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THE ROLE OF THE PRINCIPAL IN EFFECTIVE PROFESSIONAL LEARNING
COMMUNITIES

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Abstract

To meet the demands of increased student achievement, schools are implementing professional learning communities as a means of driving school improvement efforts. For the professional learning community structure to be effective, what conditions must exist in the school, and what is the principal's role in creating those conditions? This study examines the effects of transformational leadership, faculty trust in the district, faculty trust in the principal, faculty trust in colleagues, and program coherence on the effectiveness of professional learning communities. In this study, transformational leadership, trust, and program coherence were all found to have statistically significant relationships to professional learning community effectiveness, with program coherence emerging as the most important variable.

Chapter 1: Introduction to the Study

Educators today are under extreme pressure in the era of high-stakes testing and increased accountability; even experienced administrators are exploring new ways of increasing effectiveness to meet the demands placed on schools. Some claim that the “High School reforms in the 1990’s failed because they left the *overall nature of teaching and learning unchanged*” (Gibbs & Ushijima, 2008, p. xv). In order to affect true change in student achievement it is necessary to match teaching practices to the way students learn. Districts across the country are implementing professional learning communities (PLCs) at all levels and expecting this innovation to improve student achievement, and research suggests that professional learning communities contribute to increased student achievement (DuFour, 2004; Hord, 1997, 2004; McLaughlin & Talbert, 2001). McLaughlin and Talbert (1993) suggest “the path to change in the classroom core lies within and through teachers’ professional learning communities” (p. 18). The professional learning community is a framework for collaborative learning and reflective professional inquiry centered on student work and data that produces a unifying vision of education (Bolam et al., 2005; DuFour, DuFour & Eaker, 2008; Senge, 1990). More recent findings of Darling-Hammond, Wei, Andree, Richardson and Orphanos (2009) support the professional learning community model asserting that job-embedded professional development will increase the effectiveness of teachers more than traditional professional development models commonly referred to as “sit and get” sessions.

“It is widely assumed that principals have both direct and indirect effects on teaching,” (Wahlstrom & Louis, 2008, p.459). Robinson, Lloyd, and Rowe (2008)

conducted a meta-analysis of 27 research studies and noted principals' ability to promote the learning and growth of teachers was strongly predicative of positive student outcomes. However, if the principal is not leading or even present during the professional learning community activity, to what extent does the principal have the ability to affect the function of professional learning communities? The challenge for administrators becomes understanding the conditions necessary for professional learning communities to thrive and creating those conditions within the school. What can the principal do to foster the conditions necessary for successful professional learning communities?

Statement of Problem

Increasing student achievement is the goal of every administrator; the challenge is how. Research shows that effective teachers are the key to improved student results, so how can principals ensure they have effective teachers in all classrooms (Darling-Hammond, 2000; Sanders & Rivers, 1996)? Louis, Marks, and Kruse (1996) claim that how teachers spend time with colleagues outside of the classroom, engaging in professional learning communities, is critical to improving student achievement. A large body of literature from scholars and practitioners supports professional learning communities as one vehicle for increasing the effectiveness of teachers (Barber & Mourshed, 2009; Bolam et al., 2005; Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009; Fullan, 2002; King, 2011; Louis, Marks, & Kruse, 1996; Williams & Hierck, 2015). Extant literature also identifies structural conditions and human and social resources in schools that either hinder or enable professional learning

communities to succeed (DuFour et al., 2008; Fullan, 2002; Louis, Kruse & Raywid, 1996; Louis et al., 1996; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006).

But what accounts for the variation in the success of professional learning communities, and what can the principal do to create the conditions for success? In the literature, we find significant support for trust and transformational leadership as enabling conditions for successful professional learning communities, both of which the principal has significant control over in schools and which will be discussed in the review of literature (Forsyth, Adams, & Hoy, 2011; Louis et al., 1996). But is there something else that facilitates the conditions for successful professional learning communities? The idea of coherence surfaces as an interesting variable to the effectiveness of professional learning communities. Fullan (2002) claims that coherence is critical to more effective innovation and is a requisite for principals to lead cultural change in schools. A small body of literature supports structural coherence as an enabling condition for effective professional learning communities (DuFour et al., 2008, Darling-Hammond, 1996). However, the body of research on program coherence in schools is scant, with virtually no empirical studies testing the relationship between program coherence and the effectiveness of professional learning communities.

Purpose and Significance of Study

The purpose of this research is to explore empirically the role of the principal in effective professional learning communities; specifically focusing on the conditions a principal can create in the school to support effective professional learning communities. This study aims to answer the following research questions: What is the role of the principal in establishing the conditions necessary for professional learning

community effectiveness? To what degree do transformational leadership, trust, and program coherence affect the function of the professional learning communities?

There is a robust body of research supporting a strong relationship between trust and transformational leadership and professional learning communities. However, to date, there is little research or evidence of the relationship between program coherence and professional learning community effectiveness. If principals are able to bring coherence to their schools in addition to employing transformational leadership behaviors and building trust, are professional learning communities positively influenced to a greater degree? This study aims to add to the body of research on trust and transformational leadership in relation to professional learning communities and fill a gap in the research on the relationship between program coherence and professional learning communities.

Conceptual Underpinnings for the Study

Chapter two will examine literature on professional learning communities, trust, transformational leadership, and program coherence. The review of literature will identify a gap in research on program coherence in schools and its effect on professional learning communities.

Literature suggests that professional learning communities provide a structure in which teachers collaborate around common goals, participate in data sharing and collective inquiry, and critically examine their practice for the purpose of improvement and goal attainment (Barber & Mourshed, 2005; Bolam et al., 2005; DuFour, 2008; King, 2011; Louis et al., 1996; Stoll, et al. (2006). Extant research shows high levels of trust increase a teacher's sense of belonging, motivation, and participation in collegial

dialogue and collective problem-solving (Cosner, 2009; DuFour et al., 2008; Forsyth, Adams, & Hoy, 2011; Ghamrawi, 2011; Stoll et al., 2006). Additionally, significant research exists showing that transformational leadership elicits in others a willingness to collaborate, coalesce around a shared vision, mission and goals, exhibit higher commitment to the organization, display a willingness to collaborate and foster a desire to go beyond what is obligated and put forth extra effort (Forsyth, Adams, & Hoy, 2011; Geijsel, Sleegers, Leithwood & Jantzi, 2003; Harris, 2005; Kirtman, 2013; Leithwood & Jantzi, 2002; Marks & Printy, 2003).

With a small body of literature referring to the significance of program coherence as supporting effective professional learning communities (DuFour et al., 2008; Fullan, 2002; Honig & Hatch, 2004) but no empirical studies testing the relationship between the two, program coherence emerges as a concept worth exploring. Program coherence is a way of aligning the work of the school so that it makes sense and teachers can see the connection to the larger work of the school and the work in their classroom (Newmann et al, 2001). Newmann suggests that when principals are able to connect schoolwide goals with professional learning schools are more likely to see instructional improvements in the classroom. This reasoning suggests that when teachers see connections to their work, they are more likely to engage in activities and see professional learning communities as relevant to their classroom, apply knowledge learned, and collaborate around the work that is aligned to shared mission and goals. In a study focused on identifying key dimensions of coherence at the central office level, Honig and Hatch (2004) suggest that professional learning communities provide teachers the avenue in which to coalesce around “goals and strategies that serve as

powerful and normative guides for teachers' practice" (p. 21). The reason could be that when teachers work together, using common goals and strategies to make sense of the competing demands and implications for the work, they align their individual practice to that which serves the common goal. The lack of evidence or theorizing about program coherence as a predictor to the variance in professional learning community success merits exploration

Organization of Dissertation

This dissertation is organized into six chapters. Chapter 1 presents an introduction to the research presented including statement of problem, purpose and significance of the study, conceptual underpinnings of the research, and organization of dissertation. Chapter 2 presents a review of literature on professional learning communities, transformational leadership, trust, program coherence, and organizational citizenship behavior. Chapter 3 presents the rationale and hypotheses for the study. Chapter 4 presents the methods including research design, research population and district context, data source, conceptual and operational measures, analytical technique and limitations of the study. Following the methods, Chapter 5 presents the findings of the study and the post hoc study along with analysis of the results. Finally, Chapter 6 of the dissertation presents a discussion of the findings, a summary, recommendations for and practice, and recommendations for future research.

Chapter 2: Review of Literature

Chapter 2 will begin by examining extant literature on professional learning communities, defining what they are and the conditions necessary for them to be effective. The review of literature will move to discussion of the three independent variables: transformational leadership, trust, and program coherence. The review of literature will identify a gap in research on program coherence in schools and its effect on professional learning communities. The review of literature will conclude with a review of organizational citizenship behavior for the purpose of providing a rationale for linking the variables.

Professional Learning Communities

In this section, theory and evidence related to professional learning communities is reviewed with a focus on the dimensions of professional learning communities necessary for effectiveness. The first part will explore the research defining professional learning communities chronologically. The second part will explore the research concerning the role of the principal in professional learning communities.

What are professional learning communities?

“Professional learning communities” is a term that, prior to the late 1990’s, was commonly used by educational researchers but has since been adopted by practitioners to “ubiquitously describe any loose grouping of educators” (DuFour et al., 2008, p. 14). The challenge for schools and principals becomes how to define professional learning communities not only in terms of structure and purpose, but also in terms of mechanisms that produce the desired outcomes.

Louis et al. (1996) conducted a three-year longitudinal study on professional learning communities based on five elements of practice: shared values, focus on student learning, collaboration, de-privatized practice, and reflective dialog. Louis et al. identified four structural conditions and five human and social resources that influence the function of professional learning communities, as shown in Table 1.

Darling-Hammond (1996) also suggests that schools must change structurally to become learning organizations not only for students but also teachers.

Table 1: Structural Conditions versus Human and Social Resources

Structural Conditions	Human and Social Resources
Size	Supportive Principal
Staffing Complexity	High Innovation
Scheduling Planning Time	Respect
Teacher Empowerment	Feedback from Parents and Colleagues Staff Development

In the early 2000s, as professional learning communities gained popularity, researchers began to identify the structures conducive to creating conditions for improving teaching and learning. Bolam et al. (2005), for example, extend the elements of professional learning communities to include: both group and individual learning; openness, networks and partnerships; inclusive membership; and mutual trust, respect, and support. They identify three domains of professional learning community effectiveness:

1. Effects on pupil learning and social development.
2. Effects on staff morale and practice, with potential for developing leadership capacity.
3. Characteristics are in place and processes are operating smoothly – it becomes the modus operandi of the school.

Stoll and colleagues (2006) contend that while there are varying definitions, there are internationally accepted commonalities suggesting that a professional learning community is “a group of people sharing and critically interrogating their practice in an ongoing, reflective, collaborative, inclusive, learning-oriented, growth promoting-way” (p. 223). Stoll et al. (2006) contend “an effective professional learning community has the capacity to promote and sustain the learning of all professionals in the school community with the collective purpose of enhancing pupil learning” (p.3).

DuFour et al. (2008) suggest that professional learning communities are centered on three big ideas: (1) ensuring that all students learn; (2) establishing a culture of collaboration; and (3) focusing on results. Embedded in these three big ideas, DuFour et al. identify six characteristics of effective professional learning communities:

- Shared mission, vision, and values
- Collaborative culture with a focus on learning
- Collective inquiry
- Action orientation: learning by doing
- Commitment to continuous improvement
- Results orientation

DuFour and colleagues (2008) define professional learning communities as “educators committed to working collaboratively in ongoing processes of collective inquiry and action research to achieve better results for the students they serve” (p. 14). Professional learning communities, when structured appropriately, enable collaboration that focuses on shared goals, classroom practice and reflective professional inquiry (Barber & Mourshed, 2009; Bolam et al., 2005; Darling-Hammond et al., 2009; King, 2011).

Since the mid-1990s, researchers recognize that educational reform efforts have placed an importance on collaboration and the possibility that collaboration may improve teaching and learning (Darling-Hammond, 1996; DuFour, 2004; DuFour et al., 2008; Goddard, Goddard, & Tschannen-Moran, 2007; Louis et al., 1996; Stoll et al., 2006). Professional learning communities provide a structure in which teachers come together to collaborate around teaching and learning for the attainment of increased student achievement and school improvement. Principals empower teachers by establishing the conditions for professional learning communities to be designed to share leadership in collaborative decision making and problem solving (Blasé & Blasé, 2000; Leithwood, 1992; Ross & Gray, 2006; Wahlstrom & Louis, 2008). Hanaysha (2016) found that employee empowerment has a strong positive effect on organizational commitment, and that teamwork has a positive effect on organizational commitment. The implication is that teamwork activities “could create an environment that facilitates knowledge and information exchange where they are necessary to increased job autonomy and higher job satisfaction” (Hanaysha, 2016, p. 304). Goddard, Goddard and Tschannen-Moran (2007) state “the more teachers collaborate, the more they are able to converse knowledgeably about the theories, methods, and processes of teaching and learning, and thus improve their instruction” (p. 879). In summary, the professional learning communities model establishes a system through which teachers are able to collaborate to improve classroom practice, assume leadership and ownership for their work, and focus on collective goals (Barber & Mourshed, 2009; Bolam et al., 2005; Darling-Hammond et al., 2009; DuFour et al., 2008; King, 2011).

