21. Are additional supports necessary in order for you to add to your current leadership responsibilities and activities?

- ◯ No additional supports are necessary
- ◯ Additional supports are necessary. If more support is necessary, please describe what kind of support is needed

Describe support needed:

Teacher Leadership Questionnaire

Final Page: Instructions for Thank You Gift Registration

Thank you for taking this survey. Read below regarding thank you gift registration. Once you have read below, you may click DONE to submit the questionnaire.

You could be eligible to receive a $50 Amazon.com thank you gift certificate!

Although you will not be compensated for completing this survey, you may choose to be eligible to receive a limited number of $50 Amazon thank you gift certificates. All participants will have an equal chance to receive a thank you gift. The study aims for a minimum of 192 respondents. The maximum number of potential respondents is approximately 2,000. Therefore, all participants will have between a 1% and 10% chance of receiving a thank you gift.

In order to share your desire to be eligible to receive one of the thank you giftsyou should email Sean Arelas at sma5@lehigh.edu by April 15, 2016. Please type THANK YOU GIFT in the subject line of the email. Mr. Tom Shearer, the State Department Regional Director for schools in Africa, will randomly select the recipients of the thank you gifts by April 29, 2016. Emails will be securely stored in a password-protected file separately from other survey response data so that there is not a breach of confidentiality.

* Most questions copied or adapted from; Danielson, 2006; Katzenmeyer & Moller, 2009; Lambert, 2003; Mancuso; 2010, Sides, 2010; Williams et al., 2015

Appendix E. Cover Letter, Instructions and Response Form for Delphi Panel Experts

Date

Dear *Delphi Panel Expert*:

Thank you for volunteering to be a panel expert to review and give feedback on the construct and content validity of the Teacher Leadership Questionnaire which I will use in my upcoming study. This means you will be giving me feedback on whether my survey instrument actually collects the intended information and contains accurate information. For some background, I have included the abstract for my proposed study below:

The U.S. State Department supports 193 American-sponsored overseas schools in 134 countries. A competitive international school market has increased the pressure on these schools to recruit and retain high-quality teachers. Teachers, who feel they have more input into school decisions are more likely to desire employment at such schools, or once at the school, are more likely to stay for a longer period of time (Ingersoll, 2001; Mancuso, 2010). Purposefully developing teacher leadership in international schools may be a way to recruit and retain the best teachers (Weston, 2014). Education reformers have called for developing teacher leadership as a key component of sustainable school improvement initiatives (Berry, 2013). Many claim teacher leadership professionalizes teaching, enhances overall school health, and improves teachers' instructional practices, all of which lead to greater student learning outcomes (Murphy, 2005).

This study aims to support American-sponsored overseas schools with recruiting and retaining the most effective teachers to fulfill their missions, and it will add to the research base on variables that support teacher leadership in order to enhance school effectiveness within the unique context of American-sponsored overseas schools. Using a multistage census sampling methodology, the principal investigator for this quantitative study will send a questionnaire to an accessible population of approximately 2,150 teachers from 39 American-sponsored overseas schools in Africa. The study will investigate the type of leadership and number of leadership activities teachers currently perform in these schools. Moreover, the study will explore to what extent different school level variables (organizational structure, professional development, time, recognition, role clarity and school culture) teachers perceive to support the enactment of teacher leadership. The study will include the following design elements and statistical methods for data analysis: the Delphi process, a pilot study, descriptive statistics, computations of Cronbach alphas, principal components analysis, and multiple or logistic regression.

The following list contains key definitions of terms and variables for this study that I will ask you to consider as you are reviewing the Teacher Leadership Questionnaire.

- **Teacher leadership.** Katzenmeyer and Moller (2009) define teacher leadership as "…teacher leaders lead within and beyond the classroom; identify with and contribute to a community of teacher learners and leaders; influence others towards improved educational practice; and accept responsibility for achieving the outcomes of their leadership" (p. 6). Teacher leadership, for this study, will be further broken down into

five phases of teacher leadership. These phases of teacher leadership are presented in more detail in the below table:

