

**PRINCIPAL PERCEPTIONS OF PROFESSIONAL LEARNING  
COMMUNITY IMPACT ON COLLECTIVE TEACHER EFFICACY**

by

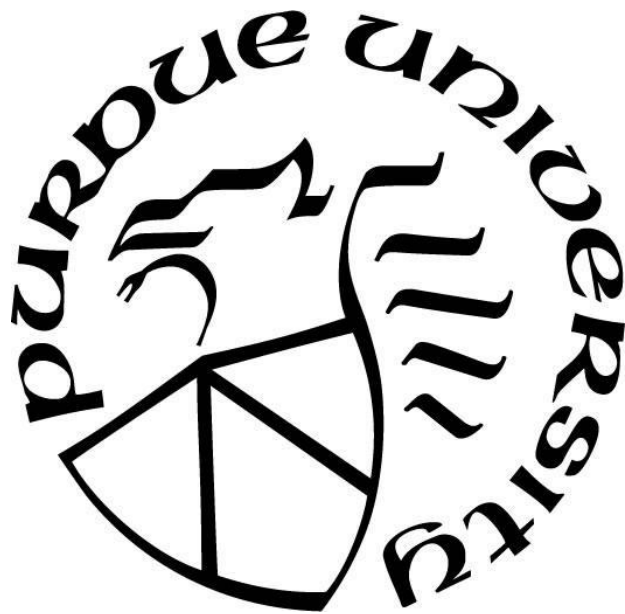
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*This dissertation is dedicated to Todd Michael Estes, my best friend and husband, whose encouragement and sacrificial care for me and our family made it possible for me to reach the finish line. You are appreciated more than you will ever know.*

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## **ABSTRACT**

The purpose of this study was to examine the perceptions of school principals on the impact of professional learning communities (PLCs) on collective teacher efficacy in two Indiana schools.

This study's design is grounded in the frameworks of DuFour & Eaker's (1998) six elements of PLCs and Donohoo's (2017a) six enabling factors of collective teacher efficacy.

Using the methodology of grounded theory, this exploratory, multiple-case study aimed to understand the experiences of principals who have implemented PLCs, and their perceptions of the impact of PLC implementation on collective teacher efficacy. By examining elements of PLCs to determine any perceived impact on six enabling factors of collective teacher efficacy through structured interview responses, the research findings revealed that principals perceived PLCs to impact specific enabling factors of collective teacher efficacy. This study adds to existing research on developing collective teacher efficacy through specific professional development opportunities. The researcher recommends that educators continue educating themselves on PLC implementation and improving their PLC practices.

## CHAPTER 1. INTRODUCTION

The 1983 release of *A Nation at Risk: The Imperative for Educational Reform* (National Commission on Excellence in Education) sparked a wave of educational reform initiatives that continue to influence schools today. In one of its most famous passages, the authors warned: “The educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and as a people” (National Commission on Excellence in Education, 1983, p. 1). The report provided recommendations for coursework required to graduate, for the implementation of more rigorous standards, for increasing the time spent in schooling, for high-quality teacher preparation, and for leadership accountability and fiscal support to achieve reform efforts (National Commission on Excellence in Education, 1983). The topics identified in those recommendations continue to provide the foundation for many current educational reform efforts aimed at increasing student achievement.

While there are many variables that have the potential to influence student achievement, high-quality teachers are often cited as having a significant impact on student learning outcomes (McCaffrey et al., 2003; Rowan et al., 2002; Sanders et al., 1997). The 1996 report of the National Commission on Teaching & America’s Future stated, “What teachers know and can do makes the crucial difference in what children learn” (p. 6). The conclusion that “student learning in this country will improve only when we focus our efforts on improving teaching” (National Commission on Teaching & America’s Future, 1996, p. 6) provided the foundation for many state reform efforts to implement evaluation systems and career pathways that reward highly effective teachers (Honawar & Olson, 2008). As noted by subsequent research, the 1996 report supported professional development as a key factor in successful educational reform efforts (Desimone et al., 2002; Elmore & Burney, 1999; Fishman et al., 2003; Hargreaves, 2000; Sykes, 1999). With

attention on the need to improve teaching, it is no surprise that the legislative agenda has focused on reform efforts, which have included Goals 2000, No Child Left Behind, Every Student Succeeds Act, and Race to the Top.

In response to the 2009 Race to the Top federal reform initiative, states competed for substantial funding dollars in exchange for revamping their teacher evaluation systems. As part of the initiative, school administrators were required to factor student learning gains in teacher annual evaluations. This move sparked criticism for using value-added measures as a means for the high stakes evaluation of teacher effectiveness (Marzano & Toth, 2013). However, it also motivated school administrators to focus on opportunities that yield the greatest results related to building teacher capacity. While there are an exponential number of ideas for increasing student achievement, finding a manageable, tailored strategy that works best continues to be a goal for everyone who has a vested interest in education.

In an effort to narrow down which strategies have the greatest influence on student achievement, Hattie (2015) synthesized over 1,200 related meta-analyses. Hattie determined an effect size for each factor of influence, finding that certain factors equated to greater than a year's worth of school growth for many students (2015). The most influential factors on student achievement included the jigsaw method, response to intervention, self-reported grades, and the factor determined to be most influential; collective teacher efficacy. In a 2016 research update, Hattie focused on the correlation between collective teacher efficacy and student achievement as synthesized in Eells's (2011) meta-analysis. Eells found collective teacher efficacy to have a strong, positive correlation with student achievement consistently over multiple content areas. In contrast, when educators have doubts related to their collective efficacy, schools see academic declines (Bandura, 1997). Hence, it is apparent that, as Donohoo (2017a) suggested, educational

leaders should consider professional learning that focuses on understanding collective teacher efficacy and ways to create and sustain it in their schools.

### **Collective Teacher Efficacy**

Collective teacher efficacy as defined by Eells (2011) is an “organizational property reflecting beliefs about the capability of the school to achieve its goals” (p. 53). Bandura (1997) stated that collective efficacy is a “shared belief in a group’s ability to successfully engage in actions necessary for attaining expected results” (p. 477). Hattie (2016) ranked collective teacher efficacy as the number one factor of influence on student achievement.

Donohoo (2017c) detailed a theory of action for fostering collective teacher efficacy and shared six enabling conditions. Donohoo (2017c) stated, “The theory is fostering collective teacher efficacy to realize increased student achievement, and it involves creating opportunities for meaningful collaboration, empowering teachers, establishing goals and high expectations, and helping educators interpret results and provide feedback” (p. 35). The six enabling conditions for collective teacher efficacy as described by Donohoo (2017a) are: (1) advanced teacher influence – the opportunities provided for teachers to take part in school-wide decision making; (2) goal consensus – reaching consensus has a measurable impact on student achievement (Robinson et al., 2009); (3) teachers’ knowledge about one another’s work – confidence in colleagues’ impact on student learning increases when they have knowledge of their practice; (4) cohesive staff – agreement on educational issues; (5) responsiveness of leadership – a leader’s protection of time and focus out of concern and respect for their teachers; and (6) effective systems of intervention – processes for supporting all students are successful.

As educational leaders, school principals are poised to build collective teacher efficacy among staff through professional learning experiences (Protheroe, 2008). While there are various

methods for providing opportunities for professional learning, the term professional learning community (PLC) is becoming increasingly popular in the discourse surrounding professional development.

### **Professional Learning Communities**

According to the Great Schools Partnership (2014), the term professional development refers to the “specialized training, formal education, or advanced professional learning intended to help administrators, teachers, and other educators improve their professional knowledge, competence, skill, and effectiveness” (p.1).