The role of the principal in effective professional learning communities.

The professional learning community model has become a common way for schools to frame instructional practice to improve student achievement - the ultimate result of any school improvement effort. Louis et al. (1996) argue that the school organizational context consists of structural conditions and human resources that have the potential to either enable or hinder a professional learning community. Louis et al. (1996) argue that a principal must create shared values, support teacher growth and empowerment while attending to the staffing and scheduling complexities of the school. Newmann, King, and Youngs (2000) found that social and structural conditions are critical and fall into five groups: individual teacher knowledge, skills and dispositions, professional learning community, program coherence and technical resources. Newmann and colleagues (2000) contend that it is the role of the principal to create the conditions for the groups of work to exist and improve on a continuous basis.

The findings of Bolam et al. (2005) describe the principal tasks as creating a shared mission, vision and goals and developing leadership capacity of those in the school. Bolam and colleagues reason that a principal must ensure that professional learning communities become the *modus operandi* and are always focused on student results. DuFour, DuFour, and Eaker (2008) describe the principal's role in setting the conditions for effective professional learning communities through three tasks:

(1) being clear about their primary responsibility, (2) dispersing leadership throughout the school, and (3) bringing coherence to the complexities of schooling by aligning the structure and culture of the school with its core purpose.

Vision building or giving a focus to the work of the school is a leadership skill that effective principals have mastered (Lashway, 1998; McEwan, 2003; Rutherford, 1985). A clear vision fosters a collective sense of purpose and acceptance of group goals (Deal & Peterson, 1990; Leithwood, 1992). Principals “must create the conditions that help the adults in the building continually improve upon their collective capacity,” a task done through scheduling and consistent referencing of the vision, mission and goals of the school (DuFour et al., 2008, p. 318).

The need for principals to share leadership and develop the leadership capacity of teachers is supported by Sarason (1990) who states, “When a process makes people feel that they have a voice in matters that affect them, they will have a greater commitment to the overall enterprise and will take greater responsibility for what happens to the enterprise” (p. 61). Leadership in schools should not be a function solely of the principal, but rather “it resides in the interpersonal networks among the members of the faculty” (Donaldson, Jr., 2007, p. 9).

Transformational Leadership

This section reviews the concept of transformational leadership in schools as it relates to vision building, organizational capacity, and collaboration, with commitment to the organization a common thread linking all three areas. The review of transformational leadership literature begins with an introduction to transformational leadership in schools. The review continues the work Burns (1978) and Bass (1985). Marks & Printy’s (2003) three-dimensional model of transformational leadership: mission centered, performance centered, and culture centered, provides the structure for the remainder of the review. Transformational leadership is established as a type of

leadership especially suited for fostering conditions under which effective professional learning communities might flourish.

Transformation, by definition, means to bring about change. Transformational leadership seeks to bring about change in attitude, practice, commitment level, and performance of both leaders and followers. In the educational setting, transformational leadership focuses on the school's ability to build capacity, innovate, problem solve, and collaborate with the goal of school improvement (Geijsel, Slegers, Leithwood & Jantzi, 2002; Marks & Printy, 2003). Principals skilled in transformational leadership enable staff to find opportunities in difficult situations and appreciate the tension associated with change (Kohm & Nance, 2007). Kirtman (2013) argues that a transformational leader focuses on common goals to effect change and support school improvement. Leach and Fulton (2008) and Wahlstrom and Louis (2008) argue that for school leaders to be successful in the 21st century, transformational leadership, which empowers staff and increases motivation, is critical.

Transformational leadership originated in Burns' (1978) study of political leaders and expanded to other contexts (Bass, 1985). Focusing on the relationship between leaders and followers, Burns identified two types of leadership: *transactional* and *transformational*. Transactional leadership involves an exchange between leaders and followers to achieve a goal, *quid pro quo*. At the opposite end of the leadership continuum, transformational leadership focuses on developing the capacity of an organization to innovate while leaders "shape and alter and elevate the motives and values and goals of followers through the vital teaching role of leadership" (Burns, 1978, p. 425). Bass (1985) argued that transactional and transformational leadership

are separate continua, while at opposite ends of the leadership spectrum, allowing them to coexist and complement each other. Bass' model of transformational leadership consists of four dimensions: idealized influence (charisma), inspirational motivation, intellectual stimulation, and individualized consideration (Bass, 1985, 1991; Bass & Avolio, 1994). In the 1990s, using the work of Burns and Bass as a foundation, researchers began to apply transformational leadership principles to school improvement (Hallinger, 2003; Leithwood, 1992; Leithwood & Jantzi, 1990; Marks & Printy, 2003).

Leithwood and colleagues (Leithwood & Jantzi, 1990; Leithwood, 1992, 1994; Leithwood, Jantzi, & Steinbach, 1999) conducted multiple studies resulting in a modification of Bass' four dimensions, redefining the categories to fit the educational setting. Marks and Printy (2003) noted that the nine functions of transformational leadership identified in the studies of Leithwood and colleagues fall into three areas: (1) mission centered (developing a shared vision, establishing school goals), (2) performance centered (demonstrating high expectations, providing intellectual stimulation, modeling best practices) and (3) culture centered (creating a productive school culture, building a collaborative culture, and fostering participation in school decisions, modeling school values).

Mission centered.

Transformational leaders are able to inspire others to redefine their personal goals to align with the organizational goals and to feel a sense of obligation to achieve the collective purpose (Harris, 2005). Forsyth, Adams & Hoy (2011) state transformational leadership "focuses on fostering an awareness and commitment to an

ever-emerging common mission” (p. 157). Through focus on the collective vision and mission, transformational leaders “broaden and elevate the interests of their employees [and enable them] to look beyond their own self-interest for the good of the group” (Bass, 1991, p. 21). Transformational leaders raise the level of awareness of the school’s goals and influence followers to align their personal goals with those of the school, resulting in an increased commitment to the organizational mission (Lashway, 1998; Leithwood et al., 1999; Ross & Gray, 2006). Li, Hallinger, and Walker (2017), building upon the work of Hallinger and Lee (2014) and Barth (1990), assert one way principals provide a sense of certainty during change is through “articulating and building a longer-term shared vision of change for the school.” (p. 44).

Performance centered.

Transformational leadership builds organizational capacity (Hallinger, 2003; Leithwood, 1992, 1994; Marks & Printy, 2003), elicits higher levels of commitment and effort from participants (Burns, 1978), and encourages employees to achieve beyond their expectations (Bass, 1985, Burns, 1978). Transformational leadership works to foster the growth of the organization’s members and increase their expertise and mastery of process to achieve results (Burns, 1978; Hallinger, 2003; Leithwood, 1992, 1994; Marks & Printy, 2003). In an educational setting, transformational leadership focuses on changing teaching practices by changing people’s attitudes rather than promoting specific instructional strategies (King, 2011). By using the foundation of shared values and common goals along with providing opportunities for collaboration and shared inquiry, principals can evoke a change in teaching practice (Hallinger, 2003; King, 2011).

Culture centered.

Well implemented transformational leadership supports collaboration, fosters a sense of community, and increases motivation and participation in the decision-making process (Blasé & Blasé, 2000; Leithwood, 1992; Ross & Gray, 2006; Wahlstrom & Louis, 2008). Transformational leadership is concerned with the relationships within an organization and the engagement of its members to raise everyone, leader and followers, to a higher level of motivation, participation and commitment (Burns, 1978; Harris, 2005). By fostering collaboration, collective inquiry, and participation in decision making transformational leaders set the foundation for an effective, positive organizational culture (Marks & Printy, 2003). These conditions are predictive of efficacy in complex work by ensuring that all parties are focused on the same goal and willing to collaborate with colleagues to continually question the work and make decisions based on shared beliefs.

Trust

This section reviews the theory and evidence related to trust in schools in three areas: faculty trust in the district, faculty trust in the principal, and faculty trust in colleagues. The review of extant literature establishes trust as an enabling condition for feelings of benevolence, openness, reliability, competency, honesty, and a willingness to collaborate, thus, a predictor for effective professional learning communities.

Commonly accepted definitions of trust include the terms benevolence, reliability, competence, honesty, and openness (Daly, 2009; Day, 2009; Forsyth, Adams, & Hoy, 2011; Mishra, 1996; Tschannen-Moran, 2004; Tschannen-Moran & Hoy, 2000; Walker, Kutsyuruba, & Noonan, 2011). Faculty trust exists on multiple

levels including trust in the school district as an organization, trust in the principal, and trust in colleagues (Forsyth et al., 2011; Hoy & Kuper-Smith, 1985; Tarter, Bliss, & Hoy, 1989) with evidence supporting the positive correlations between the three types (Hoy & Kuper-Smith, 1985; Hoy, Sabo & Barnes, 1996). Cummings and Bromiley (1996) provide a definition of trust that can be applied to all three referent groups:

...an individual's belief or a common belief among a group of individuals that another individual or group (a) makes good-faith efforts to behave in accordance any commitments both explicit or implicit, (b) is honest in whatever negotiations preceded such commitments, and (c) does not take excessive advantage of another even when the opportunity is available. (p. 303).

Faculty trust in the district.

Faculty trust in the school organization is defined as the extent to which the faculty believes it can rely on the school district to act in its best interest and be fair to teachers (Forsyth et al., 2011). At all levels of the school organization, trust is critical for school improvement; in the absence of trust, organizations impede progress and employee effectiveness (Tschannen-Moran & Hoy, 2000). Schools, like other organizations, are effective when they are well managed and support cooperation, cohesiveness, and efficiency (Louis et al., 1996; Tschannen-Moran & Hoy, 2000).

Faculty trust in the principal.

“Because of the nature of interdependence between teachers and principals, and the authority that principals exercise in relations to them, teachers tend to pay particular

attention to the trustworthiness of their principals” (Tschannen-Moran & Gareis, 2015). Faculty trust in the principal is defined as the extent to which the faculty “has confidence the principal will keep his or her word and act in the best interests of teachers” (Forsyth et al., 2011, p. 4). Walker, Kutsyuruba, and Noonan (2011) claim “the instrumental role of fostering a culture of trust in schools, and hence the immense responsibilities and challenges that come with the role, lie within the scope of school administrators’ everyday activities” (p. 3). Tschannen-Moran (2014) and asserts that the level of faculty trust in the principal sets the tone for the school.

Principals gain the trust of faculty by (1) engaging in regular dialog with teachers to create a culture of openness, (2) “walking the talk” through modeling and (3) having a clear sense of purpose (Ghamrawi, 2011; Tarter, Bliss, & Hoy, 1989). Tarter, Bliss, and Hoy (1989) found that “openness [on the part of the principal] was significantly correlated with trust in the principal” (p. 300). Wahlstrom’s and Louis’s (2008) findings were consistent with the research conducted by Tarter et al. (1989) which “found that supportive principal behavior and faculty trust were significantly correlated” (p. 462). Trust is critically important for leaders when attempting to implement change. Li et al. (2017) suggest one way for principals to develop school climates of trust is to ensure dependability or certainty amid change, which is frequently during times of school improvement efforts.

Faculty trust in colleagues.

In schools where faculty have high trust in their principal, they are more likely to trust their colleagues. Conversely, where there is low faculty trust in the principal, there is lower collegial trust (Tschannen-Moran & Gareis, 2015). Faculty trust in

colleagues is defined as the degree to which faculty feel they can depend on one another and rely on the integrity of their colleagues (Forsyth et al., 2011). Employee behaviors consistent with high levels of faculty trust include shared leadership, openness, and a supportive or caring environment (Ghamrawi, 2011; Hoy & Williams, 1971; Leech & Fulton, 2008; Oplatka, 2006; Tarter et al., 1989; Wahlstrom & Louis, 2008). Principals foster trust by creating a school culture through establishing norms, intervening to resolve conflicts and removing barriers to trust formation, including removing incompetent teachers (Kochanek, 2005; Tschannen-Moran, 2004).

Principals who foster high levels of trust in schools establish a school culture that encourages shared inquiry, risk taking, and innovation to improve instruction (Louis et al., 2007). When colleagues trust each other, they are more likely to share information and resources, as well as disclose relevant data (Cosner, 2009; Tschannen-Moran & Hoy, 2000). High levels of collegial trust also facilitate conflict resolution when task related disagreements, such as those that may occur during professional learning communities, arise (Cosner, 2009; Simons & Peterson, 2000). As a result, professional disagreements are less likely to lead to relationship conflict when high levels of collegial trust are present. Collegial trust is critical to capacity-building and the establishment of teacher leaders (Cosner, 2009).

Program Coherence

This section establishes, through the extant literature, a historical perspective and progression of the research on program coherence. This section concludes with establishing a definition of program coherence that will be used through this paper.