Evolution of Modern Conceptualization of Teacher Leadership

Continuum: Phases of Teacher Leadership	Time Period	Types of Teacher Leadership Roles	Functions of Teacher Leadership
Phase Zero	Pre- 1980s	Few leadership opportunities outside classroom; teacher isolation	Teachers lead students in classrooms only; teachers not treated as professionals
Phase One	1980s	Department chairperson; team leader	Subject Matter; Grade-Level Expertise
	Early to Mid 1990s	Governance leadership	Whole School Reform; shared decision-making
Phase Two	Mid 1990s	Instructional leaders; team leader; curriculum developer; staff developer	Standards-based reform; outside of classroom roles; coaching; mentoring; curriculum writing; "Remote controlling of teachers"
Phase Three	Mid to Late 1990s	Collective teacher leadership; teacher leadership as a concept rather than position	Standards-based reform continues; professional learning communities; teaching and leading
	2000s	School-based instructional leadership as support for collective teacher leadership	Address press of accountability; aid implementation of communities of practice
Phase Four	2010s	Teacherpreneurs; educational authors, educational software developers, community organizers, etc.	Address complexities of Common Core U.S. standards movement; teachers remain in classroom but have release time to influence profession outside of school

The following terms are the definitions of the variables in current literature that support the development of teacher leadership:

- **Organizational structure.** Supportive organizational structures are nonhierarchal, organic networks that are more democratic in nature with more opportunities for shared decision-making, collaborative problem-solving and accountability.
- **Professional development.** Professional development refers to training in which the goal is to develop specific teacher leadership skills either in formal or informal capacities.

- **Time.** This study will focus on two aspects of time: (a) scheduled time to perform additional teacher leadership responsibilities not normally associated with classroom teaching duties, and (b) time for teacher collaboration.
- **Recognition.** Recognition describes the processes and systems in place to recognize teachers for their leadership and contributions to the school.
- **Role clarity.** Role clarity refers to the extent to which teachers understand what administrators and other teacher colleagues expect of them as a leader.
- **School Culture.** School cultures that support the development of teacher leadership have respectful, collaborative and collegial relationships. In school cultures conducive to developing teacher leadership, teachers believe in the capability of their fellow teachers to be leaders, and expressions of leadership among colleagues is not perceived as threatening.

Instructions: I have attached a draft copy of the Teacher Leadership Questionnaire with this letter. What I need you to do is review each section and item carefully. During your review, you will complete the following form/questions giving feedback on the construct and content validity of the questionnaire.

Teacher Leadership Questionnaire Feedback

Part I: Background Information

Part I gathers basic demographic information on the school and the teacher in order to better analyze the data later in the study. I do not require much feedback here. However, if you wish you may comment on the following:

1. In terms of background information, are there any other demographic details you feel could be useful in analyzing to what extent teachers perform leadership duties? List all that apply and explain any suggestions.

Part II: Teacher Leadership

Question 9 in Part II lists phases 1-3 teacher leadership activities mentioned in the literature and used on a previous survey instrument.

2. This question requires less feedback as it has been validated in a previous study. However, if you wish, you may comment on the following: Are there any critical examples of phases 1-3 teacher leadership that you feel are missing from question 9? If so, what are they?

3. This question requires less feedback as it has been validated in a previous study. However, you wish, you may comment on the following: Are there any teacher leadership activities listed in question 9 that you believe do not belong in the list of phases 1-3 activities? If so, what are they?

Question 10 provides a list of so-called phase 4 teacher leadership activities. These are leadership activities performed outside of school and related to the education profession.

4. Are there any critical examples of phases 4 teacher leadership that you feel are missing from question 10? If so, what are they?

5. Are there any leadership activities listed in question 10 that you believe do not belong in the list of phase 4 activities? If so, what are they?

Part III: School Support for Teacher Leadership

For each section/variable in Part III, comment the on the following:

Do the items in each section fit with the overall section title? Yes or no? What modifications, suggestions, or comments (if any) any do you have.

Question 13: Organizational Structure

- Yes ____
- No ____

Any modifications, suggestions or comments?

Question 14: Professional Development

- Yes ____
- No ____

Any modifications, suggestions or comments?

Question 15: Time

- Yes ____
- No ____

Any modifications, suggestions or comments?

Question 16: Recognition

- Yes ____
- No ____

Any modifications, suggestions or comments?

Question 17: Role Clarity

- Yes ____
- No ____

Any modifications, suggestions or comments?

Question 18: School Culture

- Yes ____
- No ____

Any modifications, suggestions or comments?