PLC represents a model for professional development that promotes a culture of collaboration to promote increased levels of student achievement (DuFour et al., 2004). The PLC model used in schools is comprised of six elements: (1) shared mission, vision, and values; (2) collective inquiry; (3) collaborative teams; (4) an orientation towards action and a willingness to experiment; (5) commitment to continuous improvement; and (6) a focus on results (DuFour & Eaker, 1998). The increasing popularity of implementing PLC as a primary means for professional development is noteworthy; however, engagement in all the model’s six elements is essential to achieve the best possible outcomes for student achievement.

### **Statement of the Problem**

Since the release of *A Nation at Risk* in 1983, educational reform efforts have sought to increase student learning and achievement in schools. Educators and policymakers have often disagreed on what works best to accomplish these goals, and there are limited data on which of the plethora of best practices yield measurable results. Hattie’s (2016) meta-analysis provided a research-based solution to the long, sought-after question of what efforts in education yield the

highest impact on student achievement. One key finding was that collective teacher efficacy strongly impacts student achievement (Hattie, 2016). Professional development in schools may contribute to the development of collective teacher efficacy. In terms of professional development effectiveness, DuFour (2007) stated, “researchers who have studied schools where educators actually engage in PLC practices have consistently cited those practices as our best hope for sustained, substantive school improvement” (p. 5).

For an educational leader, decision-making on professional learning is influenced by many factors including time, money, and appropriate structures for sustaining learning opportunities that enrich a teacher’s professional knowledge and practice (Bredeson, 2002). Another significant factor that influences education leaders’ decision-making on professional development for teachers is the leaders’ own perceptions of effectiveness. To better understand this phenomenon, this study focuses on principals’ perceptions of how PLC implementation contributes to the enabling factors for collective teacher efficacy.

### **Purpose of the Study**

The purpose of this qualitative study is to develop a deeper understanding of principals’ perceptions of how PLCs impact collective teacher efficacy. Eells (2011) described collective teacher efficacy as the shared beliefs of teachers about their ability to achieve their goals. On the basis of Eells’ research, Hattie (2016) ranked collective teacher efficacy as the number one influence on student achievement. With a strong research base suggesting the importance of its existence in schools, it stands to reason that educational leaders desire clear direction on how to develop collective teacher efficacy (Hoy et al., 2002; Leithwood et al., 2010; Moolenaar et al., 2012; Tschannen-Moran et al., 2015). This study aims to make the development of collective

teacher efficacy a less ambiguous task and to influence future decision-making about professional development activities by adding to the emerging body of research.

### **Research Questions**

This research study aims to understand the experiences of principals who have implemented PLCs, and their perceptions of any impact PLC implementation has on collective teacher efficacy, through seeking to answer the following research questions:

1. What are principals' perceptions of the impact of PLCs on advanced teacher influence?
2. What are principals' perceptions of the impact of PLCs on responsiveness of leadership?
3. What are principals' perceptions of the impact of PLCs on teacher knowledge of one another's work?
4. What are principals' perceptions of the impact of PLCs on effective interventions for student academic achievement?
5. What are principals' perceptions of the impact of PLCs on goal consensus?
6. What are principals' perceptions of the impact of PLCs on cohesive staff?

### **Significance of the Study**

With so many factors involved in the schooling aspect of education and the continuous limitation of resources, it is essential that educators narrow the focus of their efforts to raise student achievement. The struggle of identifying which efforts should be a priority and which can be removed from the proverbial “plate” is a constant topic of educational discourse. Educational researchers have exerted time, energy, and effort to find a solution among the seemingly random selection of strategies in the quest to improve student achievement. Educational reform efforts that highlight classroom management strategies, peer tutoring, and quality feedback strive to achieve

results while requiring much of a teacher's time and effort. According to Fullan and Stiegelbauer (1991), the problem is "not resistance to innovation, but the fragmentation, overload, and incoherence resulting from the uncritical and uncoordinated acceptance of too many different innovations" (p. 197).

In addition to reform efforts, many educators hold strong opinions and beliefs about what works best to achieve increased student learning. These opinions and beliefs are often based on personal experiences, but "rarely rely on available research evidence" (Fleckenstein et al., 2015, p. 29). Beliefs that lack a foundation in empirical evidence can be especially problematic if they contradict substantiated evidence but are perceived as correct by the educator (Fleckenstein et al., 2015).

This study has the potential to provide insight for educational leaders as to which factors might influence their decision-making on professional development for teachers. Furthermore, the study may help educational leaders prioritize specific professional development activities that have the potential to impact greater change. Research on the structure of PLCs and research on collective teacher efficacy provide a foundation for this study. This study explores the specific activities within PLCs that may have the greatest impact on the enabling factors for building collective teacher efficacy and, ultimately, student achievement.

### **Limitations of the Study**

This study examines how work within PLCs is perceived by principals as contributing to the enabling factors of collective teacher efficacy. As indicated by Boote and Beile (2005), "in education research we are often faced with the challenge of communicating with a diverse audience, and it is very difficult for us to assume shared knowledge, methodologies, or even commonly agreed-upon problems" (p. 3). The study is thus limited by potential variations in

interpretations of the PLC model by educational leaders. Further, there was a limited availability of schools with fully implemented PLCs and principals willing to participate in the study.

Research methodology always presents potential limitations. To reduce the limitations associated with qualitative research, all processes were documented thoroughly to allow for replication in various settings. To reduce the potential for unrealized exaggeration or bias in interview responses, participants were given an opportunity to preview initial findings and provide comments.

Finally, as an educational researcher, every stage of the research process was influenced by my own diversity, knowledge, and experiences. My goal was to move beyond a mere acknowledgment of my own subjectivity to acting as a researcher who Peshkin (1988) describes as being “meaningfully attentive to their own subjectivities” (p. 17). In particular, I acknowledge that my own perceptions as a former principal who implemented PLCs could influence my interpretation of the findings. It is essential to allow the findings of this study to speak for themselves.

### **Definition of Terms**

**Professional Development:** “Specialized training, formal education, or advanced professional learning intended to help administrators, teachers, and other educators improve their professional knowledge, competence, skill, and effectiveness” (Great Schools Partnership, 2014, p. 1).

**Professional Learning Community (PLC):** “An environment that fosters cooperation, support, and growth created by educators to accomplish goals that cannot be achieved alone” (DuFour & Eaker, 1998, p. xii).

**Collective Teacher Efficacy:** “An organizational property reflecting beliefs about the capability of the school to achieve its goals” (Eells, 2011, p. 53).

### **Summary**

With the education of our future generations at stake, there is a sense of urgency related to effective methods for increasing student achievement. This study examines the perceptions school principals have related to the elements of PLCs and the impact on enabling factors of collective teacher efficacy. The findings have the potential to allow educational leaders to focus less on determining “what” works and focus more on “how” to implement changes that lead to true reform efforts influencing student achievement.

## **CHAPTER 2. LITERATURE REVIEW**

This study seeks a deeper understanding of principals' perceptions of how the implementation of PLCs impacts the enabling factors of collective teacher. This chapter thus includes a review of the literature on educational reform efforts related to professional development of educators, PLCs, collective teacher efficacy, and roles of school principals in reform efforts.

### **Accountability and Professional Development Reform**

While the 1980s was a period that represents a somewhat outdated way of life, the decade marks the release of *A Nation at Risk* (National Commission on Excellence in Education, 1983), which sparked an immediate call to action for the improvement of education in the United States. This call to action has remained strong through the decades and fueled many reform efforts by the educational system that involved the federal government more than in the past. President William Clinton signed Goals 2000: Educate American Act into law in March of 1994. The law, along with the reauthorization of Title I, focused on changing education through systematic reform by aligning curriculum, instruction, standards, assessments, and opportunities for student learning (O'Day & Smith, 1993). However, the lack of enforcement and accountability resulted in only 26 states creating approved improvement plans by 1998 (U.S. Department of Education, 1998).

