Exploring the ‘Spaces Between’: Teachers’ Perceptions of Teacher Leadership within Professional Networks

Cynthia B. Bauman
University of South Florida, baumanch@yahoo.com

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Exploring the ‘Spaces Between’:
Teachers’ Perceptions of Teacher Leadership within Professional Networks

by

Cynthia B. Bauman

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Educational Leadership
Department of Leadership, Counseling, Adult, Career, and Higher Education
College of Education
University of South Florida

Major Professor: Judith A. Ponticell, Ph.D.
William Black, Ph.D.
Zorka Karanxha, Ed.D.
Rebecca Burns, Ph.D.

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Keywords: teacher networks, teacher leaders, teacher collaboration, leadership capacity

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DEDICATION

Dedicated to my parents who taught me a love of learning, my brothers and nieces and nephews who inspire me to create great educational experiences for children, and my husband who never lets me underestimate myself.
ACKNOWLEDGMENTS

My journey through graduate school and this dissertation would not have been as meaningful or successful if it had not been for my network of friends, mentors, and colleagues in both my collegiate life and professional life. Thank you to these special individuals for providing much needed emotional support, advice, and collaboration. Thank you to my major professor, Dr. Judith Ponticell for her unwavering, steady guidance. Thank you also to my committee members: Dr. Rebecca Burns for her insight, Dr. Zorka Karanxha for her strength of purpose, and Dr. William Black for his belief in me.
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ABSTRACT

The enactment of teacher leadership can be challenged by both policy initiatives and school contexts (Anderson & Cohen, 2015; Hargreaves & Fullan, 2012). However, teachers can have a positive influence on each other and their broader school community by building capacity for leadership, innovation, and student achievement through the relationships, or networks, they develop and maintain (Baker-Doyle, 2015; Hovardas, 2016; Hunzicker, 2012; Moolenaar, Sleegers, & Daly, 2012). This single exploratory case study takes place in a Title I elementary school and uses a combination of Social Network Analysis and content analysis to uncover patterns in teacher professional networks, the context in which they exist, and teachers’ perceptions of the influence of these networks on their sense of themselves as teacher leaders. The study focuses on four constructs: teacher leadership, teacher efficacy, instructional innovation, and professional networks. The concept of social capital is used to explore the connection between networks and teacher leadership. Symbolic interactionism frames the analysis of the nature of relationships that emerge within these networks. Findings indicate that teachers linked their identities as leaders with a culture of leadership, exchange of advice, shared values, and high expectations for themselves and their students. Interview responses demonstrated they believed in their collective capacity to accomplish a shared mission of student achievement; they trusted in and supported each other through their professional networks.
CHAPTER 1:
INTRODUCTION

The enactment of teacher leadership can be challenged by both policy initiatives and school contexts (Anderson & Cohen, 2015; Hargreaves & Fullan, 2012). Teacher leadership can be difficult to demonstrate when control within schools is dominated by federal accountability measures and state mandates that reduce local decision-making (Endacott, Wright, Goering, Collet, Denny, & Davis, 2015). An “audit culture” (Apple, 2007) in schools, prompted by accountability policies, can dampen initiative and innovation. Some teachers perceive that implementation of standardized curriculum along with heightened accountability measures reduces their role to that of a “robot teaching other little robots” (Endacott et al., 2015). Encouraging teachers to take up leadership roles, formal or informal, can be challenging in itself (Muijs & Harris, 2006). Traditionally, teacher leadership has been “challenged by a professional culture of isolationism, individualism, and egalitarianism in teaching” (Taylor, Goeke, Klein, Onore, & Geist, 2011, p. 921). Both teacher socialization and attitudes toward stepping into those roles, as well as principal reluctance to relinquish power, can be a roadblock to creating shared leadership opportunities (Barth, 2013; Brosky, 2011).

Conditions that support teacher leadership, however, appear to support strong relationships among all teachers. Empowering teachers and school communities requires open, transformational leadership that is characterized by authenticity, trust, accessibility,
and risk-taking (Anderson, 2009). Trust is embedded in a relational model of leadership “that mobilizes other people to improve practice” (Donaldson, 2007, p.27). Learning communities that build a “democratic capacity for teachers” based on principles that foster increased opportunities for teacher empowerment and control are vital for teacher leadership (Mullen & Jones, 2008, p. 329). Successful enactments of teacher leadership appear to exist when teacher leaders increase their influence through skills and strategies (either consciously or unconsciously) and when administrators create and support structures that provide opportunities for teachers to exert that influence through collaborative inquiry (Brosky, 2011).

Teachers can have a positive influence on each other and their broader school community by building capacity for leadership, innovation, and student achievement through the relationships, or networks, they develop and maintain (Baker-Doyle, 2015; Hovardas, 2016; Hunzicker, 2012; Moolenaar, Sleegers, & Daly, 2012). Although some policy initiatives focus on formal roles for teacher leaders in order to build capacity for school improvement, less formal professional networks can often positively influence teacher efficacy for student achievement (Daly, Moolenaar, Bolivar, & Burke, 2010).

Purpose of the Study

The purpose of this single exploratory case study is to uncover patterns in teacher professional networks, the context in which they exist, and teachers’ perceptions of the influence of these networks on their sense of themselves as teacher leaders. The study was conducted at a Title I elementary school in a suburban school district in the southeastern United States.
**Research Questions**

The overall guiding question for this study is, to what extent do teachers utilize professional networks to seek information and influence others as teacher leaders working toward a common goal of student achievement and school improvement? Related secondary questions are:

1. What formal and informal networks for instructional improvement and innovation exist in this school?
2. What are teachers’ perceptions of the role these networks play in building teachers’ efficacy and capacity to improve and innovate instructional practices for student achievement?
3. In what ways do teachers perceive these networks contribute to their sense of themselves as teacher leaders?
4. What factors do teachers perceive enable or constrain their ability to enact teacher leadership through these networks?

**Conceptual Framework**

The concept of social capital can help describe the connection between networks and teacher leadership. Social capital is the result of individuals creating relationships with others to give and receive advice based on knowledge and experiences in order to achieve a goal.

Networks are a fertile ground for social capital (Baker-Doyle, 2015). In social capital it is all about whom you know, not just about what you know (human capital) or how you understand it (cultural capital). Lin (1999) states that social capital consists of
three components: 1) resources embedded in a social context; 2) that are accessed or mobilized; 3) for purposive action. Researchers have used this definition of social capital to analyze an individual’s navigation and positioning for socioeconomic status and employment attainment (Lin, Zhang, Chen, Ao, & Song, 2015; Najarzadeh, Soleimani, & Reed, 2014).

Social capital can exist both external (the collaborative effect) and internal (the leadership effect) to the actors. This perspective, which describes both the influence of individuals and the influence of the collective, is summed up by Adler and Kwon (2002): “Social capital is the goodwill available...in the structure and content of the actor's social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor” (p. 23).

Social capital can be applied to networking in education for the purpose of understanding teacher relationships that build capacity for school improvement (Muijs, West, & Ainscow, 2010). Social capital can help describe the way teachers navigate social networks as they “mobilize” (Lin, 1999) themselves and others to improve instructional practice and influence others. The power of social capital may be to unlock leadership potential in each individual within the larger network. Then, teacher leadership is not necessarily reserved for those that occupy formal leadership roles. This can help foster a more pervasive culture of teacher leadership and maximize capacity for instructional improvement.

Definitions

- *Teacher leadership*: Teacher leadership exists through collaboration and
networking that occurs formally or informally to influence the broader school community as school personnel work together for student achievement (Barth, 2013; Donaldson, 2007; Feeney, 2009; Helterbran, 2010; Margolis & Huggins, 2012; Phelps, 2008; York-Barr & Duke, 2004).

• **Network:** A network is a set actors connected by ties that form patterns of relationships (Borgatti & Ofem, 2010). Teacher professional networks are groups of teachers whose ties may be defined by a variety of criteria including collaboration, frequency of interaction, and advice-seeking (Carolan, 2013; Spillane, Hopkins, & Sweet, 2015; Woodland, Barry, & Roohr, 2014). These may exist within formal structures and roles created specifically for planned instructional collaboration amongst assigned groups of teachers, or professional learning communities (DuFour & Fullan, 2013). These networks may also exist within the relationships individuals have organically developed to seek advice about instructional practice (Coburn, Choi, & Mata, 2010; Coburn & Russell, 2008).

• **Efficacy:** Efficacy can exist both individually and collectively. Collective efficacy is the “shared perceptions of a group’s ability to achieve collective goals” (Moolenaar, Sleegers, & Daly, 2012). In the educational setting one significant goal is student achievement.

• **Innovation:** For the purpose of this study, innovation is the development or creative application of a new or unique strategy as a solution to an instructional issue (Anderson, Potocnik, & Zhou, 2016; Robinson, 2011; Schimmel, 2016).
**Delimitations**

This is a single case study seeking to understand the context, characteristics, and teacher perceptions of teacher networks within one school. The study focuses on one unique activity site (Patton, 2002; Stake, 2010) within the elementary setting. Limiting the site to an elementary school takes into account my own experiences in the elementary setting. My entire professional career in the K-12 setting has been in elementary schools. I believe that this has assisted me in data collection and analysis. I believe I have investigated this phenomenon with the benefit of personal experience at the elementary setting. I also wish to build on existing research at the elementary setting focused on networking for instructional practice and expand upon this in relation to perceptions of teacher leadership.

The research questions, as well as study design and data collection, limit discussions of teacher leadership to instructional improvement and innovation. Teacher control over their work environment is not addressed. Also, the network survey is a closed survey limited to the school site. I want to focus attention on the professional networks for instructional practice that exist within this particular school. Teachers from this school may be a part of broader professional networks for a variety of purposes that include actors beyond the school site, but that is not the focus of this case study.

**Rationale for the Study**

Although there has been much research about educational leadership as a function of administrative and supervisory roles, the role and characteristics of the teacher leader continue to be much less consistently defined (Nappi, 2014). However, teacher leadership continues to be highlighted as a policy initiative. Within federal policy, teacher leadership
is usually defined by roles and responsibilities. Race to the Top (RTTT), a federal grant initiative, made creating and supporting “Great Teachers and Leaders” for student achievement a priority. The RTTT 2009 Executive Summary recognized “evidence of leadership roles (which may include mentoring or leading professional learning communities) that increase the effectiveness of other teachers in the school or LEA [Local Education Agency]” as an indicator of a “Highly Effective Teacher,” but little more was said about contexts that may or may not accompany such responsibilities. The reauthorization of the 1965 Elementary and Secondary Education Act in 2015 as the Every Student Succeeds Act (ESSA) discusses teacher quality with an increased emphasis on teacher leadership (Fennel, 2016). Title II of ESSA links supporting teacher quality efforts with developing teacher leaders and provides grant monies to assist (among other things) in the:

Developing, or assisting local educational agencies in developing—career opportunities and advancement initiatives that promote professional growth and emphasize multiple career paths, such as instructional coaching and mentoring (including hybrid roles that allow instructional coaching and mentoring while remaining in the classroom), school leadership, and involvement with school improvement and support. (ESSA, Title II, Section 2101, Part A, c 4 B vii I)

These grants are administered through the U. S. Department of Education (USDOE) Office of Innovation and Improvement, Teacher Quality Programs, and specifically the Teacher Incentive Fund. As funding becomes more available, these positions may become more prevalent. These formal roles can be an opportunity for teachers to demonstrate leadership skills and can have an influence on their peers for innovation and student
achievement, but a role or position does not of itself ensure the enactment of leadership or result in school improvement (Margolis & Doring, 2012; Margolis & Huggins, 2012). Research that discusses the definitions, contexts, and conditions for the enactment of teacher leadership can help organizations navigate formal program implementation as well as guide individual administrators, and teachers themselves, to foster more informal, organic expressions of teacher leadership within existing school environments and contexts.

Empowering teachers to have a voice in their schools can have an impact on school improvement (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Katzenmeyer & Moller, 2009; Murphy, 2005; Smylie, Conley, & Marks, 2011). Gaining insight into supportive contexts may help to increase opportunity for teacher leadership to affect teacher efficacy for student achievement, as well as the professionalism and stability of the teacher workforce (Moolenaar, Sleegers, & Daly, 2012). Teacher leadership has been noted as a way to address issues of teacher retention. In a policy brief reviewing recently submitted state ESSA implementation plans, American Institutes for Research (2017) identified promoting and supporting teacher leadership as a common strategy outlined in the plans for retaining teachers to address current and anticipated teacher shortages. The National Comprehensive Center for Teacher Quality (2010) links creating opportunities for teacher leadership with engaging and motivating Generation Y, now commonly know as Millennials. Coggshall, Ott, Behrstock, and Lasagna (2010) highlight that this generation’s preference for differentiated career options did not necessarily include becoming a principal.
Research suggests that teachers can demonstrate leadership within contexts that provide opportunities to showcase and share their learning for school improvement (Collinson, 2012). Relationships aligned with common goals can foster teacher leadership to build and strengthen collaborative action and collective capacity for student and school improvement (Harris, 2011). Empowering teachers and school communities requires open, transformational leadership that is characterized by authenticity, trust, accessibility, and risk-taking (Anderson, 2009). Understanding the contexts that challenge and support teacher leadership, as well as the perceptions of the actors within those contexts, can inform our approaches to enhance teacher collaboration and growth as leaders within their school communities.

Many contemporary studies of teacher leadership focus on the role of the principal and the conditions administrators create that support or inhibit teacher leadership (Poekert, 2012). Another perspective to take is looking at the networks that teachers develop within a sphere of professional influence. Less research has been undertaken to record and analyze the quality and quantity of the networks that occur as a result of collaborative practice (Pitts & Spillane, 2009). Additional research investigating perceptions of teacher leadership within networks can highlight the contexts that support or challenge teacher leadership.

**Chapter Summary**

The combination of federal, state, and local policy, along with subsequent implementation efforts, can affect conditions for teacher leadership within school contexts. The relationships teachers develop to navigate these contexts can influence both the enactment of teacher leadership and the larger school culture and climate for student
achievement. Further examination of the literature in the areas of teacher professionalism, leadership definitions, contexts, and research methodologies can bring greater insight as to what has been learned and what yet needs to be further explored in order to continue to build opportunities for teachers to enact leadership within formal and informal relationship networks working toward a common goal of student achievement and school improvement.

**Organization of the Dissertation**

This study is designed to uncover patterns in teacher professional networks, reveal the context in which they exist, and document teachers’ perceptions of the influence of these networks on their sense of themselves as teacher leaders. This first chapter provides an introduction to the study by stating the background, purpose, research questions, conceptual framework, definitions, delimitations, and rationale for the study. The second chapter provides a review of the literature that gives an overview of teacher leadership definitions and contexts, and then narrows the focus to survey current literature on teacher network studies and methodology. The third chapter outlines the overall context of this exploratory single case study and site selection, as well as the research design, theoretical framework, data collection procedures, processes for data analysis, limitations, researcher reflexivity, validation strategies, and ethical considerations. The fourth chapter displays the data collected, including visual representations of the networks. It provides evidence of findings within the document review, observations and interviews. The fifth chapter synthesizes the evidence for discussion, application, and implication for further study.
CHAPTER 2:
LITERATURE REVIEW

The overall guiding question for this study is, to what extent do teachers utilize professional networks to seek information and influence others as teacher leaders working toward a common goal of student achievement and school improvement? With this in mind, relevant literature that frames this question includes discussions about teacher leadership within networks for school improvement. Definitions of teacher leadership and models for leadership actions are often based on formal roles, but are increasingly including relationships within informal networks. How these definitions and characteristics of teacher leadership are enacted and perceived within professional networks can inform future paths for teacher leadership.

Focus and Review Strategy

The literature review focused on three questions: 1) How have definitions, models, and contexts of teacher leadership evolved over the past 10 to 20 years in theory, policy, and practice? 2) What insights do contemporary studies of teacher leadership conducted within the last 10 to 15 years provide about how teachers utilize networks within schools? 3) What methods have been used in studies conducted in the past 10 to 15 years to record or measure networks, or the spaces between (Donaldson, 2007; Taylor et al., 2011) relationships that are so important for networks to exist? Methods used in these studies to examine teacher leadership are discussed to explore ways future studies may be framed.
Review Strategy

To prepare this literature review, I utilized the University of South Florida Libraries general keyword, title, and abstract searches using a variety of databases including: Academic Search Premier, EBSCO, ERIC, Google Scholar, JSTOR, SAGE, and Web of Science. Searches included the following keywords: teacher leadership, teacher leadership definition(s), distributed leadership, social capital, network analysis, social network analysis, and network theory. Searches were not limited geographically or by genre, but were limited to within the past 20 years. I cross-referenced sources within selected texts, resulting in additional searches by author or source.

This literature review is organized into the following sections: 1) teacher leadership definitions; 2) models; 3) contexts; 4) contemporary studies of teacher networks; 5) methods to investigate teacher networks; and 6) discussions and implications for further study.

Teacher Leadership Definitions

Garman and Holland (2016) describe “closed systems” of teaching and learning that are perpetuated by current accountability policies and “open systems” that allow for more individual and collective teacher agency. Teacher leadership for professional culture (Fullan, 1996), control (Ingersoll, 2003), student inquiry (Copland, 2003), and democratic voice (Mullen & Jones, 2008) has been addressed within the literature. Concepts of teacher leadership have also grown out of definitions of distributive and shared school leadership (Muijs & Harris, 2007). The call for collaborative and democratic relationships in school culture is directed not just between administration and teachers (Beachum & Dentith, 2004; Woods, 2004), but also amongst all teachers (Helterbran, 2010). This has even
prompted the creation of teacher-led schools (Kerchner & Mulfinger, 2010; Myers, 2013; Williams, 2007). Discussions in the literature have moved from delineating roles and structures for teacher leadership to a much more organic expression of relational and contextual networks that emerge (Smylie, Conley, & Marks, 2011).

**Professionalism**

Understanding the evolution of current concepts of teacher professionalism is a starting point for understanding how all teachers might view the leadership potential within themselves (Hall & McGinty, 2015). Professionalism as an “occupational value” is increasingly being defined by employing organizations rather than practitioners (Evetts, 2011). Current shifts toward marketization in public education have created a “new professionalism” that emphasizes standardization and measures of performance to legitimize practice and define quality (Anderson & Cohen, 2015). This “new professionalism” is also characterized by a shift in power away from individual practitioners (Evans, 2008), leading to the de-professionalization of the workforce (Endacott et al., 2015). Anderson and Cohen (2015) call for resistance to the “new professionalism” through “critical vigilance,” “counter-discourses,” and “counter conduct” (p. 8). Evans (2008) argues that professionalism is dependent upon professional culture within an organization, and “professionality” is the individual enactment of professionalism. She maintains that “professionalism has to be something that people – professionals - actually ‘do’, not simply something that the government or any agency wants them to do” (p. 27). With this interpretation in mind, she defines professionalism as:

> Professionality-influenced practice that is consistent with commonly-held consensual delineations of a specific profession and that both contributes to and
reflects perceptions of the profession’s purpose and status and the specific nature, range, and levels of service provided by, and expertise prevalent within, the profession, as well as the general ethical code underpinning this practice. (p. 29)

While professionalism may exist only in the enactment of “professionality-influence practice” (what teachers do), this definition does not address that often teachers are subject to conditions of accountability and measurement that inhibit that enactment of professionality (what is done to them).

Teacher leadership is addressed to varying degrees in popular instructional frameworks often used for teacher evaluation purposes. Teacher leadership is highlighted within Danielson’s evaluation tool Framework for Teaching (2013) Domain Four, Professional Responsibilities. Critical attributes of the highest rated “Distinguished” teacher include demonstrating leadership through promoting a culture of professional inquiry, growth in professional learning, and showing professionalism. Examples of professionalism include demonstrating honesty and integrity, proactively providing help to colleagues, and partnering with community members for resources. Marzano’s (2014) teacher evaluation tool describes the highest rating of “Innovating” for elements within the categories of planning, reflecting, collegiality and professionalism, indicating that the teacher “is recognized as a leader in helping others with this activity” (p. 2). I believe the questions remain; recognized by whom, and defined by what? This explicit link between leadership, collaboration, learning, and professionalism within teacher evaluation tools makes continued exploration of these concepts relevant and necessary as teacher leaders navigate the power structures and contexts that may inhibit or advance their ability to influence and impact other teachers for school improvement.
Professional organizations that promote practitioner standards can be an expression of professionalization “from above” or “from within” (Evetts, 2011), depending upon who is in control of the professional organization. The Teacher Leadership Exploratory Consortium began the development of standards in 2008 and released a draft in 2010. The participants appear to have been a cross section of stakeholders within education including university, union, non-profit, state, and school level partners. The draft was released for public comment in 2010. The standards in their final form are called the Teacher Leader Model Standards and consist of seven domains that are designed to “codify, promote, and support teacher leadership as a vehicle for transforming schools to meet the needs of 21st-century learners” (TLMS, 2012). These domains describe actions or functions of teacher leadership that include the use and facilitation of: collaboration, research, professional learning, improving instruction, using data and assessments, community outreach, and student learning advocacy. However, the creation and development of these standards are not the result of an active workforce organization with individual members of the profession, but rather a coalition of organizations with a variety of individual agendas.

How do teachers perceive teacher leadership, and is this perception aligned with the new Teacher Leader Model Standards? Cosenza (2015) asked 22 teachers in semi-structured interviews what their definition of teacher leadership was. Dominant themes in these teachers’ responses emerged including: collaboration, sharing best practices, taking action, role modeling, and (to a lesser degree) the enactment of formal roles for teachers. Cosenza (2015) concluded that teachers are beginning to see teacher leadership as actions
within a collaborative environment that all teachers can take for school improvement and increasing student academic performance.

Hargreaves and Fullan (2012) further expand upon the concept of teacher professionalism as collaborative and relational as it relates to the idea of capital. They describe professional capital as the combination of highly trained (human capital), networked, collaborative teachers (social capital) that have the experience to make effective judgments about their work (decisional capital). The networks these teachers engage in can magnify their collective capacity for high quality teaching by sharing their knowledge and experiences. Teachers who effectively utilize their social capital networks for instructional knowledge and commitment may increase opportunities to influence and be influenced by their peers. Specifically, Hargreaves and Fullan (2012) state, “Use the group to change the group” (p. 37). Linking teacher leadership and networks may give insight as to how teachers build networks to strengthen their own professional practice as well as build capacity in the broader school community.

**Shifts from Roles to Relationships**

At the end of the twentieth century, definitions of teacher leadership were evolving to include the actions teachers take to influence others. “Constructivist and democratic conceptions of leadership suggest that the essence of teacher leadership is found in leadership acts rather than leadership roles” (O’Hair & Reitzug, 1997, p. 67). Such leadership acts can foster a caring culture, intellectual growth, and inquiry for achievement and equity. Donaldson (2001) clearly articulates, “We can all be leaders if we choose, even if our contribution to the relationship looks quite different from somebody else’s” (p. 153). Teacher leadership has been described as a fluid, relational process that is structured by
networks of support and influence to impact improvements to teaching practice and student learning. York-Barr and Duke (2004) describe teacher leadership as, “The process by which teachers, individually or collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement” (pp. 287-288).

**Shared Leadership**

Helterbran (2010) defines shared leadership as “principal leadership coupled with teacher leadership” (p. 365). Helterbran (2010) also describes this leadership as a relational, organic process: “Teacher leadership rises from within the teaching ranks and expresses itself in a myriad of ways for the betterment of students, specifically, and school in general” (p. 364). In contrast to traditional and formal teacher leadership roles, she describes an informal “type of teacher leadership [that] runs much deeper, is self-generated, and holds the promise of serving as a mechanism for continual professional learning and innovation in the school” (p. 365). Shared leadership acknowledges formal and informal leaders in the school setting rather than leaders and followers. “Teachers are viewed as partners, rather than as followers, and leadership is defined through the interaction of leaders, constituents, and situation” (Sheppard, Brown, & Dibbon, 2009 as cited in Sheppard, Hurley, & Dibbon, 2010).

Within the distributive leadership model, Spillane and Orlina (2005) define leadership as “reserved for those activities that administrators and teachers either design to influence others, or that others understand as intended to influence them, in the service of the organization’s core work” (p. 159). This element of influence is key to both teachers and administrators, but essential for the enactment of teacher leadership in informal
settings. Donaldson (2007) observes, “An alternative to the hierarchical model of school leadership is the relational model, which views leadership as residing not in individuals, but in the spaces among individuals” (p. 27).