Newmann, Smith, Allensworth, and Bryk (2001) claim that school improvements are unsuccessful if they fail to strengthen instructional program coherence, which they characterize as “a set of interrelated programs for students and staff that are guided by a common framework for curriculum, instruction, assessment, and a learning climate that are pursued over a sustained period” (p. 297). Additionally, Newmann and colleagues posit that principals who connect professional development activities with the schoolwide goals may be more likely to achieve systemic, school wide improvements in instruction. However, when Newmann et al. reviewed extant literature, no studies were found that “offered a thoughtful, systematic definition and exploration of school-level instructional program coherence” (p. 298). Newmann and colleagues (2001) identify three shortcomings in literature on coherence in education: (1) its failure to address instructional coherence as a school improvement strategy, (2) its lack of a theoretical explanation connecting strong instructional program coherence to student achievement, and (3) its lack of an operational definition to support research on the effects of instructional program coherence.

Fullan (2001) asserts the main barrier in educational improvement efforts is the “presence of too many disconnected, episodic, piecemeal and superficially adorned projects (p. 109). In 2002, Fullan begins to look at the principal’s role in bringing coherence to lead cultural change in schools. Fullan (2002) asserts that the principal of the future needs to transform the learning cultures of schools and the teaching profession and to do so requires an understanding of how to build coherence. Fullan (2002) suggests that for lasting change in the learning cultures of schools, principals must embody five key characteristics: moral purpose, relationship building skills,

knowledge creation and sharing, understand the change process, and coherence making. Elmore (2003) suggests that most schools spend time on unconnected activities and initiatives, moving quickly from one to the next, and implementing them with low fidelity.

Focusing on the district level or central office, Honig and Hatch (2004) define coherence as a process of negotiation whereby school leaders and central office administrators continually craft the fit between external policy demands and the schools' own goals and strategies and use external demands strategically to inform and enable implementation of those goals and strategies. (p. 19)

Honig and Hatch term this process "crafting coherence." Crafting coherence is a continuous process by which schools and central offices jointly participate in specific activities related to development of schoolwide goals and strategies and managing external demands to advance the work. The "conceptualization of these activities stems mainly from literature outside of education with albeit limited confirmation by empirical literature on schools and school districts" (Honig & Hatch, 2004, p. 17); however, they guide inquiry into educational application. Honig and Hatch call for collaboration between schools, central office and external demands by stating coherence should be a "social construction produced through continual interactions among teachers, students, organizational structures, curriculum, and other tools of schooling" (p. 18). Professional learning communities may offer the structure in which teachers have the opportunity to collaborate on curriculum, district initiatives, student work, teacher practice, and common mission and goals, and thus bring coherence and a feeling of efficacy and comradery to their work.

The Consortium on Chicago School Research, like Honig and Hatch, also sees the convergence of internal and external demands on schools as a roadblock to school improvement, explicitly referring to the role of researchers in school reform (Roderick, Easton, & Sebring, 2009). The Consortium on Chicago School Research, referring to Dewey (1927, 1929), stresses the need for researchers to be in close communication with practitioners. Frequently, research is used to launch educational reform initiatives with researchers disregarding the school leaders' and practitioners' ability to implement said initiative in a way that leads to changes in behavior and policy (Roderick et al., 2009). As a result, districts, schools, and teachers find themselves in a situation where multiple programs and initiatives, some inimical to each other, are implemented to varying degrees with mixed results. This lack of alignment leads to the problem of research informing practice with disregard for efficacy to those ideas on behalf of the practitioners and can be seen throughout educational history with the major initiatives such as: A Nation at Risk, high stakes testing, national standards, No Child Left Behind, school choice, and decentralization (Roderick et al., 2009).

Schools are dealing with external policy demands, internal policy demands of the district, and their capacity to align every program and reform to come down the pike, often leading to unsuccessful implementation or initiative fatigue (DuFour et al., 2008; Roderick et al., 2009). The Consortium on Chicago School Research found that poorly performing schools had a lack of focus, stemming from a difficulty using the policies to focus their efforts and inform their practice. This lack of focus is described as a Christmas tree school where “programs [like ornaments on a Christmas tree] were unconnected and uncoordinated; teachers and students alike were adversely affected by

this incoherence” (Roderick et al., 2009, p. 25). This could be a result of teachers feeling a lack of coherence between what occurs in their classroom and what the district is asking, implementing, or expecting of teachers, or from too many programs or initiatives being implemented simultaneously. Frustration rises along with teachers feeling that they are not supported in the work and the district puts barriers in place that are contrary to achieving the goals at the teacher level. The Consortium on Chicago School Research defines program coherence as the coordination and alignment of programs both across and within grades, and argues that program coherence is a solution to divergence between internal and external demands (Roderick et al., 2009). To measure the concept of program coherence the Consortium on Chicago School Research developed a scale to tap teacher perceptions of their school’s program coherence; the results showed that schools with high program coherence were more likely to have better results from school improvement efforts (Roderick et al., 2009). For the purposes of this study we will use the Consortium on Chicago School Research definition of program coherence as well as the operational measure developed.

In summary, the body of literature on program coherence in education is small, with much of the focus on central office, structural alignment, and the alignment of research and how that percolates down into the classroom (Honig & Hatch, Roderick et al., 2009). A small body of research links program coherence as a critical function of principals desiring to implement lasting change with school improvement as the result (DuFour et al., 2008; Elmore, 2003, 2006; Fullan, 2002). Elmore (2006) asserts coherence of basic goals and values is paramount to effective leadership for school improvement; without coherence, the work is chaotic, and staff perceive it as

impossible and unconnected to their individual work and frustration emerges. DuFour and colleagues (2008) reverse Elmore's assertion stating, "effective leadership is a prerequisite for establishing the coherent sense of purpose, direction, and goals essential to an improving school" (DuFour et al., 2008, p. 318). Fullan (2002) asserts bringing coherence to the work is paramount to a principal transforming teaching and the culture of their school. Fullan (2002) lists coherence making as one of the five skills principals must have in order to transform the learning culture of their school and facilitate lasting change. Literature suggesting program coherence as an enabling condition for professional learning communities is even less robust (DuFour et al., 2008; Newmann et al., 2000). The search for empirical evidence supporting program coherence as a predictor of variation in professional learning community effectiveness yielded no results.

Organizational Citizenship Behavior

This section reviews literature on organizational citizenship behavior to provide a rationale for the linkage of the primary variables. The evidence of how citizenship functions in organizations informs the reasoning and justification for the predicted relationships in this study. Literature surrounding the concept of organizational citizenship behavior examined in this section points to variables that may be important to understanding the variation in professional learning community success.

Although the initial consideration of citizenship behavior developed from the ideas of altruism and helping behavior (Smith, Organ, & Near, 1983), the concept of organizational citizenship behavior also stems from social exchange theory (Blau, 1964). Organ (1997) referring to his work in 1977 states "the roots of organizational

citizenship behavior research and theory lie in an intuitive conviction that...job satisfaction did indeed bear a functional relation to performance of a sort” (p. 92). Organ (1988) contends that organizational citizenship behavior is related to job satisfaction, employee effectiveness, and organizational effectiveness. The concept is if organizations seek more satisfied, effective employees and exist as a more effective organization, they need to engage in leadership activities that support and elicit organizational citizenship behaviors in employees. Organizational citizenship behaviors (OCB) are “those organizationally beneficial behaviors and gestures that can neither be enforced on the basis of formal role obligations nor elicited by contractual guarantee of recompense” (Organ, 1990, p. 46). Organizational citizenship behaviors are those which an employee chooses to either offer or suppress, without expectation of immediate formal reward or repercussion (Shore & Wayne, 1993). Since the 1990s, organizational citizenship research has grown, and, as a result, multiple definitions of organizational citizenship behaviors exist, some conflicting and some overlapping. Organization citizenship behaviors are categorized into seven widely accepted domains: (1) helping behavior, (2) sportsmanship, (3) organizational loyalty, (4) organizational compliance, (5) individual initiative, (6) civic virtue and (7) self-development (Podsakoff et al., 2000). Examples of commonly accepted organizational citizenship behaviors are:

- assisting others voluntarily (Organ, 1990)
- willingness to sacrifice personal interest for the good of the group
(Podsakoff et al., 2000)

- following procedures and rules, even when nobody is watching (Borman, Penner, Allen & Motowidlo, 2001)
- engaging in tasks that are beyond the expected level, volunteering to take on extra responsibility (Podsakoff et al., 2000; Borman et al., 2001)

Organ (1997) defines organizational citizenship behavior as “performance that supports the social and psychological environment in which task performance takes place” (p. 95). Professional learning communities are structures in which teachers come together with the specific task of collaborating to analyze data and problem solve to improve their practice in order to achieve higher student outcomes (Barber & Mourshed, 2009; Bolam et al., 2005; Darling-Hammond et al., 2009; DuFour et al., 2008; Louis et al., 1996; Williams & Hierck, 2015). Based on the empirical evidence, it can be argued that the commonly recognized organizational citizenship behaviors above are also critical to supporting the professional learning community structure and process. Therefore, the literature on organizational citizenship behavior has relevance in pointing to variables that may be important to understanding variations in professional learning community.

Organizational citizenship is useful in examining the relationship between trust and professional learning communities because there is significant literature linking trust with organizational effectiveness. As such, trust formation emerges as one way in which principals can foster enabling conditions for effective professional learning communities. In 2003, Tschannen-Moran showed that in schools, trust in the principal is strongly correlated to teachers’ exhibiting organizational citizenship behaviors. Forsyth et al. (2011) propose “certain leadership behaviors elicit trust in the leader; trust

in the leader, in turn, elicits organizational citizenship behaviors, which are by their nature cooperative, aligned with common goals, and result in organizational effectiveness” (p. 160).

When teachers have high levels of trust in their principal and believe them to be reliable, they tend to have greater confidence in their own decision-making and actions (Tschannen-Moran & Gareis, 2015). High levels of principal and collegial trust increase a teacher’s sense of belonging, motivation, and participation in collegial dialogue and collective problem-solving (Cosner, 2009; DuFour et al., 2008; Forsyth et al., 2011; Ghamrawi, 2011; Stoll et al., 2006).

Existing evidence suggests trust, collaboration, commitment, and supportive leadership are critical conditions for the emergence of effective, intense, and sustained learning communities (Barber & Mourshed, 2009; Bolam et al., 2005; DuFour et al., 2008; Goddard et al., 2007; Louis et al., 1996). Effective professional learning communities occur when teachers are open with their data, are receptive to feedback from colleagues, and are reflective about their practice (DuFour et al., 2008; Bolam et al., 2005; Stoll et al., 2006). There is evidence in the literature to support a relationship between trust and professional learning community effectiveness and thus making trust a worthwhile variable for predicting variance in professional learning community effectiveness.

Lowe, Kroeck, and Sivasubramaniam (1986) conducted a meta-analysis that suggested transformational leadership is a reliable predictor of the effectiveness of work groups. Podsakoff et al. (2000) conducted a meta-analysis and found that a strong relationship between organizational citizenship and transformational leadership.

Research supports transformational leadership as a mechanism through which principals elicit organizational citizenship behaviors from their staff (Hoy & Miskel, 2001; Podsakoff et al., 1990; Yukl, 1989). Considering these two meta-analyses and extant empirical research, transformational leadership also emerges as a possible pathway for principals to create the conditions for effective professional learning communities.

Principals who employ transformational leadership experience higher levels of faculty trust, inspire commitment to common goals, and foster a desire in employees to go above and beyond expectations to reach those goals (Forsyth et al., 2011; Geijsel et al., 2003; Harris, 2005; Kirtman, 2013; Leech & Fulton, 2008; Leithwood & Jantzi, 2002; Marks & Printy, 2003; Podsakoff et al., 1990; Ross & Gray, 2006). When principals employ transformational leadership, they likely find teachers more willing to collaborate, empowered to make decisions, aligned to common goals, and with an increased commitment to the organization and colleagues (Forsyth et al., 2011; Harris, 2005; Leithwood, 1992; Marks & Printy, 2003). Fortuitously, the same citizenship behaviors linked with transformational leadership are predictors of professional learning community effectiveness (Blasé & Blasé, 2000; DuFour et al., 2008; Leithwood, 2002; Wahlstrom & Louis, 2008). Thus, informed by empirical evidence and literature on citizenship behaviors, transformational leadership emerges as a logical variable to explore in relationship to learning community effectiveness.

Program coherence emerges as an interesting variable in predicting variation in professional learning community effectiveness. The literature review identified a number of studies suggesting program coherence as an enabling condition for professional learning communities by aligning the work of schools and teachers to

resources (Honig and Hatch 2004; Roderick et al., 2009), a vehicle for coalescing around common goals and values (DuFour et al., 2008; Honig and hatch, 2004; Louis et al., 1996), and providing structural conditions conducive to collaboration and problem solving (Blasé & Blasé, 2000; Darling-Hammond, 1998; DuFour et al., 2008; Leithwood, 1992; Ross & Gray, 2006; Wahlstrom & Louis, 2008). However, the literature review revealed a gap in empirical evidence linking program coherence directly to the effectiveness of professional learning communities.