While the passage of Goals 2000 (1994) was a step towards increased accountability, the passing of the No Child Left Behind Act (2002) possibly represented the most intense federal reform in education since the Elementary and Secondary Education Act (ESEA) (Pub. L. 89-10) was passed in 1965 (Nelson et al., 2004). No Child Left Behind (2002) mandated instructional strategies supported by scientifically based research and called for proficiency on required

standardized testing. Like other reform efforts, a significant concern in implementation was financial support for schools to achieve the goals. The American Recovery and Reinvestment Act (2009) funded the U.S. Department of Education's Race to the Top initiative which provided financial incentive for implementation of reform efforts meant to improve student achievement, graduation rates, and college enrollment. However, only 12 states were awarded funding to help achieve their goals, one of which included improved teacher evaluation systems. Furthermore, in December 2015, President Obama signed into law the sixth reauthorization of the Elementary and Secondary Education Act (ESEA), known as Every Student Succeeds Act (ESSA, 2015). ESSA (2015) still focused on accountability, but restricted federal involvement and allowed for state discretion over policies. All the efforts to create a system of accountability that focused on every student succeeding in school made it increasingly apparent that diversity makes achieving equal results challenging in the field of education (Firestone & Riehl, 2005).

The increasing demands placed on educators create a need for greater expertise to achieve the purpose of schooling, which can be simply defined as student learning (Bush, 2008). This greater expertise is obtained through a continual process of learning, or professional development. The definition of professional development has evolved through the years and is referred to by Richter et al. (2011) as the "uptake of formal and informal learning opportunities that deepen and extend teachers' professional competence, including knowledge, beliefs, motivation, and self-regulatory skills" (p. 116). Similarly, the National Staff Development Council (2010) amended an existing definition of professional development to "a comprehensive, sustained, and intensive approach to improving teachers' and principals' effectiveness in raising student achievement" (p. 16). More recently, professional development was defined in ESSA (2015) as activities that:

(A) are an integral part of the school and local agency strategies for providing educations (including teachers, principals, other school leaders, specialized

instructional support personnel, paraprofessionals, and, as applicable, early childhood educators) with the knowledge and skills necessary to enable students to succeed in a well-rounded education and to meet the challenging state academic standards; and (B) are sustained (not stand-alone, 1-day, or short term workshops), intensive, collaborative, job-embedded, data driven, and classroom-focused. (p. 396)

There are various types of professional development opportunities that support educators' growth. Formal or informal learning opportunities are one way of differentiating between types of professional development. Formal learning opportunities, such as college courses or mandatory staff trainings, can be identified as having specific content or structures (Feiman-Nemser, 2001). Informal learning opportunities such as book studies, observations, and collaboration with others, are, according to Desimone (2009), those that "do not follow a specified curriculum and are not restricted to certain environments" (p. 182).

In addition to the categorization of formal and informal learning opportunities to distinguish between types of professional development, there are key features that can be used to shape professional development opportunities. These features are either structural or core features (Desimone et al., 2002). Structural features include reform type (i.e., committees, study groups, mentoring), duration, and collective participation, while core features include active learning opportunities, coherence, and content focus (Desimone et al., 2002). These are just a few ways that educators distinguish between the various means of professional development. Specific types of professional development activities include coaching cycles, single session, facilitated Multi-Tiered Systems of Support (MTSS) data analysis, seminars, and webinars (Moore, 2016). It is evident throughout the literature that a wide variety of learning experiences are labeled as professional development. Desimone et al. (2002) stated that "given the size of investment in professional development and the dependence of education reform on providing effective professional development, the knowledge base on what works must be strengthened" (p.

82). Strengthening the research base will allow for identification and replication of professional development that can be directly linked to student achievement (Moore, 2016).

### **Professional Learning Communities**

One of the more consistently researched forms of professional development is known as a PLC. A PLC, according to Eduflow (2013), exists when there is “a shared vision for running a school in which everyone can make a contribution, and staffs are encouraged to collectively undertake activities and reflection to constantly improve their students’ performance” (p. 1). This type of professional development fosters teacher collaboration, which has been linked to increases in student achievement (Y. Goddard et al., 2007).

In *Learning by Doing* (2006), DuFour et al. 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. 217). They also explain that they are structured around an assumption that improved student learning requires ongoing, professional learning for educators. DuFour (2007) states,

A school does not become a PLC by enrolling in a program, renaming existing practices, taking the PLC pledge, or learning the secret PLC handshake. A school becomes a professional learning community only when the educators within it align their practices with PLC concepts. (p. 4)

The PLC model used in schools is comprised of six elements: (1) shared mission, vision, and values; (2) collective inquiry; (3) collaborative teams; (4) an orientation towards action and a willingness to experiment; (5) commitment to continuous improvement; and (6) a focus on results (DuFour & Eaker, 1998).

In *Professional Learning Communities at Work*, DuFour and Eaker (1998) detailed these six elements that illustrate the process of professional learning communities:

1. Shared mission, vision, and values: What sets a learning community apart is its collective commitment to guiding principles related to what the educators in the school believe and what they will work to create (p. 25).
2. Collective inquiry into best practices and current reality. —Educators in the community question the status quo, seek out new methods, test those methods, and reflect on the results (p. 25).
3. Collaborative teams focused on learning: Although individual growth is necessary to support organizational growth, it does not guarantee organizational growth. Building the school's capacity must be seen as a collaborative task, rather than an individual one (pp. 26–27).
4. An orientation towards action and willingness to experiment: PLC team members develop, test, and evaluate. They reflect on what happened during implementation of methods and why (pp. 27–28).
5. Commitment to continuous improvement: The learning community is committed to maintaining focus to ensure it continually seeks improvement (p. 28).
6. Results orientation: Focus on continuous improvement must be assessed based on results (p. 29).

Eaker and DuFour (2002) also detail the cultural shifts that need to occur to transform schools into PLCs. While non-linear in nature, these shifts include improvements in collaboration; developing a mission, vision, values, and goals; focusing on learning; leadership; focused school improvement plans; celebration; and persistence. Students benefitting from collaboration, focus, high expectations, and a relentless pursuit of their individual success should not be a surprise. Therefore, it should come as no surprise that schools engaging in PLC implementation

are continually cited for sustained school improvement as indicated by student growth and achievement (Darling-Hammond, 1997; Fullan, 2005; Reeves, 2006; Schmoker, 2005; Sparks, 2005).

Eastwood and Louis (1992) identified supportive conditions as the most important factor to enhancing school improvement (p. 215). Research points to two types of supportive conditions needed to build effective PLCs: human capacity and structural/physical conditions (Huffman & Hipp, 2003, p. 12). Supporting human capacity is dependent on the existence of a culture of trust and caring relationships among staff and students (p. 13). According to Bryk and Schneider (2002), “Trust is forged in daily social exchanges – trust grows over time through exchanges where the expectations held for others are validated in action” (pp. 136–137). According to Hord (1998), “Much of the current literature on school reform extols the importance of school staffs working collegially to increase successful results for students” (p. 1). By working and learning together, educators can commit to supporting high levels of learning for all students.

Structural/physical conditions are also important to ensure educators have the resources needed to be productive (Huffman & Hipp, 2003, p. 13). During the implementation of PLCs, structures often need adapted or replaced (Hipp & Huffman, 2010, p. 127). Often, schedules require changes that allow for more opportunities for collaborative work (Hipp & Huffman, 2010, p. 127). This time set aside for teachers to meet is critical for successful PLC implementation (Huffman & Hipp, 2003, p. 13). Additionally, a structure for easy access to organized data should exist (Olivier et al., 2010) and frequent opportunities should be provided for teachers to participate in the decision-making process (Huffman & Hipp, 2003, p. 13).

Even with a compelling body of empirical evidence of effective schools using the PLC model, many schools have not taken steps toward implementation. LaRocco (2008) claimed that

research suggests schools struggle in the development of structures that support the growth of PLCs. While these struggles could be linked to the historical trend of teachers working in isolation (LaRocco, 2008), it could also be influenced by the lack of collective efficacy. Liebman et al. (2005) add that the accomplishment of reform goals is dependent on a shift from educators working in isolation to actions that increase collective teacher efficacy.