**Relational Leadership**

Concepts of teacher leadership have shifted in the last 20 years from individualized, formal leadership roles created to integrate with hierarchical structures, to conceptualizations focused on social, relational, task, and function oriented positioning not dependent upon formal roles (Smylie, Conley, & Marks, 2011). This is influenced by a growing emphasis on social and relational aspects of leadership rather than roles and structures. Katzenmeyer and Moller (2009) define teacher leadership as those teachers who: 1) lead within and outside their classroom; 2) identify with and contribute to a community of teacher learners and leaders; 3) influence others to improve practice; and 4) accept responsibility for achieving outcomes. Collinson (2012) also closely links teacher leadership with teacher learning, describing an almost symbiotic relationship between the two actions: “As the teachers’ circles of connections began to spread outward from their classroom like ripples on a pond, their interactions with peers increased and opportunities for leadership unfolded” (p. 250).

Taylor et al. (2011) developed a definition of teacher leadership based on concepts of relational leadership: “Leadership resides, not in individuals, but in the spaces between and among individuals” (p. 921). Neumann, Jones, and Webb (2012) define teacher leadership knowledge domains to include instructional (transactional), professional development (transformational), and social responsibility (critical). They observe,
“Teacher education needs to conceptualize teachers as serious power brokers and develop their awesome power as effective leaders in all areas of the educational landscape” (p. 11).

Summary

Definitions of teacher leadership have evolved to include relationships teachers develop and actions they initiate to influence others rather than strictly focusing on the formal roles or positions they hold within the school structure. Teacher leadership definitions have come to represent a much more symbiotic and synergistic description of growth and inquiry for student learning. These fluid and relational expressions of leadership can be shared across networks that may be just as dynamic. This definition of relational leadership, one that has benefits for the individual growth of the teacher as well as the overall health of the school culture for student achievement, may serve as a foundation for further inquiry into current expressions and enactments of teacher leadership.

Teacher Leadership Models

It is important to examine models for teacher leadership to determine what current manifestations of the enactment of teacher leadership are utilized. If definitions of teacher leadership have generally evolved in the literature, have current models also changed to reflect the application of these definitions? Educational leadership has moved toward a post-heroic leadership model (Hulpa & Devos, 2010) in which shared leadership with teachers is seen as necessary. Models of teacher leadership are increasingly recognizing informal contexts for teacher leadership that emerge as a result of relationships and a school culture of inquiry. The literature contains a combination of conceptual and operationalized models derived from both theory and practice that articulate a variety of
beliefs and values that can provide a foundational platform for creating greater opportunities for teacher leadership.

**Distributed Leadership**

The concept of distributed leadership can provide a foundation for increased opportunities for teacher leadership within school contexts. Fullan (1996) asks educators to “reshape the professional culture of teaching” (p. 500). Considering the many external forces being exerted upon educators, this is a daunting endeavor. One solution to meet these challenges has been distributed leadership. Harris (2005) states, “The term ‘distributed leadership’ captures and reflects the evolving model of leadership in many schools encompassing multiple sources of influence and guidance” (p. 10). According to Harris (2003), “We cannot continue to ignore, dismiss, or devalue the notion of teacher leadership as distributed leadership” (p. 322). Distributed leadership can have an impact on teachers’ perception of empowerment and control. It is a step away from the hierarchical single leader model that has traditionally dominated the school environment. Hulpa and Devos (2010) describe a post-heroic leadership model, a “group-level phenomenon where leadership is distributed among the school team” (p. 565).

Spillane and Orlina (2005) explain distributive leadership through a conceptual lens that includes the “leader-plus” model that recognizes all individuals that are involved in leadership practice, not limiting the definition to formally designated roles. In addition, leadership revolves around tasks and functions, networks and interactions among individuals as they practice leadership. The practice of leadership is a focal point in this model, and influence lies in the interactions among individuals. Interactions can be expressed through three types of distributions: collaborated distribution, collective
distribution, and coordinated distribution. *Collaborated distribution* is a team approach, characterized by leaders working in tandem on a specific goal or project. *Collective distribution* describes leaders working “separately but interdependently” (p. 166). *Coordinated distribution* signifies leaders working separately yet in a coordinated sequence. This model balancing theory and practice aims to provide a framework for further inquiry into not just what leaders do, but how, why, and when they do it.

**Collective Action**

Concepts of distributed and democratic leadership can make a space for teachers to have additional opportunities to engage in leadership actions. York-Barr and Duke (2004) developed a conceptual model for teacher leadership based on their synthesis of the literature. This framework recognizes teacher leadership as contextual, relational, inclusive, knowledgeable, and collaborative. It describes characteristics of the teachers themselves, the context in which they function, and how they influence others with a focus on results for student learning (p. 289). Fairman and Mackenzie (2012) developed the conceptual framework called the Spheres of Teacher Leadership Action for Learning Model, a nine component model that expanded upon the York-Barr and Duke (2004) model. The Fairman and Mackenzie model is grounded in the theoretical framework that leadership at all levels is a function, not a role (Donaldson, 2007; Harris & Muijs, 2007; Muijs & Harris, 2006). The framework includes the characteristics and actions of professional learning and sharing, reflection, collaboration for instruction and school improvement, advocacy for change when necessary, and participation in school improvement efforts. Fairman and Mackenzie (2012) further build on the concepts of relationship building and networking by teachers themselves to sustain teacher leadership in both formal and informal contexts.
within collective and collaborative work. They state, "It [teacher leadership] cannot be imposed to realize the desired effect" (p. 244). Conceptualizations in the literature of teacher leadership include an emphasis on collective, school-wide collaboration for school improvement (Smylie, Conley, & Marks, 2011).

Sharing Expertise

The literature also includes examples of investigations that look for specific, targeted opportunities for teachers to demonstrate leadership in a mix of formal and informal roles for professional development within their content area or concerning a specific issue, as well as encouraging the awareness of this type of leadership in pre-service teachers and beyond. Examples include science (Hanuscin, Rebello, & Sinha, 2012); mathematics (Koellner, Jacobs, & Borko, 2011); service learning (Stewart, 2013); social justice (Larrabee & Morehead, 2010); and early childhood education (Maxfield, 2011).

Although additional certification and training for leadership in a specialized field can increase a teacher's opportunities for leadership activities, school-wide power, influence, or control does not always follow. National Board Certified Teachers reported that although they participated in increased leadership activities, they did not feel they had any greater influence over school-wide decisions than their colleagues (Cannata, McCrory, Sykes, Agagnostopoulos, & Frank, 2010).

Structures for teacher leadership have also come to include instructional coaches and the hybrid teacher leader, or HTL (Margolis & Huggins, 2012). These are teachers that function to provide instructional leadership for student achievement as opposed to the limited administrative duties of the traditional department head. These teachers may lead professional development and curriculum development while still assigned students and
maintaining a model classroom to demonstrate reform strategies (Margolis & Doring, 2012). While investigating formal roles and structures for teacher leadership, Angelle and Schmid (2007) isolated perceived characteristics of teacher leaders that were identified by the teachers and principals through open-ended interviews. Five characteristics emerged: 1) decision maker, 2) educational role model, 3) positional designee, 4) supra-practitioner, and 5) visionary.

Poekert (2012) suggests providing professional development for individual teachers to lead professional development in their own buildings. This approach recognizes professional development for teacher leadership and as teacher leadership. The act of facilitating job-embedded professional development helps foster growth in teacher leadership. Poekert, Alexandrou, and Shannon (2016) further describe teacher leadership as an “instance of emergence, or organized complexity” (p. 325) that results from teacher teams working collectively within an inquiry model and influencing one another both formally and informally. This job-embedded professional development utilizes collaborative relationships that are based on the shared goal of school improvement. This model of teacher leadership links growth as a teacher, growth as a researcher, and growth as a leader, positioning these as dependent upon each other. Providing teachers job-embedded contexts for teacher leadership gives opportunities for instructional growth and learning.

**Innovation**

Frost (2012) links non-positional teacher leadership to educational innovation for student learning. The concept of educational innovation is at the juncture of teacher leadership, knowledge building, and culture building within the school. He outlines a plan
to scale up continuous professional development, growing from a classroom centric approach to whole school systematic collaborations through teacher leadership not confined by roles that are dependent upon funding or the creation of new positions. Teachers in this model are motivated by a moral imperative to positively impact their students through their instructional innovations. Teacher leadership can be a product of and a stimulus for instructional innovation (Chew & Andrews, 2010; Collinson & Cook, 2013; Hovardas, 2016; Muijs & Harris, 2007).

**Inquiry**

Teacher research can be a vehicle for teacher leadership (Smylie, Conley, & Mark, 2011). Teacher inquiry can build and utilize influence for impacting instructional practices and school improvement. Inquiry leadership can be a vehicle for shared leadership structures. It is a vital component of increasingly democratic collaboration. Copland’s (2003) work focuses primarily on developing new formal leadership roles for collective inquiry, such as the co-principal, rotating lead teacher, and reform coordinator. Job embedded collaborative inquiry can be used to enhance leadership learning (Ross, Adams, Bondy, Dana, Dodman, & Swain, 2011). Ongoing, continually embedded development is another venue for teacher leadership. This minimizes the need for teacher leaders to straddle two worlds of stratified formal and informal roles. Teacher-led teams of action research and inquiry for school improvement work together collaboratively. This environment for leadership can increase “collective agency and professional collaborative action with a pedagogical purpose which can take the form of both formal and informal leadership roles” (Muijs & Harris, 2006, p. 963).
Summary

Teacher leadership may exist in both formal and informal structures. Current models reflect the shift in leadership definitions from more traditional and hierarchical expressions of roles to acknowledgment of teacher initiative and relational influence. Teacher leadership for inquiry, innovation and professional development appear to focus on teacher growth and influence on teaching for student achievement, while distributed, shared leadership implement structures that may increase teacher voice in decision making. There are recurring themes within both definitions and models for teacher leadership. These include an ever-increasing attention to the influence teachers have upon each other. Do current contexts of teacher leadership align with the definitions and models presented in the literature?

Teacher Leadership Contexts

Contemporary studies indicate that teacher leadership can be enacted when there are trusting relationships built around a shared moral purpose (Beachum & Dentith, 2004; Vernon-Dotson & Floyd, 2012). There can also be tension between the intent for and enactment of teacher leadership when the attempted enactment of teacher leadership is formalized within roles or structures that are in conflict with existing school culture (Margolis & Doring, 2012; Margolis & Huggins, 2012). Teacher leadership often exists within collaborative relationships (Szcesiul & Huizenga, 2015). The following studies focus on what can challenge or support teacher leaders as they formally or informally attempt to influence their peers.
Challenging Contexts

Margolis and Huggins (2012) looked closer at the formal position of the hybrid teacher leader (HTL). These teachers spend a portion of their time in the classroom and the rest acting in a leadership capacity. Six HTLs along with five administrators were followed through interviews, a focus group, and observations during two years of role implementation. They described a lack of role definition for the hybrid teacher leader position that undermined relationships and negatively impacted effectiveness. HTLs and their teacher peers both perceived that time was not being spent productively, and they “struggled to understand the HTL positions in relation to both student learning in the classroom and larger district efforts” (p. 976). These formal roles were not a successful means by which to exercise teacher leadership for professional development or school improvement. The authors recommended more clearly defined roles, and they acknowledged the “dilemma” in the literature over the effectiveness of formal versus informal teacher leadership.

When looking more closely at the studio-classroom application of the HTL role, Margolis and Doring (2012) noted a lack of trust in the implementation of these roles, as well as the intervention of the studio-classroom. Active resistance from teacher organizations and passive resistance from school-based administration led to the perpetuation of a culture of isolation and inertia. HLTs themselves doubted and seemed resentful of teachers’ motive for seeking their help. “They [teachers] get stuck and it’s like: rescue, rescue, rescue” (p. 872). A lack of shared vision for the initiative and relationships characterized by distrust, along with structural barriers such as scheduling, sabotaged this attempt to impact instruction through teacher leader positions.
Hackney and Henderson (1999) developed graduate coursework for democratic leadership through an inquiry-based democratic learning community. The course was designed for teachers in order to promote a broader, more inclusive definition of leadership that centered on four main themes: leadership requires a vision; leadership requires collaboration for a democratic and purposeful community; leadership is political and involves critical inquiry for action; and leadership must remove hierarchical structures, not perpetuate them. The goal was to redefine and reposition teachers’ perceptions of their own leadership potential. The participants practiced critical inquiry utilizing curriculum theory and conducted action research. They maintained journals and wrote special topics papers documenting their journey. The authors utilized these documents, as well as interviews of cooperating administrators, to collect data on the progress and outcomes of the students’ participation. In light of the previously discussed barriers to teacher leadership on the part of both teachers and administrators, this course posed a challenge to its participants. Perceptions of leadership within their own experiences resided in traditional, hierarchical structures. Doubt existed as to the transferability of the inquiry process to the schoolhouse and criticism from colleagues. However, as the course proceeded, the students became more self-assured even as they realized how hard critical inquiry would be to apply consistently for democratic leadership. Increased opportunities for democratic, action-oriented leadership did, in their case, promote a more positive school climate.

Collaboration

Ross et al. (2011) developed a graduate teacher leadership program that included job-embedded collaborative inquiry to enhance leadership learning. The purpose of the
study was to document the impact of the program on teacher leadership as perceived by the participants and their colleagues. The guiding questions for this study focused on teachers’ and principals’ perceptions of practice, inquiry, and leadership as a result of the program. Results indicated participants perceived that their knowledge and skills increased, and inquiry “transformed their approaches to instruction” (p. 1217). In reference to empowerment, the participants began to see themselves as autonomous professionals. Leadership transformation included the emergence of the view that student learning is a communal responsibility and the stance that leadership is to be “demonstrated by all and that benefits everyone” (p. 1218). While this program appeared to have a positive impact on the individual perceptions of participants and their colleagues, the participants expressed concern that they would be able to continue to maintain their impact and efficacy in their schools. Challenges such as new administration, state takeovers, and mandates impacted their power to maintain professional learning communities based on cycles of inquiry and collaboration at their own schools. It was difficult in those situations to transfer university-supported practice to self-sustaining practice.

Beachum and Dentith (2004) conducted an ethnographic study of twenty-five teacher leaders and identified organizational conditions that supported teacher leaders. School structures and organization included both strong teacher teaming for the purpose of collective inquiry and discussion, as well as the position of quasi-administrators that taught part of the day and fulfilled managerial tasks the rest of the day. Teachers throughout the school also felt encouraged to initiate change. Administration was perceived as open to new ideas, and teachers believed leadership was “integral to their work as teachers” (p. 280). An environment of reciprocal trust encouraged risk-taking, built self-efficacy, and
fostered a sense of moral purpose. Representative of the broader influence of the teacher leader, a component of engagement with the broader community outside their school was evident in the form of grant writing, university partnerships, and advocacy for teachers through union involvement.

Collinson (2012) focused on exemplary teachers and their experiences with teacher leadership. Interviews with 81 secondary school teachers resulted in her conclusion that “their leadership occurs as a by-product of their learning” (p. 247). This leadership occurs in response to innovation in teaching through their own growth and learning. For example, these teachers continually expanded their own knowledge base and then contributed to the profession by means of relationships and networks they developed. This included team teaching, establishing networks of support, changing schools to engage with like-minded teachers, observing colleagues, serving on committees, participating in professional organizations, and providing professional development.

**Relationships**

While investigating how schools utilized teacher leadership teams for school improvement, Vernon-Dotson and Floyd (2012) connected teacher leadership to collaborative relationships:

Specifically, teacher leadership is the ability of school professionals to forge a sense of community and share a commitment for increasing student achievement by engaging all faculty and staff and enhancing school climate with the overarching goal of building capacity for change. (p. 40)

Their case study into building capacity for teacher leadership reinforces the need to support and empower all teachers as leaders. “Teachers are the closest to school problems,
experts on school issues, and a valuable resource in problem solving and decision making regarding what is best for students, teaching, and learning” (p. 39).

The purpose of the Vernon-Dotson and Floyd study was to follow teams of teacher leaders as they participated in university partnership professional development and then record their perceptions of teacher leadership, professional development, and dispositions as a result of participating in the professional development activity. The authors framed their program development and investigations in a constructivist theoretical framework and with the belief that “Through a leadership team approach, school leaders can promote all teachers as leaders by empowering their participation” (p. 39). Throughout the article the term “all teachers as leaders” was repeated. Their definition of leadership encompassed relational concepts, community, and supporting change for school improvement. Their findings show three themes: 1) the transformation of teacher roles, 2) improved professional development, and 3) increased teacher efficacy. A majority of participants expressed an increase in informal leadership roles while some went on to more formal leadership or administrative positions. However, the authors recommended expanding professional development in leadership for teachers: “We need to support the institutionalization of teacher leadership by unlocking (and sharing) the leadership capabilities of all teachers” (p. 47). Increased professionalism was also manifested through increased efficacy. Teachers felt more valued as they had more to bring back to and offer within their schools, as well as better prepared to achieve school goals. One aspect the authors noted was the importance of sharing the new knowledge and experience of any leadership or professional development team with the whole school. Some non-team members became suspicious and resentful if they were kept in the dark. This
recommendation falls in line with the recurring theme of the study that all teachers should be viewed as potential leaders. It is essential for communication to remain open and honest to promote trust. Donaldson (2001) observes, “Leadership is a relational, not an individual, phenomenon. Leadership, that is, does not reside in the individual; it resides in the interpersonal networks among the members of the group, the faculty, the workforce, the nation” (p. 7).

Influence

How can teacher leaders learn to exercise leadership through these “interpersonal networks”? Hunzicker (2012) describes teacher leaders whose growth as an informal leader grew through exposure to research-based practices, increased teacher self-efficacy, and serving beyond the classroom. Contexts that supported that growth included collaborative inquiry experiences that built a deep knowledge of content and instructional practice, actively supportive colleagues and administrators that built feelings of trust and expressed encouragement, and engaging in many levels of collaborative decision making.

The ability of teacher leaders to influence their peers to improve practice is a recurring theme in the literature (Evans, 2008; Harris, 2005; Katzenmeyer & Moller, 2009; Spillane & Orlina, 2005; York-Barr & Duke, 2004). Administrative support is vital for the enactment of teacher leadership within the school environment (Affolter & Hoffman, 2011; Taylor et al., 2011). Brosky (2011) examined micropolitics for teacher leadership through a mixed methods approach that utilized a survey of 149 teachers as well as semi-structured interviews with selected participants. Results revealed that colleagues and principals are both sources of support for, and barriers to, teacher leader success. Support from colleagues was characterized by collaboration, encouragement, and participating in a
“collegial school culture” (p. 6). Supportive principals funded professional development and created an environment of trust where risk-taking was encouraged. Conversely, barriers to teacher leadership included passive and active resistance from peers to new ideas as well as perceptions of distrust and resentment. Cliques developed in opposition to teachers being perceived as aligned with administration. Some principals had difficulty relinquishing power in order to flatten leadership structures. Although these varied conditions existed, teacher leaders used their political “skill and will” to extend and maintain their own influence within these contexts.

As previously stated, it may be difficult for teachers who hold formal leadership or quasi-administrative coaching positions to position themselves to have authentic influence upon the instructional practice of their peers (Mangin & Dunsmore, 2013; Margolis & Doring, 2012). Formal roles for teacher leaders can be problematic, and can include confusion and lack of focus, even distrust amongst teachers (Margolis & Doring, 2012; Margolis & Huggins, 2012; Muijs & Harris, 2007). Informal functions of teacher leadership can have a broader reach for building capacity for teacher leadership across schools and districts.

**Summary**

Although definitions and models of teacher leadership in current literature are moving away from a focus on roles or positions of teacher leadership, there are still many instances of formal leadership roles in the field in which teachers navigate their influence on the school environment. The examples above document contexts that challenge or support the enactment of teacher leadership in both formal and informal contexts. Challenges include distrust from peers, administrative turnover, and confusion about or
resistance to the expectations (or lack thereof) for teacher leaders as defined by the principal or district. Confusion could also be manifested as conflict between school and district goals within formal roles. Supportive contexts are characterized by trust, shared purpose, and a collaborative culture where all teachers have the opportunity to grow and value each other’s contributions to the whole. The relationships between teacher leaders, peers, and administration are all important to the expression of leadership. Collaboration can lead to trusting, influential relationships that can result in the enactment of teacher leadership. Networks are one way to conceptualize these interpersonal relationships (Baker-Doyle, 2015; Daly et al., 2010). Taking a closer look at teacher relationship networks may provide insight to how teacher leadership occurs.

**Contemporary Studies of Teacher Networks**

Networks can be the conduit for building instructional expertise and advice giving, (Coburn & Russell, 2008; Coburn, Choi, & Mata, 2010; Spillane, Hopkins, & Sweet, 2015) collaboration (Munoz, Queupil, & Fraser, 2016), as well as reflection and emotional support (Rienties & Hosein, 2015). Contemporary network studies have been set in higher education (Abbasi, Wigand, & Hossain, 2014; Munoz, Queupil, & Fraser, 2016; Rienties & Hosein, 2015), secondary schools (Cole & Weinbaum, 2010), and elementary schools (Atteberry & Bryk, 2010; Coburn & Russell, 2008; Daly et al., 2010; Moolenaar, Sleegers, & Daly, 2012; Spillane, Hopkins, & Sweet, 2015). Network studies have focused on the connections between coaches and teachers for the implementation of system-wide reform (Coburn & Russell, 2008; Spillane, Hopkins, & Sweet, 2015). A closer look at a sample of these studies can help determine the direction the literature has taken to explore teacher networks.
Collaboration

Rienties and Hosein (2015) investigated formal and informal networks for instructor reflection on teaching in higher education. The analysis of both formal and informal networks for academic development uncovered unique purposes for each type of network. Informal networks tended to include those individuals that the teachers trusted. They shared their feelings and frustrations about teaching and also were able to connect the teaching theory they learned in formal training with the practical application in the classroom. Results indicated that while the instructors did utilize formal networks to gain knowledge about teaching practices, a vast majority of them extensively used contacts within their informal network. Collaboration networks can build collective efficacy, which then can support student achievement (Moolenaar, Sleegers, & Daly, 2012). Studying collaboration networks between university academics can help improve collaboration initiatives (Munoz, Queupil, & Fraser, 2016)

Implementation

Coburn and Russell (2008) studied teacher networks for the implementation of a new standards-based mathematics curriculum. They focused on the impact of district policy and role of the coach and school leaders in building stronger networks for collaboration in curriculum implementation. They used four aspects of reform implementation to gauge the quality of the networks: structure of ties, access to expertise, trust, and the content of the interaction. Coaches’ success in having a significant impact on the network varied based on the district and school administration selection, training, and utilization of the coaching position. Those coaches that were initially selected based on expertise, provided systematic professional development, and then integrated themselves
into teacher networks through routine coaching interaction and advice giving had a greater influence in the network. In addition, principals had an impact on the trust teachers placed in the new curriculum, as sometimes school administration viewed implementation differed from fidelity of implementation. District policy did impact networks, yet school administration and coaches mediated policy, sometimes changing the message. The authors recognized that the policy message also changes when passed along through routines of interactions between teachers. Ultimately, this study found that although district and school policy can “shape patterns of [teacher] interaction to some degree, it does not shape them entirely” (p. 225). The policy message can evolve as it percolates throughout implementation. Studying teacher networks can give insight to the depth and scope of implementation and reform efforts within schools (Daly et al., 2010). Different types of teacher networks and the links teachers have within those networks can have varied impacts on the diffusion of innovation (Woodland, Barry, & Roohr, 2014).

**Advice and Information**

Spillane, Hopkins, and Sweet (2015) investigated ties within schools around instructional advice and information during school reform. The authors situated their study in literature on social capital. Results indicated that formal leadership positions, particularly individuals who filled subject specific coaching positions, were more likely to be sought out for advice from non-subject specific leaders. Interestingly, the study found that professionals with more experience were less likely to provide or seek out advice. In this study, holding a formal leadership position did indicate more opportunity for advice giving and was a stronger influence than individual teacher characteristics such as gender or years of experience. The qualitative results emphasized the role of perceived expertise,
either from the formal position or specific professional development experiences embedded in the reform. Social capital considers trust, information, and materials as valuable resources that can be accessed through social ties. While this study used the school as the unit of analysis, the authors suggest that varied loci of teacher's networks should be further investigated, as the focus might not always be confined within the school unit. Revealing advice networks within teacher collaboration can give insight as to whom teachers go to for advice for implementation of an innovative practice (Woodland, Barry, & Roohr, 2014). Van Waes, Moolenaar, Daly, Heldens, Donche, Van Petegem, and Van den Bossche (2016) examined college instructors' perceptions of the quality and value of their interactions with other instructors in relation to their own growth as a teacher. Combining the analysis of the networks, along with interview data describing the instructors’ perceptions of the quality of the interactions, revealed that more experienced instructors engaged in more complex and rewarding exchanges within their network.