Thank you in advance for your time, support and feedback. Once I have received this first round of feedback from all the panel experts, I will send you a revised draft. The second draft will not require as detailed feedback, but it will ask you to take one last look and make any final comments or suggestions.

I am very grateful for the time you are taking from you busy schedule to support me with my study. Please let me know if you have any questions or need any clarification.

Sincerely,

Sean Areias
Elementary Principal
American International School of Lagos

Doctoral Candidate
Lehigh University

Appendix F. Pilot Study of Teacher Leadership Questionnaire

Pilot Study of Teacher Leadership Questionnaire

Part I: Background Information

Thank you for volunteering to be a part of the pilot study for my dissertation. Before you begin answering the questions, please keep the following in mind as you work your way through the questionnaire. At the end of the questionnaire, you will be asked to give feedback on:
1. How many minutes did this survey take you to complete?
2. Were any questions or sections unclear? What suggestions, if any, do you have for making the questionnaire clearer or more user-friendly?

* 1. What is the 3-digit number that your school head provided for your survey? All pilot study participants should put 000 here.)

Only two more questions to go... Your feedback on this questionnaire is very much appreciated.

* 22. How many minutes did this survey take you to complete?

23. Suggestions or comments. Were any questions or sections unclear? What suggestions, if any, do you have for making the survey clearer or more user-friendly?

*The final study questionnaire and the pilot study questionnaire were the same accept for the introduction, the closure, the instructions for question 1 with the 3-digit code, and questions 22-23 in the pilot which were to seek feedback on the length of time it took teachers to complete the survey and to seek feedback to improve the questionnaire. No major themes for improvement emerged. Therefore, the final survey questions were the same as the questions in the pilot study.

Appendix G. Cover Letter to Teachers in Pilot Study

March 11, 2016

Dear Colleagues,

As many of you know, I am currently working towards my Doctorate in Educational Leadership at Lehigh University. I have a big favor to ask!

I need to conduct a pilot study with my questionnaire that I will use in my research study on teacher leadership in American-sponsored overseas school teachers in Africa. As such, I am asking if you would help me by completing the survey link provided at the end of this letter.

Would you please consider taking my survey? I estimate it will take between 15-20 minutes. In addition to the normal survey questions, the pilot survey will ask you to report how long it took you to complete the questionnaire, if you experienced any confusing questions, and if you have any final recommendations/suggestions to make the survey more user-friendly.

Strict confidentiality will be maintained throughout this study in accordance with the *Federal Policy for the Protection of Human Subjects* (Federal Register, 1991) and the *Ethical Principles in the Conduct of Research with Human Participants* (APA, 1982). There are no distinguishing data on the survey that would identify the participant, and participation is totally voluntary. Your decision whether or not to participate will not affect your current or future relations with the American International School of Lagos. If you decide to participate in the survey, you are free to withdraw at any time without affecting those relationships.

I will be sharing my findings of my overall study with the school at the end of the study. Also, you may e-mail me if you would like your own copy of the findings at the conclusion of the study. If you have any questions about this study, please contact me at sma5@lehigh.edu. You may also contact my adviser, Dr. Floyd Beachum (fdb209@lehigh.edu), at Lehigh University. Any problems or concerns that may result from participation in this study may be reported to Naomi Coll, Officer of Research and Sponsored Programs, Lehigh University (nac314@lehigh.edu).

Thank you for your support.

Sincerely,

Sean Areias
Elementary Principal
American International School of Lagos

Doctoral Candidate
Lehigh University

Appendix H. Teacher Responses to Additional Supports Necessary for Teacher Leadership

	Teacher responses on additional support needed
1.	Administration needs to recognize teachers' activities and their talents. Currently teachers are undervalued and work in a culture of fear. This does not create a comfortable, collaborative environment. Teachers do take on leadership roles but their abilities and contributions are overlooked and not respected. Teachers are starting to avoid taking on new things as many hurdles are put in their paths.
2.	More professional training needed. Better welfare packages.
3.	Time
4.	Additional support of a colleague, parent volunteer or community member would be very helpful for me in running the afterschool programs and producing the quarterly musical shows.
5.	Time is not properly allocated for leadership responsibilities/activities. There is rarely a clear purpose or structure for and communication between the different leadership groups. Administrators regularly do not model good teaching practices. Professional development for leaders is not based on the individual's needs and instead is approached in a one-size-fits-all manner.
6.	Responsiveness and problem-solving methods, approaches, and processes that administratively address the results of collaborate, teamwork and group processes outlining needs assessment, strategies for improvement and recommendations for constructive changes that teacher and departmental teams present to leadership. There needs to be an orienting perspective that all teachers can be leaders for their inclusion in 'leadership team' or 'administrative team' decision-making.
7.	There must be better communications between admin, department heads and schools ES MS and HS about school directives and leadership beyond basic accreditation directives. These school wide goals or directives take precedence over other major issues effecting student learning. Data collection, team goals, etc., are seen as busy work by the majority of the faculty. Support is needed in solving major issues such as master scheduling more student contact time and parental concerns/needs in the arts program.
8.	Support from Admin
9.	More time (specified) for communication between involved individuals and flexible admin who listen constructively to teacher's questions and concerns.
10.	Less meetings