Examining literature on organizational citizenship could assist in establishing program coherence as a possible predictor of variation in professional learning community success. Program coherence “assesses the degree to which the faculty feel the instructional programs at their school are coordinated with each other and with the school’s mission” and, therefore, have a stronger focus on the school’s goals (Oklahoma Center for Educational Policy [OCEP], 2013, p. 12). Prior to the Consortium on Chicago School Research much of the research on coherence focused on policy coherence and the traditional models of “inside-out” and “outside-in” (Roderick et al., 2009; Honig & Hatch, 2004). “The idea of coherence often surfaces when educational researchers confront practices, programs, or policies found to be poorly conceived and coordinated or at odds with other practices, programs, and policies” (Newmann, Smith, Allensworth & Bryk, 2001). Principals and teachers often feel outside “policy” pressures regarding curriculum and strategies from many directions: central office, colleagues, researchers, educational consultants and higher education, to name a few. Frequently, teachers feel the vision and mission of the district as high-level goals that are out of touch with the daily work in the school, and thus become frustrated

(Newmann et al., 2001). Said differently, teachers often feel outside pressures to implement certain school improvement strategies or may be at odds with the work currently happening in their classroom. Conversely, when schools attempt to align what they are doing with a school improvement strategy provided by an external entity, “school actors tend not to use the whole school reform approaches as organizing frameworks for school improvement but to add the approaches on to their repertoire of interventions as though they were targeted, categorical programs” (Honig & Hatch, 2004).

Professional learning communities are structures in which teachers collaborate around curriculum, classroom practice, and shared goals (Bolam et al., 2005; Darling-Hammond et al., 2009, King, 2011). With a lack of coherence, teachers perceive the work as chaotic and unconnected to their individual work (Elmore, 2006). This disconnect between the larger work and the individual work may translate to a perceived misalignment between the goals of the schools and the work in the classroom, resulting in professional learning community activities being viewed as irrelevant. Literature on organizational citizenship may provide a rationale for this by suggesting that principals who are adept at bringing coherence to the work enable teachers find relevance and value in participating in professional learning community activities. As such, teachers may be more inclined not only to participate, but to apply knowledge gained to improve their practice. Coherence establishes connections between the larger goals and the daily work in the classroom; connections that bring feelings of relevance and produce perceptions that the work makes sense and can be accomplished.

Newmann et al. (2001) suggest coherence provides a common vision for curriculum, instruction and assessment, thus supporting formation of common goals. Professional learning communities provide a structure through which teachers align their beliefs with shared vision and goals, collaborate to improve instruction, commit to participate in reflective professional inquiry, and feel ownership for reaching the shared goals (Barber & Mourshed, 2009; Bolam et al., 2005; King, 2011; DuFour et al., 2008; Stoll et al., 2006). Increased commitment to shared goals, a willingness to participate in collaborative dialog, and a belief that the individual has a responsibility for the success of the group are predictors of professional learning community effectiveness (Barber & Mourshed, 2009; Bolam et al., 2008; Darling-Hammond, 2009; DuFour et al., 2008; King, 2011; Marks & Printy, 2003). Consequently, the same behaviors appear frequently in the literature on citizenship (Borman, et al.; Forsyth et al., 2011; Podsakoff, 2003; Organ, 1990). As such, literature on organizational citizenship helps draw connections between program coherence and professional learning communities, making it an interesting relationship to test in this study.

In summary, literature on organizational citizenship is useful in identifying viable predictors of professional learning community effectiveness. As the literature review revealed, there is robust evidence supporting transformational leadership and trust as having a relationships potential to explain variance in professional learning community effectiveness. The literature review also revealed a gap in that prior empirical research has not examined the relationship between program coherence and professional learning communities. However, the literature on organizational

citizenship establishes a possible rationale for predicting a relationship. The above research and findings in the review of literature are the impetus for this research.

Chapter 3: Rationale and Hypotheses

This section gives the rationale for the hypotheses; why this research examines the extent to which transformational leadership behavior, faculty trust in the principal, faculty trust in colleagues, and program coherence affect the effectiveness of professional learning communities.

The purpose of this study is to focus on the conditions a principal can create to support effective professional learning communities. To review, a large body of research supports the professional learning community structure as a viable option for increasing teacher effectiveness and student achievement (Barber & Mourshed, 2009; Darling-Hammond et al, 2009; Fullan, 2002, King, 2011, Louis et al, 1996; Williams & Hierck, 2015). Professional learning communities provide educators a structure in which they collaborate, share data, reflect on their practice, and coalesce around common goals for student achievement (Barber & Mourshed, 2009; Bolam et al., 2005; DuFour et al 2008; King, 2011). Through the literature review, transformational leadership, trust (both trust in the principal and trust in colleagues) and program coherence emerge as viable predictors of variance in professional learning community success.

The literature review presented empirical evidence to suggest that principal's use of transformational leadership can foster the conditions necessary for effective professional learning communities. Professional learning communities depend on

teachers' willingness to commit to collaboration, commitment to common vision, mission, and goals, reflective inquiry, and assuming shared leadership for the activity (Bolam et al., DuFour, et al., 2008; Leithwood, 1992; Louis et al., 1996; Stoll et al., 2006). Principals who employ transformational leadership establish a shared vision, mission and goals and create a culture that encourages collaboration, extra effort, and increased commitment (Barber & Mourshed, 2009; Blasé & Blasé, 2000; Forsyth et al., 2011; Harris, 2005; Ross & Gray, 2006; Slegers et al., 2002; Wahlstrom & Louis, 2008). In addition to the empirical evidence, organizational citizenship is useful when examining transformational leadership and professional learning communities because there is literature to suggest a rationale for the relationship. Podsakoff et al. (2000) claim a strong relationship between organizational citizenship and transformational leadership. Research supports transformational leadership as a mechanism through which principals elicit organizational citizenship behaviors from their staff (Hoy & Miskel, 2001; Podsakoff et al., 1990; Yukl, 1989). Organizational citizenship may present in employees as increased commitment to common goals, extra effort, and willingness to sacrifice personal interest for the good of the group (Podsakoff et al., 1990; Podsakoff et al., 2000; Organ, 1990), all of which are also recognized as enabling conditions for professional learning communities (Bolam et al., DuFour, et al., 2008; Leithwood, 1992; Louis et al., 1996; Stoll et al., 2006)..

Professional learning communities rely on teachers' willingness to collaborate, share data, problem solve, make decisions, and engage in discussions with colleagues about teaching and learning with the goal of improving practice (Barber & Mourshed, 2009; Stoll et al., 2006; Tschannen-Moran & Gareis, 2015). Empirical evidence

suggests principals who foster trust formation are likely to see an increase in teachers' sense of belonging and willingness to be vulnerable, making them more likely to share information, resources, and relevant data (Bolam et al., 2005; Cosner, 2009; Forsyth et al., 2011; Simons & Peterson, 2000; Tschannen-Moran & Hoy, 2000; Tschannen-Moran & Gareis, 2015). When high levels of trust are present, schools and teachers experience a more open environment in which individuals are feel a certain confidence that colleagues will be honest, open, act with their best interest at heart (Cummings & Bromiley, 1996; Forsyth et al., 2011; Walker et al., 2011).

When teachers have high levels of trust for the principal, they tend to have greater confidence in their decision-making ability and actions (Tschannen-Moran & Gareis, 2015). Trust in the principal “maximizes teacher effort and performance and helps to focus the collective energy on what is important” (Forsyth et al., 2011, p. 157). Schools with high levels of in the principal are more likely to have higher collegial trust (Tschannen-Moran & Gareis, 2015). High principal and collegial trust support increased motivation, collaboration, collective problem solving, and participation in collegial dialogue (Cosner, 2009; Forsyth et al., Ghamrawi, 2011; Stoll et al., 2006).

In addition to the empirical evidence, literature on organizational citizenship is useful when exploring the relationship between trust and professional learning communities. Citizenship behavior may emerge as helping behavior; which involves individuals helping others to solve work related problems, or as individual initiative, demonstrated by initiating change or innovation to improve performance, encouraging others to do well, willingness to take on additional responsibilities, and offering solutions for improvement (Podsakoff, 2000). Forsyth et al. (2011) propose “certain

leadership behaviors elicit trust in the leader; trust in the leader, in turn, elicits organizational citizenship behaviors, which are by their nature cooperative, aligned with common goals, and result in organizational effectiveness” (p. 160). The literature on citizenship behavior makes a case for trust formation predicting the success of professional learning communities, activities designed to support innovation in collaborative problem solving and collective inquiry.

Transformational leadership and trust support professional learning communities through creating a shared vision and mission, and promoting increased effort, effective collaboration, and collective inquiry (Blasé & Blasé, 2000; Cosner, 2009; Cummings & Bromiley, 1996; Forsyth et al., 2011; Ghamrawi, 2011; Leithwood, 1992; Louis et al., 1996; Marks & Printy, 2003; Tschannen-Moran & Hoy, 2000; Wahlstrom & Louis, 2008). In summary, transformational leadership behavior and trust were selected as foci because existing empirical evidence, along with literature on citizenship behavior, supports that these conditions may explain variance in professional learning community effectiveness. This study will test prior research in this area and gain additional insight into the relationship between transformational leadership and trust as predictors of effective professional learning communities. Thus, the following hypotheses were derived from existing evidence and it is predicted that,

H1. Schools in which the principal exhibits transformational leadership will have higher professional learning community effectiveness.

H2. Schools with high levels of trust in colleagues will have higher professional learning community effectiveness.

H3. Schools with high levels of trust in the principal will have higher professional learning community effectiveness.

The extant literature on program coherence in schools is limited. A small body of research suggests schools consider structures that support coherence, ensuring the larger work is connected to the daily work of the school and teacher, when seeking to improve teacher practice (Darling-Hammond, 1996; DuFour et al., 2008; Honig & Hatch, 2004; Roderick et al., 2009). DuFour and colleagues (2008) suggest that principals need to “bring coherence to the complexities of schooling by aligning the structure and culture with its core purpose” (p. 308). Darling-Hammond (1996) argues schools must change structurally to become learning organizations for teachers to improve practice.

The review of literature revealed a few studies suggesting program coherence as an enabling condition for successful school improvement (Fullan, 2002; Newmann et al., 2001) and effective professional learning communities (DuFour et al., 2008; Newmann, 1996). Fullan (2002) states the need for principals to understand how to build coherence in order to change the learning cultures of schools. Schools are complex organizations which “inherently generate overload and fragmentation” (Fullan, 2002, p. 18) causing frustration in teachers. Fullan suggests principals contribute to the fragmentation when they take on too many initiatives and projects. Roderick et al. (2009) refer to this as a “Christmas Tree” school, where the programs are like ornaments, “displaying a great deal of energy and innovative spirit [but in reality] unconnected and uncoordinated” (p. 24). This fragmentation, or lack of coherence, may cause teachers to feel the work chaotic and disjointed with little relevance to their

classroom (Elmore, 2006). In response to initiative overload, Newmann (1996) suggests coherence is essential to the success of professional learning communities. Podsakoff and colleagues' (2000) dimension of organizational citizenship may provide insight as to why this is. Civic virtue represents a commitment to the organization and is reflective of feeling a part of the larger whole (Podsakoff, 2000). If teachers perceive their school to be overloaded and fragmented with initiatives and unrelated to their work, they may not feel committed to the work of the larger organization. To combat taking on too many projects or initiatives, Fullan suggests coherence making is one of the responsibilities of principals who aim to implement and sustain school reform efforts.

Newmann et al. (2001) proposes when principals bring coherence to the work, schools are more likely to see improvements in instruction. This could suggest that teachers are more apt to engage in activities they see as connected and relevant to informing their work, thus more likely to be committed to assuming ownership of attaining the shared goals. Again, the literature on organizational citizenship may offer a bridge. Civic virtue, as mentioned above, reflects a commitment to the organization, which presents as active participation in meetings (Podsakoff et al., 2000). This rationale may explain why when teachers feel the work is connected; they feel a higher commitment to engage in professional learning community activities. Another dimension of organizational citizenship, self-development, may also serve as a rationale. Self-development refers to self-development for the sake of others and presents as employees volunteering to improve their expertise and skill (Podsakoff et al., (2000). A teacher's willingness to engage authentically in professional learning

community activities for the purpose of improving practice in service to the attainment of shared goals may be explained by civic virtue.

Professional learning communities consist of a group of teachers committed to participating in collaborative, reflective inquiry to increase their skills and elevate their practice to achieve the shared goals (DuFour et al., 2008; King, 2011; Stoll et al., 2006). Program coherence seeks to align structures, programs, and instructional resources to align practices to streamline efforts and eliminate confusing, disconnected or overlapping initiatives that hinder school improvement efforts. There is insufficient empirical evidence showing the relationship between program coherence and effective professional learning communities; however, the review of literature on citizenship formation may offer a bridge suggesting a relationship between program coherence and professional learning communities. Therefore, it is predicted that,

H4. Schools with high levels of program coherence will have higher professional learning community effectiveness.

Extant literature supports the need for transformational leadership and high levels of trust in creating necessary conditions for effective professional learning communities (Barber & Mourshed, 2009; Bolam et al., 2005; DuFour et al., 2008; Goddard et al., 2007; Louis et al., 1996). Research also suggests that program coherence is essential for effective professional learning communities (Bolam, et al., 2006; DuFour et al., 2008). The importance of program coherence in professional learning community effectiveness is affirmed, generally, by the findings of Louis et al. (1996) who found a strong positive relationship exists between school structural conditions, human and social resources and professional community. Fullan (2002)

suggests a leader's "ability to build relationships and the creation and sharing of knowledge forge coherence through the checks and balances embedded in their interaction" (p. 18).