**Leadership**

Hovardas (2016) examined instructional networks to support innovative instruction in outdoor education. The author concluded that teacher leadership was “transient” in character, meaning that levels of leadership or empowerment to develop innovative instructional strategies in environment education varied based on the teachers’ interactions with peers. “Teacher leadership is continuously produced and reproduced in informal networks of teachers” (p. 250) as a result of reflection on practice in relation to shared experiences. This reinforces the situational and contextual circumstances of teacher leadership.
Summary

Contemporary studies of teacher networks indicate that trust is vital. Informal networks are often based on trust and perceptions of expertise. The relationships that teachers, coaches, and administrators build with each other are the basis for distributing knowledge, expertise, and resources. When successfully implemented, coaches and formal leader roles can have an impact on instructional practices. However, it is not the role itself as much as the trust and shared expertise that is developed as a part of that role through established relationships.

Methodological Approaches in Studying Teacher Networks

Some network studies noted above utilized social capital to explain ways teachers develop relationships to influence others and position themselves to have greater impact within formal or informal collaborative professional networks. The concept of social capital may be used to analyze relationships in order to better explain leadership opportunities. Teachers can develop relationships that position themselves to have greater impact and influence others within formal or informal collaborative professional networks. Social network analysis is a tool that can provide sociograms (a type of graph) that map out those relationships and provide descriptive analytics.

Social Network Analysis

Coburn and Russell (2008) used social network analysis to map teachers’ patterns of giving and receiving advice during the implementation of new mathematic curriculum in elementary schools. Purposive sampling was used to make selections of elementary schools within two districts. Selected elementary schools were relatively representative of the district and similar to each other, yet with a broad range of staff expertise. Interviews
were conducted with teachers representing a broad range of attitudes toward the new curriculum. Initially recommended by the principal, these “focal teachers” also completed surveys confirming those recommendations. The authors identified potential sources of social capital within the schools as data points. This included tie strength, access to expertise, trust, and depth of interaction (p. 206).

Coburn, Choi, and Mata (2010) looked deeper into one district in which the inclination of teachers to reach out to each other in lieu of administration or a coach increased over the three year span of the study. The authors used social network analysis to describe the nature of the ties and relationships during the implementation of a new math curriculum, and discovered that as individual teacher expertise increased, the nature of the networks changed. As they grew in expertise, teachers were less likely to seek advice from someone in their own grade (homophily) or physical location (proximity) and more likely to seek out advice due to perceived levels of high expertise. Although these teachers’ networks for mathematics instruction became smaller, as measured by the density of the networks, they became more efficient and targeted because teachers knew whom to seek out for expert advice within their school community.

**Mixed-methods**

Teacher networks have also been analyzed in relation to reform efforts in reading. Daly, Moolenaar, Bolivar, and Burke (2010) designed their investigation around three aspects of instructional social networks: collaborative lesson planning, reform knowledge, and reform recognition. This study used different types of data to better understand how the networks “support or restrain” (p. 365) the reading reform initiative. These included social network analysis, grade level work measures, and semi-structured interviews. This
mixed method approach is reflected in studies that seek to triangulate the data to provide for a richer and more dependable description of the results for more reliable analysis (Avila de Lima, 2010).

Rienties and Hosein (2015) used social network analysis to measure and map the formal and informal networks instructors in higher education used in conjunction with academic development (AD) programs to improve and reflect upon teaching practices. The authors utilized a closed system of analysis (the participants were given names to choose from) when collecting data about the formal structures within the AD program, and an open system (participants were free to give any names) when asking about informal networks. The authors also incorporated qualitative techniques, such as collecting individual written reflections, in a mixed methods approach to triangulate the data and gain a richer description of the networks.

Spillane, Hopkins, and Sweet (2015) used social network analysis (SNA) along with qualitative interviews to record effects of ties within and across schools. The SNA items on the teacher questionnaire were open ended, asking whom the respondents asked for advice about curriculum, teaching, and student learning. The participants in the qualitative interview were selected through purposeful sampling to maximize variation in position in the network, including the principal, coaches, teacher leaders and individual classroom teachers.

Summary

How can the “spaces among” (Donaldson, 2007) relationships that are so important for leadership to exist be recorded or measured in order to support collaborative conditions that foster strong leadership across schools and districts? Utilizing social
network analysis as well as targeted interviews may give insight to organizations on how to empower teachers as leaders through networks for school improvement. This method of analysis may provide more efficient ways to record and investigate levels and layers of relationships that are distributed throughout the school structure and context.

**Discussion and Implications**

Teacher professionalism is closely linked to collaboration, expertise, and efficacy. The actions of leadership are much more powerful than any one leadership role. Teachers can influence others through social capital in order to negotiate and navigate their environment for instruction and innovation. This can happen within formal networks where trust, expertise, collaboration, and a shared moral purpose are the norm. Informal networks based on trust and a shared culture of inquiry may develop even stronger relationships that result in risk-taking for innovation. Organic structures that grow around and through teacher relationships, characterized by influence and interactions for school and student improvement are particularly interesting. Investigations into more organic structures between a variety of teachers that exist in relation to action and function may help provide insight into these “spaces between” (Taylor et al., 2011) so key to relational leadership.

While a few studies emerged in the literature review that looked at both formal and informal networks within individual schools (Spillane, Healey, & Kim, 2010), even less common is study of the intersection of networks and teacher leadership. Poekert (2012) discusses the need for research that focuses on the teachers’ role in fostering teacher leadership. Typically, the research has addressed the principal’s responsibility for building a culture of teacher leadership, but how do teachers support contexts for teacher
leadership within their own environment? What are the perspectives of teachers as they practice formal and informal leadership within instructional networks? Investigating the context of both formal networks and informal networks side-by-side within individual schools may demonstrate how each plays its part in developing a collaborative culture. Teacher leadership needs to be explored as a collaborative and synergetic concept, not only defined by individual characteristics or traits. Collaborative networks may provide the context for all teachers to have opportunities to enact leadership based on their strengths and expertise thereby resulting in collective efficacy for student achievement.
CHAPTER 3:

METHODS

Exploring teacher networks and describing teacher perceptions of themselves as leaders within those networks can give insight to relationships for teacher leadership. A case study approach allowed me to dig deeper into those layers of interaction between teachers within one school. A preliminary understanding of the context of the case is presented in this chapter, as well as the design and methods for data collection and analysis. I also address issues of reflexivity, ethics, and validation strategies.

Purpose of the Study

The purpose of this single exploratory case study is to uncover patterns in teacher professional networks, the context in which particular networks exist, and teachers’ perceptions of the influence of these networks on their sense of themselves as teacher leaders. The study was conducted at a Title I elementary school in a suburban school district in the southeastern United States.

Research Questions

The overall guiding question for this study is, to what extent do teachers utilize professional networks to seek information and influence others as teacher leaders working toward a common goal of student achievement and school improvement? Related secondary questions are:
1. What formal and informal networks for instructional improvement and innovation exist in this school?

2. What are teachers’ perceptions of the role these networks play in building teachers’ efficacy and capacity to improve and innovate instructional practices for student achievement?

3. In what ways do teachers perceive these networks contribute to their sense of themselves as teacher leaders?

4. What factors do teachers perceive enable or constrain their ability to enact teacher leadership through these networks?

**Research Context**

This study takes place in an elementary school on the west coast of Florida and in the Tampa Bay area. Evolving state requirements for teacher evaluation, stagnant student achievement indicators, the implementation of more rigorous state curriculum standards, and the election of a new superintendent prompted a wave of change in the school district beginning in 2011. The new superintendent restructured district departments and redefined the district vision to include college, career, and life success. The following information is provided to help establish the context for the study. This study is not focused on any one initiative or its implementation. The establishment of professional learning communities (PLCs), the specialized training provided for PLC facilitators, and the use of the term “innovation” in both the teacher evaluation tool and measures of employee engagement give insight to the context for teacher leadership for student achievement and school improvement within this district and school.
Professional Learning Communities (PLCs)

One key district priority in achieving its vision is building a collaborative culture, and to this end formal professional learning communities have been implemented. While district documents do not specifically define collaborative culture, the district success plan links building a collaborative culture with building capacity for “instructional excellence” through shared decision-making and collective commitment.

One action identified in the success plan to support this collaborative culture is developing leadership for professional learning communities that utilize problem-solving processes to support instructional improvement. Questions designed for instructional inquiry are at the heart of the district’s effort to build collaborative culture within these PLCs (DuFour & Fullan, 2013). These four questions are: What do we want students to learn? How do we know if they have learned it? What do we do if they did not learn it? What do we do if they did? (Buffum, Mattos, & Webber, 2008; DuFour, DuFour, Eaker, & Many, 2010).

In the elementary setting, this approach to collaborative practice was first initiated throughout the district through grade level teams with intensive PLC facilitator training in 2013. The initial professional development included an additional district created question, “How are we going to teach it?” Including this additional question to the DuFour model was prompted by the lack of instructional resources for new state standards that were being phased in. Few district resources, such as curriculum maps, were current with the new standards. The textbook series adopted by the district in reading and mathematics at the time were not aligned to state standards, and teachers had to engage in extensive collaborative work to develop lessons aligned with the standards. Since that time, aligned
resources have been acquired by the district in reading, and district curriculum mapping for both reading and math has become much more comprehensive.

In the summer of 2016, the district initiated professional development for leadership teams, including PLC facilitators, that refocused the work of the PLC on those four original DuFour questions as they relate to cycles of inquiry around common formative assessments and developing problem-solving processes for multi-tiered systems of academic or behavioral supports. This professional development for school leadership teams, including PLC facilitators, was based on the *RtI at Work* professional development series (Buffum, Mattos, & Weber, 2011) from the educational consulting firm Solution Tree. Consultants from Solution Tree and district staff facilitated the training. The training continued throughout the 2016-2017 school year and focused on re-energizing the discussion around the four questions, as well as working to create and maintain a structure for school-wide and grade level teams to meet, problem solve, provide students with tiers of instructional or behavioral support, and monitor student response to that support.

**Teacher Evaluation System**

During the 2017-2018 school year, the district used the Marzano Instructional Framework (2014) for teacher instructional practices as a tool for teacher evaluation and as a guide for professional development throughout the district. This framework was adopted by the district as a result of a sweeping 2011 teacher evaluation law that was passed in the state legislature, both in response to shifting attitudes toward teacher tenure and the state's endeavor to align its teacher evaluation system with the comprehensive requirements of the *Race to the Top* federal grant.
Professional development in instructional practices for all teachers is centered around this model. The Marzano Framework (2014) includes four domains comprised of sixty elements for instructional practice. The majority of these (41) are located in Domain One - Classroom Strategies and Behaviors. District professional development has created a series of on-line learning modules to help any teacher understand and utilize these strategies and behaviors in the classroom. In addition, face-to-face professional development opportunities such as teacher induction, classroom management courses, and differentiation courses integrate elements of the Marzano Framework.

For the 2017-2018 school year, 65% of teachers’ summative evaluation was based on the instructional practices score. The evaluation process requires at least two “classroom visits” during which the evaluator scores observable elements from Marzano Domain 1. The final instructional practices score also includes scores from Domain 2 – Planning and Preparing, Domain 3 – Reflecting on Teaching (including deliberate practice), and Domain 4 – Collegiality and Professionalism. The remaining 35% of the teacher’s summative evaluation score is composed of student performance measures. How these student performance measures are calculated is determined according to teaching assignment. For example, a Kindergarten teacher’s student performance score or measurement is based on the percentage of students in his or her class (present for both state attendance surveys in October and February) who demonstrate proficiency on the district final exam in May. A Fourth Grade teacher’s student performance measure, however, is based on the growth individual students make on the state assessment according to the state’s value-added statistical model.
Although there are no specific characteristics of teacher leadership indicated in the Marzano Framework, the highest rating of “Innovating” in each element of Domains 2-4 indicates that the teacher “is recognized as a leader in helping others with this activity” (Marzano, 2014). There are no additional specific descriptors for what “Innovating” looks like in these domains. Evaluators must rely heavily on their own perceptions of leadership displayed by individuals they are evaluating. Formal opportunities for teacher leadership based on role or position may provide opportunities for the evaluator to observe leadership behaviors, but there may also be many times teachers help others in more informal settings that the evaluator does not observe. It is more difficult to provide evidence for these informal leadership occurrences. This places the responsibility on the teacher to self-report and document. As a result, there may be teacher leadership occurring in a building that evaluators are not aware of and do not record in the observation tool.

**Measuring employee engagement.** The district partners with Gallup to measure indicators of student and staff engagement. The Gallup Employee Engagement Survey (Q12) is distributed in October each year. Gallup (2017) describes engaged employees as passionate and innovative in their work. District staff and principals review results from the staff survey at both the district and school level to help develop strategies to increase staff engagement.

**Aligning standards and instruction.** The district has also redirected its focus within the last two years from administrative classroom walkthroughs based on the Marzano Framework to walkthroughs based on a different tool that rates classroom lesson alignment with instructional shifts found in the Common Core State Standards. This
redirection was prompted by a 2015 report about the district generated by the educational consulting group TNTP (originally founded as The New Teacher Project) that warned classroom instructional practices were not meeting the rigor of Common Core State Standards. Administrators observe instructional planning and practices through this additional lens as they seek to align professional development with the needs of their staff.

**Student achievement measures.** Amidst these initiatives, there have been additional challenges to growth in student achievement. The introduction of new state assessments aligned to state standards, as well as the modification of state accountability criteria, has resulted in reported decreases in student achievement. Results for the 2015-2016 school year indicated that of the non-charter public elementary schools in the district, 40% were labeled as D or F schools. That was up from 20% in 2014-2015. In addition, eleven elementary schools were identified as in the lowest 300 in the state for reading proficiency. Previously, only three had been identified in the lowest 300. Title I schools make up 53% of the elementary schools in this district, and they have particularly struggled to demonstrate proficiency or growth according to the state accountability ratings. Seventy-two percent of Title I elementary schools received a D or F rating, and 28% percent a C rating. No Title I school received an A or B rating. Despite trends in current achievement data, however, some Title I elementary schools have been able to demonstrate growth. Identifying and investigating the context of these schools may help other schools also build supportive contexts for student growth.

**Summary**

District systemic initiatives have been implemented to create and sustain “instructional excellence” within a “collaborative culture” with the ultimate aim of
improving student achievement. This includes refining expectations for instructional practice through the Marzano framework, expanding opportunities for collaborative practice through DuFour’s professional learning community structures, utilizing school-based teams to create multi-tiered systems of academic or behavioral support for students, and aligning resources and lesson development with Common Core State Standards. Throughout these initiatives teachers have been identified by principals and received training in these areas, in particular as PLC facilitators.

Professional learning communities were designed to create formal networks for student achievement within schools. The rosters of these formal structures can change from year to year due to changing teaching assignments. Facilitators can change from year to year due to principal selection. Principals can implement strategies for staff engagement and innovation that impact teachers outside the formal PLC structures. Informal networks may become more important as formal structures change.

**Site Selection**

I originally was considering schools for a multiple site analysis, with an interest in elementary schools that had demonstrated greater student achievement gains in comparison to other elementary schools during the changes being made in the district. In determining site selection, I developed a rubric to rank the academic success of the Title I elementary schools in the district. I eliminated any school at which I had previously been an administrator in order to avoid conflict of interest or any possibility of the appearance of coercion during the study.

I analyzed summative student achievement data from state assessments for the 2015-2016 school year, the last available data at the time of site selection. State
accountability categories include the percentage of students meeting satisfactory performance in reading and math, as well as the percentage of students with a previous score on a state assessment that have made growth. I assigned two points for academic achievement for any Title I school that had over 50% student success in any one category, a point for any school whose percentage of economically disadvantaged students was over the average for Title I schools in the district (86%), and a point for schools whose percentage of minority students was over the district average for Title I schools (40%).

Once the initial student achievement data were included, I reviewed publicly available Fall 2016 Gallup Employee Engagement Survey (Q12) scores for the six schools that demonstrated student achievement success. I added a point to those schools whose staff engagement was higher than the district average. I then ranked the schools based on the rubric.

One school stood out from the rest, Sunnydale Elementary School (described in Chapter 4). According to assessment results from the 2015-2016 school year, over 50% of the students assessed in this Title I elementary school demonstrated growth or proficiency in four areas as defined by state accountability standards. This is compared to two areas for the next closest school on the rubric. This school had over 81% economically disadvantaged students, slightly below the district average for Title I schools. According to the Fall 2016 Gallup Employee Engagement Survey, the school also had the highest percentage (60%) of staff engagement for Title I elementary schools. Gallup also reports this as a grand mean of 4.26 out of 5 as compared to the district at 3.86. In the district context I felt this was an extraordinary case (Stake, 1995). The combination of significant student achievement in multiple categories paired with evidence of high levels of staff
engagement warranted further investigation in relation to my interest in teacher leadership.

**Gaining Access**

A request for the school district’s permission to conduct a research study was coordinated through its research department. A formal request required the approval of university officials and was granted only after review by district officials. District officials reserved the right to deny requests to conduct research if the study does not align with district instructional priorities. The formal request to conduct research included an explicit description of the study as well as anticipated timelines and study sites. Principals at study site locations may not allow research to begin without the signed letter of approval from the district director. I followed these guidelines and obtained a letter of support from the school site principal. As a result, the director of the district department gave approval of this study contingent upon university IRB approval.

**IRB Approval**

The university Institution Review Board (IRB) process for social/behavioral research begins with researcher training. Required current certification for social/behavioral investigators must be completed through the Collaborative Institutional Training Initiative (CITI). The University of South Florida Applications for Research Compliance (ARC) portal manages submissions to the IRB. Completed submissions include a detailed explanation of the study to be conducted as well as specific research protocols. As primary investigator I described plans to obtain informed consent from participants as well as maintain confidentiality and ensure their ethical treatment. IRB approval for the study was obtained prior to engagement with the research site.
Research Design

This is a single exploratory case study. The phenomenon (Stake, 2010) studied is the manifestation of teacher professional networks and teachers’ perceptions of the influence of these networks on their sense of themselves as teacher leaders, working toward a common goal of student achievement and school improvement.

This phenomenon was studied in a unique context (Patton, 2002), a Title I elementary school site that had demonstrated a greater measure of student achievement in comparison with similar Title I schools in this district. Title I elementary schools currently make up 53% of the total elementary schools in the district and serve economically disadvantaged students.

Both Yin (2012) and Stake (1995) recommend identifying the boundaries of the case. This case study is limited to this single Title I elementary school (Sunnydale), in this one district in the Tampa Bay area in Florida, during the 2017-2018 school year, and in the context of the district’s initiative to build a collaborative culture through formal professional learning communities (PLCs) aimed at improving instruction to support student achievement.

Case Study

The case study approach allows me to dig deeply into this phenomenon and uncover layers of context from many perspectives. My research questions revolve around relationships and perceptions of teacher leadership within networks for instructional practice bounded by one school. The exploratory case study (Patton, 1990; Stake, 1995; Yin, 2014) allows me to investigate this phenomenon by immersing myself in the case of this school and providing a rich description of the story of this school and its members as
they collaborate for student achievement. Selecting a Title I elementary school that has demonstrated relative growth in student achievement helps add to the understanding of teacher leadership in that unique context, perhaps even providing school leaders with suggestions for promoting teacher leadership in the context of economically disadvantaged student populations.

**Exploratory design.** Exploratory research (Patton, 1990) utilizes a research approach in a new or unique way. Although there have been a number of studies utilizing social network analysis (SNA) in elementary schools for the purpose of understanding reform efforts or instructional initiatives (Atteberry & Bryk, 2010; Coburn, Choi, & Mata, 2010; Coburn & Russell, 2008; Daly et al., 2010; Frank, Zhao, Penuel, Ellefson, & Porter, 2011), and within urban or low performing schools (Finnigan & Daly, 2010), few have focused on teacher leadership (Pitts & Spillane, 2009; Spillane, Healey, & Kim, 2010). Few have integrated descriptions of teachers’ perceptions of teacher leadership within the context of both formal and informal professional networks. PLC Facilitators are recognized by the district and school administration as teacher leaders and key actors in the formal network, but I used SNA in an exploratory approach to identify key actors throughout the professional network(s) in the school. I interviewed key teachers within these networks to collect their perspectives about teacher leadership within their professional networks for instructional practice.

**Integrated approach.** There is precedent for utilizing social network analysis (SNA), along with qualitative methods such as interviews and observations, to answer research questions that revolve around teacher networks (Baker-Doyle, 2015; Daly et al, 2010; Penuel, Riel, Krause & Frank, 2009). Using SNA, along with document review,
observations, and interviews, provides a way to triangulate the data to paint a more complete picture of the case and lend reliability to the network results (Baker-Doyle, 2015).

I integrated quantitative and qualitative methods after careful consideration of my theoretical and conceptual frameworks as well as my research questions. One particular challenge of this case study is uncovering the informal networks that exist within the bounded case of teacher leadership within this school. I could have used qualitative social network research alone (Baker-Doyle, 2015) by interviewing all teachers and asking them to whom they go for advice and how often. This would be very time consuming, and most likely not all teachers would agree to be interviewed. I believe a more accurate and efficient way to uncover the informal network is to employ SNA. This allowed for a greater number of teachers to respond and participate in a brief and convenient manner via an email survey. In addition, I observed and tracked patterns of advice seeking within professional learning communities. The results of the survey, along with the observations, were used to determine whom I interviewed to collect teacher leader perspectives on patterns of advice-seeking and the enactment of teacher leadership within the network.

This explanatory sequential model of method integration (Bradt, Burns, & Creswell, 2013) uses qualitative data collection to help further explain the quantitative results, and help me dig deeper into the professional networks for improvement and innovation that may exist within the school site.

**Theoretical Framework**

This study is situated within the belief that knowledge and understanding of the world around us is constructed and interpreted by perceptions of the experiences within
the social structures we are a part of. Constructionism encompasses the idea that meaning is made or constructed. The construction of knowledge or “meaningful reality” (Crotty, 2012) is contingent upon human practices and interactions constructed within a social context. According to Lincoln, constructivism is a theoretical perspective “which attends to the meaning-making activities of active agents and cognizing human beings” (as cited in Paul, 2005, p. 60). It is “primarily an individualistic understanding of the constructionist position” (Crotty, 2012, p. 58).

For this study I assumed leadership is socially constructed as a result of social norms and structures combined with interactions between individuals and their perceptions of those interactions. The concept of leadership within educational settings continues to evolve as leadership can mean different things to different people under differing circumstances (Gumus, Bellibas, Esem, & Gumus, 2018). I also believe teacher perceptions of teacher leadership are influenced not just by roles that are assigned or that they agree to engage in, but by the relationships and social interactions within various contexts in which they participate.

**Symbolic Interactionism**

Symbolic interactionism proposes that individuals interpret and make meaning about the world around them through the social interactions they engage in. Reality is “always open to being recast” (Blumer, 1980, p. 410), based on the varied perspectives with which it is approached. Symbolic interactionism further proposes that relationships have a great impact on individuals’ sense of self and can impact beliefs, feelings, and ultimately actions within relationships.
How people position themselves within social relations is situational and changeable based on their interactions within a particular social context. Blumer (1980) states, “[H]uman group life is caught up in a continuous process of formation as people have to adjust to one another and to the situations with which they are faced” (p. 412). In the complex social structure of a school, networks can be a context for social interactions and relationships (Jones & Volpe, 2011). The relationships that people develop, and the exchanges they engage in, can shape their perceptions of themselves within the social structures in which they enact those relationships (Patulny, Siminski, & Mendolia, 2015).

Symbolic interactionism explains relationships as fluid and dependent upon the meaning-making that is occurring between actors to form identity within a certain context (Angelle & Schmid, 2007). This development of identity emerges from the cumulative interactions that individuals experience. Symbolic interactionism can provide a basis for interpretation of the nature of teacher relationships that can emerge within a school setting for the purpose of shared leadership (Lee, 2014). As teachers interact in professional networks, what influences their perceptions of themselves and each other as sources of leadership will be shaped by the meanings they create and interpret within both formal and informal social contexts of the school setting. Identifying and exploring perceptions of individuals within these networks may provide insight into how leadership develops within those relationships.