### **Collective Teacher Efficacy**

Malally (2016) stated that “self-efficacy beliefs provide the foundation for human motivation, well-being, and personal accomplishment” (p. 8). As a concept of Albert Bandura’s social cognitive theory (1977), self-efficacy outlines the belief that, at a basic level, people are unmotivated to persevere unless they believe that their actions can lead to their desired outcomes. The concept of self-efficacy can be applied to education, as teacher efficacy, in reference to “a teacher’s judgement of his or her capabilities to bring about desired outcomes of student engagement and learning” (Tschannen-Moran & Hoy, 2001, p. 783). Both concepts provide the foundation for an understanding of collective teacher efficacy, which, according to R. Goddard et al. (2000), illustrates “the perceptions of teachers in a school that the effort of the faculty as a whole will have a positive effect on students” (p. 480). DuFour et al. (2004) states,

It is not the perception of a staff regarding the ability of their students that is paramount in creating a culture of high expectations. The staff members’ perception of their own personal and collective ability to help all students learn is far more critical. (p. 181)

Brinson and Steiner (2007) emphasized educational leaders’ need to build collective teacher efficacy based on its potential to positively impact student performance. On a larger scale, Hattie’s (2015) synthesis of over 1,200 meta-analyses related to influences on student achievement. Hattie’s (2016) findings indicated collective teacher efficacy has the highest

influence on student achievement, indicating an impact equal to over three years of growth for students.

The desire to foster the growth and development of collective teacher efficacy is only complicated by the need to identify and implement specific actions while redirecting efforts which may hinder progress. One model for the “formation, influence, and change of perceived collective efficacy in schools” (R. Goddard et al., 2004, p. 11) is below.

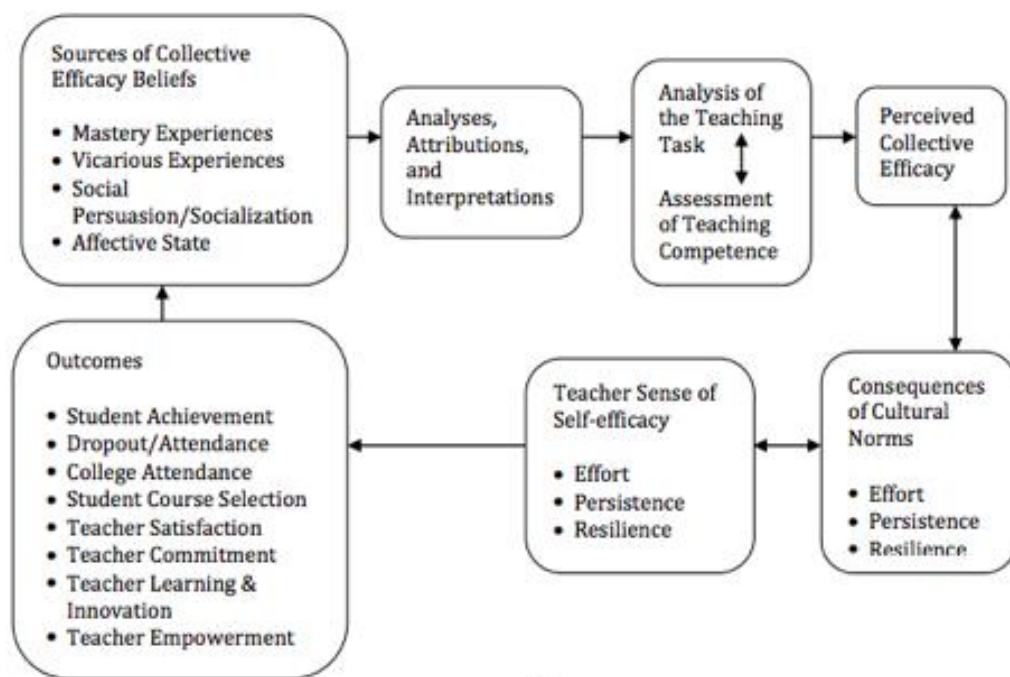


Figure 1. Proposed model of the formation, influence, and change of perceived collective efficacy in schools” (R. Goddard et al., 2004, p. 11)

As an extended concept of Bandura’s (1977) social cognitive theory, collective teacher efficacy may be shaped by enactive mastery experiences, physiological and emotional states, vicarious experiences, and social persuasion. Teachers with high levels of self-efficacy believe in their ability to positively impact student learning (Hoy & Woolfolk, 1993) and produce better student outcomes (Bray-Clark & Bates, 2003). Identifying specific actions to increase levels of

self-efficacy could have large scale implications for student educational attainment. However, while the literature supporting collective teacher efficacy as a high indicator of student achievement is abundant; according to Donohoo (2017b), “There is little to be gleaned from the research related to professional learning and the contextual factors that influence collective efficacy beliefs” (p. 113).

While little empirical evidence exists to link professional learning communities as defined by DuFour and Eaker (1998) with efficacy, there are studies that have found relationships between certain characteristics of professional learning communities related to collaboration and efficacy (Lee et al., 1991; Newmann et al., 1989; Rosenholtz, 1989). Newmann et al. (1989) found a strong connection between teachers working together and teacher efficacy. Rosenholtz (1989) also discovered gains in student assessment scores when teachers collaborated, which contributed to an increased sense of efficacy.

The identification of direct links between specific professional development types and collective teacher efficacy would allow educators to narrow their focus significantly. While the concept of collective teacher efficacy is relatively new to the research agenda, the concept of self-efficacy is not and can be used to guide the understandings of how collective teacher efficacy is developed. Bandura (1977) named mastery experience, vicarious experience, verbal persuasion, and physiological states as the primary sources of self-efficacy. Mastery experiences influence self-efficacy based on the direct effect of previous successes and failures. Vicarious experiences influence self-efficacy when successes or failures are modeled by someone else (Hoy & Miskel, 2008). Verbal persuasion builds self-efficacy when encouragement is used to enforce capabilities if the encouragement is realistic. Additionally, physiological states based on enthusiasm or other emotional stimulants can influence self-efficacy (Bandura, 1977). If growing collective teacher

efficacy is the goal, it stands to reason that professional development should align with one of these four primary sources of self-efficacy.

Donohoo (2017a) further suggested six conditions which, when present, provide the environment for collective teacher efficacy to exist. These are:

1. Advanced teacher influence
2. Goal consensus
3. Teacher knowledge of one another's work
4. Cohesive staff
5. Responsiveness of leadership
6. Effective systems of intervention

Considering Hattie's (2016) identification of collective teacher efficacy as the strongest influence on student achievement, the sources and enabling factors of collective teacher efficacy may provide the foundation of professional development reform efforts aimed at increasing student achievement.

According to Lim and Sungmin (2014),

Educational policy makers need to consider how to promote teachers' perceived collective teacher efficacy as well as how to create cooperative and supportive organizational climates of school organization. Educational policy makers and researchers in teacher education need to develop various in- and pre-service teacher education programs and systems to increase the level of collective teacher efficacy. (p. 145)

While DuFour and Eaker (1998) described the process of educational reform as an "absolutely daunting task" (p. 13), DuFour et al. (2010) contend that the PLC journey is worthwhile (p. 7). This all brings to light the question: who is responsible for developing collective teacher efficacy and where does the responsibility lie for selecting professional development that will yield desired results? While it is expected that teachers continue their learning throughout their career, typically,

the decisions made about the professional development opportunities offered within a school land with building principals.

### **Principal Decision-Making**

Educational leaders have numerous responsibilities. These include creating positive learning environments (O'Donnell & White, 2005), analyzing student data (Neumerski, 2013), giving feedback to enhance teaching and learning (Ovando, 2005), ensuring access to necessary curriculum resources (Lynch, 2012), and planning professional development based on identified needs (Choy et al., 2006).