There is research showing the independent variables are closely related to each other. Some research shows trust as a foundation for successful transformational leadership. Yukl (1989) argues that transformational leaders are effective because they have the trust of their followers. Hoy and Miskel (2001) support that by stating trust is what "transformational leaders use as a foundation for achieving exemplary performance" (p. 41). Fullan (2002) establishes coherence as a critical construct for transformational leaders to foster when seeking to bring about lasting change in the culture of learning, suggesting a relationship between transformational leadership and bringing coherence.

The first four hypotheses of this study predict a positive relationship between each of the independent variables and professional learning communities when examined separately. The interrelatedness of the variables raises the question of whether the variables will show an increased effect on professional learning communities when examined in a combined model. This study will test if there is an increase in the effectiveness of professional learning communities when transformational leadership, trust, and program coherence exist simultaneously. Thus, it is predicted that,

H5. Schools which combine high levels of principal transformational leadership, high collegial and principal trust, and high program coherence, will have more effective professional learning communities.

Chapter 4: Methods

Research Design

The primary purpose of this study was to determine the role of the principal in effective professional learning communities, specifically what conditions can they create to foster effective professional learning communities. It was predicted that if the principal creates the conditions for high levels of trust and program coherence while employing transformational leadership, teachers will perceive more effective professional learning communities. This study used a correlational research design using data from schools in an urban district to look at the relationships between trust, transformational leadership, and program coherence with professional learning community effectiveness. This study used a hierarchical linear modeling to determine the effect of the trust, transformational leadership, and program coherence on the effectiveness of professional learning communities.

Research Population and District Context

Data were collected from teachers representing 71 schools in in a large, urban district in the Midwest with a metropolitan population of approximately 950,000 residents. The district has an enrollment of approximately 42,000 students in 52 elementary schools and 19 secondary schools. Of the 42,000 students, approximately 31% are African American, 29% Caucasian, 25% Hispanic, 8% Native American and 2% Asian. Eighty three percent of the students qualify for free or reduced lunch. While the data came from a large urban district in the Midwest, these schools are reflective of urban schools across the country. Therefore, while the sample is limited to

one district, there is no reason to believe that these schools are different than other like schools in like districts throughout the country.

Data Source

The data for this study were collected and provided by the Oklahoma Center for Education Policy in the spring of the 2013-2014 school year. Data were collected for the following variables, all with the teacher as respondent: professional learning community performance, program coherence, faculty trust in colleagues, principal and district, and transformational leadership. The survey was administered via an electronic link sent to approximately 2,400 teachers at 72 school sites. Teachers average 10 years of teaching experience and approximately 25% hold advanced degrees. Teachers from all grade levels, PK-12, were randomly assigned one of two electronic surveys (Survey A or Survey B). The response rate was 65% for Survey A and 62% for Survey B. Items for transformational leadership and professional learning community effectiveness appeared on Survey A and items for trust and program coherence appeared on Survey B.

Data on professional learning community performance, faculty trust in the principal, faculty trust in the district, faculty trust in colleague, transformational leadership and program coherence were collected using a Likert-type scale in which respondents specify their level of agreement or disagreement for a series of statements about their perception of school conditions and structures. Using a scale that ranges from 1-6, the range captures the intensity of their feelings for a given item with higher scores indicating a more positive response and lower scores indicating a more negative response. Dawes (2008) found that surveys with ten levels as opposed to five or seven

produces slightly higher mean scores relative to the highest attainable score. Although the difference is statistically significant, there were no other differences found when comparing the surveys. An even-point scale is used to force respondents into a positive or negative leaning response by eliminating the neutral option, resulting in increased reliability.

Conceptual and Operational Measures

Professional learning communities.

Professional learning communities enable collaboration that focuses on shared goals and reflective professional inquiry (Bolam et al., 2005; King, 2011). The Professional Learning Community Performance Scale measures the degree to which faculty feel that the inquiry team structure enables a team to accomplish its task by working together so that team functions are coordinated to aid in the achievement of student learning goals. The Professional Learning Community Performance Survey used in this study comes from Stanford University's Center for Research on the Context of Teaching and consists of fifteen items with a Likert-type response set ranging *strongly disagree* =1 to *strongly agree* =6. Reliability, as measured by Cronbach's-alpha was .97 with factor loadings ranging from .72 to .92. Sample items from this survey include:

Our PLC members:

- Are open and honest about their instructional weaknesses and mistakes
- Solve important issues during team meetings
- Challenge one another in order to make informed decisions

- Are able to come to an agreement without compromising individual members' perspectives
- Leave meetings confident that there is consensus on decisions
- Share ownership of team learning

Reliability and structural validity

Reliability, as measured by Cronbach's-alpha was .97 with factor loadings ranging from .72 to .92

Faculty trust in the principal.

Faculty trust in the principal measures the quality of relationships between the faculty and the principal. Questions ask faculty about the support, openness, dependability, competence and honesty of the principal. Higher principal trust indicates that faculty respect and trust the leadership of the principal. The survey consists of eight items with a Likert-type response set ranging *strongly disagree* =1 to *strongly agree* =6. Items included in the survey are:

1. Teachers in this school trust the principal
2. Teachers in this school are suspicious of most of the principal's actions
3. The teachers in this school have faith in the integrity of the principal
4. The principal in this school typically acts in the best interests of teachers
5. The principal in this school does not show concern for the teachers
6. Teachers in this school can rely on the principal
7. The principal in this school is competent in doing his or her job
8. The principal doesn't tell teachers what is really going on.

Reliability and structural validity

The Omnibus T-Scale is a short operational measure of the three dimensions of faculty trust which can be used for either elementary or secondary schools. The reliabilities of the three subscales typically range from .90 to .98. Factor analytic studies of the Omnibus T-Scale support the construct and discriminate validity of the concept.

Faculty trust in colleagues.

Faculty trust in colleagues measures the quality of relationships among teachers as determined by faculty perceptions of their colleagues' openness, commitment to students, honesty, competence in the classroom, cooperation with each other, and reliability. Higher faculty trust suggests that faculty perceive their colleagues as being open, honest, reliable, competent and benevolent in their thoughts and actions. The faculty trust in colleagues survey consists of eight items with a Likert-type response set ranging *strongly disagree* =1 to *strongly agree* =6. Items included in the survey are:

1. Teachers in this school trust each other
2. Teachers in this school typically look out for each other
3. Teachers in this school are suspicious of each other
4. Even in difficult situations, teachers in this school can depend on each other
5. Teachers in this school do their jobs well
6. Teachers in this school have faith in the integrity of their colleagues
7. The teachers in this school are open with each other
8. When teachers in this school tell you something, you can believe it

Reliability and structural validity

The Omnibus T-Scale is a short operational measure of the three dimensions of faculty trust which can be used for either elementary or secondary schools. The reliabilities of the three subscales typically range from .90 to .98. Factor analytic studies of the Omnibus T-Scale support the construct and discriminate validity of the concept.

Faculty trust in the district.

Faculty trust in the district measures teacher perceptions of the district as open, honest, benevolent, reliable, and competent. More specifically, it assesses faculty perceptions of the degree to which the district administration is aware of relevant issues, organized, committed, and supportive of teachers' autonomy and professional growth. The survey for faculty trust in the district consists of ten items with a Likert-type response set ranging *strongly disagree* =1 to *strongly agree* =6. Items included in the survey are:

The district administrators...

1. show concern for the needs of my school
2. value my expertise for school improvement
3. value the expertise of teachers
4. follow through on commitments
5. often say one thing and do another
6. honor agreements
7. are committed to the stated goals of the district
8. demonstrate knowledge of teaching and learning

9. have established a coherent strategic plan for the district
10. take personal responsibility for their actions and decisions

Reliability and structural validity

Reliability, as measured by Cronbach's alpha, was .95 for the scale suggesting strong consistency among the 10 items. Internal structural validity was strong with factor loadings ranging from .45 to .90.

Transformational leadership.

Transformational leadership “focuses on developing the organization’s capacity to innovate” by motivating them to achieve beyond their expected level of performance (Hallinger, 2003, p. 330). Transformational leadership is characterized by seven key behaviors: 1) identifying and articulating a vision, 2) providing an appropriate model, 3) fostering group cohesion, 4) high performance expectations, 5) challenging assumptions and the status quo, and 7) recognizing outstanding work. Theoretical and empirical research suggests that transformational leadership behaviors influence organizational citizenship behaviors both directly and indirectly (Podsakoff et al., 1990; Ross & Gray, 2006). Items measured for the Transformation Leadership Behavior Scale were generated to measure the seven key behaviors of transformational leadership as perceived by teachers. The Transformational Leadership Behavior Scale used in this study consisted of seven items with a Likert-type response set ranging *strongly disagree* =1 to *strongly agree* =6. Items included in the survey *are the principal at this school*:

1. inspires others with his/her plans for the future
2. provides a good model for me to follow
3. develops a team attitude and spirit among employees

4. insists on only the best performance
5. behaves in a manner thoughtful of my personal needs
6. asks questions that prompt me to think
7. commends me when I do a better than average job

Reliability and validity

Reliability, as measured by Cronbach's alpha was .94 for the Transformational Leadership Behavior Scale, suggesting strong internal consistency among the items. The structure of the factor analysis supported the construct validity, as did concurrent and predictive validity procedures.

Program coherence.

Program coherence assesses the degree to which faculty feel the instructional programs at their school are coordinated with each other and the school's mission. The Program Coherence Survey, developed by the Consortium on Chicago School Research, asks questions to measure degree to which faculty feel there is coordination and alignment of instructional programs at their school, both across and within grades. High levels indicate that the school's programs are coordinated and consistent with its goals for student learning. The Program Coherence Survey consists of six items with a Likert-type response set ranging *strongly disagree* =1 to *strongly agree* =6. Items included in the survey are:

1. Once we start a new program, we follow up to make sure that it is working
2. We have so many different programs in this school that I can't keep track of them all

3. Many special programs come and go at this school
4. You can see real continuity from one program to another at this school
5. Curriculum, instruction, and learning materials are well coordinated across different grade levels at this school
6. There is a consistency in the curriculum, instruction, and learning materials among teachers in the same grade level at this school.

Reliability and validity

Reliability, as measured by Cronbach's-alpha, ranged from .84-.90 indicating strong item consistency.

Analytical Technique

With teachers nested in schools, multi-level modeling was chosen as the appropriate analytical technique to test the five hypotheses. A conventional modeling building process was followed using HLM 7.0. The first step involved partitioning variance in professional learning community experiences to individual teacher and school factors. Second, variance was modeled as a function of individual teacher characteristics and school characteristics with a fixed effects regression. Teacher trust in district administration and years teaching were used as teacher level predictor variables and centered around the grand-mean. The purpose was to account for individual teacher factors that may explain variation in experiences with the professional learning communities. The effect of these variables were fixed to the individual teacher level and not allowed to vary at random across schools. The third step was to test a random intercepts means-as-outcomes model. This analysis models variance in professional learning community experiences as a function of school

characteristics controlling for the effect of individual teacher factors (Luke, 2004; Raudenbush & Bryk, 2002). Example equations follow.

Unconditional Model (Null Model)

$$\text{Level-1: } ZPLCSOR_{ij} = \beta_{0j} + r_{ij}$$

$$\text{Level-2: } \beta_{0j} + \gamma_{00} = u_{0j}$$

Fixed Effects Regression

$$\text{Level-1: } ZPLCSOR_{ij} = \beta_{0j} + \beta_{1j}*(ZFTDISTS_{ij}) + \beta_{2j}*(ZYEARSTA_{ij}) + r_{ij}$$

$$\text{Level-2: } \beta_{0j} = \gamma_{00} + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

Random Intercepts, Means-as--Outcomes

$$\text{Level-1: } ZPLCSOR_{ij} = \beta_{0j} + \beta_{1j}*(ZFTDISTS_{ij}) + \beta_{2j}*(ZYEARSTA_{ij}) + r_{ij}$$

$$\text{Level-2: } \beta_{0j} = \gamma_{00} + \gamma_{01}*(ZTLBSCOR_j) + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

Limitations of the Study

First, this study is limited in that data come from one district. Although the district is a large urban district and is reflective of other like schools in the country, it is unknown if the same results would occur if the study included rural, suburban or small schools. Second, while years in the school was found not to be statistically significant in the analysis, years in the district did show to be statistically significant, albeit weak (Table 2). The study does not consider the turnover rate in the district and possible lack of professional development or training that may result within a population of the

teachers. This study assumed that teachers and administrators in the district have gone through the same or similar professional development on what professional learning communities are, how to implement professional learning communities, and how to maintain the ongoing fidelity of the implementation in their school. However, if schools have a high number of teachers with few years in the district, it may change the data for that school and is therefore a limitation of the study.