Teacher responses on additional support needed
11. Reduce workload
12. Connection with other teaching and learning coaches in other schools.
13. Admin. Needs to include teachers in decision-making.
14. Recognition of ideas from admin, time, support from admin in decisions/ideas made/discussed by teachers
15. There is not a culture of leadership at our school, nor is there encouragement to take on those roles. The elementary principal is supportive of teacher leadership, but this is an exception to the overall tone of the school regarding teacher leadership.
16. This page keeps "timing out" and I need to fill in the questions again. Please disregard the answer for this section
17. Protocols for taking on leadership responsibilities should be more clearly established, roles should be defined, and documents that should exist that allow for consistency in leadership.
18. Currently grade level team leaders receive a stipend but not release time. Teachers who have been asked to head a committee are given no stipend or release time. In the end, the leadership roles listed above are often performed ineffectively not due to teachers lack of effort but because of lack of time.
19. Open advertisements to current staff of all leadership roles available - not pre-selecting prior to advertising.
20. More support is necessary when planning events and activities involving students across grade levels or across our two campuses.
21. Relief from after school responsibilities
22. I used to have a lot of leadership responsibilities, but under our current administration I have chosen now to participate in as few as possible, in order to minimize my dealings with admin. Any kind of support, appreciation, and valuing of input would be needed.
23. It is unclear what is expected from principal, he avoids contacts with the teachers.
24. The school I work at is large, with a top-down hierarchy. Many decisions are made with little to no teacher input. I saw hope when I volunteered to be on a literacy committee, but the committee was disbanded after one meeting. The committee consisted of diverse voices from teachers across a wide range of grade levels in the school. I thought the work we began was very powerful! The literacy committee has since been regrouped with mostly administrators in the lead... I think there is only one classroom teacher on the

Teacher responses on additional support needed
committee! In schools where I experienced strong teacher leadership, decisions were made from the ground up through a consensus decision-making model. All curriculum changes and initiatives were initiated by committees made up entirely of classroom teachers! Change happened slowly, but deliberately, with diverse opinions taken into account. I also felt empowered by my administrators to try new and perhaps novel things in the classroom. In fact, the principal once said to me that wherever she witnesses innovation, she allows teachers to engage in experimentation and action research. At my current school, we are held to account for following a fairly rigid curriculum, and frankly the curriculum is quite traditional, in spite of the school's marketing which makes it seem otherwise. I have tried to engage in leadership, but generally I feel tied to a short leash so to speak. Not the best environment for me, as in the past I have exercised strong leadership in my school, led committees, and been heavily involved in activities outside of my school including coordination and delivery of workshops for teachers statewide, curriculum writing, development, and dissemination, and conference presentations.
25. I think we need to bring in some Education specialists to support the Early Years transition into authentic play-based learning. As a school, we need some support in developing our maths program/curriculum and could use an expert's help.
26. Professional development, and financial support
27. Since I already voluntarily contribute time in 3-4 formal areas of school development, as well as having a service approach in many informal projects, I would want release time, a change in title or a stipend to add to what I'm already doing.
28. Time
29. Historically our school had a group of teachers who acted unprofessionally. The ADMIN has worked very hard to hire people who do act professionally. They need to trust their teachers and distribute leadership, agency and control over time to show that the Admin in fact does trust the teachers.
30. Team leadership skills- managing meetings
31. It would be helpful to be aware of any leadership possibilities that may arise in our school
32. Teaching support or adequate substitutes if the teachers need to leave their class for leadership work.
33. Support from administration to create leadership and teachers involvement in their professional learning communities and practice.