Decisions are determinations arrived at after consideration (Merriam-Webster, n.d.). Literature on the topic of decision-making indicates its importance and points to how complex the process can be (Johnson & Kruse, 2009). Educational leaders are faced with decisions every day. In fact, according to Johnson and Kruse (2009), leadership is defined as “decision making in action” (p. 5). For educational leaders, decision-making is impacted by many factors such as knowledge, policies, and funding. In most situations, resources are limited, so it is essential to base decisions on clear needs (Kesson & Henderson, 2010). Identifying professional development needs of teachers is a task that is influenced by many factors such as location, socioeconomic status, student achievement, and staffing dynamics (Marzano et al., 2011). When the factors that influence decision-making and identifying professional development needs are combined, the process is extremely complex. However, the body of research related to how educational leaders select professional development opportunities to implement for their staff is limited (Moore, 2016).

With the possibility of a research base that is too weak to adequately support practice, educational leaders often rely on their own knowledge, experiences, judgment, and beliefs to make decisions (Firestone & Riehl, 2005). This is a significant area of concern given that some

educational leaders are unfamiliar with current research. For instance, Hockenberry's (2009) study indicated that some educational leaders understand very little about self-efficacy, much less collective teacher efficacy.

The list of professional development options and implementation practices for PLCs is extensive and increases the complexity of decision-making. Recognizing to what extent professional development practices align with current research findings on effectiveness can be valuable for educational leaders who are striving to make decisions with the maximum potential impact on student achievement. To move towards a culture of considering current research when making decisions, it is essential to first understand more about educational leaders' knowledge and beliefs related to the implementation of professional development and its impact on student achievement. This understanding has the potential to provide a foundation for a decision-making process that sources research in prioritizing professional development practices.

According to several researchers, principal leadership is one of the most important factors in successful implementation and ongoing success of PLCs (Boyd & Hord, 1994; DuFour & Eaker, 1998; Graham, 2007; Morrissey, 2000; Thompson et al., 2004). Furthermore, Boyd and Hord found the principal as essential in the creation and sustainability of a PLC. A principal's ability to create an environment of shared decision making is essential for PLCs (Boyd & Hord, 1994; Hipp et al., 2008; Huffman & Hipp, 2001; Lee et al., 1991; Leithwood et al., 1998; Morrissey, 2000).

### **Summary**

Educational leadership is a topic regularly found on the reform agenda (Datnow & Sutherland, 2002), perhaps due to the influence educational leaders have on teacher capacity, school environment, and teacher efficacy (Bush, 2008; Horng & Loeb, 2010; Pont et al., 2008). This study aims at developing a deeper understanding of educational leaders' perceptions

of how the implementation of PLCs impacts the enabling factors of collective teacher efficacy. A deeper understanding could help create reform efforts that are focused on sound educational research versus a reliance on leaders' personal belief systems.

## **CHAPTER 3. METHODS**

This qualitative study examines the experiences of two principals in Indiana schools where professional learning communities have been implemented for at least one full school year and where school growth can be documented through student achievement results since the implementation of PLCs. This study's design is grounded in the frameworks of DuFour and Eaker's (1998) six elements of PLCs and Donohoo's (2017a) six enabling factors of collective teacher efficacy. Using the methodology of grounded theory, this exploratory, multiple-case study aims to understand the experiences of principals who have implemented PLCs, and their perceptions of the impact of PLC implementation on collective teacher efficacy by seeking to answer the following research questions:

1. What are principals' perceptions of the impact of PLCs on advanced teacher influence?
2. What are principals' perceptions of the impact of PLCs on responsiveness of leadership?
3. What are principals' perceptions of the impact of PLCs on teacher knowledge of one another's work?
4. What are principals' perceptions of the impact of PLCs on effective interventions for student academic achievement?
5. What are principals' perceptions of the impact of PLCs on goal consensus?
6. What are principals' perceptions of the impact of PLCs on cohesive staff?

### **Research Design**

According to Merriam (2009), qualitative research focuses on understanding how people make sense of the world and their experiences. This qualitative research study follows an exploratory, multiple-case study design. Yin (2003) stated that case study design should be

considered if contextual conditions relevant to the phenomenon being studied are covered. While a multiple-case study design can be costly and time consuming, it provides an opportunity for rigorous and reliable analysis. Yin (2003) described that multiple-case studies can “(a) predict similar results (a literal replication) or (b) predict contrasting results but for predictable reasons (a theoretical replication)” (p. 47). When considering the study of how PLC implementation impacts the enabling factors of collective teacher efficacy, interviewing all principals implementing PLCs would be exhaustive. Therefore, the goal of this multiple-case study is to better understand the perceptions of the sample to theorize how implementation may similarly impact the development of collective teacher efficacy in other schools implementing the six elements of PLCs.

### **Methodology**

Grounded theory, a systematic procedure for using qualitative data to generate theory (Patton, 2002), served as the design for this study. Glaser and Strauss, authors of *The Discovery of Grounded Theory: Strategies for Qualitative Research* (1967), are credited as the founders of grounded theory; their work provided the foundation for challenging the belief that qualitative studies lack the rigor to generate theory. Further amplifying the relevance of grounded theory in research, Patton (2002) stated that it relies on “methods that take the researcher into and close to the real world so that the results and findings are grounded in the empirical world” (p. 125).

Glaser (1978) focused on the goal of traditional grounded theory to develop a conceptual theory that accounts for patterns of behavior. Strauss and Corbin (1998) defined grounded theory as “theory that was derived from data, systematically gathered and analyzed through the research process” (p. 12). This research study aligns with grounded theory described by Strauss and Corbin (1998) as the researcher “begins with an area of study and allows the theory to emerge from the

data” (p. 12) through the use of coding procedures to “provide some standardization and rigor” (p. 13) to follow the process.

This study’s design is grounded in the frameworks of DuFour and Eaker’s (1998) six elements of PLCs and Donohoo’s (2017a) six enabling factors of collective teacher efficacy. The combination of these frameworks guided the creation of the interview questions and protocol. While the interview protocol in Appendix A included question prompts aligned with the intersection of each of the six PLC elements and each of the six enabling factors, not all questions were asked in the interviews. Only 12 questions, indicated on Appendix A in parentheses, were used in each interview. These were selected as primary questions to ensure each participant had the opportunity to respond to their experience with implementing each of the individual six elements of PLCs through the lens of one or two of the six enabling factors of collective teacher efficacy. The remaining, secondary, questions were created for use if a participant had a limited response to any of the primary interview questions.

### **Site and Participant Selection**

Participants were selected for this study by using purposeful sampling that allowed for the selection of two principals who lead schools where PLCs already exist as the primary structure for professional development. To ensure the required criteria (beyond their first year of PLC implementation and documented school growth in the area of student achievement after implementation of PLCs) were met by participants, purposive sampling techniques, as described by Patton (1990), were used during the selection process. An initial pool of names was elicited through an inquiry to the Indiana Department of Education. Schools that were beyond the initial year of PLC implementation and that had demonstrated school growth as evidenced by student achievement data since initial implementation were selected. This decision was made to ensure all

elements of PLCs were already established and implemented with fidelity and to ensure that the anticipated outcome of increased student achievement was documented.

Prior to starting the selection process, approval from Purdue University's Institutional Review Board was granted. To initiate the selection process, an invitation to participate was sent to principals through the Indiana Department of Education's (IDOE) Office of School Improvement. The Office of School Improvement provided support for school principals to engage in PLC implementation for several years prior to the study. To recruit principals to participate in the study and to reduce bias, an email was sent to the Office of School Improvement school principal listserv to share the required criteria and background. This also ensured that the identity of the researcher was not made known to potential participants. A copy of the invitation can be found in Appendix B.