Third, this study assumed that all professionals involved with the professional learning community process are implementing and using the model to the best of their abilities and with a high degree of fidelity. With no way of measuring to what degree of fidelity teachers and schools are implementing professional learning communities, it is unknown if teachers are using the same criteria for judging the effectiveness. If teachers are answering based on different criteria of effectiveness, results could be skewed and therefore this could be considered a limitation of the study. Fourth, this study does not take into consideration the level of school taught or the gender of the teacher. It could be that the results would be different for elementary and secondary schools, male and female teachers. Further analysis of the data would be necessary to determine if these variables influenced professional learning community effectiveness.

Finally, this study also does not consider the experience level of the principal. Additional information might emerge from considering principals early in their career, later in their career, if they have served as principal in only one school versus a variety of schools, or how many districts they have worked in as a principal. There are many factors about the principal, which if studied further, could give insight as to when

principals are most likely to employ trust, transformational leadership and program coherence in their careers.

Chapter 5: Results and Analysis

The purpose of this section is to report the specific results of the data analysis to allow the researcher to test the hypotheses. First, descriptive and correlational data for teachers and schools are provided. These data describe the sample of teachers and schools and show the correlation among the variables. Next, results of the random coefficient regression are presented to illustrate the relationship between teacher variables and perceptions of learning communities. Evidence for the hypotheses come from the random intercepts and slopes models. The section concludes with findings from a post-hoc analysis.

Table 2 shows the descriptive statistics and correlations for the teacher level variables. Years taught does have a statistically significant correlation to professional learning community effectiveness. It is very weak, but it is statistically significant so that is justification for entering it into the HLM model. Also, faculty trust in the district has a strong relationship to professional learning community effectiveness; that justifies for including at the teacher level in the analysis. Years in school is not statistically significant related to professional learning community effectiveness, therefore it was not included in the analysis.

Table 2. Descriptive Statistics and Correlations for Teacher Level Variables

Teacher Level Variables	Mean	SD	FTD	PLC	Years Taught	YearsInSch
FTD	3.52	1.17	1	.438**	.022	-.058
PLC	4.10	1.18		1	.130**	.067
YearsTaught	13.10	9.1			1	.535**
YearsInSch	6.13	6.4				1

Note. N=600; **. correlation is significant at the 0.01 level (2-tailed). FTD = faculty trust in the district. PLC = professional learning community effectiveness. YearsTaught = years taught. YearsInSch = Years in the school.

Table 3 shows the descriptive statistics and correlations for the school level variables. It is important to note that all the predictor variables have strong correlations, but not so strong as to cause concern. With correlation coefficients below .70, there is no concern that they are collinearly. The correlational evidence presented in Table 3 supports the belief that these four predictor variables are related, yet they are distinct concepts.

Table 3. Descriptive Statistics and Correlations for School Level Variables

School Level Variables	Mean	SD	TLB	FTP	FTC	PC
TLB	4.551	.6794	1	.549**	.273*	.452**
FTP	4.460	.8218		1	.512**	.660**
FTC	4.566	.4893			1	.636**
PC	3.474	.5501				1

Note. N=72; **. Correlation is significant at the 0.01 level (2-tailed) *. Correlation is significant at the 0.05 level (2-tailed). TLB = transformational leadership behavior. FTP = faculty trust in the principal. FTC = faculty trust in colleagues. PC = program coherence.

An unconditional random effects ANOVA was run to determine the amount of variance in perceptions of professional learning communities that exists at school and teacher levels (Table 4). Variance components of .09 for the intercept and .91 for

teacher-level error indicate that 9% variance in perceptions of professional learning community effectiveness exists across schools. Although the majority of variance is at the teacher level, 9% is statistically significant and worth explaining.

Table 4. Unconditional Model of PLC Variance Across Schools

Random effect	Standard Deviation	Variance Component	<i>d.f.</i>	X^2	<i>p</i> -value
INTRCPT1, u_0	0.30248	0.09150	70	129.97351	<0.001
level-1, r	0.95479	0.91163			

Note. N=71 schools; ** $p < .01$; * $p < .05$. Deviance=1690.542277. Number of estimated parameters=2.

Results of the random coefficient regression model with only teacher-level predictor variables are displayed in Table 5. Results indicate that faculty trust in the district ($\beta_1 = .43$, $p < .01$) and years of teaching experience ($\beta_2 = .13$, $P > .01$) have statistically significant relationships with professional learning community effectiveness, combining to explain approximately 31% of the teacher level variance. Faculty trust in the district had the strongest unique effect, accounting for approximately 18% of the variance in professional learning community effectiveness.

Table 5. Random Coefficient Regression Model PLC Effectiveness Explained by Faculty Trust in the District

Fixed effect	Coefficient	Standard Error	<i>t</i> -ratio	Approx. <i>d.f.</i>	<i>p</i> -value
For INTRCPT1, β_0					
INTRCPT2, γ_{00}	0.001859	0.49219	0.038	70	0.970
For ZFTDISTS slope, β_1					
INTRCPT2, γ_{10}	0.428817	0.036196	11.847	527	<0.001
For ZYEARSTA slope, β_2					
INTRCPT2, γ_{20}	0.12864	0.036171	3.556	527	<0.001

Note. N=71 schools; ** $p < .01$; * $p < .05$. ZFTDISTS = faculty trust in the district. ZYEARSTA = years experience.

Table 6 shows the results of the random intercepts and slopes models. Each school-level predictor was entered with the school and teacher controls to first assess its

independent effect on professional learning community effectiveness. Statistically significant predictors were retained and entered into a combine model. In model one, transformational leadership behavior had a weak and statistically significant relationship with professionally learning community effectiveness ($\beta_1 = .13, p < .01$), explaining approximately 33 percent of the school-level variance. In model two, faculty trust in the principal had a weak and statistically significant relationship with professional learning community effectiveness ($\beta_1 = .11, p < .05$), explaining about 30 percent of the school variance. Results in models three and four report that faculty trust in colleague ($\beta_1 = .14, p < .01$) and program coherence ($\beta_1 = .18, p < .01$) also had statistically significant relationships with professional learning community effectiveness, explaining about 33 percent and 44 percent of the school-level variance.

The combined model estimates the unique effect of transformational leadership behavior, faculty trust in principal, faculty trust in colleague, and program coherence. Results showed that statistically significant relationships with transformational leadership behavior and faculty trust in the principal wash out in the combine model and the relationship between faculty trust in colleague and professional learning community effectiveness was reduced from .14 to .05. Program coherence, on the other hand, maintained its statistically significant relationship with professional learning community effectiveness ($\beta_1 = .17, p < .01$) without a reduction in its effect. The combined model was the best fitting mode and accounted for 50 percent of the school-level variance.

Table 6. Results of Random Intercepts and Slopes Models of PLC Effectiveness

	Model 1	Model 2	Model 3	Model 4	Combined Model
For Intercept1, β_0	-0.0 (.04)	0.0 (.04)	0.0 (.04)	0.0 (.04)	0.0 (.04)
TLB	0.13(.04)**	-	-	-	0.10 (.06)
FTP	-	0.11 (.05)*	-	-	-0.09 (.07)
FTC	-	-	0.14 (.04)**	-	0.05 (.05)*
PC	-	-	-	0.18 (.04)**	0.17 (.06)**
FTD slope	0.42	0.43	0.43	0.42	0.42
Years Ex. Slope	0.12	0.12	0.12	0.12	0.12
Deviance	1550	1553	1548	1542	1548
Δ Deviance	140	137	142	148	142
Explained School Variance	33%	30%	33%	44%	50%

Note. N=71 schools; **p<.01; *p<.05. Δ Deviance presents the difference from the unconditional model. TLB = transformational leadership behaviors; FTP = faculty trust in the principal; FTC = faculty trust in colleagues; PC = program coherence; FTD = faculty trust in the district; Years Ex. = years experience.

Post Hoc Analysis

Results of the primary empirical test raise an interesting question about how program coherence may work to effect experiences in professional learning communities. A post-hoc analysis was done to test one theoretical pathway between program coherence and professional learning community effectiveness. Derived from Self-Determination Theory, the pathway involves the autonomous motivation and

engagement of teachers. It is predicted that a coherent instructional program provides a context in which teachers are motivated to go above and beyond their contractual obligations by engaging in professional behaviors that enhance their own learning experiences. To test this idea, a 2-2-1 mediation model with organizational citizenship behavior mediating the relationship between program coherence and professional learning community effectiveness was advanced. Professional learning community effectiveness (β_{0j}) was predicted to be a function of the grand mean (γ_{00}), the effect of program coherence (γ_{01}), organizational citizenship behaviors (γ_{02}) and school level error (u_{0j}).

2-2-1 Mediation Model

$$\text{Level 1: } \text{PLC}_{ij} = \beta_{0j} + r_{ij}$$

$$\text{Level 2: } \beta_{0j} = \gamma_{00} + \gamma_{01}^* (\text{ZPCSCORE}_j) + \gamma_{02}(\text{ZOCBSCOR}_j) + u_{0j}$$

Barron and Kenny's (1986) criteria for mediation were used. Accordingly, mediation exists when (1) there is an estimated direct effect of the independent variable (program coherence, in this case) on the dependent variable (professional learning community effectiveness), (2) there is a direct effect of the independent variable on the mediator (organizational citizenship behavior), and (3) the inclusion of the mediator in the regression model reduces the strength of the direct effect of the independent variable. Results to evidence against the first criterion appear in Model 1 of the post hoc which establishes a unique, direct relationship between program coherence and professional learning community effectiveness ($\gamma_{01} = .22, p < .05$). Evidence for the second criterion is the bivariate correlation between program coherence and

organizational citizenship behavior; the bivariate correlation is .83 suggesting a strong relationship between these two conditions.

Results to evaluate evidence against the third mediation criterion appear in Table 7. As shown, program coherence had a positive and statistically significant relationship with professional learning community effectiveness ($\beta_1 = .22$, $p < .05$). Moreover, in Model 2, the inclusion of organizational citizenship behaviors had a strong and statistically significant relationship ($\beta_2 = .42$, $p < .01$) with program coherence and its inclusion in the model reduced the effect of program coherence from .22 to .00. The results suggest that organizational citizenship behavior fully mediates the relationship between program coherence and professional learning community effectiveness.

Table 7. Post-Hoc Mediation Model of Professional Learning Community Effectiveness

	Model 1	Model 2
For Intercept1, β_0		
PC	.22 (.05)**	.00 (.04)
OCB	-----	.42 (.03)*
Deviance	1680	1628
Δ Deviance	11	62
Explained School Variance	44%	99%

Note. N=71 schools; **p<.01; *p<.05. Δ Deviance for model 1 presents the difference from the null model to model 1. Δ Deviance represents the difference from the null model. PC = program coherence. OCB = organizational citizenship behaviors. Standard errors are reported in parenthesis.

Chapter 6: Discussion and Summary

This chapter interprets and discusses the results considering the study’s research questions, literature review, and conceptual framework. This chapter concludes with a summary followed by recommendations for future research, and recommendations for policy and practice. The key research questions that will be addressed are:

- What is the role of the principal in establishing the conditions necessary to support effective professional learning communities?
- What are the individual and combined effects of transformational leadership, trust, and program coherence on professional learning community effectiveness?

Discussion

School districts are under increasing pressure of accountability with respect to student achievement. To increase the effectiveness of teachers, a common trend in

education is the concept of professional learning communities, a design in which teachers meet regularly to collaborate around data to improve practice and ultimately student achievement (DuFour, 2004). With professional learning communities continuing to gain prominence in districts across the country principals need to intentionally focus their efforts on creating the conditions to enable successful professional learning communities. Professional learning communities are, by design, collaborative structures in which participants share leadership, they are not designed for the principal to be the sole leader (Donaldson, Jr., 2007; Sarason, 1990). Therefore, if the principal is not leading the professional learning, or even present during the professional learning community, what can he or she do to ensure the teachers' time is spent adhering to the process and yields the desired outcome of increased student achievement?

This study examined data from a large urban district to determine what conditions are necessary for effective professional learning communities. In this study 9% variance in professional learning communities existed across schools; a significant amount worth examining. With the study containing one district, it is postulated that the district controlled not only the amount of training administrators and teachers received on professional learning communities, but also set the expectation for implementation for all schools. It can be assumed that the majority of teachers and administrators received the same amount of training, have the same understanding of what a professional learning community is, and operate under the same district expectations. This study examined the following teacher level variables as they relate to professional learning community effectiveness: transformational leadership, faculty

trust in the principal, faculty trust in colleagues, and program coherence. Faculty trust in the district was examined as a control variable.

Transformational Leadership Behavior

The first hypothesis of this study predicted that transformational leadership has a positive effect on professional learning communities. This hypothesis is grounded in empirical research detailed in the literature review supporting transformational leadership as an enabling condition for vision building, collaboration, problem solving, increased commitment to shared goals, and increasing capacity within an organization to accomplish the work (Burns, 1978; Forsyth et al., Geijsel et al., 2002; Harris, 2005; Marks & Printy, 2003). Transformational leadership seeks to bring about change by improving practice, increasing commitment level, and boosting performance of an organization. In educational settings, transformational leadership seeks to increase workers capacity for collaboration, problem solving and innovation with the goal of school improvement (Geijsel et al., 2002; Marks & Printy, 2003). The desired outcomes for transformational leadership behavior in schools align with the goals of professional learning communities: collaboration, learning-oriented, reflective and collective inquiry, commitment to continuous improvement, and shared mission, vision and values (DuFour, 2004; DuFour et al., 2008). By combining shared values and common goals with opportunities for collaboration and shared inquiry, principals can evoke changes in teaching practices (Hallinger, 2003; King, 2011). Kirtman (2013) asserts that the role of the school principal has moved from transactional to transformational and identifies competencies associated with successful principals. To meet “the challenges of shifting the exiting paradigm – redirecting the primary focus

from accountability, scores, and testing to the school's fundamental purpose and shared mission, vision, and commitment," Kirtman has identified seven critical competencies.