Teacher responses on additional support needed
34. Materials, personnel, business office support personnel
35. Better schedule to allow for collaboration, less initiative, three principals rather than two.
36. More time, fewer preps
37. The support of having more time for these responsibilities and activities. Time always seems to be the challenge, whether that is time to meet with colleagues or time to do research or time to observe each other, etc.
38. Time!!
39. Greater encouragement from administration. Stipend
40. Role of learning and ESL specialists. Successful schools have great curriculum coordinators.
41. The main supports that are necessary in order to add to my current leadership responsibilities are supports that I think any school needs in order to efficiently and effectively operate. These include greater access to technology and reliable Internet; time to focus on student learning with colleagues; specialists (i.e. Learning needs specialist; ELL support, etc.); reduced class load (some teachers are planning for 3-4 different courses and grade levels while taking on extra responsibilities); and IEP system; and a clear assessment policy. Without these supports, taking on additional responsibilities seems overwhelming to say the least.
42. A general vision and expectations need to be established. The staff needs to design essential agreements for practice, professionalism and learning. Several of the current staff are not supportive of newcomers in general and exclude others. They seem disinterested in developing as professionals and rely on traditional methods of teaching.
43. Supports include administration training in building a professional learning community among teachers, time is needed, open policies about trainings and job postings, and other changes in structure, routine and communication that would allow teachers to feel confident and secure in seeking leadership positions.
44. It is often unclear what the mission of the school is in regards to my role at the school as the Learning Specialist. In order for me to do my job best and take on a stronger leadership role, the school needs to decide and clearly communicate with staff whether or not it is an inclusive school or a selective school.
45. PD should be actively encouraged
46. More opportunities for leadership, more time put aside to work on

Teacher responses on additional support needed
leadership opportunities, more clarity on pre-existing leadership roles
47. Additional time release would be helpful. Timetabled faculty meetings would help. It would also be made easier if there was more consistency with teaching staff, and action taken by senior leadership when teachers do not perform to expectations or do not adopt the philosophy of the school in their classroom approaches.
48. In general, our school lacks basic communication. Faculty meetings agendas are set without teacher input and rarely include information or support for what teachers are dealing with at the moment. Clearer communication paired with a chance to celebrate each other, and reflect with each other would be welcomed improvements on our campus.
49. Supports to encourage teachers to observe other teachers' classroom instruction to improve student learning. Supports when looking at student learning data.
50. Our PD budget is $500 per year. That is not enough.
51. More dialogue prompted by classroom observation.
52. More access to PD opportunities i.e. conferences. This is a challenge however, considering that we live in West Africa.
53. Admin needs to give PD to each teacher equally. PD is a popularity contest at my school.
54. If the time were provided, and needs assessed, I would enjoy and be able to assist elementary teachers in better understanding math content and pedagogy. Also, were there time and identified needs, I could offer great support to other teachers in differentiating for high ability children.
55. Time, compensation, development, appreciation
56. Time. I teach 5 preps and also have a two leadership positions, one I am paid for and the other I am not. It takes a lot of time.
57. Within staff meeting discussions about core issues facing the school, all staff voting should be mandatory. At a guess, I would say that 60% of staff needs to agree in order for the action to be taken. If less, it should be shelved or dismissed. I think that consensus amongst all staff is absolutely crucial for a happy, motivated school.
58. Increased planning and collaboration time with other teachers, especially in connecting grade levels to promote vertical curricula, such as shared planning periods would be useful to encourage leadership building with teachers, since it would not force teachers to take on leadership on their own time, after school hours end and