Responses were collected by the Office of School Improvement to create an initial pool of potential subjects. From that pool, two principals were selected by the researcher who were each beyond their first year of PLC implementation and who had documented school growth in student achievement after the implementation of PLCs. Principal One serves as an elementary level principal in a rural setting and has been implementing PLCs for over four years. According to Principal One, the 165-person student body is 93.3% white, 2.4% multi-racial, 3.6% Hispanic, 0.6% Black/African American, and 0.1% Asian. Over the course of his time leading the staff, the school has demonstrated significant student growth, as determined by state thresholds, on statewide assessments as well as regular growth on common formative assessments through the progress monitoring process. Principal Two serves as a middle school principal in an urban setting and has been implementing PLCs for two years. According to Principal Two, the 197-person student body is 54.8% white, 13.2% multi-racial, 6.1% Hispanic, 25.4% Black/African American,

and 0.5% Asian. Over the course of her time leading the staff, the school has demonstrated significant student growth, as determined by state thresholds, on statewide assessments as well as regular growth on common formative assessments through the progress monitoring process.

All identifying information was removed to ensure anonymity of participants. In addition, written permission from each of the school principals was obtained before conducting research. Through interviews, perceptions were examined to gain an understanding of how specific elements of PLCs were implemented and how that implementation was perceived to influence enabling factors of collective teacher efficacy.

### **Data Collection**

According to Patton (2015), an interview guide is created to provide a structure for ensuring that the same basic procedures are utilized for each person interviewed. A questionnaire and semi-structured interview process were developed based on information that was obtained through the review of literature related to PLCs and the enabling factors of collective teacher efficacy. The questionnaire gathered demographic and background information from each school principal involved in the study. Once the questionnaire was received from each principal, a Doodle Poll was shared to schedule an interview time at the convenience of the participant. The interview questions were shared with each participant along with the calendar invite used to schedule the interview time.

During the interview, the principals provided their perceptions on the process of implementing each of the six elements of PLCs: (1) shared mission, vision, and values; (2) collective inquiry; (3) collaborative teams; (4) an orientation towards action and a willingness to experiment; (5) commitment to continuous improvement; and (6) a focus on results (DuFour & Eaker, 1998). Each interview was electronically recorded using a portable device and transcribed

by the researcher for preparation of data analysis through coding practices. The initial coding used to prepare each interview that was recorded and transcribed allowed for the data to be sorted into categories that emerged as themes. To increase the validity of the study, individual responses were shared with the participating principals. This allowed each participant to request changes or additions to their comments. These member checks, according to Kornbluh (2015), increase the accuracy of participant responses and allow the researcher to deepen their understanding if additional results are gathered in the process.

### **Data Analysis**

The data collected through the semi-structured interview processes were transcribed using DVT2805 Dragon Speech Recognition software and coded using grounded theory design procedures. Creswell (1994) describes qualitative research as interpretive. Therefore, data are collected specifically to be interpreted. The researcher examined the data to build meaning out of the verbal responses gathered during the interview processes.

The first step in this process was open coding of the interview transcripts. Corbin & Strauss (2008) outlined a design that begins with open coding, leads to axial coding and then selective coding (Corbin & Strauss, 1990). The process of coding and analyzing data were initiated using NVivo, a computer-aided qualitative data analysis software (CAQDAS) program. Through this process, Strauss (1987) emphasized the importance of detailed analysis to ensure saturation and discovery of all categories (Strauss, 1987). Using open coding processes, the data were broken into small segments that led to initial categorization based on patterns that emerged.

As categories were refined and compared, new categories were formed using axial coding. Strauss (1987) explained that axial coding is more in-depth coding within categories and an analysis related to the who, what, when, where, and why of each category (Strauss, 1987). Corbin

and Strauss (2008) suggested that, through this process, the researcher is seeking to uncover “that special something that ties together all of different categories to create a coherent story” (p. 104).

Upon discovery of the core category, the selective coding process was initiated, which was described by Strauss (1987) as a coding process that focuses systematically on the core category as the process enters the stage aimed at theory generation.

### **Reliability and Validity**

Yin (1994) recommended detailed documentation of procedures to allow for future replication. As recommended, the procedures have been documented to mitigate any concerns related to the reliability of this case study. Reflexivity, described as the continuous process of reflecting done by researchers (Parahoo, 2006), helps in the understanding of how social background and existing assumptions can potentially impact the research (Hesse-Biber, 2007).

As a former school principal who engaged in implementing PLCs, the researcher’s past experiences heightened the need to engage in reflexivity to consider how those experiences and schema could potentially threaten the validity of the study and mitigate those threats by remaining open to all emergent theories. The practice of journaling before and after each interview and throughout the data analysis process was used to reflect on any potential impact the mood or preconceptions of the researcher may have had on the interview process and responses. In addition, member checks were interspersed throughout the interview process to ensure subjects had the opportunity to correct any misconceptions or misinterpretations of the data through the data collection and analysis processes. These checks consisted of the researcher asking clarifying questions and rephrasing responses to ensure reliability and validity of interview data.

## **Summary**

While there is a plethora of research on the topic of educational professional development, this research study has specifically contributed to the research surrounding how specific elements of PLCs may impact the enabling factors of collective teacher efficacy, according to the perceptions of school principals. This information can be utilized to help others understand and study how, why, and to what extent elements of professional learning communities' impact specific enabling factors of collective teacher efficacy. The themes were used as a foundation for the assertions about how, why, and to what extent principals believe elements of PLCs' impact specific enabling factors of collective teacher efficacy.

## **CHAPTER 4. RESULTS**

This qualitative study examined the experiences of two principals in Indiana schools where professional learning communities have been implemented for at least one full school year and where school growth can be documented through student achievement results after the implementation of PLCs. The principal interviews that informed this study were conducted in April 2021. For the purposes of confidentiality, each principal is referred to as Principal 1 and Principal 2.

### **Qualitative Analysis**

Participants were interviewed about their work implementing and supporting professional learning communities within their schools. The interview was semi-structured, and questions were provided to each participant before the interview. Each interview was recorded and transcribed by the researcher. After the interviews were transcribed, participants had the opportunity to review and clarify that their responses captured their thoughts accurately.

Once interviews and transcriptions were complete, the interviews were coded using NVIVO 12 software followed by qualitative analysis of each interview. This analysis allowed for themes to emerge through the coding process. Then, those themes were cross-referenced for alignment to the enabling factors of collective teacher efficacy.

Throughout the coding process, the data were analyzed and organized. The interview process was guided by scripted questions; however, the participant responses and additional information provided varied based on the participant's own experiences. Despite the differences in response length and structure, the analysis of data allowed for the emerging of common themes.

The purpose of this qualitative study was to develop a deeper understanding of principals' perceptions of how implantation of PLCs impact collective teacher efficacy. Additionally, it encourages continued conversations that will empower school leaders to focus professional development and professional learning community implementation efforts intentionally on efforts that support the development of the enabling factors of collective teacher efficacy: (1) Advanced Teacher Influence; (2) Responsiveness of Leadership; (3) Teacher Knowledge of One Another's Work; (4) Effective Interventions for Student Academic Achievement; (5) Goal Consensus; and (6) Cohesive Staff.

This chapter highlights the responses and conversations with participants during the interview process. Each participant was asked specific questions about their experience implementing the six elements of PLCs. Additionally, the questions were aligned to the enabling factors of collective teacher efficacy to determine any perceived impact.

### **Open Coding for Principal Interview**

The tables below represent open coding for each of the twelve interview questions focused on the intersection of each of the six elements of PLCs and the six enabling factors of collective teacher efficacy: (1) "Describe the process used to develop your school's mission, vision, and values?"; (2) "What is your primary function in the PLC process?"; (3) "How are PLC goals created?"; (4) "How often and using what process do you analyze strategies being used?"; (5) "How are PLCs formed and how, if at all, have these groups evolved over time?"; (6) "How do PLC members interact and provide feedback to each other?"; (7) "What process is used to ensure all points are heard before deciding a course of action?"; (8) "In what ways do you help teachers build collegial professional confidence?"; (9) "What opportunities exist to learn from each other to enhance effectiveness?"; (10) "What process is used when an existing intervention is not

successful?"; (11) "How are common formative assessments used in PLCs?"; (12) "How do you address resistance within a PLC?" A narrative synopsis of the information aligned with the aligned enabling factors for collective teacher efficacy can also be found following each table.