Data Collection

Data were collected in three phases. Layers of data collection from a variety of participants contributed to rich, thick descriptions that link ideas and experiences within the case. The table below states the three phases and their purpose.
Table 1

*Phases of Data Collection and Purposes*

<table>
<thead>
<tr>
<th>Data Collection</th>
<th>Formal Network</th>
<th>Informal Network</th>
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<tbody>
<tr>
<td><strong>Phase One</strong></td>
<td>Document Review</td>
<td>Information Request</td>
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<tr>
<td>(Context)</td>
<td></td>
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<tr>
<td><strong>Phase Two</strong></td>
<td>Observations</td>
<td>Survey</td>
</tr>
<tr>
<td>(Networks)</td>
<td>(Roles)</td>
<td>(Relationships)</td>
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<tr>
<td><strong>Phase Three</strong></td>
<td>Interviews</td>
<td>Interviews</td>
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<tr>
<td>(Perceptions)</td>
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**Pilot Activities**

In order to ensure the clarity of the survey instrument and interview protocol, I engaged in several pilot activities before data collection began. A sample survey was developed and administered to gather feedback concerning the organization and clarity of the questions. I met face-to-face with a group of 10 teachers known to me, but who were not potential participants in the study. At this meeting I first reviewed the purpose of the study, just as planned in phase one. I then distributed the pilot survey via email to the group and ask them to complete it. Once completed, I asked questions about their experience. As a result, I clarified the instructions and explanation for the survey. In addition, I was able to practice the process of distributing the survey via email and troubleshoot unexpected complications with survey distribution.

**Phase One**

Phase One was designed to describe the context for professional networks in this school. The context of the school site was revealed throughout the study as additional layers of data were collected, but an initial document review and district information request set the stage for this process. During Phase One I collected district and school-
based documents that referenced strategies for implementing and fostering teacher leadership within a collaborative culture. Document sources included the Internet, public records, internal professional development materials, and school improvement documents. Specifically, I identified and retrieved public documents from websites, as well as identified and retrieved internal documents from leadership trainings that include PLC Facilitators and defined PLC Structures. These documents consisted of district strategic plans, school success and improvement plans, master schedules, and PLC facilitator training records. The documents were reviewed to determine if, and in what ways, teacher leadership is addressed.

In addition, I requested pre-existing student information for the selected school site. This is information that the district already collects for state and federal reporting. I requested a roster of the instructional personnel as well as their email addresses for contact information. I also asked the school site principal for the membership of formal professional learning community structures. Student demographics included percentages of minority, ED, ELL, and ESE students. I also requested indicators of staff and student engagement as measured by Gallup. In addition, this district has an early warning system that calculates the percentage of students “On Track”, “At-Risk” or “Off Track” for attendance, discipline, and academics in each school. This information is used to measure the health of the school and target specific subgroups for intervention. This additional information collectively helped tell the story of this school.

Organizing and cataloging document and district-provided information data necessitated a management system that utilized a spreadsheet. It was important not just to
 chronologically and thematically organize the items, but also to capture the main function and role of each document throughout the progression of the case.

Phase Two

Phase Two was designed to answer the research question, *what formal and informal networks for instructional improvement and innovation exist in this school?* I conducted observations of professional learning communities to collect information about the formal network, and distributed a network survey to collect information about the informal networks in the school. This phase began with an introduction of the study and myself to instructional personnel within individual PLCs, including an explanation of the purpose, research questions, and data collection activities. All research activities were fully explained not only at this initial introduction, but at an additional faculty meeting where I specifically introduced the informal advice-seeking network survey directly before it was distributed.

**Observations.** I observed professional learning community teams as defined by the formal structures and roles established at the school. I observed all six grade level PLCs at least once in 13 hours and 45 minutes of observation. Although no individuals on the team refused to participate, not all were in attendance each time due to illness, maternity leave, and other obligations. Five out of the six teams allowed me to audio record their meeting. I utilized a map of seating arrangements in each meeting space and used lines, arrows, and tallies to document exchanges of advice giving and frequency of comments pertaining to instructional practice. The information on these maps was then compiled to create a visualization of the patterns of observed advice-seeking exchanges within the team.
meetings. I shared these maps with individual members of the team to confirm participant names and seating.

**Network survey.** Throughout the months that the teams were being observed, a survey was distributed to school-based instructional personnel to collect informal network data about advice-seeking relationships that were mapped utilizing social network analysis via Gephi (Bastian, Heymann, & Jacony, 2009) visual graphing software (Spillane, Healey, & Kim, 2010). The survey was a closed network survey (Rienties & Hosein, 2015), bounded (Carolan, 2013) by the roster of all instructional personnel as provided by the principal. This survey helped to reveal teacher informal network(s) (Coburn, Choi, & Mata, 2010) for advice-seeking on instructional practice. Data collected helped to determine the number and intensity of relationships (ties) within the network to determine the position (centrality) of individual actors (Daly, Moolenaar, Bolivar, & Burke, 2009).

In addition to basic demographic questions about the respondent, including number of years teaching and level of education, the following three items appeared on the survey:

1. **Select up to five individuals from the drop-down roster that you are most likely to seek out for advice about instructional practice, and indicate how often you sought advice within the past year from each individual about instructional practices.**

   1 - Few (1-2 Times)
   2 - Some (3-4 Times)
   3 - Often (over 5 times)

2. **Select up to five individuals from the drop-down roster that you are most likely to seek out for advice about improving instructional practice, and indicate how often you have sought advice within the past year from each individual about improving instructional practices.**

   1 - Few (1-2 Times)
   2 - Some (3-4 Times)
   3 - Often (over 5 times)

3. **Select up to five individuals from the drop-down roster that you are most likely to seek out for advice about innovating instructional practice, and indicate how often**
have you sought advice within the past year from each individual regarding innovating instructional practices.

1 - Few (1-2 Times)
2 - Some (3-4 Times)
3 - Often (over 5 times)

This survey was designed not only to capture which teachers (actors) are more likely to be sought out for advice, but also to measure the strength (Avila de Lima, 2010) and direction (Carolan, 2013) of the ties between actors. The directional data indicates the flow of advice-seeking. Directional data can indicate if teachers are connecting individuals or bridging groups within a network (Woodland, Barry, & Roohr, 2014). The primary function of this survey and analysis was to identify key actors in the network based on measures of centrality. Whole network analysis that provides density (ratio of existing ties and to potential ties) measures also assisted in describing the network (Donati, Zappalà, & González-Romá, 2016). I did not track the diffusion of any specific instructional innovation or school initiative, but provided evidence of advice-seeking from one teacher to another regardless of PLC, grade level, role, or content area affiliation.

The survey was distributed via a university approved survey generator, after a brief introduction to the study during a faculty meeting. I facilitated this face-to-face meeting with instructional staff listed on the roster to explain the purpose of the study, the meaning of informed consent, and the content of the survey. In addition, I provided specific definitions concerning each item – instructional practice, improving practice, and innovating practice – that originated in my research and that aligned with the shared values of the school as revealed in school documents and observations of professional learning communities. Defining the survey items helped focus the results on patterns of advice-seeking for instructional practice. I made it clear that it is not an anonymous
survey, but that all submissions would be kept strictly confidential and names replaced with numbers in any presentation of the data. The survey was distributed via email to all on the instructional roster to help ensure privacy and confidentiality. The survey remained open until the end of the school year.

Data were collected and organized in a spreadsheet through the secure web-based survey tool. The raw data were then organized into columns on a spreadsheet labeled source, target, and weight. This represents the respondents (source) and the individuals (targets) they seek out for advice. The weight assigned is the frequency with which the source seeks out the target. I then used Gephi (Bastian, Heymann, & Jacony, 2009) graph visualization software to create a sociogram, a visual representation of the relationships indicated in the survey responses. Although the data set for this study is relatively small, the software is a tool that displays the results of the survey by plotting and linking the nodes (teachers connected by advice relationships as indicated in the survey and/or observations). Degrees of centrality were recorded and displayed to describe the network(s) within the school and determine the strength and direction of individual nodes and ties that represent individual teachers and their connections to each other to determine patterns in advice-seeking.

Phase Three

Phase Three of data collection, teacher interviews, was designed to answer the remaining sub-questions concerning teacher’s perceptions of these networks. I sent interview requests after observations had been conducted and initial survey results had been compiled. I sent out 20 interview invitations, and then sent out a reminder three weeks later. Nine invitations went to individuals who completed the survey, and 11
invitations were to people who did not complete the survey, but were prominent in the observations or as a target of advice seeking from the survey. I selected potential interviewees based on the frequency with which they either were asked questions (in-degree centrality), or asked questions of others (out-degree centrality). As I observed the PLCs, I noticed that the frequency with which teachers asked questions around instructional practice seemed to influence the discussions as well. These questions often directed the conversation in a certain way that the rest of the group responded to positively.

**Interviews.** I conducted eight interviews with prominent figures in the professional networks, as indicated by frequency of advice-seeking, questioning, and contributions to the PLCs. These included five classroom teachers that demonstrated a high score of in-degree centrality (Atteberry & Bryk, 2010), indicating a high rate of peers seeking out their advice, in order to gather their perceptions of teacher leadership within the informal network(s). Two non-classroom teachers and one administrator were also interviewed. The administrator was invited after all 20 teacher requests had been exhausted and participating teacher interviews had been conducted. This administrator was only recently appointed and had served as an instructional coach the previous four years.

Pairing social network analysis (SNA) with interviews of actors within the professional network(s) provided a richer description of the network than just the visual graph alone. It also allowed me to further investigate teachers’ perceptions of the influence of the professional network(s) on their sense of themselves as teacher leaders. Previous studies have selected teacher leaders to interview based only on input from the principal or those that hold formal teacher roles, such as coaches. This exploratory case study also
selected individuals that are key actors within the professional network(s) based on the network analysis.

The purpose of the interviews was to reveal teachers’ perceptions of the influence of these networks on their sense of themselves as teacher leaders for improvement and innovation. Interviews were digitally recorded and immediately transcribed. Member checking assisted in clarification and documentation of the interviews. The process of transcription and working with the data on such an intimate level is the first level of analysis, and I immersed myself in this way.

**Interview protocol.** I invited those instructional personnel that were identified within the professional network(s) as being a prominent source of advice-giving among their peers as reflected through their rate of degree centrality. These selected teachers were invited via email. They were reminded of the study purpose, as well as the role and function of the interviews – how it will further the study, what they can expect in an interview, the process of informed consent, how long the interview may take, and that it will be recorded. I used an appointment web-based application to facilitate scheduling. I gave the teachers the choice to meet on or off campus. All teachers chose on campus to conduct the interviews.

Upon the commencement of the interview, signed informed consent was collected for this additional activity if it had not already been collected during the observations. Teachers were given the opportunity to refuse to be audio recorded. It was repeated to the participant why they were chosen for the interview – what was unique about their position in the network(s). I shared the intention to share a transcription with the participant for member checking via email. I began the interview by showing the interviewee a sociogram,
depicting the professional networks identified in the observation and/or network survey results and where the interviewee was positioned in the sociogram. I invited the participant to ask any questions about how the sociogram was created.

I used a prepared semi-structured interview guide with open-ended questions, asking the same questions in relatively the same order and style. Utilizing a semi-structured format allowed me to ask clarifying/follow-up questions in a conversational manner. I allowed for an interview time of approximately 60 minutes. Upon completion of the interview, I confirmed contact information and send the participant a transcription of the interview so that they may clarify or add any items to facilitate member checking. Maintaining alignment with my democratic and collaborative values, it is vital that member checking occurs during data collection, after transcription, and at various points throughout analysis (Stake, 2010). Clarification of ideas and continued engagement with participants can increase the trustworthiness and dependability of the work (Hamilton & Corbett-Whittier, 2013). I conducted follow-up interviews and/or sent follow-up questions based on the availability of the interviewee to clarify some perspectives on expressions of leadership within the network. Follow-up interviews maintained the same level of conversational quality in a neutral setting as the initial contact.

**Journaling.** In order to synthesize my own understanding of my role, function, and impressions during the data collection process I maintained a journal. I began journaling August of 2017 in preparation for data collection. Staring in December 2017, I completed a journal entry immediately after each preparatory site visit, observation, or interview. I completed a journal entry at least three times a week, sometimes daily, during the data collection and analysis process from December 2017 through September 2018. The
purpose of this journal was to help structure and organize my thoughts to assist in the ultimate analysis and discussion of the data collected. This journaling activity assisted me to position myself appropriately throughout the course of the case study and note my reflections in an ongoing and continuous stream parallel to the research activities I engaged in (Janesick, 2011). My positioning and reflection helped better define the nature of my interpretations of data and helped me frame the perspective I took. It was imperative that I recognized and accounted for evidence of my own predispositions as an administrator, and watch for and record evidence of trust and/or distrust on the part of study participants. This transparency helped proactively address issues to encourage as many as possible to participate and engage in the study. In addition, my record of the data collection experiences helped establish the context in which they were undertaken.

**Potential Risks and Benefits of Participation in the Study**

Potential risks could have included professional embarrassment due to survey results, observations, or interviews. Removing participants’ names from the survey results, observations, and interviews reduced any potential professional embarrassment or risk. Conversely, teacher participants could have perceived the opportunity to reflect upon their own practice and collaboration within teacher networks, as well as their own perceptions of teacher leadership, as beneficial to them. School-based administrators had the opportunity to reflect upon the conditions under which networks and teacher leadership may be supported. Conditions for teacher leadership within schools may be improved as a result of actions taken based on these reflections.
Informed Consent Process

All potential survey participants received a detailed explanation of the purpose and intent of the survey, including follow-up interviews, well as the opportunity not to participate if they choose. A full explanation of the survey was embedded within the survey email invitation and participation indicated consent. Signed informed consent was gained at the beginning of any more intimate data collection, such as observations and interviews.

Confidentiality

All names of individual participants are removed and pseudonyms (e.g., Classroom Teacher) or numbered pseudonyms (e.g., Classroom Teacher #9) are used instead of names. The school site itself is referred to with a pseudonym. Although it is important to accurately and specifically describe the context of the site, care was also be taken to maintain the confidentiality of location and remove any unique identifiers of the site itself.

Data Analysis

Stake (1995) urges researchers to dig deeply into a case, “an integrated system” (p. 2), to establish contexts and build the story around the case. Exploratory research (Patton, 1990) combines methodology in a new or unique way, which has little or few models in the literature. I have used a combination of social network analysis with more traditional qualitative methods (i.e., interviews, observations, reflective journaling) to explore and describe the story of this case (Yin, 2012, 2014).
Social Network Analysis Software

In considering which network software to use, I reflected upon my research questions and theoretical framework of symbolic interactionism to determine the purpose and function of the tool I would choose. The purpose of collecting advice-seeking network data is exploratory. I am not testing a hypothesis about the nature of the network. I am not attempting to link individual teacher attributes to their position within the network(s). I have mapped the network(s) in order to understand the relationships that may exist within and outside the formal structures for sharing instructional information. I am seeking a variety of perspectives about teacher leadership within this study, and key actors in the network(s) as indicated by measures of centrality may have a unique perspective.

After reviewing a number of software choices, I decided to use Gephi. Gephi is free, open source multi-platform software that provides users dynamic network visualizations. The purpose of this analysis is to determine key actors as measured by their centrality. Gephi has been the most suited for the purposes of this study. It is designed for a variety of exploratory and interpretive applications in network analysis (Bastian, Heymann, & Jacony, 2009). Before using it in this study, I practiced with it. There are many on-line tutorials available (jengolbeck, 2016; jengolbeck, 2018; University of Kentucky Libraries, 2017), and Gephi functioned appropriately for this novice user. The functionality of Gephi has met the needs of this exploratory case study and provided a tool to determine the centrality indicators sought within the network(s) (Buchenroth-Martin, DiMartino, & Martin, 2017).

In order to prepare the data for analysis, I first took the raw data from the survey and created a CSV (comma separated values) file. This is a fairly simple matrix or array of rows and columns that aligns each node (source), or respondent teacher from the survey,
to their corresponding selected teacher choice (target) in order to create ties (edges). I created one for the advice-seeking I observed within the team meetings. I also created one file for each question set within the survey (instructional practice, improvement, and innovation). See Appendix E for an example. Once these data sets were created, I then uploaded these to Gephi and continued with preparing each data set for visualization and analysis, in order to determine the teachers I would invite to be interviewed. I then created a third data set based on the responses to the interview questions about advice seeking. Finally, I combined all the data to create one data set representative of the all advice-seeking revealed within the course of the study, without duplications. Once the sources and targets had been listed in the CSV file, I again uploaded these to Gephi and continued with preparing each data set for visualization and analysis. Once in Gephi I specified that these are directional (advice-seeking) edges that are either weighted (frequency of advice seeking) or not weighted. This allows Gephi to determine the in-degree centrality of individual nodes. Gephi uses tables to report the degrees of centrality for each node. Gephi also plots the nodes and edges in order to create a visualization of the network. Gephi allowed me to manipulate the nodes and edges in order to help make sense of the connections. No additional software was necessary.

Social Network Analysis Measures

The modeling unit in SNA is the level at which the data are modeled or summarized (Wasserman & Faust, 1994). Although the unit of observation in this analysis is the actor (based on survey, observation, and interview results), these data points are combined to create a model of the whole network. Subsequent whole-network analysis results in
measures of individual actors in relation to the network (Carolan, 2013). For this study, I focused on measures of centrality.

Measures of centrality are key indicators of each node’s relationship to others. Centrality is determined by measuring the number of ties that are linked to the node, or actor. Deal, Purinton, and Waetjen (2009) describe actor nodes as *stars*. A *star* actor within the network might have a high rating of in-degree centrality, meaning many instances of ties directed toward the actor. Measures of in-degree centrality have also been called measures of prestige (Faust & Wasserman, 1992). Prestigious members of the network are prominent or visible within the network. What they are prominent or prestigious for is dependent upon the relationship being measured. Some have found the term prestigious problematic because it implies a positive relationship, which may not always be the case (Wasserman & Faust, 1994). However, it persists in the literature (Cheng-Min & Kuen-Shiou, 2006; Como, Trobia, & Manna, 2014; Russo & Koesten, 2005).

In this case I recorded whom a teacher choose to seek advice from and how often. These directional ties indicate whom teachers seek out for advice. The frequency with which teachers report this happens adds weight to the ties. The more often a teacher is likely to seek out another particular teacher the greater the weight of the tie. In-degree centrality notes which nodes, or actors, are the target of advice-seeking. Out-degree centrality is the measure that notes which nodes, or actors, are seeking out advice. This study utilized directionality, in-degree, and out-degree centrality to visually represent advice-seeking within networks. With the exception of the interview analysis and the cumulative analysis, this study also utilized the weight of the ties, or edges, that connect the actors, or nodes within the network. Including weight as a factor helped better define the
in-degree measures of centrality. When it could be captured, this gave a better indication of the strength of the presence in the network.

**Content Analysis**

I utilized basic content analysis to review the documents, observation notes, and interview transcripts. The purpose of the document review was to gather information about how district and school administration had established the context for teacher leadership in this school. I read through websites, internal documents from leadership trainings, district strategic plans, school success and improvement plans, master schedules, and PLC facilitator training records, looking for references (words, phrases, sentences, paragraphs) to teacher leadership and collaborative culture. Information gathered contributed to description of the structures and processes intended to support teacher leadership in the district.

The purpose of the observations of the PLCs was to document contexts for teacher leadership within the formal network of the established professional learning communities. Immediately after the observation, I recorded initial thoughts and reactions in my journal, including non-verbal behaviors, content, and tone of the discussions. I counted and sorted the instances of advice-seeking as recorded in the observation guide. I organized and described more specific observations in a written summary of the notes (time, place, membership). I listened to the recording (if available) with a copy of the original notes and the written summary. I then made any additions, clarifications, or corrections within the written summary from the recording.

The interviews then complemented the document reviews and observations by asking teacher leaders themselves their perceptions of the influence of these networks on
their sense of themselves as teacher leaders. Interviews were transcribed and participants had a chance to provide input and reflect upon their interview conversation. I read and re-read the material to identify emergent themes. As I analyzed interview data through multiple readings, I sorted and clustered exemplars (words, phrases, sentences, paragraphs) of concepts in interview responses, utilizing a matrix of four constructs: leadership, networks, innovation, and efficacy. Concepts took on the quality of a theme if three or more teachers similarly referenced the concept to make it a dominant part of the whole analysis. The process included organizing and categorizing themes into groups and subgroups, finding patterns of evidence. I recorded those themes and created memos in my journal. Having a thorough understanding of the context of the case helped ensure relevant themes and key categories were discovered (Hsieh & Shannon, 2005). Thoroughly documenting this process by journaling as an analytical tool added to reliability in the process of analysis.

**Presentation of Results**

Results are organized according to the four constructs of *teacher leadership*, *networks*, *efficacy*, and *innovation*. Content analysis of school documents, observation notes, and interview transcripts is used to describe the formal networks. This is presented in narrative form, utilizing excerpts and quotations from the data collected to indicate specific examples of thematic discoveries. Professional network survey data is presented as sociograms, highlighting actors with significant in-degree centrality (*stars* noted above). Gephi software allowed me to make the nodes (circles) larger based on centrality. I adjusted the visualization to emphasize the more prominent nodes (higher in-degree centrality) by increasing the node size proportionally with less prominent nodes. Edges
are also made thicker based on the weight assigned (frequency reported). One sociogram is presented for each survey item, featuring advice-seeking for instructional practice, improving instructional practice, and innovating instructional practice. One sociogram each is presented for advice-seeking for instructional practice, improving practice, and innovating practice that was observed within formal team PLC meetings. One sociogram each is presented for instructional, improving, and innovating practice based on interview data. One sociogram each is presented for advice-seeking for instructional practice, improving practice, and innovating practice to represent the combined patterns of advice-seeking observed, interviewed, and surveyed. A narrative, explanatory description of each informal network accompanies each sociogram.

**Reflexivity**

The role of the researcher conducting the case study is that of interpreter (Stake, 2006; Yin, 2014). The researcher’s own experience can have an impact upon the design, collection, and analysis of the study (Stake, 2010; Yin, 2014). Reflecting upon one’s own experiences can help frame the researcher’s viewpoint and expose any bias that exists so the reader may take that into consideration. The inclusion of a quantitative component, the teacher survey, does not exist in isolation from these perceptions either. Study design and analysis of social networks is also subject to interpretation. I designed this study to ensure that in the course of investigation, more information could be collected in order to tell the story of the visual representations. I combined quantitative and qualitative data collection to provide evidence for a full investigation of the phenomena.

Self-reflection is a tool that helped me balance the role of the researcher and the interpretive nature of the case study (Hamilton & Corbett-Whittier, 2013). Stake (2006)
encourages an acknowledgement of the value-ridden nature of qualitative research and the awareness on the part of the researcher that often what is left out of the analysis is just as influential to the reader as what is included. As I proceeded through this study, I recognized that I must be cognizant of my own perceptions and interpretations as a researcher and constructor of meaning.

Reflection

It is with these admonishments in mind that I reflect upon my own experiences with teacher leadership and attempt to position myself within the context of the case. I first began thinking about the role of teachers in the school from my own experiences as a teacher leader and then a building administrator. I know that there are many untapped sources of leadership throughout our teacher ranks, and some are often reluctant to come forward as a leader because of preconceived ideas about what leadership entails. They see themselves as “just a teacher” (Helterbran, 2010) and believe moving outside of their comfort zone in the classroom to impact the larger school community will either make them a target for critique or expend time better spent on their own classroom needs.

I believe that teachers desperately need each other to create a positive collegial community for their own professional development as well as student achievement. Too often leadership roles are associated with additional managerial responsibilities and a paltry stipend to go with it. As a new principal, I want to provide teachers with an opportunity to internalize personal beliefs of engagement, enthusiasm, and commitment through influencing their broader school environment, beyond their classroom and their current cohort of students. I believe teachers often influence others through modeling and giving advice, but they don’t necessarily think of that as leadership.
Teachers’ current opportunities to make decisions concerning their professional environment can be inhibited by trends in federal and state education accountability initiatives that continue to erode teacher professionalism through top-down processes. I am often conflicted when tasked with implementing district initiatives that, while perhaps even beneficial for the school or district as a whole, may be perceived by teachers as just “one more thing” that controls their practice. I want to help foster an environment that can support teachers as leaders and to provide an example for other building administrators to seek out and nurture the teachers in their building to create a vibrant, energetic collaborative environment conducive to student success. I want to help counter the trend of de-skilling and de-professionalizing teachers by discovering what conditions support teacher action and agency through teacher leadership.