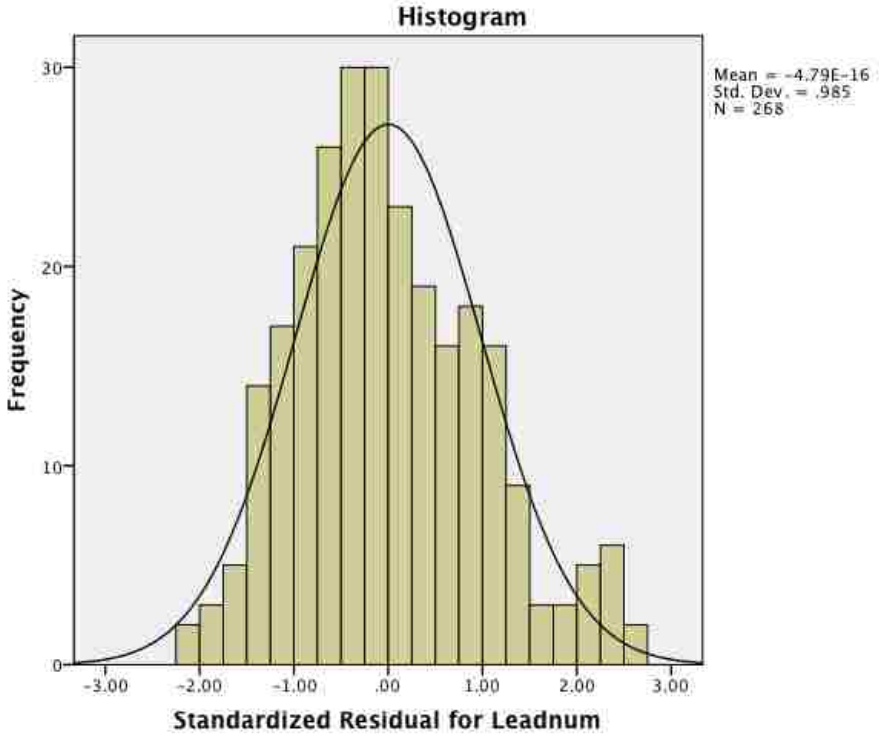
Teacher responses on additional support needed
when we are unpaid for that extra initiative and work load.
59. Clarification of roles and expectations for the different teacher-leadership roles. More opportunity for peer feedback and in school mentoring.
60. Collaborative planning time 2) I'd like to distinguish between formal positions of authority/responsibility (which the school does encourage teachers to take) and leadership roles (where teachers provide leadership & direction and help set goals) - which it does not.
61. Teachers development workshops
62. Communication and material and technical assistance
63. We need mentoring to learn new skills, develop teachers, but there is no system in place to identify those in need (skills or individuals), nor are teachers ever trained (anywhere?) to be effective mentors.
64. I see my role is as a support system and a facilitator. I do not have all the answer though. It is important to act as a means to provide teachers with current pedagogical practices, support them with the most up to date materials and resources, provide time and opportunity for teachers to collaborate, seek out advice from other experts, provide opportunity for ongoing professional learning and sharing with the workplace.
65. More support is needed to take pedagogical risks, and more administrative support is needed to help teachers see each other as valuable resources.
66. Time
67. Administrators need to be on the ball and regularly engage in meaningful professional dialogue with teachers about leadership opportunities and the school's commitment to supporting them. Our school administrators seem particularly disengaged from the teaching staff. Teacher initiatives aren't well supported or recognized (unless they happen to be complete in line with the administrator's own interests). There seems to be an inherent distrust of teacher leadership here -- admin seems to think it has all the answers, and rarely asks the right questions.
68. Time. There is simply not enough time in the day for teachers to successfully plan, teach, meet, and work towards achieving school/grade level/personal goals.
69. Time
70. Better communication of teacher roles and expectations against the declared school aims. More opportunity to be part of the

Teacher responses on additional support needed
development of aims rather than a select committee that drives a top down approach to school aims and objectives.
71. Teachers observing each other for professional development is desired and will be helpful.
72. TIME to truly collaborate and support better leadership
73. More support from the Admin team, including understanding of the demands of the various activities staff are involved in.
74. Current administration is working hard to bring the school up after crisis, and doing an admirable job. However, they could support the development of my current leadership by: - Providing appropriate and significant PD support (in my case professional conference attendance and/or additional certificate or masters degree in support of both the school and my professional goals) - Ensuring that past PD is utilized (I have IB training, but I am being moved into a new role, so I will not be able to use that training) - Encouraging and recognizing work done outside of school (such as supporting teachers who work with local agencies - I have worked with local educational association, created exchange relationships with libraries in other schools, and worked with the ministry of education, but our administration gives no recognition, reward, or remuneration for that work) - Supporting leave time to work in other schools - While I am being asked to move from my profession to take on a teaching role, I would like to be able to continue working in my profession by providing support in another American university, to help develop their library services and train their librarian. Currently, I would not be permitted to use work time for these endeavors.
75. More collaboration/discussion with senior administration (rather than top-down approach) Leadership roles are only given to those with experience. It is almost impossible to rise up the ladder within the school. More attention should be given to professional development.
76. Administrators need to know what we are teaching and come into our classrooms more than one 30-minute period a year.
77. Administrative support
78. Opportunity and mentoring/guidance
79. The support of admin. Only the current favorites have leadership responsibilities. No one else is seen, much less valued.
80. Time; assistance; guidance
81. More encouragement of teacher leadership -More collaborative approach which focuses on student learning
82. I would like to have more training in teaching adults. We had a