Transformational leadership outcomes align with Kirtman's competencies which include:

1. Challenges the status quo
2. Builds trust through clear expectations and communication
3. Common plan (vision) for success
4. Focus on team over self
5. High sense of urgency and sustainable results
6. Commitment to continuous self-improvement
7. Building external networks and partnerships

Transformational leadership has consequences for principals who aim for their faculty to engage in productive, effective professional learning communities in order to bring about school change. Through transformational leadership, principals will create enabling conditions for common vision, collective responsibility and commitment to continuous improvement, and focus on team to achieve common goals (Harris, 2005; Marks & Printy, 2003; Wahlstrom & Louis, 2008; Yu, Leithwood & Jantzi, 2002). If schools expect professional learning communities to be the vehicle through which teachers collaborate to improve practice and student outcomes, principals should be skilled in transformational leadership.

Table 8 shows the percent of total variance explained by each variable independently and the total variance explained by the variables collectively. As shown in Table 8, this research supports the current literature with transformational leadership

behavior explaining 33% of the variance in professional learning community effectiveness and validates H1: Schools in which the principal exhibits transformational leadership, as perceived by teachers, will support more effective professional learning communities.

Table 8. Summary of Explained Variance

Variable	% variance explained of the total variance of 9%
Transformational Leadership Behavior	33%
Faculty Trust in the Principal	30%
Faculty Trust in Colleagues	33%
Program Coherence	44%
Combined	50%

Trust

The second and third hypotheses in this study predicted that schools with high levels of trust in colleagues and the principal will experience more effective professional learning communities. These hypotheses are grounded in research detailed in the literature review that show trust to be an enabling condition for feelings of benevolence, openness, reliability, competency, honesty, and a willingness to collaborate, thus a necessary condition for effective professional learning communities (Daly, 2009; Day, 2009; Forsyth et al., 2011; Mishra, 1996; Tschannen-Moran 2004; Tschannen-Moran & Hoy, 2004; Walker et al., 2011). Trust occurs when another person, colleague or leader, or an organization is perceived to be honest, open, benevolent, reliable, and competent (Daly, 2009; Forsyth et al., 2011; Walker et al., 2011). In schools, trust exists on three levels: faculty trust in the district, faculty trust in the principal, and faculty trust in colleagues (Forsyth et al., 2011; Hoy & Kuper-Smith, 1985; Tarter et al., 1989). Strong relationships in the building are frequently considered

to be necessary for effective professional learning communities to occur (Bolam et al., 2005). Faculty trust in the principal and faculty trust in colleagues are school level variables and, as such, are to some degree, within the principal's locus of control (Walker et al., 2011).

Returning to the literature, key components for professional learning communities to be effective are: shared mission, vision, and values; collaborative culture; collective inquiry; learning by doing; a commitment to continuous improvement; openness; mutual trust, respect, and support (Bolam et al., 2005; DuFour, 2004; DuFour et al., 2008). Faculty trust in colleagues is critical as teachers come together in professional learning communities to examine student data, identify areas for improvement and problem-solve ways to teach the content better. Teachers must openly share their data, acknowledge mistakes and failures, along with successes, in order to learn and build their capacity to educate students. Research is clear that with an absence of faculty trust in colleagues, key components of effective professional learning communities are less likely to occur (Cosner, 2009; Forsyth et al., 2011; Tschannen-Moran & Hoy, 2000). This could likely be because with an absence of trust, teachers are unwilling to risk being vulnerable with their colleagues or retribution from their principal for ideas that are contrary to the leadership or for failure. Without trust professional learning communities are not places that teachers are comfortable sharing their practice and results for the purpose of "failing forward" and continuous improvement.

While the goal of professional learning communities is for teachers to collaborate and increase their effectiveness to reach common goals, it is the principal

who sets the conditions for teachers to continually hone their skills and improve their practice (DuFour et al., 2008). Principals are the drivers of the structural, human and social resources found to be supportive of effective professional learning communities (Ghamrawi, 2011; Forsyth et al., 2011; Louis et al., 1996; Wahlstrom & Louis, 2008; Walker et al., 2011). Principals who support collaboration, value the voice and suggestions of the teachers, and distribute leadership are more likely to find professional learning communities yielding the intended results of improving teacher practice (Sarason, 1990). If teachers feel autonomy to collaborate in professional learning communities absent the presence of the principal and trust that the principal will value their work, they are more likely to be committed to the process. For all of the above conditions to occur, faculty must perceive the principal as trustworthy; believing that there will be no repercussions for failing, expressing views contrary to those of the principal, or disagreeing with colleagues in the name of collaboration and progress.

H2 and H3 state: schools with high levels of faculty trust in colleagues and the principal, respectively, will experience more effective professional learning communities. As shown in Table 8, this research supports the hypothesis and current literature, with data showing 33% of the variance across schools is explained by faculty trust in colleagues and 30% by faculty trust in the principal. Faculty trust in colleagues and faculty trust in the principal are both statistically significant with respect to professional learning community effectiveness.

As stated earlier, faculty trust in the district is not a school level variable and therefore was not the focus of this research. However, with 91% of the variance residing at the teacher level, the researcher wanted to determine if faculty trust in the

district could be significant in explaining the variance. The results of the random coefficient regression were noteworthy: 18% of the variance at the teacher level is attributable to faculty trust in the district. While not explored in this study, it is an interesting finding and one that school districts should understand. Professional learning communities are most commonly a district driven initiative in terms of district expectations and strategic planning. As a district initiative, it would stand to reason that faculty trust in the district would be a large contributor to the variance at the teacher level. If teachers have high trust in the district, they have high trust in the initiatives and expectations set by the district. If central offices aim to use professional learning communities as the vehicle for improvement in teaching and learning, they would be wise to consider to what degree the teachers trust in the district and what can be done to increase the level of trust.

Program Coherence

It is no surprise that transformational leadership and trust are significant enablers for the conditions for effective professional learning communities and this is heavily supported in extant literature as well as by this research (Bass, 1985; Burns, 1978; Hallinger, 2003; Harris, 2005; King, 2011; Leithwood, 1994; Leithwood & Jantzi, 1990; Marks & Printy, 2003; Wahlstrom & Louis, 2008). What is surprising in the findings is that program coherence, independently, explains 44% of the total variance and proves to be the single most important variable in the study. Program coherence, or instructional coherence, is often alluded to and is sometimes implied as a necessary condition for school reform success (DuFour, 2004; DuFour et al., 2008; Honing & Hatch, 2004; Newmann et al., 2001; Roderick et al., 2009). However, in

2001, Newmann and colleagues found no studies exploring school-level instructional program coherence. Honig and Hatch (2004) found “theoretical and empirical research relevant to but outside education” that predominately focused on policy coherence (p. 27). As a result, Honig and Hatch suggest educational policy coherence must shift from being an outcome of the work to a process of how the work is done. This idea of associating key activities and conditions for coherence in educational settings is referred to as crafting coherence (Honig & Hatch, 2004). The Consortium on Chicago School Research (2009) recognized the need for further study on program coherence in education, which resulted in the development of the Program Coherence Survey to determine the degree to which faculty feel there is coordination and alignment of instructional programs.

Much of the research on coherence focuses on policy coherence in the form of “inside-out” and “outside-in” models from non-educational settings (Honig & Hatch, 2004; Roderick et al., 2009). In the field of education, these methods are ineffective as they focus on coherence as an outcome rather than a continual process for the way schools operate (Honig & Hatch, 2004). Newmann and colleagues (2001) assert that school reform efforts fail to succeed when there is not strong instructional program coherence. When teachers perceive alignment between initiatives, strategic planning, professional learning, resource allocation and classroom practices reform efforts are more likely to yield the desired results (Roderick et al., 2009). For professional learning communities to function effectively, teachers must see value in the work being done and a connection between the school goals and their individual work in the classroom. Principals who give a clear, common focus to the work of the teacher find

greater acceptance of the group goals (Deal & Peterson, 1990, Leithwood, 1994, McEwan, 2003).

Of the three variables examined, program coherence emerges as the strongest, independently explaining more variance in professional learning community effectiveness than transformational leadership or trust. With professional learning communities serving as the structure for school improvement in many schools, this study adds to the small body of literature that suggests program coherence is an enabling condition to professional learning community effectiveness (DuFour et al., 2008; Fullan, 2002; Newmann et al., 2001; Roderick et al., 2009). These results also address a gap in the literature, suggesting a direct relationship between program coherence and professional learning community effectiveness. With program coherence explaining 44% of the total variance, the results also suggest that bringing coherence to the work is one of the highest leverage actions a principal can take to support effective professional learning communities. As shown in Table 8, with the finding that program coherence independently explains 44% of the variance, this research validates H4: schools with high levels of program coherence experience more effective professional learning communities.

Combined Model

The final hypothesis in this research (H5) is if principals exhibit transformational leadership behaviors, create the conditions for high levels of trust, and ensure program coherence, then the professional learning communities in the building will function at higher levels of effectiveness. As previously discussed, this study supports the empirical evidence that trust and transformational leadership are enabling

conditions for effective professional learning communities. (Geijsel et al., 2002; Harris, 2005; Hoy & Williams, 1971; Leech & Fulton, 2008, Marks & Printy, 2003; Oplatka, 2006; Tarter et al., 1989; Wahlstrom & Louis, 2008). This study also shows a strong relationship between program coherence and effective professional learning communities, supporting the implications of a small body of existing research (DuFour et al., 2008; Fullan, 2002; Newmann et al., 2001; Roderick et al., 2009). As shown in Table 8, each of the variables shows influence on professional learning community effectiveness independently. However, when combined, the variables explain 50% of the total variance. It is evident from the research results that there is shared variance among the variables, which is not surprising due to the interrelated nature of the concepts. The findings in this study soundly support H5, showing that principals who demonstrate transformational leadership behaviors, foster trust, and create program coherence have propitiously set the necessary conditions for professional learning communities to be an effective structure within the school.

Post Hoc

In addition to extant evidence of existing relationships, the hypotheses in this study relied on research surrounding the concept of organizational citizenship as rationale to justify drawing connections between the variables and professional learning communities. Organizational citizenship literature aided in pointing to variables that may be important to understanding variation in professional learning community success. Of the three independent variables in the original study, program coherence emerged as the strongest, and the only variable to maintain its statistically significant relationship with professional learning community effectiveness in the combined model.

This finding was significant and addressed a gap in current literature, introducing program coherence as a predictor of professional learning community effectiveness. However, the original study failed to address why this might be the case.

As a result, it became of interest to explore further the relationship between program coherence and professional learning communities and formally introduce organizational citizenship behavior into the equation as a mediating variable. To review, the posts hoc analysis predicted that a coherent instructional program provides a context in which teachers experience increased motivation to engage in professional learning community activities that enhance their own learning experiences and thus improve practice. The results of the post hoc analysis show organizational citizenship behavior fully mediates program coherence. That does not mean program coherence and organizational citizenship behavior are the same thing, but it does suggest that the measurement domains for these two perceptions activate the same set of perceptions. The implication is teacher attitude toward professional learning community effectiveness and their inclinations to practice organizational citizenship are practically inseparable.

To explore “why” this should be the case it is prudent to introduce a theory that provides a lens through which to examine possible explanations for the results yielded in this study. For that, it is helpful to reexamine the post hoc analysis, now through the lens of Self-Determination Theory. Self-Determination Theory suggests that social conditions work through motivations to influence effort, work, and tasks. Ryan & Deci (2002) argue that “the concept of basic psychological needs for competence, autonomy, and relatedness serves to define those contextual factors that tend to support versus

undermine motivation, performance, and well-being” (p. 27). The next sections will examine transformational leadership, trust, and program coherence as satisfying the psychological needs of autonomy, relatedness, and competency, respectively.

The psychological need for autonomy may be useful to further examine the relationship between transformational leadership and professional learning community effectiveness. Central to the work of professional learning communities is a common vision for teaching and learning, ownership for attainment of shared goals, a commitment to growth and improvement (Bolam et al., 2005; DuFour et al., 2008; Louis et al., 1996; Senge, 1990; Stoll et al, 2006). Transformational leadership requires a principal to set a vision, mission, and goals for the school and enables others to align themselves to the vision and develop strong commitment to the shared goals (Marks & Printy, 2003; Newmann et al., 2000). Transformational leaders inspire employees to go beyond what is contractually expected to achieve common goals (Bass, 1985, Burns, 1978). Employment of transformational leadership demands that principals share leadership; supporting suggestions that any member of the faculty can assume leadership while working in collaboration to problem-solve (Bolam et al., 2005; DuFour et al., 2008).