I also look for more caring, democratic, and empowering ways for teachers to participate in the decisions that impact their students and their daily lives (Noddings, 2005). Teaching and learning need to be recognized as a social-emotional experience that is based on unique relationships and events. I want to encourage teachers to use their individual voices to advocate for their ability to apply the art of teaching to promote critical inquiry and creative thinking. Inquiry that occurs at the school and teacher level, based on collaborative, democratic processes, empowers teachers to make instructional and procedural decisions that impact their general school environment and working conditions (Frost, 2012; Muijs & Harris, 2006). Individuals should be empowered to act rather than frozen by fear of reprisal. School leadership that fosters empowerment based on trust can result in informal leadership acts that occur in a timely manner to resolve an expressed need. Teachers begin to see themselves and others as leaders.
All this being said, as I embarked upon this research project, I realized some teachers may not be able to trust me because of my position as an administrator within the district. This barrier to trust is something I attempted to proactively counter by being as transparent and inclusive as possible in the implementation of this research plan and throughout the data collection and analysis. I repeatedly reassured participants of the confidentiality of their participation and my commitment to the protection of their personal reflections as I sought out their opinions and beliefs. I believe I can honestly step aside from my administrator role to maintain adherence to high standards of confidentiality. While at the site, I made a point not to spend time in the administrative offices, but rather I worked in the media center between observations. I made sure the site administration knew and respected my commitment to confidentiality and they did. I have refrained from discussions with other administrators in the district about my experiences during this study and follow a strict code of non-disclosure. I met with each grade level team before any observation was conducted to introduce myself and fully explain consent and study confidentiality. During the observations, I used the observation tool and recorded patterns of advice-seeking. This helped me step away from my administrative role and focus on my research parameters. I then shared the completed tool with members of the team, so that what I was recording was not a mystery to them. I also believe by introducing myself independently of administration and being transparent with potential participants of my position as an administrator, I was able to reassure others and remind myself of my role as researcher rather than administrator.

I attempted to be approachable and available at my host school, being friendly and open at all times. This trust and respect can only be built through multiple expressions in
word and actions. I believe I was able to let individuals get to know me to the point that they felt comfortable sharing concerns or celebrations throughout the study. Any lack of trust would have inhibited the data collection process. Through journaling and reflection, with a focus on the participants as the experts in their school with their instructional practice for their students, I minimized possibility that I may continue to view participant teachers through the administrative lens, as the evaluator and supervisor. In the same manner that lack of trust can inhibit data collection, my administrator experiences can impact content analysis. I maintained a close connection to participants through member checking to be sure I was seeking to understand their perspectives in my interpretation of the data.

**Ethics**

This study was conducted with the utmost attention to ethical considerations for the individuals who offer their time and insights to assist in its completion. This included gaining university IRB approval, as well as the authorization of the district in which it is to be conducted. An introduction to the study was conducted at the activity site during which individuals invited to participate received a detailed explanation of the purpose of the study. Consent was obtained of all participating instructional personnel, to ensure that each individual knows that confidentiality will be maintained. I reassured participants of confidentiality throughout the study. These precautions and considerations will help me progress through the study in an ethical manner.

**Validation Strategies**

Multiple strategies for validation of findings, as suggested by Creswell (2013), were used in the study.
**Triangulation**

“Getting the picture right” (Stake, 2006, p. 77) involves triangulation of data. Multiple sources were collected including documents, survey results, observations, and interviews. Utilizing multiple data sources provided me the opportunity to find where themes intersect across sources and to look from various vantage points (Stake, 2010) thereby validating descriptions and results.

**Member Checking**

As stated previously in this chapter, member checking was used to clarify and confirm statements and contributions from participants throughout the data collection and analysis process. Building relationships with individuals that are a part of the case is key to support collaboration in this manner. Providing observation notes and interview transcriptions via email to participants for their clarification and feedback helped maintain the momentum of vibrant data collection and increase accuracy (Stake, 2010). Providing participants drafts of initial data analysis helped confirm themes (Creswell, 2013).

**Prolonged Engagement**

This study occurred throughout the 2017-2018 school year gathering documents and conducting multiple observations and interviews. This immersion both in the data and the field helped form relationships with individuals, built trust in the work, modeled transparency, and provided a foundation for analysis based on multiple exposures to the context.

**Rich, Thick Description**

I have provided the reader with detailed descriptions of each step of the data collection and analysis process, as well as multiple quotes and examples from observations
and interviews. This supports the potential transferability of analysis and conclusions (Merriam & Tisdell, 2016). This description informs the reader fully about the context of the case so that they can determine if information or findings might transfer to other similar contexts.

**Clarifying Researcher Bias**

My initial reflections have exposed my own bias and internal conflict as a building administrator, even as I seek teacher perceptions. I maintained a journal that has helped me position myself and reflect upon this bias throughout data collection and analysis.

**Peer Debriefing**

I have sought out feedback from a variety of close colleagues who are supportive of my progress, but not directly vested in the outcome of my research (Lincoln & Guba, 1986). This includes colleagues that are currently working on separate studies within the same district context. I have encouraged these individuals to challenge my assumptions, help me acknowledge my bias, and check for consistency and clarity in analysis. In addition, each member of my dissertation committee has provided a unique perspective based on his or her area of interest. One committee member is a professor who works extensively with and provides professional development for teacher leaders.

**Negative Case Analysis**

In conjunction with clarifying researcher bias and peer debriefing, I have considered negative case analysis. This requires me to acknowledge “disconfirming evidence” (Creswell, 2013, p. 251) discovered through data collection, analysis, and the validation strategies previously mentioned. I might not have initially recognized such evidence, due to my own perceptions. However, through peer debriefing, this evidence may be exposed.
I have an obligation to fully analyze the unexpected or exceptional themes that may be brought to my attention.

**Limitations**

I attempted to develop trust and collaboration at every interaction with district and school-based personnel. One potential limitation to the study is selective or constrained responses by participants if there is a perception that the district or school might be placed in a less than flattering light by the findings of the study.

Collecting survey data requires the assumption that the participants will answer survey items honestly and candidly. A potential limitation is that respondents were not candid in their responses or may not have fully understood the questions. Individuals at the school site may not have trusted me as I am relatively unknown to them and am an administrator, and therefore did not participate. Not all instructional personnel choose to respond to the survey. Although a majority of the staff requested it, and I believe more staff members were able to answer fully about their advice seeking networks, some staff may not have responded to the survey due to my inclusion of administration as a choice for advice seeking. Also, response options may not have fully reflected the informal network each teacher engages in.

In the school-based interview phase, teachers may have been intimidated being interviewed by me because I am an administrator. Not only may my position as an administrator have inhibited teacher responses, my experiences as an administrator may have inhibited my interpretation of the data. I continually reflected upon and acknowledged the limitations of myself as an administrator attempting to analyze teacher
perceptions, including the internal conflict I experience when I am required to be a facilitator of the “top-down processes” that I attempt to mitigate within my own building.

Chapter Summary

I attempt in this chapter to provide a brief initial introduction to the case, situating it within district and school contexts. The process for securing permission and gaining access to conduct research by both my university and district is explained. The theoretical framework of symbolic interactionism influences my research design, as well as the concepts of social capital and social networks. Data collection occurred in phases that were designed to build layers of thick descriptions from a variety of sources. This included a social network survey in which I used social network analysis in an exploratory manner to describe informal advice-seeking networks for instructional innovation, and I identified and interviewed key actors in the professional networks. Content analysis was used to analyze data, revealing prominent themes throughout a variety of written data, including documents, observation notes, and interview transcripts. Validation strategies such as journaling to clarify researcher bias and member checking occurred throughout the data collection and analysis to provide the reader greater trust in the findings.
CHAPTER 4:
FINDINGS

The purpose of this single exploratory case study was to uncover patterns in teacher professional networks, the context in which they exist, and teachers’ perceptions of the influence of these networks on their sense of themselves as teacher leaders. The study was guided by the question, to what extent do teachers utilize professional networks to seek information and influence others as teacher leaders working toward a common goal of student achievement and school improvement? The study was conducted at Sunnydale Elementary School, a Title I school in a suburban school district in the southeastern United States, during the 2017-2018 school year.

Sunnydale School

Sunnydale Elementary School is a Title I eligible school which sits in a suburban setting. Sunnydale serves students Pre-K through 5th grade. Student demographic reports during the 2017-2018 school year indicated that there were 703 entries and 96 withdrawals throughout the year, with a final headcount of 607 students attending. Of the 607 attending, 72% of students were white non-Hispanic, 20% Hispanic, 5% Multi or Other, 3% Black, and less than 1% were Asian/Pacific Islander or Native American. Approximately 86% of students qualify for free or reduced lunch. Twenty-six percent of students are identified as Students with Disabilities, 8% have qualified for a 504 Plan, 8% are identified as English Language Learners, and 6% are categorized as Homeless.
At the end of the 2012-2013 school year, Sunnydale had received its second “D” rating from the state’s accountability system. Sunnydale, along with three other elementary schools in the district, was identified as a “Focus” school under that system. A third “D” in the 2013-2014 year would make Sunnydale subject to more intense state oversight and improvement measures. This prompted focused improvement strategies from the district, in cooperation with Sunnydale’s then recently appointed principal, in order to keep state authorities at bay. The district contracted with an outside consultant to implement problem-based learning structures integrated with technology within classrooms, with the goal of increasing student engagement and achievement. Fast forward five years, and of the four original “Focused” schools cohort of that year, the other three continue to struggle and fluctuate in student academic achievement outcomes as measured by the state system. Sunnydale’s efforts, in contrast, have resulted in sustained student growth and achievement.

**Early Warning System**

The district utilizes an Early Warning System as required by state law to identify students that are On-Track, At-Risk, or Off-Track in reference to Course Performance, Attendance, and Discipline. These three key indicators are monitored due to their impact on the likelihood or probability a student will graduate high school.

At the elementary level, On-Track students for Course Performance have received satisfactory grades in all subject areas. One grade that is below average or indicates needing assistance will bump a student to At-Risk, and any one failing or receiving an unsatisfactory grade will place the student in the Off-Track category for Course Performance. At Sunnydale, in any one quarter, over 70% of students were consistently
On-Track for Course Performance and just under 30% of students were considered At-Risk. Less than one half of 1% of students were considered Off-Track for Course Performance in any one quarter. The cumulative percentage of students that remained On-Track throughout the year was over 50%, while the percentage of students Off-Track for performance at any one time was just over 1%.

The student that is considered On-Track for Discipline has received no Office Discipline Referral (ODR) within any one quarter, and fewer than two for the whole year, with none resulting in an In-School Suspension (ISS) or Out-of-School Suspension (OSS). The At-Risk student may have received one ODR within any one quarter and up to three for the year with no resulting ISS or OSS. The Off-Track student would have received two ODRs within any one quarter or semester and four or more ODRs within the year with any one of these resulting in ISS or OSS. Consequently, even if a child receives only one ODR, if that one results in an ISS or OSS that child is automatically considered Off-Track for graduation based on Discipline. At Sunnydale, in any one quarter, over 96% of students were considered On-Track for Discipline, with almost 98% of students ending the year On-Track. Throughout the year in any one quarter approximately 1% of students were considered Off-Track, and by the end of the year just under 2% of students were categorized as Off-Track.

While the Course Performance and Discipline categories are strong positive indicators at Sunnydale, its students do struggle with Attendance. The On-Track indicators for attendance adopted by the district are the same from Kindergarten through high school. Students are considered On-Track for Attendance if they miss less than 2 days per quarter, or remain at less than 4% absenteeism throughout the year. Students who miss 3-4 days
within a quarter or remain at 5-9% absenteeism for the year are considered At-Risk. Students who miss 5 or more days within any one quarter or remain at 10% or greater absenteeism for the year are considered Off-Track. At Sunnydale, the 2017-2018 year started strong at 70% of students within the first quarter considered On-Track for Attendance. Subsequent quarters drop to just over 50%, and the year ended with approximately 37% of students able to maintain attendance rates throughout the year. Conversely, just over 10% were Off-Track during the first quarter with an increasing percentage throughout the year resulting in over 20% considered Off-Track for the year. This also leaves a considerable percentage (approximately 30%) in the At-Risk category. These numbers do include Kindergarten, which does not have state-mandated attendance until the age of 6.

Vision

Sunnydale's vision states: “All our students achieving success in college, career, and life.” Its mission states that Sunnydale “is committed to a student centered environment with expectations of high quality instruction demonstrated through professionalism and integrity to create life-long learners as a collaborative community.” One teacher reflected on the process of creating the new norms and core values when their current principal was appointed five years ago:

Like when she first got here we did all the new norms and the new core values. That was a long process... and it was purposeful. And honestly a lot of people left... we kind of got rid of the dead weight. You know what I mean?

This focus continued from year to year. Clear expectations were stated at the principal’s beginning of the year 2017-2018 welcome back presentation titled, “Owning the Challenge.” She referenced the strides the school had made in student achievement,
attendance, and behavior due to their instructional practices, sense of urgency, and development of a growth mindset. She challenged her staff to press on with that sense of urgency even though they had accomplished so much. She stated,

This year is about learning for all, not just the students, but ALL members of our [Sunnydale] community...We will not allow very good to be the enemy of great... To move forward, we will push each other’s thinking to places we never thought to go before...We’ve moved our students from conscious control, to engagement, to collaboration, to empowerment. Our next frontier is efficacy and then leadership for each of them and for all of us. How will you be that facilitator, cheerleader, encourager, and teacher that will help the next generation of learners here at [Sunnydale]?

Staff

The school-based personnel at the time of the study included a total of 41 instructional staff plus two administrators. Instructional support personnel included one learning design coach, three support facilitators (special education), two speech teachers, two reading interventionists, and one school counselor. The “Specials” team consists of three physical education, one art and one music teacher, and students alternate in these classes once a day. The “Specials” times are leveraged to provide common planning time for general classroom teachers within the master schedule.

An administration change occurred during the study. The assistant principal that had been with the school for the previous five years retired in December, which led to a new AP appointment in late December. This individual took a different position in the district soon after, and another new AP was appointed in February. This new AP was well known to the staff, as she had served for the past four years as a math coach, then learning design coach, and then most recently in the current year as an administrative intern at the school.
The Fall 2016 Gallup staff engagement survey indicated that 60% of staff (both instructional and non-instructional) was engaged. That number increased by 2% in Fall 2017 to a total of 62%; the district average was 42%. Of the 12 questions designed to measure individual indicators of engagement, the highest score for Sunnydale was for the item, “I know what is expected of me at work.” That score was 4.64 (out of 5), a .09 point increase over the year before, higher than the national average, and .34 points over the district. Other items that resulted in a score above 4.5 (out of 5) included those that indicated the individual felt they were a part of an organization that supported its employees in an important shared mission that was committed to quality work and provided opportunities to learn and grow.

There is evidence from interviews that administration and teachers hold each other accountable for high expectations and quality work. One teacher stated during an interview, “Doing what’s best for the kids. That’s kind of like our motto here of what’s best for kids.” Another teacher noted about the teachers, “They do hold each other accountable.” Also, administration exhibits a supportive stance. One Sunnydale teacher said about her principal, “The expectation is here, and if you don’t meet the expectation, she’s going to tell you, but she’s also going to support you.”

The Observations

Setting

I visited Sunnydale a total of fifteen times throughout the course of the study, from December 2017 through June 2018. Six of these visits were specifically for PLC observations. The teams generally met in the media building. The rooms utilized within the media building included the Learning Design Coach’s office, the data chat room, and
another meeting room. Occasionally, teams met in a fellow member’s classroom. Each team consistently used a projector or wireless connection to display agendas, lesson plans, or student data for the group to collaboratively discuss.

The data chat room was specifically designed to display student progress as well as team celebrations. The data chat room had four walls and one door; there were three tables put together in the center that seat a group of up to 10. It also had bookshelves and two built in desks, cabinets and a sink. One wall prominently displayed the three district priorities and corresponding school goals on three separate posters. Next to that were the clock and TV/monitor with wireless display capability. There was a banner at the top of the wall above the television that said, “Precision... Reason... Analyze... Communicate... Tools... Investigate... Construct... Evidence”, or PRACTICE. Below the television were reading level data walls printed and displayed from September through December. On the other side of the door were listed first grade student groups; it is unknown if they were current. The next wall displayed Kindergarten, First, Second, and Fourth Grade sections of bulletin boards that had goals, commitments, and data unique to the grade level. I did not see any of these referenced or updated during my observations. The back wall had professional library materials, books, and references – including two professional development books aligned with current initiatives prominently displayed. It also had the district goals and beliefs (student actions, behaviors, performances) displayed in two posters hanging from a shelf. The last wall appeared to document celebrations and was labeled “Shoot for the Stars.” Each grade level as identified by their team name had the cutout of a space shuttle on the bottom, and each celebration was written on a star cut-out. They were lined up like a graph, and it was apparent some teams had posted celebrations
regularly while others did not. The celebrations crossed subject areas from reading to math to writing.

In between the formal, scheduled observations throughout the day, I spent time in Sunnydale’s media center. I was able to see and hear children come and go as they returned books. I was present when classes used the computer lab that was housed there. I always saw and heard children being spoken to respectfully and pleasantly. The tone and feel of my time at Sunnydale was positive, even when I was just in the background and no one really knew who I was or why I was there. I felt welcomed. The students and teachers were very much like the ones at my own school, some more experienced and some more frazzled. The teachers were very open with me as a group and individually. I was present at an impromptu faculty meeting that addressed safety concerns in response to a school shooting that happened across the state. The staff was sober, not scared, and expressed any concerns in a measured manner. The principal was able to anticipate many of their concerns and was able to reassure her staff. The team I was observing that day was able to resume their PLC within 20 minutes. They started off with celebrations as was the routine, but this routine had an extra purpose that day to help offset the concerns of the morning meeting.

**Structures**

The collaborative structures at Sunnydale include multiple opportunities for both vertical and horizontal planning and professional development. I was able to be present at many of these activities. Instructional planning for each team begins in the summer when they begin to develop their problem-based learning units. This work includes reflection on the previous year and feedback from their peers. During the 2017-2018 school year
collaborative structures existed for the purpose of instructional planning, professional development, and student inquiry. The master schedule included 120 minutes of weekly extended PLC instructional planning for each grade level team. Classroom teachers, support personnel, and (occasionally) administrators attended this meeting. There was also weekly 45 minute regular instructional planning on a second day that could include the full team, but sometime just consisted of the classroom teachers. PLC data chats occurred every four to six weeks. In this meeting, PLCs analyzed grade level assessment data and created intervention groups. Quarterly data chats occurred approximately every 9 weeks to review district created assessment results. These day-long reviews gave teams the opportunity to dig deeply into student data. The morning consisted of a review of assessment results facilitated by administration, and the afternoon was reserved for the team to work on their own to action plan and meet with specialists. This may include the school counselor or learning design coach as needed to attend to concerns of student engagement and/or unit development and modification.

There were also opportunities for individuals from different grade-level teams to meet across grade levels in bi-weekly professional development. This year the focus was on writing, and participants sat in shifting vertical groups to review writing rubrics from the grade level above and the grade level below, as well as student samples. Fifth grade and Kindergarten even teamed up. At times the PD sessions would include support from a contracted consultant; at other times a teacher facilitated. A monthly school-based leadership team to review and monitor school improvement goals, along with a weekly school-based intervention team for individual student problem-solving, rounded out the
scheduled meetings. Other ad hoc meetings occurred to plan for school events or respond to emergency needs. One teacher noted:

She [the principal] is very big on everyone having a role in some aspect, in being a leader in some way. There’s different activities and stuff so like we have a big event, Aloha Night, while she doesn’t put that on, she asks staff members, ‘Okay who would like to lead this’ so she’s very open allowing other people to be things and encourages that I guess.

**Professional Learning Communities.** I was able to observe 35 out of 46 instructional staff members within PLC meetings, with the exception of Pre-Kindergarten and Specials (Art, Music, PE). Grade level PLC meetings follow an agenda that is created and submitted to administration by the team. Each grade level PLC has collaboratively established its own norms, or commitments. Four out of six teams I observed recited those commitments and shared celebrations to open the meeting. A fifth team had already started when I began the observation. The sixth did not have all its members together at any one point in the meeting due to unexpected circumstances, so the atmosphere was much more disjointed.

I recorded instances of advice-seeking for instructional practices within weekly professional learning communities during each grade level team’s extended planning time. I limited this particular analysis to extended planning time. I wanted to maintain approximately the same duration for each PLC because that could impact the visualizations. I was able to observe all teams at least once, for a total of 630 minutes of extended planning time. The figures below collectively represent one meeting of each of the individual PLC extended planning time within a two-month time frame. This is the time set aside in the schedule each week for teams to meet for approximately two hours and collaboratively
discuss instruction, including lesson planning and instructional modifications. The power of questioning was evident in these instances. Individuals within the teams questioned each other to draw on their expertise and experience. The frequency with which members asked an instructional question was often as influential as the answers they received.

The frequency and directionality of the advice-seeking within the observed PLCs is captured in Figure 4.1. Larger and darker nodes indicate a greater measure of in-degree centrality, or more questions being directed toward that individual, either alone or as part of the whole. I categorized and labeled the nodes as classroom teacher, non-classroom teacher, and administrator. I believe these three categories provide additional insight as to whom individuals within the network are more likely to seek out for advice.

The network illustrated in Figure 4.1 only reflects advice-seeking within the observed PLCs. The individuals within these PLCs are determined by assigned grade level. Special education and intervention support personnel are expected to attend. In addition, individuals within the PLC may ask specialists, such as speech language pathologists, to attend if there is an area they want to focus on that day. Other things that impacted the membership of the PLC on any one day were illness, maternity leave, and conflicting meetings. I observed that the PLCs were able to adjust what day they met in order to avoid some conflicts, but that adjustment of days impacted the amount of time they might have had during the collaborative time. Figure 4.1 demonstrates that because some non-classroom teachers generally attend multiple PLCs, they have the opportunity to be asked for advice from numerous individuals across the whole network. This results in a greater measure of in-degree centrality, illustrated by a larger node on the visualization. Clusters
of nodes within Figure 4.1 generally indicate the PLC that each individual participated in during the observed meeting.

Figure 4.1. Instances of advice-seeking about instructional practice within observed PLCs.

The thickness of ties between nodes indicates the frequency with which individuals were sought out for advice. At times this was a result of a question asked of the group. I counted each of these questions asked of the group as one instance per participant. Most clusters, while having varied thicknesses between groups, tended to have similar thickness within any one group. This indicated that individuals tended to ask questions of the whole group with a similar frequency. Of note is the prominence of non-classroom teachers within this analysis. The most prominent is a curriculum coach that attends a number of
different PLCs to provide support for lesson design, integration of technology, and the selection of teaching strategies. Other non-classroom teachers also attend multiple PLCs, work directly with students, and provided support for reading intervention and exceptional student education. Further investigation through interviews and the survey showed that some of these individuals at Sunnydale are also viewed as those with experience and expertise. Many non-classroom teachers are prominent in all three analyses – observations, survey, and interviews.

Figure 4.2 shows that there were very few instances of advice seeking for improvement and innovation recorded throughout the total time of 825 PLC minutes observed. This is not to say that the only opportunity for advice seeking for improvement or innovation is through the PLC, but I only formally observed and collected data during teacher PLC teams, and not other structures that could be used for developing instructional practice such as professional development, leadership, or school-based intervention teams. For this reason, I expanded the analysis for improvement and innovation advice seeking to include all PLC sessions observed. These additional observations included sessions of regular planning time (a shorter duration) and one 70-minute portion of a quarterly data chat day that I observed. It is significant that a data chat session was included because the purpose of these meetings is specifically to reflect upon and adjust instruction based on student performance on assessment. Also, administration did not attend most of the extended planning meetings. Administration is typically in attendance at a quarterly data chat and was in attendance at this one.
Figure 4.2. Instances of advice-seeking about instructional improvement within observed PLCs.

Figure 4.3 illustrates the one observed instance of advice seeking for innovative practice. It occurred during the data chat in reference to problem-solving around an individual student. Although observed instances of advice seeking for improvement and innovation were not as frequent as regular advice seeking for instructional practice, teachers reported seeking advice from others at Sunnydale in survey and interview data.