**Table 1.** *Open coding chart for Principal Interview Questions 1&5*

Principal #1	Principal #2
<p><b>Process used to develop your school's mission, vision, and values:</b></p> <ul style="list-style-type: none"> <li>- I did have a retreat right before school started and showed them my vision to give them a little ins and outs of what a PLC really is, what our goals would be and still have all those PowerPoints, so I show it to the new teachers. I really homed in on the most important thing is, which is, relationships with students because you can't do anything else without building those.</li> <li>-we really have a core group that build those relationships with kids and that's the foundation</li> </ul> <p><b>PLC formation and how have these groups evolved over time:</b></p> <ul style="list-style-type: none"> <li>-When I came here, it's a building that had a lot of, as I looked at the data, a lot of discipline problems. There was a PLC slash war room concept that was to be implemented by the former superintendent. And when I took over, you could tell that it needed to be done with fidelity. And I don't think it was, I think it was done because the superintendent said it had to be done. So, the first thing I had to do was I had to really clean up the culture.</li> <li>-So, the first thing, I did was I sat down and looked at the schedule. I looked at how things were being implemented and created embedded professional development through the PLC model and I powered through every day. I was able to hire aides that can push into the rooms on days that I needed a PLC time. And then the aid took over the class. It was only half an hour that first year.</li> <li>-In that second year, we narrowed it down a little bit to three PLCs a week and what they look like currently after six years of morphing into the strong PLC model</li> <li>-Then I break the PLCs up into, K one, two as a PLC, third and fourth grade has a PLC and fifth and sixth grade has a PLC.</li> </ul>	<p><b>Process used to develop your school's mission, vision, and values:</b></p> <ul style="list-style-type: none"> <li>- We really had to change almost all the ways that we do the typical education type things, because our students needed something different.</li> <li>-I would say that the transformation zone really became a turning point for my staff and myself</li> </ul> <p><b>PLC formation and how have these groups evolved over time:</b></p> <ul style="list-style-type: none"> <li>-grass roots type of effort here.</li> <li>-I had begun reading literature on professional learning communities and knew that, while I had read some, I wasn't completely well-versed, but knew that I wanted to get teachers together on a regular basis and do professional learning and growing together</li> <li>-PLC took off here in the building, it absolutely took off because not only at the time was I becoming more informed on PLCs as I worked through my doctorate we were also bringing in consultants and continuing to professionally develop teachers with the transformation zone.</li> <li>-we have PLC leaders and at the elementary level, it is based on grade level. So, there's a kindergarten PLC leader, a first grade PLC leader. It may be that they combine grades. So it's a K one PLC at the middle school level. We divided based upon subject. So I have a math science PLC, and I have an ELA social studies PLC. And so there's a leader of each group and they are paid and it is added to their contract.</li> <li>-They have a stipend for the year they are paid more for being a teacher leader in the building. And they have received training on the PLC cycle plan. So we have a tracking system in place. We have communication logs. We have a coaching cycle as well.</li> </ul>

Responses from participants to questions 1 and 5, provide insight into the perception of how implementing the PLC elements of creating shared mission, vision, and values and forming collaborative teams impact advanced teacher influence, an enabling factor of collective teacher efficacy. While the participants' overall responses varied, each indicated that they had reevaluated the mission, vision, values, and goals when they were hired on and started the process of professional learning community implementation. Additionally, the structural makeup of professional learning communities was framed, by both participants, around a natural grade level and/or content area grouping arrangement. However, both participants also emphasized authentically connecting groups in a way that allows for vertical and horizontal goal articulation and alignment. While the structure itself did not seem to be impacted directly by teacher influence, the overall formation of group dynamics and roles within were impacted by teacher leaders and their earned influence.

**Table 2.** *Open coding chart for Principal Interview Questions 3&7*

Principal #1	Principal #2
<p><b>PLC goals created:</b></p> <ul style="list-style-type: none"> <li>-strong PLC model that we have and really follows the old RTI, but now the new MTSS model that includes social, emotional behavior support.</li> <li>-we're going to keep an eye on that and then try to figure out the root cause and what's going on.</li> <li>-We'll look at our three-week assessments and we'll talk about what success class looks like in the following three weeks.</li> <li>-we had a good foundation of three-week assessments, what we were supposed to be doing, learning logs that went along with it in the PLC, how you report reported data out, how you adjusted your three-week assessments, how you created your success classes</li> <li>-Well, a lot of that is driven from the data. So then, you look at the data then I think you have an agreement of, okay, we got to have this as a goal setting because we're all agreeing on the data about what the data is. So, you know, I think that's collaborative in that piece.</li> </ul>	<p><b>PLC goals created:</b></p> <ul style="list-style-type: none"> <li>-So we received training on how to effectively run a professional learning community and we had a consultant from teach plus come in.</li> <li>-we have the leader of course running the meeting, but the agenda is set from the beginning of the plan phase at the beginning of each unit in time or within each two week to four week period, here's our goal. So our goal maybe for this quarter, our goal for this month is we want to work on identifying central idea.</li> <li>-They work on their own goals. So, my ELA, social studies PLC, they have a goal for the quarter, or typically a year. It seems we go for about six weeks with them and then they're ready to move, to create another goal. And they work together to create the goal within that PLC. So, we have our school-wide goals. So, we have a math goal and an ELA goal for the school year of improving proficiency, and then it becomes more granular within the process. So, we have our school wide goals. And then, so the PLC's job is to take the curriculum maps, the assessment calendars, and the instructional strategies that they've learned throughout our multitude of professional learning and determine how are we going to get to increase proficiency</li> <li>-We set our goals in the plan stage.</li> </ul>
<p><b>Process to ensure all points are heard before deciding:</b></p> <ul style="list-style-type: none"> <li>-They felt comfortable enough to share with me and I think that helped build that strong relationship and give them the opportunity to really become, even in their first year, instructional leaders.</li> <li>-If there's an initiative that comes down from the superintendent's office or something like that, that's definitely something I'm driving</li> </ul>	<p><b>Process to ensure all points are heard before deciding:</b></p> <ul style="list-style-type: none"> <li>-We set our goals in the plan stage. We enact them and use new instructional strategies that we've learned. We study the data when it comes in, and then we act upon those datas in our interventions.</li> </ul>

Responses from participants to questions 3 and 7, provide insight into the perception of how implementing the PLC elements of collective inquiry and an orientation toward action and willingness to experiment impact goal consensus, an enabling factor of collective teacher efficacy. Overall, the use of data to develop goals was a common thread in both responses. However, there

was also an understanding that some decisions occur based on a response to a hierarchical decision that has already been made. This hierarchical part of the process can influence the overall goal consensus process and requires leadership and transparency to maintain the level of trust and the collaborative culture that is desired.