Teacher responses on additional support needed
consultant come for 1.5 days, but I don't feel like that was enough.
83. More opportunities
84. More training
85. A focus on developing communication skills would improve the potential for leadership pursuits and change to occur.
86. Better training is needed along with others understanding leadership roles and their responsibilities.
87. Team building supports and diversity training (international school setting) How to be a more pluralistic school.
88. We need allocated time and specific guidelines for leadership roles. We also need the support from administration to freely communicate our needs to best support the children in our classroom.
89. To be able to do a lot of the things I'm interested in (workshop leader, etc.) I think that more reflection time is needed and a bit more discussion focused on these areas of growth between teachers and administration would be helpful. Additionally, I often don't learn about these opportunities nor do I feel that I would have the support to go to a conference during the school year when many of them are held.
90. Communicating roles more clearly, creating a culture where people are encouraged to share challenges and successes, support for teacher leaders to deal with conflict
91. Professional development that is appropriate for each individual teacher leader is needed - also a clear vision of details surrounded teacher leaders is lacking
92. Time - some leadership posts have a time allocation, some do not Employing staff that are capable of leading a team
93. Time, reduced complexity of teaching load (I currently teach 5 preps)
94. When planning teacher training time out of class should be given to help teacher leaders focus.
95. Payment and/or time allowance. Grade level leadership position at my school is paid at about $15 per hour. Insulting. Not interested. Largely menial administrative work yet supposedly a "Leadership" position. This year I was asked to lead 3 maker days at my school. About 50 hours of planning, admin and training work. No payment or period allowance was offered. Non-teaching or lesson planning work always increases. Nothing is ever removed. Job/Scope creep.
96. Clear role statement with objectives / performance criteria.

Teacher responses on additional support needed
97. More time, or release time would be nice.
98. There should be more time to share what we do in class with each other, so we can learn from each other.
99. Teachers need more common time for important leadership roles to be effective.
100. Basically, time allocation is something that would be very beneficial support-wise.
101. We need better resources for addressing student learning needs: ESL, special education, school counseling. Time to collaborate only works when your colleagues WANT to collaborate.
102. Culture of responsibility needs to be inculcated. This holds for students, staff, and administration. Further, the school's systems and hiring practices mean that teachers may not end up teaching for the position they were hired to do, or may not maintain a semblance of that position in the second year of their employment.

Appendix I. Standardized Residual for Leadership Number



Appendix J. Author Vita

Sean Matthew Areias
sareias@me.com

Professional Experience

Elementary School Principal
American International School of Lagos, Nigeria; 2014–present

Middle School Principal
Harare International School, Zimbabwe; 2012–2014

Assistant Head of Lower School/PYP Coordinator
The American School Foundation, Mexico; 2011–2012

Primary Principal
American International School of Lusaka; Zambia; 2007–2011

Elementary Principal
Caribbean School; Ponce, Puerto Rico; 2005–2007

Fifth Grade Teacher and Team Leader
International School of Brussels; Belgium; 2002–2005

Sixth Grade Teacher
Instituto San Roberto; Monterrey, Mexico; 2000–2002

Fourth Grade Teacher
Los Angeles Unified School District, California; 1999–2000

Third Grade and Fifth Grade Teacher
San Diego Unified School District; California; 1996–1999

Kindergarten and Third Grade Teacher Assistant
San Diego Unified School District, California; 1994–1996

Degrees and Certifications

Doctoral Candidate in Educational Leadership
Lehigh University, Bethlehem, PA; 2016

Pennsylvania Principal Certification K-12
Commonwealth of Pennsylvania; 2010

Master of Education Curriculum and Instruction
University of San Diego, San Diego, CA; 1999

California Multiple Subject Credential
State of California; 1997

Bachelor of Arts Diversified Liberal Arts
University of San Diego, San Diego, CA; 1996