Figure 4.3. Instance of advice-seeking about instructional innovation within one observed PLC during a data chat in reference to problem-solving around an individual student.
The Survey

Distribution

The survey was sent via email to the 46 members of the instructional faculty at Sunnydale. Initially, I was not going to include administration in the advice-seeking survey. However, the instructional staff wanted me to include administration in the survey. When I first met with the whole faculty to introduce and explain the purpose of the study, many individuals were publicly adamant that I include administration in the survey. In the course of explaining my research and the survey, I explained that instructional support personnel such as ESE and interventionists and coaches were included. When they learned that I had not initially included administration — I really wish I had a camera and I could have taken a picture of their faces —, they were shocked, and immediately asked if I could include both administrators on the roster, the AP especially. A few spoke up and stated that they go to administration regularly for instructional advice. I was very clear about the definitions of instructional practice, both improvement and innovation, so they clearly knew the content of the advice seeking I was focusing on. I asked for a voice vote, and it appeared a majority of the staff present was in favor of including administration because they felt the principal and assistant principal were such an important part of their advice-seeking network. I told them they made an excellent argument for the inclusion of administration as instructional personnel, and I would do it. They appeared pleased.

Respondents. Of the 46 surveys distributed, 21 responded (45%), including both administrators. Of the respondents, 11 had bachelor’s degrees, 9 had master’s degrees, and 1 had earned a doctorate. The average years experience in education was 11 years.
**Results**

Figure 4.4 represents patterns of advice seeking for instructional practice as revealed in the advice seeking survey. Darker, larger nodes indicate greater measure of in-degree centrality. Darker, thicker edges indicate a greater frequency of advice seeking as reported by the respondents. These results demonstrate the placement of administration in these patterns. The survey actually indicated a greater prominence of administration within this informal network than the more formal observed network of the PLC. Of the observations used for the SNA, administration only attended one observed PLC during the observation window. The network for instructional practice (Figure 4.4) as captured by the survey consisted of 29 nodes and 76 edges, or ties, stemming from 21 respondents.

*Figure 4.4. Patterns of advice seeking for instructional practice as revealed in the network survey.*
Figure 4.5. Patterns of advice seeking for instructional improvement as revealed in the network survey.

The network for improving practice (Figure 4.5) included 26 nodes and 51 edges stemming from the 21 respondents. The network for innovating practice (Figure 4.6) had 27 nodes and 54 edges from those respondents. Each survey item asked for the respondent to name up to five individuals that they sought out for advice, and some respondents chose to name less than five, therefore accounting for the variation in numbers of nodes. Of interest is the greater number of edges recorded from the instructional practice item. This indicates more connections or ties of advice seeking between individuals in the network. While the number of peers respondents reportedly sought out did not significantly change between the three types of advice-seeking, the number of ties between did, resulting in a greater density.
Figure 4.6. Patterns of advice seeking for instructional innovation as revealed in the network survey.

The Interviews

I ultimately conducted eight interviews; participant included five classroom teachers, two non-classroom teachers, and one administrator. It became clear as I conducted the teacher interviews that this administrator played a key role in the professional networks of the teachers interviewed. While her advice seeking was included in the interview sociograms, (Figures 4.7, 4.8, and 4.9), I did not utilize her responses within the narrative of this report. I believe it is important for the teachers’ voices to be heard. Only their comments are quoted. The administrator’s patterns of advice seeking, however, did contribute to the overall network. She was both a target and a source of advice seeking.
Conversations

The interviewees at times had difficulty differentiating between advice seeking for instructional practice, improving practice, and innovating practice. As part of the interview protocol, I then referenced and showed them a copy of the definitions introduced in the faculty presentation and used in the advice-seeking survey. The size of the networks for each category of advice seeking varied – 19 mentioned within instructional practice, 13 in improving practice, and 24 for innovating practice.

Figure 4.7. Patterns of advice seeking about instructional practice as revealed in the interviews.
Figure 4.8. Patterns of advice seeking about instructional improvement as revealed in the interviews.

Figure 4.9. Patterns of advice seeking about instructional innovation as revealed in the interviews.
A Synthesis of the SNA

Non Classroom Teachers Across Networks

Ranking the formal network by in-degree centrality (Appendix X) reveals that all non-classroom teachers fell above the median rank (18) for in-degree centrality. Ranking the informal network by in-degree centrality (Appendix X) reveals that all non-classroom teachers fell above the median rank (3) for in-degree centrality. In addition, non-classroom teachers fell in the top 6. Of the seven non-classroom teachers that were members of the formal and informal networks, four were members of both. Tables 2 and 3 provide an overview of the non-classroom teachers roles and centrality in the formal and informal networks.

Table 2
Formal (OBS) Network Ranked by In-Degree Centrality

<table>
<thead>
<tr>
<th>Node Id</th>
<th>District Role</th>
<th>School Role</th>
<th>Formal/OBS In-Degree</th>
<th>Formal/OBS Out-Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Classroom Teacher 33</td>
<td>Instruction Coach</td>
<td>Coach/Admin</td>
<td>72</td>
<td>0</td>
</tr>
<tr>
<td>Non Classroom Teacher 31</td>
<td>Special Education</td>
<td>Teacher</td>
<td>30</td>
<td>8</td>
</tr>
<tr>
<td>Non Classroom Teacher 29</td>
<td>Content Coach</td>
<td>Teacher/Coach</td>
<td>26</td>
<td>7</td>
</tr>
<tr>
<td>Administration 21</td>
<td>Administrator</td>
<td>Administrative</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>Non Classroom Teacher 44</td>
<td>Special Education</td>
<td>Teacher</td>
<td>23</td>
<td>14</td>
</tr>
<tr>
<td>Non Classroom Teacher 41</td>
<td>Special Education</td>
<td>Teacher</td>
<td>22</td>
<td>7</td>
</tr>
<tr>
<td>Non Classroom Teacher 18</td>
<td>Content Coach</td>
<td>Teacher/Coach</td>
<td>19</td>
<td>21</td>
</tr>
</tbody>
</table>

Table 3
Informal (Survey) Network Ranked by In-Degree Centrality

<table>
<thead>
<tr>
<th>Node Id</th>
<th>District Role</th>
<th>School Role</th>
<th>Informal In-Degree</th>
<th>Informal Out-degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration 21</td>
<td>Administrator</td>
<td>Administrator</td>
<td>40</td>
<td>11</td>
</tr>
<tr>
<td>Non Classroom Teacher 33</td>
<td>Instruction Coach</td>
<td>Coach/Admin</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Administration 17</td>
<td>Administrator</td>
<td>Administrator</td>
<td>18</td>
<td>13</td>
</tr>
<tr>
<td>Non Classroom Teacher 18</td>
<td>Content Coach</td>
<td>Teacher/Coach</td>
<td>17</td>
<td>8</td>
</tr>
<tr>
<td>Non Classroom Teacher 29</td>
<td>Content Coach</td>
<td>Teacher/Coach</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Non Classroom Teacher 31</td>
<td>Special Education</td>
<td>Teacher</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Non Classroom Teacher 47</td>
<td>Special Education</td>
<td>Teacher</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Following are examples of the contributions of four non-classroom teachers as illustrations of the roles they played in the networks, based on observations and interviews.
**Non-Classroom Teacher 33, instruction coach.** She attended three out of the six extended planning sessions and seven out of the ten planning sessions I observed. She was very supportive and not usually a dominant speaker in these meetings. She did not facilitate any meetings, but was available as a resource for content, instructional resources, and school policy and procedures. For example, one team had a long-term substitute. The instruction coach used time during planning to compliment the sub in front of the team and then provide more specific guidance concerning instructional content in a side conversation. During another planning session, a teacher new to the district had questions about completing field trip paperwork. The instruction coach and the teacher had a side conversation about filling in the paperwork. She was also a target of advice seeking in both the formal (observed) and informal (surveyed) networks. Her peers referenced her expertise during interviews (e.g., advice about a struggling reader). An administrator appreciated this coach’s skill at operationalizing an idea: “She definitely takes my little idea and then adds on to it and makes it more awesome.”

**Non-Classroom Teacher 18, content coach.** During a session she attended that I observed, she participated equally with the other teachers. When the team was determining the criteria for an upcoming writing rubric, she provided suggestions for the rubric criteria. She emerged both in the formal (observed) and informal (surveyed) networks with relatively high in-degree and out-degree centrality, emphasizing her collaborative nature. She was as likely to ask questions or seek out advice, as she was to be the target of advice-seeking. She spoke in the interview about helping teachers develop multi-tiered systems of support (MTSS) for small groups of students, as well as problem solving about individual students. She goes to other teachers as well as her coaching peer
to seek instructional advice about students she works with herself. A classroom teacher stated about her, “[S]he just knows all kind of strategies and things to help struggling readers, you know what I mean? So, I go to her.” Another classroom teacher stated that she's “my primary source for reading questions... she's always very warm, I never feel like I'm inconveniencing her.” One administrator knows the staff respects this coach's opinion. “I reach out to her because she knows what she is talking about. People see her as an expert. When she puts her stamp of approval on it, it helps you to be able to push through.”

**Non-Classroom Teacher 31, special education.** She works with small groups of students and plans collaboratively with her teams to align her instruction with grade level expectations. She attended two extended planning sessions for the two grade levels she supports. During the PLC I observed, she and another teacher worked together to clarify text complexity and discuss how they would use that information to meet the needs of their students. She shared students with the classroom teachers, and that shared responsibility led to collaboration. She shared specific examples of celebrating her students. She also offered to create a comprehension quiz based on current text the students were reading. The classroom teachers were very appreciative. She also shared insights about the students she worked with in order to better plan for their instruction across disciplines. During another PLC she offered insight into potential instructional materials the team was considering, and actively engaged in reviewing those materials.

**Non-Classroom Teacher 29, content coach.** She attended planning sessions for the team she supported. She was relatively quiet in planning sessions, more likely to answer direct questions, much like the instruction coach. For example, one teacher asked her opinion about a text selection. Her impact in the overall network, however, is evident as
she figures prominently in both the formal and informal networks. The other content coach at the school spoke in an interview about how they work together to support teachers to implement targeted instructional strategies for students and develop MTSS process at the school. They work with each of their respective grade levels in a similar manner – supporting individual students as well as teachers in reading instruction. Administration utilizes this content coach as a sounding board for questions about reading strategies and instruction that may be outside of the administrator’s direct experience. “She has a lot of expertise in the content. Also getting students to be able to read. That’s her area of expertise.”

**Instructional Practice**

After compiling the observational, survey, and interview data, I created a composite map of all edges (ties) within the network of instructional personnel patterns of advice seeking for instructional practice. I removed duplicate edges between nodes. I did not weight the edges, as previous iterations of the advice-seeking data had different values to the edge weights (observation was frequency within one setting, survey was estimated frequency within the past year, and interviews were inconsistently weighted). However, even the non-weighted edges could indicate in-degree centrality based on the number of edges directed at the node. In this way I was able to see a more complete picture of connections between staff. Figure 4.10 indicates that only six staff members are isolates on the fringes of the instructional practices advice seeking network as represented by the data collected during this time frame. These are individuals that were not members of a PLC that I observed, were not respondents in the survey, and were not interviewed. Also, their
peers within the network did not select them as targets for advice seeking either in the survey or the interviews.

**Improvement and Innovation**

When combined with the survey and interviews, the advice seeking networks for improvement (Figure 4.11) and innovation (Figure 4.12) became more apparent. Although each had greater numbers of isolates (unconnected personnel) than the instructional practices network, it is clear that the instructional members of this staff do reach out to each other for advice for improvement and innovation. In addition, the number of isolates

*Figure 4.10. Composite map of all edges (ties) within the network of instructional personnel patterns of advice seeking for instructional practice.*
within any network captured during this data collection most likely reflects the individuals who did not voluntarily participate in the survey or interviews, or were not mentioned within someone else's network. It is unlikely that this study accurately captured the complete network due to less than 100% participation in the study. However, these results can give insight into some trends within the network. For example, once all data were compiled for the three categories of practice, it became clear that there were only six individuals that presented as isolates in all three sociograms, and five more that presented as isolates within both the improvement and innovation sociograms. While it may be that these isolate individuals were part of their own network not captured by this study, the

Figure 4.11. Composite map of all edges (ties) within the network of instructional personnel patterns of advice seeking for instructional improvement.
observations, survey, and interviews conducted provided information to paint a picture of the opportunities for and operationalization of advice seeking networks within this case setting. Although these visualizations of the networks are helpful in noting trends and patterns, such as the prominence of non-classroom teachers and administration, only a deeper conversation with individuals within the network could reveal more about teacher perception of these networks. I attempted to capture these perceptions by interviewing teachers prominent within the networks.

*Figure 4.12. Composite map of all edges (ties) within the network of instructional personnel patterns of advice seeking for instructional innovation.*
A Synthesis of the Interviews

Tables 2 and 3 indicate the measures of centrality for each interview participant as collected from the observations and survey for instructional practice (IP), improvement (IM), and innovation (IN). The average measures of centrality for all members of each network are noted at the top with above average measures indicated in bold: those who were sought out for advice more frequently than others both in the observations and the survey (in-degree centrality); and those who sought out advice more frequently than others (out-degree centrality). The decision to include out-degree centrality was a direct result of the PLC observations. I noted that individuals who asked more questions also uniquely contributed to the discussions and influenced their peers.

Table 4
Instructional Practices Network Observations (OBS) and Survey (SUR) Weighted Degree by Frequency (OBS) or Level 1, 2, or 3(SUR)

<table>
<thead>
<tr>
<th>Instructional Practices OBS and SUR Measures of Centrality</th>
<th>Weighted In-Degree</th>
<th>Weighted Out-Degree</th>
<th>Total Weighted Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Network Degrees</td>
<td>OBS 18</td>
<td>SUR 6.7</td>
<td></td>
</tr>
<tr>
<td>Classroom Teacher 4</td>
<td>4</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Classroom Teacher 37</td>
<td>16</td>
<td>9</td>
<td>34</td>
</tr>
<tr>
<td>Classroom Teacher 27</td>
<td>13</td>
<td>3</td>
<td>58</td>
</tr>
<tr>
<td>Classroom Teacher 26</td>
<td>24</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>Classroom Teacher 14</td>
<td>12</td>
<td>0</td>
<td>70</td>
</tr>
<tr>
<td>Non-Classroom 18</td>
<td>17</td>
<td>17</td>
<td>21</td>
</tr>
<tr>
<td>Non-Classroom 30</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Administrator 21</td>
<td>25</td>
<td>40</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 5
Improvement (IM) and Innovation (IN) Network Survey Only Weighted by Level 1, 2, or 3

<table>
<thead>
<tr>
<th>Improvement (IM) and Innovation (IN) Measures of Centrality</th>
<th>Weighted In-Degree</th>
<th>Weighted Out-Degree</th>
<th>Total Weighted Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Network Degrees</td>
<td>IM 4.35</td>
<td>IN 4.04</td>
<td></td>
</tr>
<tr>
<td>Classroom Teacher 4</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Classroom Teacher 37</td>
<td>6</td>
<td>7</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 5 (Continued)

<table>
<thead>
<tr>
<th>Improvement (IM) and Innovation (IN)</th>
<th>Weighted In-Degree</th>
<th>Weighted Out-Degree</th>
<th>Total Weighted Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Teacher 27</td>
<td>0</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Classroom Teacher 26</td>
<td>1</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Classroom Teacher 14</td>
<td>0</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Non-Classroom 18</td>
<td>7</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Non-Classroom 30</td>
<td>N/A</td>
<td>11</td>
<td>N/A</td>
</tr>
<tr>
<td>Administrator 21</td>
<td>26</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

Getting the perspectives of teachers who are inclined to both seek out advice and are the source of advice within the network provided insight about the relationships that are developed around those connections within the advice-seeking network. For example, Classroom Teacher 4 has a high measure of out-degree centrality for instructional practice as revealed in observations of the formal network, and I invited her to be interviewed. However, the degrees of centrality were incomplete for improvement and innovation. Those items were not answered in the survey. When asked, she noted just didn’t have an opportunity to complete it. I was able to ask her about advice-seeking for improvement and innovation during the interview, and these results were included in the interview sociograms (Figures 4.7, 4.8, 4.9) as well as the composite network (Figures 4.10, 4.11 and 4.12).

Content Analysis for Teacher Leadership and Professional Networks

Teachers’ perceptions of leadership and the connections they make with each other were grounded in three themes: technical skill, interpersonal attributes, and a leadership culture within the school. This is in line with the concept of social capital (Hargreaves & Fullan, 2012; Lin, 1999) in which individuals connect with each other to access expertise.
and mobilize action on behalf of a shared purpose. The teachers see themselves as actors in a shared purpose for student achievement.

**Technical Skill - Finding What “Perks Up My Teaching Ears”**

Two categories of responses characterize technical skill: experience and expertise, and resources.

**Experience and expertise.** Teachers repeatedly referenced technical expertise and experience when relating why they went to certain individuals for advice: “Yeah she just she knows her stuff and she’s never been afraid to share with her people.” They also referenced it when explaining why they thought others might come to them: “I think it’s knowledge. I think it’s being knowledgeable about what you are preaching to them.” Another teacher stated that when she hears something that “perks up my teaching ears like out there might be good to ask about.” It is also clear by their responses that the expertise could come from anyone on campus, not just those with specialized roles: “Sometimes it’s other teachers even and so [it’s not] just someone who has that coaching role or administrative role.” When asked, “What makes a teacher leader?”, one teacher indicated that this process of learning and sharing as a leader was an integral part of being a teacher: “Being knowledgeable and being open to learning new things. I think it’s hard to be a teacher and not be open to learning new practices and learning -- I mean, just because you’re a teacher, you’re learning as well with the students.” However, there is still a place for time-tested experience and proven expertise in teacher leadership: “I think somebody who’s shown success teaching, somebody that the kids respect as well as their peers. You know I just think probably the first thing I think of that’s just being a strong teacher.” Still
another experienced teacher stated, “I think experience helps because the teacher doesn’t want a second year teacher telling another 20-year teacher what to do.”

**Resources.** Teachers did speak about resources, another component of social capital (Coleman, 1988; Lin, 1999). However, it usually was not in reference to individuals having access or knowledge about resources, but rather the individual herself as a resource. One newer teacher stated, “I know that I have resources, having a ESE Support Facilitator.” This teacher went on to say, “I think I’ve learned from [my principal] to use your resources and she [the principal] is a big resource for us.” Another veteran teacher included providing resources as a condition of being a teacher leader: “I think challenging them [teachers] to be better versions of what they are in the classroom is somebody that’s a good teacher leader as well, but if you give them the challenge you got to give them the resources and the support to commit to the challenge.” Often the teachers stated that the resource might come in the form of modeling, and that they have been model teachers, taught a model lesson, hosted visiting observers as a model classroom, or hosted an intern. One teacher stated, “I always ask for interns. I love guiding them through that process, helping out teammates, assistance in anything.” One non-classroom teacher remembered how at first she modeled making reading intervention groups for her team:

> So in the beginning, though, they had no idea how to form a SMART group, so I formed the SMART groups. So I took it away from them and just did it to lessen the load on the plate because everything was so overwhelming at that time. Then it was like a gradual release. So now if you look at the data chat it looks very different. So I’m not the one doing anymore, I’m facilitating it.

Another teacher felt that modeling professional behaviors as well as instructional expertise was important as a leader. Only then could she ask others to participate in an initiative or
an innovation: “I just like all of these things I have to...I have to model it...I take responsibility...first and foremost.”

Interpersonal skills – “Walk Beside Them in The Challenge”

There were many references to the interpersonal skills that allow the traits and characteristics of a leader to shine through – the qualities that drew them to others and that they believed drew others to them. These qualities stemmed from experiences in their own advice seeking as well as responding to requests for advice. These qualities are captured in six themes: positivity; drive; empathy leading to approachability, trust and respect; emotional support and encouragement; collaboration; and culture.

**Positivity.** One teacher described it this way: “And I think people just put out energy. And I think you feel energy when you walk into the room and you can tell.” One teacher felt a personal responsibility as a teacher leader to be positive:

> I feel like I have to be positive. Um, I feel like I have to be the most positive on the team. I feel about excited about it, I’m just like we’ve got this, you know what I mean? Like we can do it and I feel like... that’s really helped our team to be, like so much more cohesive.

The teachers felt drawn to others that liked being a teacher and being at the school and linking that to improvement and taking initiative as a leader. For example, “I think people who seem to genuinely enjoy their jobs, which is most people I know but I think people who really. Just enjoy what they do are you know more motivated to be better at it.” Teachers believed that being positive showed leadership because it helped the whole team: “Just being open with people who come to you and give if they’re having like having a down day or negative day to try and spin it positive and bring out the good parts of it.”
Drive. Many teachers mentioned having an inner drive to seek out knowledge. This drive is manifested by doing research and asking questions of others. This was also linked to holding each other accountable. After conducting her own independent research, one non-classroom teacher stated, “If I don’t find it I seek somebody out is what I do.” A classroom teacher and PLC facilitator expressed a certain level of self-proclaimed perfectionism: “I want to know if I’m doing it wrong or could it be more right.” This drive is linked to growth and team outcomes. A non-classroom teacher observed, “I think we all push each other. I know when they sit and plan in PLCs, it’s about the children, but it’s also about pushing each other and how much further can we take that.” One co-facilitator stated, “I think the motivation and drive and then also the compassion because you have to understand what everyone is going through to make the team work efficiently.” This combination of drive and compassion can be manifested with empathy.

Empathy, leading to approachability, trust, and respect. One characteristic highlighted by multiple teachers was the quality of empathy. They recognized the need for recognizing the hard work all teachers do, and the good work represented by those no matter their roles, position, or responsibility. As one twenty-year veteran non-classroom teacher stated:

Like you’re one of them, you know what I mean? Because I don’t ever think like I’m up here and they’re -- and like they’re down here because they’re some -- the -- some of these first grade teachers are phenomenal and if I was in the classroom I don’t know that I’d be as knowledgeable or good at what they do.

Also personal reflection played into the concept of empathy:

I think, personally for me, being reflective and seeing where I struggle, and then reaching out to others to see if they struggled in the same areas where they might not be open to pour out their feelings on how they struggled in that area.
The concept of understanding was repeated and specifically linked to leadership. One teacher offered a contrast to more authoritarian approaches to leadership:

I don’t think you have to be authoritative necessarily to be a good leader. I think you have to be understanding. I think you have to be empathetic, because I have been there before and I remember when… I think putting yourself in their position and like what I said, like empathetic, it had -- is being a good leader.

Empathy and understanding in turn can result in approachability, trust and respect. One interventionist reflected, “I don’t think I’m like threatening at all... so I think that makes it comfortable for them to be vulnerable, like you know what I mean? It’s not like judgy, I’m not going to run and tell anybody.” This quality is recognized as an important aspect of the relationship for those seeking advice from this same interventionist. One teacher noted about her,

She’s always very receptive, she’s always very warm I never feel like I’m inconveniencing her although I’m sure I have before, because I’m not afraid to ask questions I am that person who’s like I’m sure everyone else understood this, but I didn’t I need to ask you fifteen more things so. She’s never made me feel like I’m bothering her, like if I email her if I’m not talking to her in person I always get a quick response back I’m never waiting. And yeah she just she knows her stuff and she’s never been afraid to share with people.

The trust and respect mentioned by teachers is in an individual capacity, between each other. For this reason I linked it with empathy and approachability and did not put it in the culture section. Teachers referenced an individual’s ability to demonstrate respect and instill trust in one another. Although ultimately this impacts school culture, it is a trust that originates with individuals, existing within but apart from school structures or supported by administration. Confidentiality is key. One co-facilitator stated, “I just think we really have a cohesive team, like everybody feels um...like we feel like whatever
happens on our team, it stays within our team.” A non-classroom teacher that many within
the network sought out for advice noted,

   We’ve all been there, so I think if you share your story, you -- the people will see you
   -- will see you and what you can help them with and that you’re not there to get
   them, you’re there to help them grow as a teacher and colleague.

Another classroom teacher draws on personal and professional connections outside her
own grade level: “I’ve taught with them before so like they definitely have my professional
respect and also my personal respect.”

   Emotional support and encouragement. Teachers also referenced providing
   continuous emotional support and encouragement. For example,

   Try this, but I’m going to come back and I’m going to see if that’s something that’s
   working for you, and if it’s not, we’re going to find something else to do. So it’s not
   have them walking alone on that path. It’s to have somebody that’s right there.