Deci and Ryan (2002) state the need for autonomy “is about sensing some level of control and choice about the work one is doing” (p. 262). With respect to professional learning communities, transformational leadership affords teachers the autonomy to monitor their own work, analyze data, and determine as a collective unit the best way to examine their classroom practice to yield increased results in student achievement (Louis et al., 1996). Eyal and Roth (2011) suggest principals and their

leadership play a key role in teacher motivation, finding that “transformational leadership – characterized by the articulation of a salient organizational vision and the empowerment of teachers – is associated with autonomous motivation” (267). In schools, principals who employ transformational leadership may be creating the conditions to satisfy teachers’ psychological need for autonomy.

The psychological need of relatedness may provide an explanation for trust as a predictor of professional learning community effectiveness. Deci and Ryan (2002) suggest relatedness is about “feeling connected, sharing a mutual goal, and being in a relationship for the long-haul” (p. 266). Relatedness refers to feeling part of a group, belonging to a community in which individuals care for one another (Deci & Ryan, 2005). Although teaching can be a very isolating job, schools are social institutions and professional learning communities are group activities, and as such how related teachers feel to the group is important.

Trust has implications for how related a person feels to a group. Teachers interact with and observe colleagues and principals daily, and perceptions of trust are based on those interactions and observations (Forsyth et al., 2011). High levels of trust in the principal indicate teachers see the principal as supportive, open, dependable and honest (OUCEP, 2013). High levels of collegial trust indicate teachers perceive their colleagues to be open, honest, competent in the classroom, and cooperative (OUCEP, 2013). Faculty trust in the principal and faculty trust in colleagues positively correlate; when trust in the principal is high, teachers are more likely to trust their colleagues and vice-versa (Tschannen-Moran and Gareis, 2015).

Professional learning communities, by design, consist of a group of colleagues regularly engaging in spirited discussions about teaching and learning as a means of acquiring new knowledge and changing practice (Bolam et al., 2005; DuFour et al., 2008; Stoll et al., 2006; Tschannen-Moran & Gareis, 2015). High levels of trust increase a teacher's sense of belonging, motivation, and participation in collegial dialogue (Cosner, 2009; DuFour et al., Ghamrawi, 2011). This suggests that trusting school cultures may motivate teachers to participate more fully in professional learning community activities. Thus, in schools where teachers' psychological need for relatedness is met with high levels of trust, professional learning communities may thrive.

The review of literature revealed a gap in the research on program coherence as a predictor of variance in professional learning communities; however, literature on program coherence and an examination of citizenship behavior pointed to possible relationship worth exploring. As a result, H4 predicted that when teachers perceive high levels of coherence, professional learning communities are more effective. The original analysis confirmed this hypothesis. But why does program coherence matter? As discussed earlier, the research on program coherence is scant. There is some research to suggest, however, when teachers perceive coherence, they feel the work makes sense; they are more likely to engage with their colleagues, they feel the work can be accomplished, and they maintain focus on the goals (Roderick et al., 2009). Newmann et al. (2001) suggest that a lack of coherence causes frustration and a feeling that the work is chaotic, with the opposite being coherence eliciting a feeling the work

makes sense, thus making teachers more willing to engage in collaboration and show a higher commitment.

The third psychological need identified in Self-Determination Theory, competence, could offer an explanation as to why program coherence matters. Competence is the ability to compete or perform as expected (Deci & Ryan, 2002). Deci and Ryan state “the need for competence is about growing and experiencing challenge to one’s current abilities or knowledge” (p. 264). The psychological need for competence is satisfied by evidence of personal and group efficacy, a belief that members are competent to accomplish the task at hand. Efficacy is critical in schools, where teachers and principals depend upon the competence of others to achieve the goals of the school. Efficacy, in Self-Determination Theory, is a competency variable (Deci & Ryan, 2002). People are not only motivated when they perceive relatedness and autonomy, but also when they perceive themselves and their colleagues as competent (Deci & Ryan, 2002). Program coherence aligns the vision and goals to essentially everything teachers and leaders do in a school. Program coherence creates a sentiment that the vision supports the work of the teachers as a group and in the individual classroom and that teachers are capable of achieving the goals (Newmann et al., 2001). Program coherence may foster a feeling of self and collective efficacy, satisfying the psychological need for competency. Thus, Self-Determination Theory may aid in explaining why program coherence has implications for professional learning community effectiveness.

Professional Learning Communities as the Vehicle for School Improvement

Efforts

Districts around the country are implementing professional learning communities with expectations of increased collaboration among teachers to improve practices and increase student achievement. With effective professional learning communities, principals will have a viable structure through which they can implement more successful school improvement efforts. However, often the principal is not present during the professional learning community, so their role then becomes to create the conditions for effective professional learning communities. This study tested the effect of the independent variables on professional learning community effectiveness, with the prediction that if principals employ transformational leadership, foster trust, and build program coherence, they will experience more effective professional learning communities.

Professional learning communities can serve as the foundation for fostering and increasing levels of trust in a school, both faculty trust in the principal and faculty trust in colleagues. Teachers must trust in the principal that they are given the liberty to question the status quo and try strategies without fear of repercussions for failure. Principals must show they are trustworthy by demonstrating the belief that teachers will adhere to the professional learning community process, self-regulate behavior and maintain a focus on the work for the collective good. That is, both parties must trust that the faculty will follow the procedures and structures of the professional learning community when nobody is watching. Principals are often not present for the professional learning community, trusting that teachers will carry out the work

independent of administrative oversight. The expectation that teachers work collaboratively to find innovative ways to problem solve, experiment with strategies and continually focus on improvement encompasses many organizational citizenship behaviors that are critical to the effectiveness of professional learning communities (Borman et al., 2001; Geijsel et al., 2002; Marks & Printy, 2003). However, where trust levels are low or non-existent it is the role of the principal to set the conditions for trust formation. Creating the conditions and expectations for effective professional learning communities will strengthen a principal's efforts to foster trust. Louis (2007) found schools with high levels of trust are those in which administrators created a culture of risk taking and shared inquiry as a means to improve instruction. It is in trust formation that transformational leadership serves principals well. Transformational leadership, in educational institutions, focuses on the school's ability to build capacity, problem solve, innovate and collaborate with the goal of school improvement (Geijsel et al., 2002; Marks & Printy, 2003).

Principals must create the conditions for trust to emerge among colleagues; establishing a professional learning community structure can be the vehicle for trust development and sustainability (Louis, 2007). By coming together regularly for the purpose of discussion, problem solving, and teacher improvement, teachers either reaffirm their current level of trust or begin to build trust that their colleagues are honest, open, benevolent, reliable and competent (Louis et al., 2006). Teaching is historically an isolated profession, with teachers planning independently and coming together for professional development only a few times a year; not ideal for building collegial trust and collaboration. Professional learning communities provide a structure

by which teachers frequently and consistently act as a team with the sole purpose of working together with the shared goal of improving the school (Louis et al., 1996).

Principals who seek to encourage a culture of collaboration and high collegial trust must provide the structural conditions for professional learning communities to operate, namely scheduling time for professional learning communities to regularly occur (Leithwood, 1992, 1994; Louis et al., 1996).

Professional learning communities can also be highly effective in ensuring a centralized focus on a shared mission and vision. If utilized effectively, professional learning communities provide opportunities for schools to coalesce around a collective mission, vision and goals for the school (Barber & Mourshed, 2009; Bolam et al., 2005; Darling-Hammond et al., 2009; DuFour et al., 2008; King, 2011). Through professional learning communities teachers are able to participate in the visioning process and align their personal beliefs to the common purpose (Barber & Mourshed, 2009; Bolam et al., 2005). When teachers are vested in the goals of the school, they are more likely to work tirelessly and above expectations to achieve the goals (Burns, 1978; Harris, 2005). Professional learning communities afford educators the time and place to come together to problem solve ways in which their daily practices are in alignment with the school's goals, thus bringing relevance and coherence to the process. Professional learning communities provide a structure through which educators collaborate to improve teacher practice while focusing on a common goal. As seen with trust formation and sustenance, transformational leadership is a key skill for principals who seek to develop a germane vision and mission that staff coalesce around in their daily work (Hallinger, 2003; King, 2011). Principals who are skilled in transformational

leadership, through professional learning communities, will be able to inspire teachers to go above and beyond to achieve the collective goals of the school.

Professional learning communities are designed for teachers to collaborate around the work of teaching and learning. As discussed, transformational leadership and trust formation are key enabling conditions for their effectiveness (Borman et al., 2001; Geijsel et al., 2002; Marks & Printy, 2003). However, as this study found, when coupled with program coherence, the effectiveness is greatly increased. If principals can bring coherence, said differently, if principals can create the conditions for teachers to make sense of the work, then everyone understands the collective purpose and his or her part in that. Teachers will see their daily work as related to the greater good and be more apt to engage professional learning community activities designed for them to collaborate, reflect on their practice for improvement, and align to the school's vision. For principals who aim to use professional learning communities as a primary vehicle for school improvement fostering trust, employing transformational leadership and bringing coherence to the work are crucial.

Summary

The goal of every school in America is to increase student achievement. Increasingly, schools are looking to professional learning communities to provide the structure for educators to engage in collaborative learning to improve teacher practice with the goal of increasing student achievement (DuFour, 2004). The question for school leaders then becomes what is the role of a principal in professional learning communities? The researcher asserts that the role of the principal in an effective professional learning community does not lie primarily within the actual time the

professional learning community is convening, but rather in setting the conditions for the professional learning community to function effectively, with or without the principal's presence. So how does a principal create the conditions for professional learning communities to thrive?

First, principals must be adept at employing transformational leadership. Second, principals must tend to trust formation. As a result, principals will find teachers more likely to collaborate, align personal values and goals to those of the school, work beyond expectations, and look beyond self-interests for the good of the whole. Principals will find teachers more willing to change teaching practice, thus increasing teaching performance and ultimately improving student achievement. However, to elevate the role of the professional learning communities to the primary vehicle for school improvement efforts, principals must bring coherence to the school structurally and instructionally. Principals must align curriculum, resources, professional development, and evaluation criteria to the vision and mission of the school. When principals set a clear vision and foster collaboration toward the common goals, allowing others to assume leadership, the work becomes shared work and professional learning communities can thrive. When principals enable the conditions for teachers to perceive a connection between the work in the classroom and the supports for the work, including resources and structures, they have set the foundation for professional learning communities function most effectively.

Recommendations for Practitioners

Relationships and trust matter, both between colleague and administrator and between colleagues. Transformational leadership fosters trusting relationships both

between colleagues and between teachers and the principal. Trust and transformational leadership have a significant influence on the effectiveness of professional learning communities. This study shows that trust and transformational leadership, when combined with program coherence, have a greater influence on the effectiveness of professional learning communities. If principals want to rely on effective professional learning communities to improve teacher practice and ultimately increase student achievement they must (1) focus on the relationships in the building, (2) employ transformational leadership to foster relationships and distribute governance, and (3) bring coherence to the work of the school.

A surprising finding of this study is that faculty trust in the district explained 18% of the variance in professional learning communities at the teacher level. The implication is that if districts use professional learning communities as a vehicle to drive school improvement efforts or implement initiatives, they need to attend to building positive, trusting relationships with teachers.

Recommendations for Future Research

The sample used in this research was from a single, large urban school district. As a result, the data are from a homogeneous sample, which could explain the low, although statistically significant, variance (9%) across schools. Future research using a more varied sample of schools may show increased variance across schools, in turn producing different results for the independent variables affecting professional learning community performance.

The original study confirmed that program coherence is important for effective professional learning communities and the post hoc offered a possible explanation as to

why this is so. Further research on trust, transformational leadership and program coherence along with other school and teacher level variables is needed to continue to explore the link between principal leadership, teacher motivation, and effective professional learning communities.

The surprising finding of this study was that faculty trust in the district explained 18% of the variance in professional learning community performance. This indicates that while school building relationships matter, if district leadership is perceived as untrustworthy, professional learning communities in schools are not going to make progress. If teacher trust in the district is the most important type of trust for successful professional learning communities, more so than teacher trust in colleagues and teacher trust in the principal, then schools should examine their practices to foster teacher trust in the district. Current literature on faculty trust in the district is scant and this area warrants further examination.

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Appendix A

IRB Approval



Institutional Review Board for the Protection of Human Subjects **Human Research Determination Review Outcome**

Date: November 11, 2014

Principal Investigator: Stacey Michelle Vernon

Study Title: The Role of the Principal in Professional Learning Communities

Review Date: 11/11/14

I have reviewed your submission of the Human Research Determination worksheet for the above-referenced study. I have determined this research does not meet the criteria for human subject's research. The determination is that the proposed activity is not consist with HSR, as defined by DHHS regulations, 45CFR46.102(f). The OU PI will not intervene or interact with living individuals or collect individually identifiable, private information. Therefore, IRB approval is not necessary so you may proceed with your project.

If you have questions about this notification or using iRIS, contact the HRPP office at (405) 325-8110 or irb@ou.edu. Thank you.

Cordially,

A handwritten signature in blue ink that reads 'Fred Beard'. The signature is written over a horizontal line.

Fred Beard, Ph.D.
Vice Chair, Institutional Review Board