This support can offset feelings of isolation: “Nobody wants to be that, by themselves, in
this profession at all.” Sometimes teachers go to each other about professionally related
issues such as parent or peer situations. One non-classroom teacher noted that colleagues
come to her about a variety of issues: “What should I do about this situation it’s not always
necessarily academic focus, but just those other things.” No matter the issue, though, these
teachers repeatedly focused on the need for each other. They recognized that teacher
leaders needed to balance advice giving with continuous encouragement: “I think it’s
somebody that’s going to challenge them but also walk beside them in the challenge, you
know?”

   Collaboration. Collaboration follows approachability, trust, and encouragement.
The collaboration teachers mentioned includes having a collaborative spirit, being willing
to share and others recognizing that need within oneself to share. Once again, these are
individuals speaking about their relationships. This is not about institutional collaboration,
but an openness to share, the freedom to ask questions of each other, and the vulnerability
that accompanies it. One teacher stated about herself, “I love sharing, and I like knowing.”
Another stated about teacher leaders, “Someone who’s willing to help out the other
teachers. That part of it, I really enjoy.” Another observed, “So it’s a very collaborative. It’s
not -- now, it’s not me anymore.” One even expressed a felt need for this collaboration:
“[My team mate] pulls things out of me.” Another teacher recognized that encouragement
and collaboration within her network has made her more inclined to ask questions:

Yeah I think that that’s been really important, that culture of like relying on each
other and feeling like you can ask questions because again I know I ask a lot of them
like all the time to everybody so no one’s ever made me feel bad like you know it’s
just kind of how we are. Like we help each other and so it’s not been an issue.

Culture

Two categories of responses emerged in culture: shared vision and administration.

Shared vision. Components of the culture that dominated discussions of teacher
leadership and professional networks included the administration’s role in maintaining a
shared vision of high expectations through collaboration. Throughout the course of the
interviews, it became apparent that these are tightly connected. One teacher concluded
that, “Doing what’s best for the kids [ties it all together]. That’s kind of like our motto here
of what’s best for kids.” Initially, not everyone was on board with this shift in thinking
when the current principal first came to Sunnydale. One non-classroom teacher recounted:
“When [the current principal] came on board a few years ago...It [developing core values]
was the process and it was purposeful. And honestly a lot of people left.” However, the
result has been an increased focus on working together. Another teacher compares the before and after of the new principal’s efforts: “Relying on each other, you know doing planning together, not planning in isolation kind of thing, and I think that expectation really changed a lot...I have seen a change in how we work together as teams.” The culture of high expectations was established, and now the teachers maintain it: “They [teachers] do hold each other accountable.”

**Administration.** Although I attempted to frame teacher leadership within this setting apart from administration, the teachers I interviewed repeatedly came back around to the importance of their administration in their ability to express teacher leadership and the freedom to focus on leadership for instructional practice openly and fluidly. One teacher stated, “You could have the best teachers in the world, but if your administration isn’t there to tie it all together and lead you in the right direction, then it’s not going to go anywhere.” The administration attempts to know the strengths of their staff and encourages individuals to seek each other out: “[Administration] shares who is like the experts in those sorts of things or is innovating and has a new approach to it so that when we go to them.” Another teacher observed: “I think that helps [our principal] to know who she can ask to be leaders in what aspect because she knows everyone’s personality so well.”

One teacher described the principal as strategic and purposeful as she invites teachers to be more involved as leaders on campus:

[Administration] really cares about growing us as leaders. Everybody is a leader on this campus. So it’s not like, "Oh, let’s put her here and let’s put her here." I mean, I think all of us. And she always says that you guys are all leaders. You're all leaders in a different way.
Another teacher referenced the principal’s practice of having co-facilitators within each PLC, as well as engaging teachers in leadership opportunities across the grade levels:

I think administration plays a huge role in [opportunities for teacher leadership]. I think she’s very big on.... multiple teaching leaders and in multiple grades ... like she’s very big [on] everyone having a role in some aspect in being a leader in some way.

Stability and low turnover were also mentioned as a product of the principal’s efforts to build an interconnected staff that has built respectful relationships with each other:

[The principal] is very big on [not changing grade levels every year] which then gives you time to get to know your peers and respect them in your grade level and then also the ones above or below your grade level you can build those really good relationships with so then when she asks you to do something you know that you’re going to have support, not just from your grade level but other people because there’s really not a ton of turnaround here, I mean it’s from when I started there is but over the last probably three years there hasn’t been a ton of turnover so you had good relationships with at least one or two people in each of the grade levels.

This highlights the importance of not just the trusting relationships the principal builds individually with each staff member, but the opportunity for the staff to build these trusting and respectful relationships with each other. This symbiotic leadership culture relies on both administrative support and teacher leadership. A classroom teacher who is not a PLC facilitator shared:

We are all leaders, and that everyone here, every day, has a voice. It’s not just one person on the team that has a voice. Everyone has a voice here. And any time that we ever have an issue, we know that we could bring it to everyone in that it would be addressed and cultivated to like, "Let’s fix it and see how we can go from there.
Content Analysis for Efficacy

Interview responses revealed two themes related to efficacy: celebrations and engagement.

Celebrations

Teacher leadership within these professional networks really sets the stage for the outcome of efficacy for improvement and innovation. The teachers reported that experiencing and publicly celebrating success led to positivity and a sense of accomplishment and engagement. The data chat room is decorated with success statements and grade level achievements from across the school. One teacher directed my attention to this display: “And now we have all these stars up here like should put the stars where we kind of brag about ourselves, and what we've accomplished.” Sharing success stories, though, is not limited to one room or venue. The role of social media at Sunnydale in celebrating success cannot be ignored. The teachers, national consultants, and principal consistently tweet positive images of students and teachers in the classroom engaged in learning activities. One teacher observed:

So, [Twitter] is [my principal’s] way of hanging our work up on the wall. It makes me feel really good. It’s like she’s proud of us. And she always re-tweets everything that you tweet about your babies. So, I think it’s her way to show that she is proud of us and that she cares.

This same teacher went on to say,

I feel like it [Twitter] makes them feel positive about what they’re doing because then whenever it gets re-tweeted by [admin] or other people out there that it makes them like, "Oh, I guess I am doing something really good."
Engagement

One teacher linked her responsibilities as a co-facilitator with her increased engagement: “Like I’m more actively...engaged ’cause I’m like...okay, I have to know this.” Teachers believed this feeling made them and others more likely to persevere, including students. As previously stated, a classroom teacher reflected that “everyone here has a voice.” She later connected this voice, or empowerment, with efficacy for student achievement:

Oh, I think it’s huge. I think that everyone coming to work every day knowing that they’re doing their best and that everyone here is topnotch that I think it brings out, in everyone, that they are somebody and they’re making a difference, and I think that admin here really pushes us to know that and they push us to give each other compliments and that hurrah and the positiveness. I think it’s just infectious that it starts at the top and works its way down. And with us being that way, it makes the students rise to that.

Social media can also play a part in engagement. Another teacher reflected, “So, I was tweeting it all, and then I was getting all these people from who knows where like, ’How do you do this?’ I’ll tell you. This is what I do. So, it’s really neat.”

Content Analysis for Innovation

PLC observations resulted in only one instance of a PLC talking about innovative practice, and this was in the context of an individual student that presented a unique challenge. A teacher recounted in an interview a time when she sought advice for innovative practice concerning one student’s behavior:

So, I went to my team for advice to see if they had any recommendations. We tried everything under the sun, and then I brought [the principal] in to see her advice, and me and just everyone, we’re such a team here. It’s amazing to see.
Interview responses suggested three themes related to innovation: professional growth, inquiry and teams.

**Professional Growth**

One interviewee said teachers come to her for innovation when they “need something extra.” Another referenced the teacher evaluation model that utilized an observation rating of “Innovating” and sought out, or others sought her out, in order to prepare for achieving that rating during an observation. When asked about innovation, still another stated she had “a hard time distinguishing between an improvement and innovation,” but went on to relay a variety of unique situations in which she needed specialized advice from a more experienced peer concerning content and/or even parent interactions. When necessary, in order to assist individuals in making the determinations between improvement and innovation, I presented the definitions used in the survey. This sparked their ideas and provided some consistency with previous data. However, I encouraged the interviewees to tell me their experiences and perceptions regardless of the definitions.

Improvement and innovation actually converged on the matrix within an intersection that included all aspect of my inquiry – leadership, networks, and efficacy. This implies that the act of striving for improvement and innovation as a construct is interdependent upon the other aspects of inquiry within this study, and previous comments mentioned have often referenced becoming “better”: “I want to know, like I want to make myself a better teacher.”
Inquiry

Questions played a distinct role throughout this study, but particularly in relation to improvement and innovation. Teachers mentioned feeling comfortable asking questions of each other and having the drive to seek out answers to questions. One teacher reflected, “What could I do tomorrow, you know what I mean, like to make it better?” Sometimes the questions asked how to adapt a district prescribed resource into the context of what is already working for your students:

You know what I mean, a lot of questions about like um, I don’t wanna say that we were complaining, but we were just trying to figure out like how to make it fit because we just don’t like the way it’s done.

Teams

The teachers often referred to “my team” as a source of advice in response to efforts for improvement and innovation. Members of these teaching teams include fellow same grade level classroom teachers and non-classroom teachers such as interventionists and ESE specialists. One teacher noted, “Our reading intervention teacher she’s probably my primary resource for my reading questions.” One teacher knows her fellow team teacher’s experience as a coach helped provide expertise:

What works best or what do they struggle with you know she’s good because she has those years of experience with that and she was our math coach when I was teaching third, she knows where the kids will struggle.

Often, however, it is the shared experience of teaching the same grade level under current circumstances that prompts discussion and inquiry: “For improvement I would definitely say sometimes [I go to] the team itself, if it’s a lesson that they did really well and like I was terrible.” The team is often a source of immediate reflection: “So, if we just taught a lesson,
I'll go to my team and see how it went with them, and then if I felt that I did it the right way for my students.” The ties of the team are strong when seeking advice: “I would never even thought of leaving the building because I feel like there are so many people that you know I go to just on our own team.”

Sometimes a team can reach out to the grade level above or below, depending upon the need. One teacher reflected upon an instance where she needed to reach out to a student’s previous team in order to better meet his needs:

So, they [previous teachers] both gave me lots of advice on things to try and everything else, and I reached out to the other ESE teachers that we have here as well for advice, and he just -- he’s doing great now, though. Everyone’s advice helped.

**Content Analysis for Teachers’ Sense of Themselves as Leaders**

Interview responses revealed three themes characterizing teachers’ sense of themselves as leaders: relationships and personality, vertical conversations, and expertise and experience.

**Relationships and Personality**

When specifically asked during the interview, “Whom might come to you and why?”, the teachers I spoke to responded clearly and distinctly about reciprocal and continuous relationships with their peers both within and across grade levels. Although teachers came to them, they were just as likely to go to others under a variety of circumstances:

“Somebody always has something happening in their room with somebody or um, things that have happened ‘cause we have a lot of um, challenging, you know, students this year.” Another teacher observed, “I have a lot of people that come to me. I don't know if it’s just my personality, but I have a lot of people.” One teacher saw the need to modify her
personality for the sake of relationships within the team: “I force myself to be more extrovert here for the sake of [other team members], but at home, I’m a total, ‘Leave me alone’.”

Some classroom teachers’ responses reflected a plurality, a collective with the team, and they did not individually single themselves out at first. However, as we talked more, often it was revealed that teachers believed their personality, empathy, and willingness to share made others feel free to come to them. One teacher noted, “To be able to share sometimes is helpful.” One non-classroom teacher believed others come to her “because I’m fun...[and] I see people and I put myself in their shoes.” Another stated, “I like to think I’m friendly.”

**Vertical Conversations**

Opportunities for vertical discussions occurred within professional development through the school-wide instructional initiative or content specific trainings. These opportunities set the stage for more informal connections between grade levels. One intermediate grade level co-facilitator observed:

> We actually communicate a lot with Kindergarten because we were the first grades together [with implementation of the initiative] so we do a lot of cross communication with that because we know we’re in the same place with it.

Teachers related that other grade levels reached out to them because they previously had a certain student and might be able to give insight about that student: “Older grade levels have had our kids, so they come to us for the kids that we’ve taught that they have now.” One perceived many came to her across grade levels:
Everyone on my team comes to me a lot and I have people from other grade levels. I'm trying to think that there's a certain grade level, but pretty much every grade level, I have people that come to me.

**Expertise and Experience**

Teachers consistently valued experience and expertise, both as a reason individuals might come to them and why they might go to others. One teacher stated, “I really try ... to be like really up-to-date with things. And I like to research stuff.” One teacher observed that other teachers came to observe her because they recognized her skill and results with student-led groups: “I'm kind of like referred to as the expert of the experts ... how I get my students to an expert level so that they can facilitate groups.” Another referenced her ability to know where expertise is in the building and facilitate those connections: “I can direct her to the right people that could help her.” Years teaching was also seen as a valuable part of the perception of leadership: “I have been teaching a while I guess I mean I don’t feel like it's been a while but I'm in double digits now. So I guess it's something.” Another reflected, “I’ve been here so long that everybody kinda knows me.” This same teacher had earlier said about being a teacher leader, “I think experience helps because the teacher doesn’t want a second year teacher telling another 20-year teacher what to do.... I think it’s being knowledgeable about what you are preaching to them.” This combination of experience and expertise played a key role in their own perceptions of being a leader.

**Summary**

The use of Social Network Analysis with observational, survey, and interview data allowed me capture a more complete network than just one source alone. The observations allowed me to capture a snapshot of the frequency of advice-seeking in real
time. The survey allowed me to capture patterns of advice seeking over time. The interviews allowed me to dig deeper about the reasons teachers went to each other and why they thought others might come to them. The teachers found it difficult to state with specificity the frequency or intensity of their interactions with individual teachers during the interviews. I was able to get more specific results from the survey, perhaps because there is more opportunity for privacy and reflection while taking a survey versus an interview.

Findings revealed the predominance of the formal structure – the PLCs – in providing both expectation and opportunity for teachers to talk collectively about instructional practice. Instructional improvement and instructional innovation were less frequently discussed in the PLCs observed. The SNA results also highlighted the importance of instructional support personnel, or non-classroom teachers, within the professional networks at this school, as well as teachers’ perception of their administrators as instructional leaders in the building.

Teachers’ sense of efficacy was supported by celebrations of accomplishments and engagement with other teachers, non-classroom teachers and administrators. Teachers’ capacity to improve instruction and innovate instructional practices was supported by professional growth, inquiry and teacher teams (most commonly, grade-level teams).

Teachers’ sense of themselves as leaders was supported by the trusting and personable relationships they experienced; the conversations they had (both vertical and horizontal) with other teachers, non-classroom teachers and administrators; and what they learned and shared from each other’s expertise and experience. Their perceptions of
themselves as leaders were influenced by their perceptions of others – why they went to others was often for the same reasons they believed their peers came to them.

The expression of teacher leadership within the professional networks at Sunnydale Elementary School was supported by a combination of technical skill (experience and expertise, resources); interpersonal attributes (positivity, drive, empathy leading to approachability, trust and respect, emotional support and encouragement, collaboration); and a leadership culture within the school.
CHAPTER 5:
DISCUSSION AND CONCLUSIONS

When I first started looking at district and school achievement for this research, I would informally ask my peers, “What’s going on at Sunnydale? Why is their school-wide instructional program taking hold and apparently achieving results while other schools with similar populations and programs still struggle?” The answers usually included reference to Sunnydale’s principal. She had a reputation in general for being knowledgeable about academic standards and actively engaging in and supporting the innovative instructional practices at her school – a belief and passion about that way of work.

I, however, was convinced that was not the whole story. I knew that other principals at other schools also appeared to have those two characteristics, yet their whole-school efforts floundered. I wanted to look closer at a school that was achieving consistent results under challenging circumstances and dig deeply into the role teacher leadership had to play, if any.

When I first began visiting Sunnydale and observing their teams and mapping networks for instructional practice, I did not know what I would find. Although I was not able to personally interact with 100% of the staff, what I generally discovered was a staff that collectively prompted each other to be “better” and focus on student outcomes. Many utilized a network of peers to seek and provide expertise, experience, resources, and
encouragement that resulted in success and a perception of efficacy for student achievement.

While there was a school-wide initiative that was gradually introduced over four years to grade level teams, a culture of high expectations and collective responsibility was promoted and cultivated across the school from the very beginning. This, paired with trust and respect, helped shared leadership grow out of that culture. A willingness to support each other in a shared vision of student achievement and engagement increased their need to collaborate and seek each other out for advice. The teachers I spoke to also expressed a sense of voice and empowerment. A perception of teacher stability increased a sense of efficacy for some – they felt confident within their grade level and were willing to support others from the grade levels from below or above from their position of expertise and experience within the grade level. One teacher stated, “[T]here’s really not a ton of turnaround here, I mean it’s from when I started there is but over the last probably three years there hasn’t been a ton of turnover so you had good relationships with at least one or two people in each of the grade levels.”

Lin’s (1999) components of social capital (mobilizing resources that exist within social contexts for purposive action) appear to be expressed within this case study. Teachers viewed each other as resources embedded in a social context, were driven to mobilize those resources to build capacity collectively and individually, for the action of refining, improving, and innovating instructional practice on behalf of the shared purpose of student achievement. Teachers’ comments also reflected elements of Hargreaves and Fullan’s (2012) concept of professional capital, which includes human capital (the growth and development of expertise in the building), social capital (the opportunity and
inclination to share it), and decisional capital (the freedom to choose how they will apply it).

**Research Questions**

The overall guiding question for this study is, to what extent do teachers utilize professional networks to seek information and influence others as teacher leaders working toward a common goal of student achievement and school improvement? Related secondary questions are:

1. What professional networks for instructional improvement and innovation exist in this school?
2. What are teachers’ perceptions of the role these networks play in building teachers’ efficacy and capacity to improve and innovate instructional practices for student achievement?
3. In what ways do teachers perceive these networks contribute to their sense of themselves as teacher leaders?
4. What factors do teachers perceive enable or constrain their ability to enact teacher leadership through these networks?

In synthesizing the data, I realized that the answers to my questions are interdependent upon one another, and I have clustered them into two lines of discussion. The first discussion of findings, teacher leadership within professional networks, attempts to answer the question of what networks exist with this school site. This includes a synthesis of the SNA results and content analysis of interviews. The second line of discussion synthesizes teacher perceptions of efficacy for improvement and innovation as indicated in the interviews.
Discussion of Findings

This study was situated in the theoretical framework of symbolic interactionism. The teachers within the professional networks of this study were asked to articulate their perceptions of teacher leadership. Often these teachers situated their perceptions of teacher leadership within their perceptions of the relationships they had with each other. What they valued in a leader was what they attempted to provide to others as a leader. Symbolic interactionism helped shape my perceptions of the relationships I observed within the actions, norms and values represented within the networks. Empathy, approachability, trust and respect were born out of the connections they made with each other, as well as the direct experiences they had in relation to the expertise and resources within the professional network they utilized. The relationships these teachers made with each other, and the interactions they engaged in while enacting their shared mission of student achievement, shaped their perceptions of teacher leadership at Sunnydale Elementary. It shaped their perceptions of themselves as leaders.

The findings revealed interconnected symbiotic relationships that were strengthened by the collaborative actions teachers took to seek out advice, as well as the interactions as they shared advice as a leader. The act of advice-seeking and sharing occurred both individually and collectively as they worked within PLCs. Teachers also took the initiative to reach out to individuals outside their PLC or grade level teams when needed. Although not all teachers reached out to each other with the same frequency or intensity, based on observation and survey data, symbolic interactionism acknowledges the role relational ties have in shaping identity within a network. This allowed me to then discuss leadership identity with more depth in relation to the networks that foster it.
Teacher Leadership within Professional Networks

This case study of Sunnydale revealed an example of shared leadership (Helterbran, 2010) to increase collaboration and build capacity for professional learning communities. Not only was this strengthening of the PLC in line with district efforts across schools, at Sunnydale it helped apply a model of innovative practice across grade levels and content areas within a specific framework for instruction. The teachers worked collaboratively to adapt and integrate this specific framework within the district provided grade level curriculum scope and sequence. This shared leadership and collaborative practice allowed teachers to build and share their expertise within their professional networks. They were driven by relationships and a shared vision of high expectations, not necessarily empowered by any singular innovative practice itself. Some teachers expressed a desire to always check their work to make sure they were doing things the “right way.”

The networks for improvement and innovation appeared more limited than those for general instructional practice. This, however, may be deceiving, as my observation within the formal settings of PLCs did not include data chat meetings nor the pre-work engaged in during the summer months for the school-wide innovative instructional initiative occurring at the school. The administration took action to support and model innovative practice and inquiry within the data chat PLC that I did observe, and teachers acknowledged they sought out innovative advice from administration both in their survey and interview responses. Teachers felt this support had an influence on their ability to make their own instructional decisions. Teachers also engaged in activities to influence those outside their school through conferences and social media.
Teacher leadership actions reflected those described in Fairman and Mackenzie’s (2012) Spheres of Teacher Leadership, including a drive to seek out knowledge, research information, reflect upon practice, and share their learning with others – both inside and outside the school. Teacher responses in the interviews indicated technical skills, interpersonal skills, and a culture that supports teacher leadership characterized the advice seeking networks for instructional practice revealed in the Social Network Analysis. One teacher noted that at times it was difficult to align the school-wide instructional program with district expectations and curriculum scope and sequence within the PLC, but that was a by-product of the content, not necessarily the relationships the teachers maintained with each other.

**Synthesis of social network analysis.** The sociograms I created as a result of SNA indicated that instructional support personnel, such as ESE teachers and interventionists, are viewed as prominent sources of advice within networks for instructional practice, improvement, and innovation. One category of instructional support personnel is not particularly more prominent than another category of support personnel. “We can all be leaders if we choose, even if our contribution to the relationship looks quite different from somebody else’s” (Donaldson, 2001, p. 153). For many of these teachers, administration was also viewed as a prominent source of advice. This may be in part due to the coaching experience administration has at the school. One of the administrators was a coach at the school in various capacities and had developed a history of advice giving within the network.

Applying SNA to this case study allowed me to paint a broader picture of the networks that exist than just interviews alone. I was able to document where a greater
number of the staff fit into these patterns – even those that may not have felt comfortable or had the time to participate in an interview. I believe it gave a more complete picture of the spaces, ties, or connections between and among individuals (Donaldson, 2007; Taylor et al., 2011) that make up the Sunnydale network for instructional practice. While collaborative relationships (Szczesiul & Huizenga, 2015) existed within the PLC, the sociograms indicated that individual teacher advice seeking networks existed both within and beyond the PLC.

**Synthesis of technical skills.** Experience, expertise, and being a resource were dominant themes in why leaders felt people came to them for advice and why they went to others for advice. These educators go to specific people for specific questions and believe they have areas of expertise to share with others. They know who to go to within their building based on grade level experience or content expertise.

Observations and interviews revealed that there are many opportunities for advice seeking within and between grade level teams or individuals. Teachers wanted to share their skills and knowledge with others, and they sought out ways to do so, such as mentoring, being a model classroom that others visit, modeling a single lesson for the PLC, or facilitating school-wide professional development (Cosenza, 2015). This helped build their leadership capacity while helping to build capacity for growth across the building. These teachers took advantage of opportunities to share their expertise and experience, as well as to act as resources for their peers – and they were just as likely to seek out others (e.g., non-classroom teachers, administrators, members of other grade-level teams) in the same manner.
**Synthesis of interpersonal skills.** The teachers I spoke to sought advice from certain individuals because they felt comfortable going to them, and they believed that others came to them for similar reasons. From these teachers’ perspectives, positivity and personality played a key role in defining what makes a teacher leader. Approachability and empathy were valued in combination with the aforementioned technical skills. These relationships were strengthened by a willingness to collaborate and maintain trust (Szczesiul & Huizenga, 2015; Vernon-Dotson & Floyd, 2012). These teachers sought to demonstrate a drive to be a better teacher, do one’s personal best, and emotionally support others in their efforts to do the same.

**Synthesis of culture.** Teachers repeatedly referenced maintaining high expectations for student achievement as part of the school’s shared vision. This created a felt need for teachers to constantly reflect upon the quality of instruction they were providing students. However, this felt need was paired with a shared leadership culture (Helterbran, 2010; Muijs & Harris, 2007) that supported and encouraged teachers to seek each other out for expertise. The role of administration in facilitating that culture was often reiterated in the interviews (Affolter & Hoffman, 2011; Taylor et al., 2011). Shared leadership has been defined as “principal leadership coupled with teacher leadership” (Helterbran, 2010, p. 365). This fosters a “collegial school culture” (Brosky, 2011, p. 6) in which teachers are motivated by that shared vision of student success to both reach out for and be willing to offer advice for instructional practice, improvement, and innovation (Frost, 2012).

Teacher leadership development supports an increased professional culture (Fullan, 1996) within the building. PLCs in the district are structured by the district. PLCs are
required to focus on four questions identified in research literature: What do we want students to learn? How do we know if they have learned it? What do we do if they did not learn it? What do we do if they did? (Buffum, Mattos, & Webber, 2008; DuFour, DuFour, Eaker, & Many, 2010). And, the district added a fifth question (which has since been removed): How are we going to teach it?

Principal assigned and district trained PLC facilitators focus the work of the PLCs on those questions as they relate to cycles of inquiry: talking about data from common formative assessments and developing problem-solving processes for multi-tiered systems of academic or behavioral supports.

Sunnydale’s administration and PLC facilitators have worked to integrate learner-centered lesson planning with the cycles of formative assessment and student inquiry prioritized in the PLC.

Within this formal structure, however, teacher leadership existed in the form of generally autonomous weekly PLCs and teacher-led initiatives, events, and professional development. Individuals repeatedly stated that the principal saw in them or their practice expertise that they could share. Teachers interviewed seemed to view themselves as partners in this work, both with each other and with administration.

Reciprocal trust and shared leadership were key to maintaining a leadership culture (Beachum & Dentith, 2004). The interviews reflect a leadership culture that is built upon multiple opportunities to gain knowledge and share it with others, including through professional development or planning. Informal networking included discussions throughout the day including arrival, dismissal, lunch, walking through neighbors’ classrooms, social media, and during school events. This was paired with layers of
structured professional development and planning opportunities provided by administration.

**Efficacy for Improvement and Innovation**

The pervasive message conveyed at Sunnydale that “all teachers are leaders” led to increased efficacy (Vernon-Dotson & Floyd, 2012). There was a perception that getting “better” professionally is aligned with “what’s best for kids.” The relational and contextual networks that emerged for student success (Smylie, Conley, & Marks, 2011) were visible and explicit. Sunnydale works to make success visible for students and teachers.

Celebrations are a routine function of the PLC agenda. Celebrations are posted in the data room, and the administration celebrates teacher instruction and learning on social media that reaches not just the school audience, but across the district and nation. Collective efficacy (Moolenaar, Sleegers, & Daly, 2012) appeared to be most evidenced by teachers’ perceptions of the team celebrations of student success, referenced and visualized within the formal PLC setting. Collective teacher efficacy has been linked with increased levels of teacher leadership (Donohoo, 2018). These positive experiences increased willingness to reach out to others in a supportive way. Individual teachers also felt supported by their administration when the principal recognized their individual or collective efforts for innovative instruction on social media, which reached a wider audience.

While evidence of advice seeking for innovation is less apparent in the routine weekly team planning, the data chat PLC I saw was more focused on innovation to meet unique challenges of one student. These data chat meetings happen at least quarterly, with some teams meeting every six weeks. They look at recent data and modify instruction based on results of either district quarterly assessments or team-determined assessments.
Based on my observations and interviews, there are many opportunities for teachers to seek out advice about instructional practice – either at PLCs or ad hoc from a teacher neighbor or duty-mate.

Opportunities to specifically discuss improvement and innovation require extended time for reflection and may be less frequent. Based on survey and interview data, teachers do not appear to seek advice for instructional improvement or innovation as often as they seek advice for instructional practice. For example, the advice seeking networks for improvement (Figure 4.11) and innovation (Figure 4.12) revealed less connection among network members around these issues and greater numbers of isolates (unconnected personnel) than the instructional practices network. It may be that the isolates were part of their own network not captured by this study. It is also true that the study may not have accurately captured the complete network due to less than 100% participation in the study. However, these results can give insight into some trends within the network and suggest an apparent lack of advice seeking for instructional improvement or innovation.

**Implications for Further Research**

**Teacher Leadership**

Teacher leadership continues to be a line of research that investigates ways this phenomena impacts both systems change and student learning and achievement (Gumus et al., 2018). Where does the expression of teacher leadership as exemplified in this study fit in with current models of teacher leadership? Leadership at Sunnydale is distributed, as the principal has selected individuals to head up specific initiatives, such as the formal PLC and some school-wide professional development. In addition, administration has encouraged individuals to seek each other out based on experience or expertise for
additional assistance or direction on instructional matters. Bush and Glover (2014) link distributed leadership and teacher leadership when shared values exist. Teachers at Sunnydale recognized each other as sources of instructional advice – even those that may not have a formal leadership role. Distributed leadership paired with teacher leadership for shared values produces a perception of shared leadership. Shared leadership has the potential for increased teacher voice and agency. The intersection of symbolic interactionism and network analysis can provide unique opportunities to further examine teacher voice and agency within professional networks.

Crossley (2010) points to network analysis as a way to operationalize the symbolic interactionism within both micro and macro networked systems. “Interactions and the relations they generate inevitably also generate networks, and attempts to think about what society or social worlds look like, from an interactionist perspective, are inevitably drawn to the notion of a network” (p. 360). This study revealed patterns of advice seeking within the grade level team. One teacher stated she “never even thought of leaving the building” (examples of micro systems) to seek out experiences, expertise and resources; others were very inclined to reach out beyond the building through national social media or state conferences (examples of macro systems). While this study focused on the closed network of the school site, pairing SNA with interviews revealed the potential for further investigation into teachers’ broader professional interests and influence, including inquiry and practice for innovation. Future studies of teachers’ sense of identity as a leader within both micro and macro systems might reveal broader platforms for teacher voice, agency, influence and efficacy.
Instructional Support Teacher Perspective

Timperley (2005) calls for more observational research in distributed leadership, apart from self-reporting, with student achievement as the basis for successful leadership practice. While these teachers spoke of having a voice, the concept of agency was not further explored. How agency can vary within the intersection of distributed leadership and teacher leadership may be a concept for further study. Gumus et al. (2014) concluded that educational leadership studies remain generally focused on the role and perspective of the principal rather than the teacher, although analysis from the perspective of teacher or district personnel have “significantly increased in the last decade” (p. 40). Instructional support personnel, or non-classroom teachers, proved to be prominent within Sunnydale’s professional networks. Future research might investigate more deeply how instructional personnel such as special education and intervention teachers view their influence on their peers, how their peers view the influence of these instructional personnel on their instructional practice, and how such instructional personnel can be positioned and supported to be resources for the whole school professional network. These teachers often have the experience and current expertise and relevancy to the work of teaching and learning. Their engagement in the work along with classroom teachers uniquely positions them to be a source of advice as well as empathetic support. The instructional support personnel in this school also networked with each other, seeking advice and support from each other.

Inquiry for Innovation

The nature of innovative practice may be better explained through Timperley, Ell, and LeFave’s (2018) concept of adaptive expertise. Adaptive expertise requires both a deep
understanding of the learner and her environment as well as a “deep knowledge base to address specific challenges” (p. 176) within that unique combination of learner and environment. One condition of adaptive expertise is deep inquiry that questions the status quo for student learning when changes need to be made. Often, asking questions is just as important as being able to answer them. I thought that in-degree and out-degree centrality in the SNA analysis would be more dichotomous, but it was evident that those who are sought out for advice can equally be engaged in advice seeking. In fact, the teachers I interviewed valued their inquisitiveness and had a drive to seek answers, and they indicated that drive was part of being a leader. The act of asking a question can open up new lines of inquiry.

Questions may be key to improvement and innovation. Future research may investigate the role and nature of questioning in improvement and innovation. How can schools maximize the influence of questioning and inquiry for innovation? How can leaders deliberately integrate reflection and inquiry for improvement and innovation more often and regularly in teacher collaboration? Although there were team-run data chats, I only observed one. Further study might focus directly on the data chat or problem-solving meeting to better understand the role questions and inquiry have in expressions and opportunities for teacher leadership. Where does innovation most often come up within the school day and how often? Where and when are the greatest opportunities for innovation to happen?

**Reflections on Professional Practice**

My experiences as both a teacher and administrator have greatly influenced the analytical lens with which I frame the synthesis and application of my learning from this
research. My experiences as an elementary music educator brought to mind a jazz ensemble when investigating these professional networks. The analogy of improvisation, shifting voices, and lead taking within an ensemble of professional jazz musicians helps illustrate for me the interactions that can occur within teacher professional networks for improvement and innovation. When jazz musicians come together to play, they utilize their experiences and expertise to engage in musical interactions with their fellow group members that can result in unique applications of musical elements within a piece as each musician takes turns shaping musical themes through improvisation. The jazz ensemble may follow an agreed upon chart that guides their playing, but there is opportunity for individual voice as well as influence upon each other’s music making. The complexity of these unique interactions between the musicians can create a richer, more interesting and innovative piece. Much like an extemporaneous conversation, the players actively listen and respond to each other’s musical expressions and at points can take the lead and change the course of the piece.

This case study of teacher leadership within networks for efficacy and innovation emphasized the need to create a fertile environment for teachers to grow and strengthen their identities as leaders. This fertile environment begins with a shared vision of high expectations for student achievement that drives teachers to strive for instructional excellence. Just as musicians need time to practice to become a tightly skilled and smooth working ensemble that seamlessly hands off the theme from player to player, each making their own variation on a theme, teachers need time and opportunity to collaboratively engage in planning, inquiry, and reflection around instructional practice, in order to share their experience, expertise, and resources. Just as members of a jazz ensemble have
opportunities to exercise their individual voices and influence each other’s music, teachers need opportunities to exercise their individual voices to empower the creativity of their teams. This was important at Sunnydale. One teacher stated that the Sunnydale network makes her feel “like I have a voice – everyone has a voice.” Another stated, “We all feel empowered to learn, grow and share new knowledge.”

Instructional support personnel such as special education teachers and interventionists are also important players in this dynamic. These individuals have the potential to share specialized instructional skills and strategies with all teachers for the benefit of the neediest students. One classroom teacher PLC facilitator I interviewed shared that one benefit of having an intern was the opportunity to spend more time in other teachers’ classrooms, watching and learning from her peers. She then was able to better understand as a leader the needs of her team and opportunities for growth. “Having that opportunity to see what amazing things that people are doing around here I was like...I was like oh, yeah, we could do this.” This experience alludes to the benefits of partnerships with teacher preparation programs to help foster leadership within schools. Partnerships between teacher preparation programs, teacher leadership programs, and school sites might provide the vision, support and resources to better build capacity and sustain a leadership culture within a school site.

As an administrator, I now know better how I can help foster a leadership culture by seeing the potential for leadership within all teachers and demonstrating this by my actions. These actions include verbally acknowledging teachers strengths. The facilitator mentioned above had an intern because her principal encouraged her to train to become a clinical educator within the district. This led to some flexible time out of the classroom that
she used to help grow her team. These teachers knew their administrators believed in them because that is the message they heard, both individually and collectively. This is not merely the act of delegating tasks, but engaging in the work of instructional practices alongside teachers without micromanaging it. The appointment of facilitators is another way administrators can see all teacher as leaders. The use of co-facilitators also helps to distribute and share leadership. Taken one step further, administrators might rotate the co-facilitator role from year to year and provide the training and supports needed with each appointment so that all teachers eventually have that experience and expertise. Some teams might even select their own co-facilitators or determine a rotation schedule that works for them. These could be options to consider in order to think more expansively about leadership capacity within teacher networks.

**Reflexivity**

As a new principal, I see specific implications for my own practice in relation to teacher leadership, networks, efficacy, and innovation. Repeatedly, the teachers at Sunnydale identified their administration, and in particular the principal, as supporting teacher growth and leadership. This reiterates the power of the principal to support or inhibit teacher networks for leadership. I have greater appreciation for attention to ethical considerations when making assumptions about the connections and relationships people manifest. Principals must be sensitive to the emotional needs of the teacher who chooses to be part of a smaller network – or has been excluded from one. Social network data are useful; however, publicly reviewing social network data can amplify feelings of isolation or exclusion for those isolated or on the fringes of the network. How network data are used,
displayed, and explained can promote school-wide collaboration or strengthen inward looking cliques.

**Networks for Teacher Leadership**

The principal at Sunnydale worked to create the space for teacher leadership (Chew & Andrews, 2010). She appeared to know her teachers’ strengths and personalities and used that awareness to help them find their unique contribution to the shared values of the school, embedded within existing formal structures. How the PLCs and collaborative structures are developed for instructional practice can promote trust and shared leadership (Mullen & Jones, 2008). The dominance of the formal PLC in networks for instructional practice, as well as the prominence of non-classroom teachers, demonstrated how important it is to recognize the need for the whole team to collaborate within these settings. Developing and implementing a master schedule that allows classroom teachers as well as non-classroom teachers to collaborate regularly, both vertically and horizontally, to draw on each other’s expertise, experience, and resources can increase opportunities for teacher leadership.

**Efficacy**

The role of social media for celebrating success and highlighting teacher instructional practice is also made evident by this case. Specifically, the principal used Twitter to give specific praise to teachers and also re-tweeted the postings of Sunnydale teachers as they shared student success. Some teachers made mention that their tweets became nationally recognized, and they fielded questions from other educators across the country. This positive reinforcement collectively put their work front and center to build a sense of collective efficacy (Donohoo, 2018). Again, however, this should be balanced by
ethical considerations of teacher choice and privacy. Participation in social media should be a choice, and that choice should be respected without penalty.

**Innovation**

There was less advice-seeking concerning improvement and innovation within the structured PLCs as indicated by the formal networks for improvement and innovation (Figures 4.2 and 4.3). The observed innovation network occurred around only one student. When asked, the concept of innovation was unclear to some teachers in comparison with improvement. Considering the dominance of the PLC within the formal networks, I will work with teachers to define a common language of innovation and then look for ways to provide opportunities for discussions around innovative practice (Collinson, 2012; Woodland, Barry, & Roohr, 2014). The instruction coach was prominent in the formal improvement and innovation networks that were observed. In particular, how can I as a principal leverage the district allocated and principal selected instructional coach to promote improvement and innovation within the formal networks (Chew & Andrews, 2010)? Embedding innovation space within the PLC could assist in prompting those discussions.

**Summary**

The teachers I spoke with during the course of this study linked their identity as a leader strongly with the culture of leadership, the exchange of advice, and the shared values of high expectations for themselves and their students that exist within their school setting. The theoretical framework of symbolic interactionism helps explain the phenomena of teacher leadership within professional networks within this case study. The teachers believed they could be leaders within this setting because “we are all leaders
here.” Their responses indicated they believed in their collective capacity and their trust in and support of each other within professional networks, in order to accomplish the shared mission of student achievement.

The concept of social capital helps to explain the nature of those relationships within the professional networks that exist within the school setting. Social capital within these networks included the opportunity to build capacity for instructional practices, improvement and innovation by sharing experience, expertise, and resources. This exchange of social capital in the form of advice-giving can help build capacity from within schools for leadership positions throughout.

In particular this case revealed that non-classroom teachers and administration can have a prominent position within patterns of instructional advice-seeking that include both formal PLC structures and more informal self-selected opportunities for exchanging advice. Non-classroom teachers believed that their ability to emotionally support and “walk beside” teachers in the challenge to improve instruction was a key element in their role as a leader. Social network analysis of combined network data (observational, survey, interview), as well as teacher interview comments, also revealed that the school’s administration played a significant role within networks for improvement and innovation. This prominent position of administration reinforces the influence school leaders can have for building a culture that has the potential to impact instructional practices for improvement and innovation at their schools. Together, administration and teachers can create a synergetic, values driven relationship of shared leadership that builds collective efficacy for student achievement.
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Appendix A:

Survey Recruitment Email

Dear Instructional Staff Member,

This is an invitation to participate in a research study.

**Pro #00029214**

**Why are you being asked to take part?**
You are being asked to take part in this research study because teacher perceptions are an important part of this study.

**Purpose of the Study**
The purpose of this single case study is to uncover patterns in teacher professional networks, the context in which they exist, and teachers’ perceptions of the influence of these networks on their sense of themselves as teacher leaders.

**Time Commitment**
This online survey should take no more than 15 minutes to complete.

**Contact Information**
If you have any questions about your rights as a research participant, please contact the USF IRB at (813) 974-5638 or contact by email at RSCH-IRB@usf.edu. If you have questions regarding the research, please contact the Principal Investigator by email at cbauman@mail.usf.edu.

<Insert weblink here>
Appendix B:

Signed Informed Consent

Informed Consent to Participate in Research Involving Minimal Risk
Pro #00029214

You are being asked to take part in a research study. Research studies include only people who choose to take part. This document is called an informed consent form. Please read this information carefully and take your time making your decision. Ask the researcher or study staff to discuss this consent form with you, please ask him/her to explain any words or information you do not clearly understand. The nature of the study, risks, inconveniences, discomforts, and other important information about the study are listed below.

We are asking you to take part in a research study called:

   Teachers’ Perceptions of Teacher Leadership within Professional Networks:
   A Single Exploratory Case Study within an Elementary School

The person who is in charge of this research study is Cynthia Bauman. This person is called the Principal Investigator. She is being guided in this research by Dr. Judith Ponticell, USF Faculty Advisor. The research will be conducted at [Redacted].

Purpose of the study

The purpose of this single case study is to uncover patterns in teacher formal and informal networks, the context in which they exist, and teachers’ perceptions of the influence of these networks on their sense of themselves as teacher leaders. In general this study is guided by the question, to what extent do teachers utilize professional networks to seek information and influence others as teacher leaders working toward a common goal of student achievement and school improvement? A network survey, observations, and interviews will be conducted as part of this research.

Why are you being asked to take part?

We are asking you to take part in this research study because teacher perceptions are an important part of this study.
**Study Procedures:**

If you take part in this study, you may be asked to:
Complete a survey that asks you who you are and whom you seek advice from, be observed as you participate in professional learning communities, and be interviewed. You will be asked to be audio recorded during observations and interviews, but audio recording is not required to participate. The interview is a focused conversation about teachers’ perceptions of the influence of these networks on their sense of themselves as teacher leaders. Permission from your principal and Pasco County School has been obtained in advance for this study.

**Total Number of Participants**

About 50 individuals in all will be invited to take part in this study. Approximately 20 interviews may be conducted.

**Alternatives / Voluntary Participation / Withdrawal**

You do not have to participate in this research study. You should only take part in this study if you want to volunteer. You may select to take part in some study activities and are free to decline others. You may decline to be audio recorded. You should not feel that there is any pressure to take part in the study. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study. Your decision to participate or not to participate will not affect your job status, employment record, employee evaluations, or advancement opportunities.

**Benefits**

The potential benefits of participating in this research study include:
The teacher participants will have an opportunity to reflect upon their own practice and collaboration within teacher networks, as well as their own perceptions of teacher leadership.

**Risks or Discomfort**

This research is considered to be minimal risk. That means that the risks associated with this study are the same as what you face every day. There are no known additional risks to those who take part in this study.

**Costs**

It will not cost you anything to take part in the study.

**Privacy and Confidentiality**

We will keep your study records private and confidential. Certain people may need to see your study records. Anyone who looks at your records must keep them confidential. These individuals include:
• The research team, including the Principal Investigator and Faculty Advisor.
• Certain government and university people who need to know more about the study, and individuals who provide oversight to ensure that we are doing the study in the right way.
• The USF Institutional Review Board (IRB) and related staff who have oversight responsibilities for this study, including staff in USF Research Integrity and Compliance.

We may publish what we learn from this study. If we do, we will not include your name. We will not publish anything that would let people know who you are. Pasco County Schools has asked for an Executive Summary of the final published report, but no names or unique identifying information will be included in either the Executive Summary or other published reports.

You can get the answers to your questions, concerns, or complaints

If you have any questions, concerns or complaints about this study, or experience an unanticipated problem, contact Cynthia Bauman by email at cbauman@mail.usf.edu. If you have questions about your rights as a participant in this study, or have complaints, concerns or issues you want to discuss with someone outside the research, call the USF IRB at (813) 974-5638 or contact by email at RSCH-IRB@usf.edu.

Consent to Take Part in this Research Study

I freely give my consent to take part in this study. I understand that by signing this form I am agreeing to take part in research. I have received a copy of this form to take with me.

_____________________________________________  ______________
Signature of Person Taking Part in Study                  Date

____________________________________________________
Printed Name of Person Taking Part in Study

Statement of Person Obtaining Informed Consent

I have carefully explained to the person taking part in the study what he or she can expect from their participation. I confirm that this research subject speaks the language that was used to explain this research and is receiving an informed consent form in their primary language. This research subject has provided legally effective informed consent.

_____________________________________________  ______________
Signature of Person obtaining Informed Consent                  Date

____________________________________________________
Printed Name of Person Obtaining Informed Consent
Appendix C:

Teachers’ Advice-Seeking Network Survey

The following items were on the survey:

Section One: Demographic Items
1. How many years have you been a teacher?
2. What is your highest level of education completed?

Section Two: Advice-Seeking Items

1. Select up to five individuals from the drop-down roster that you are most likely to seek out for advice about instructional practice and indicate how often you sought advice within the past year from each individual about instructional practices.

   1 - Few (1-2 Times)
   2 - Some (3-4 Times)
   3 - Often (over 5 times)

2. Select up to five individuals from the drop-down roster that you are most likely to seek out for advice about improving instructional practice and indicate how often you have sought advice within the past year from each individual about improving instructional practices.

   1 - Few (1-2 Times)
   2 - Some (3-4 Times)
   3 - Often (over 5 times)

3. Select up to five individuals from the drop-down roster that you are most likely to seek out for advice about innovating instructional practice and indicate how often you have sought advice within the past year from each individual regarding innovating instructional practices.

   1 - Few (1-2 Times)
   2 - Some (3-4 Times)
   3 - Often (over 5 times)
Appendix D:

Sample Observation Guide

PLC Name
Participant Names and Roles
Date and Time of Observation
Time Stamp of Significant Events
Appendix E:

Sample CSV Files

Observation File Sample: Advice-Seeking for Instructional Practice

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Appendix F:

Formal Network Instructional Practice Ranked by In-Degree Centrality

(Median=18)

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Appendix G:

Informal Network Instructional Practice Ranked by In-Degree Centrality

(Median=3)

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Appendix H:

Interview Protocol

Tell me a little bit about yourself....
  o How long have you been teaching?
    ▪ At this school
    ▪ In the district
    ▪ Total career
  o What is your current teaching assignment?
  o Do you have any specific leadership roles at this school?
  o What is your highest level of education completed?
  o Do you have any specialized instructional training?
    ▪ Master’s Degree, Endorsement, or Certification?

Reflections on Leadership
  o What makes a teacher leader?

Reflections on Instructional Practice
  o What are areas of support do you provide to others?
  o What areas of support are you most likely to seek out?

Building Networks
  o Advice-Seeking – Who do you go to, about what, and why?
    ▪ Instructional Practice
      ▪ Tell me about a time....
    ▪ Improvement
      ▪ Tell me about a time...
    ▪ Innovation
      ▪ Tell me about a time...
  o Advice-Giving – Who comes to you, about what, and why?
    ▪ Instructional Practice
      ▪ Tell me about a time...
    ▪ Improvement
      ▪ Tell me about a time...
    ▪ Innovation
      ▪ Tell me about a time...

Reflections on Teacher Leadership at [blank]
  o What about [blank] supports teacher leadership?
  o Tell me more about that....
  o Any more you would like to add?

Final thoughts?
Appendix I:

Sample Thank You Letter

All participants will be sent follow-up and thank you letters to encourage continued participation and maintain communication through each phase of the data collection.

Dear ________________,

Thank you for participating in this teacher leadership research project. Your continued support is greatly appreciated. You may be contacted in the near future to help me check to make sure that what you intended to say during our conversation was fully captured and not misunderstood or misconstrued. While your continued participation is not required, I hope that I have been able to make this process an enjoyable and engaging one that you are excited to continue to contribute to.

I welcome any questions or reflections you may have about your experience. Please feel free to contact me via phone or email below.

Sincerely,

Cynthia Bauman, M.Ed.
Doctoral Candidate
University of South Florida
Educational Leadership
813-334-3846
cbauman@mail.usf.edu
ABOUT THE AUTHOR

Cynthia Bauman has been a public school educator for 15 years, first as a music teacher, then assistant principal and now principal. Her interest in teacher leadership stems from a keen desire to recognize the unique contributions every educator can make to the profession that results in students’ social, emotional, and academic development.