**Table 3.** *Open coding chart for Principal Interview Questions 6&8*

Principal #1	Principal #2
<p><b>PLC members interact and provide feedback:</b></p> <p>-we'll talk about what success class looks like in the following three weeks. What does reteach look like? What does enrichment look like? How are we meeting the needs of the high ability students? A lot of driving questions in those learning logs, it's powerful</p> <p>-My favorite PLC is on Fridays and what that is, I just call it student samples. And so, what I'll do is I'll have the teachers bring in samples of high mediums and lows, and then it's kind of like a Tuesday where we figure out the social, emotional support.</p>	<p><b>PLC members interact and provide feedback:</b></p> <p>-We have not yet at this point.</p> <p>-I will say that there is a level of accountability as groups go into the PLC.</p> <p>-those teachers are meeting on a weekly basis to discuss progress towards that goal instructional strategies being used. Here's what my assessment data is telling me about students understanding, finding the central idea. And then they talk about once they have that assessment data; how are we going to intervene and help those students who aren't succeeding with this standard. So, it's helped to build a true community.</p> <p>-They work on their own goals. So, my ELA, social studies PLC, they have a goal for the quarter, or typically a year. It seems we go for about six weeks with them and then they're ready to move, to create another goal. And they work together to create the goal within that PLC. So, we have our school-wide goals. So, we have a math goal and an ELA goal for the school year of improving proficiency, and then it becomes more granular within the process. So, we have our school wide goals. And then, so the PLC's job is to take the curriculum maps, the assessment calendars, and the instructional strategies that they've learned throughout our multitude of professional learning and determine how are we going to get to increase proficiency</p> <p>-I feel as though my team has become stronger there is different kinds of conversations going on in the building where we used to talk about behavior, and these are the students we need to send to our alternative program. You know, it's now about instruction data, and Hey, can you look at my assessment and how I really don't like question number three kids Aren't doing well on question number three. What do you think it is? Let's talk about this.</p>

**Table 3, *continued*.**

<p><b>Help teachers build collegial professional confidence:</b></p> <ul style="list-style-type: none"> <li>-They felt comfortable enough to share with me and I think that helped build that strong relationship and give them the opportunity to really become, even in their first year, instructional leaders.</li> <li>-the teachers create interventions for the kids and do everything they can in the classroom and really it is that strong instructional leadership through that PLC model we've been able to have them attain.</li> <li>-We created that atmosphere and are intentional about it with our embedded professional development.</li> <li>-You've got to surround yourself with good people that you can trust, and you know, that are going to implement your philosophy and are on the same page as you. That is critical as well.</li> <li>-that's really the next step and allowing them the opportunity to try things, make mistakes. If they make them, we talk about it.</li> </ul>	<p><b>Help teachers build collegial professional confidence:</b></p> <ul style="list-style-type: none"> <li>-those teachers are meeting on a weekly basis to discuss progress towards that goal instructional strategies being used. Here's what my assessment data is telling me about students understanding, finding the central idea. And then they talk about once they have that assessment data; how are we going to intervene and help those students who aren't succeeding with this standard. So, it's helped to build a true community.</li> <li>-It's the job of our social studies teachers to teach writing across the curriculum and our students need to be well-versed in reading nonfiction texts, and we need your help, social studies teachers. We need your help science teachers to help us with nonfiction reading, to help us with, you know, solving equations in math classes as well.</li> </ul>
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Responses from participants to questions 6 and 8, provide insight into the perception of how implementing the PLC elements of collaborative teams and an orientation toward action and willingness to experiment impact teacher knowledge about one another's work, an enabling factor of collective teacher efficacy. Common mentions throughout both interviews related to the development of trust and intentional conversations focused on targeted strategies and student growth. While there may be an overarching assumption that teachers want to learn and grow from each other, the vulnerability required to do that strategically is significant and is seen as a challenge to overcome.

**Table 4.** *Open coding chart for Principal Interview Questions 9&11*

Principal #1	Principal #2
<p><b>Opportunities exist to learn from each other to enhance effectiveness:</b></p> <p>-My favorite PLC is on Fridays and what that is, I just call it student samples. And so, what I'll do is I'll have the teachers bring in samples of high mediums and lows, and then it's kind of like a Tuesday where we figure out the social, emotional support.</p> <p>-We tried to create a PD schedule before school starts, but it always gets adjusted, right?</p> <p>--that's really the next step and allowing them the opportunity to try things, make mistakes. If they make them, we talk about it.</p> <p>-I can say yes, I saw that Ms. Dunkin, she did a nice job, and I can compliment her on it and tell her what she did in front of her colleagues. And so that they share out strategies with each other in PLCs. Then, they are like, I want to try that.</p> <p><b>Common formative assessments used in PLCs:</b></p> <p>-We'll look at our three-week assessments and we'll talk about what success class looks like in the following three weeks. What does reteach look like? What does enrichment look like? How are we meeting the needs of the high ability students? A lot of driving questions in those learning logs, it's powerful</p> <p>-My favorite PLC is on Fridays and what that is, I just call it student samples. And so, what I'll do is I'll have the teachers bring in samples of high mediums and lows, and then it's kind of like a Tuesday where we figure out the social, emotional support.</p>	<p><b>Opportunities exist to learn from each other to enhance effectiveness:</b></p> <p>-we have had the state board of ed and the department of ed came in and we had a school quality review</p> <p>-What she did is she would come in and observe our PLC time and give right on time feedback to my PLC leaders</p> <p>- It has become revised and honed to work very well for my two PLC leaders. And, you know, if either one of those PLC leaders would leave to go to a different position, we probably would have to do some training with the new Person.</p> <p>-They work on their own goals. So, my ELA, social studies PLC, they have a goal for the quarter, or typically a year. It seems we go for about six weeks with them and then they're ready to move, to create another goal. And they work together to create the goal within that PLC. So, we have our school-wide goals. So, we have a math goal and an ELA goal for the school year of improving proficiency, and then it becomes more granular within the process. So, we have our school wide goals. And then, so the PLC's job is to take the curriculum maps, the assessment calendars, and the instructional strategies that they've learned throughout our multitude of professional learning and determine how are we going to get to increase proficiency</p> <p><b>Common formative assessments used in PLCs:</b></p> <p>-our goal for PLCs was to do a deep dive into student achievement. What is the data telling us, what do we need to do because of the data?</p> <p>- We learned about the plan do study act cycle. And so, we plan for our goal for a particular unit. Then we enacted the unit in the do stage. We came back with the assessment data and studied it. And then we talk about what we're going to do in interventions to help us what worked, what didn't work, those types of things.</p> <p>-those teachers are meeting on a weekly basis to discuss progress towards that goal instructional strategies being used. Here's what my assessment data is telling me about students understanding, finding the central idea. And then they talk about once they have that assessment data; how are we going to intervene and help those students who aren't succeeding with this particular standard. So, it's helped to build a true community.</p> <p>-we're down now to analyzing items on our assessments and the standards, mastery, iRead assessments that our students are taking for each priority standard.</p>

Responses from participants to questions 9 and 11, provide insight into the perception of how implementing the PLC elements of commitment to continuous improvement and focus on results impact cohesive staff, an enabling factor of collective teacher efficacy. While each participant referenced different types of assessments in their commentary about measuring progress, the common aspect was that both discussed data analysis in their processes and referenced common data points within their buildings to ensure everyone was operating with a common understanding. Both participants emphasized the importance of data in collaboratively determining the best strategies and then the best way to collaborate on the implementation of those strategies.

**Table 5.** *Open coding chart for Principal Interview Questions 2&12*

Principal #1	Principal #2
<p><b>Primary function in the PLC process:</b></p> <p>-When I came here, it's a building that had a lot of, as I looked at the data, a lot of discipline problems. There was a PLC slash war room concept that was to be implemented by the former superintendent. And when I took over, you could tell that it needed to be done with fidelity. And I don't think it was, I think it was done because the superintendent said it had to be done. So, the first thing I had to do was I had to really clean up the culture.</p> <p>-So, the first thing, I did was I sat down and looked at the schedule. I looked at how things were being implemented and created embedded professional development through the PLC model and I powered through every day. I was able to hire aides that can push into the rooms on days that I needed a PLC time. And then the aid took over the class. It was only half an hour that first year.</p> <p>- I did have a retreat right before school started and showed them my vision to give them a little ins and outs of what a PLC really is, what our goals would be and still have all those PowerPoints, so I show it to the new teachers. I really homed in on the most important thing is, which is, relationships with students because you can't do anything else without building those.</p>	<p><b>Primary function in the PLC process:</b></p> <p>-I had begun reading literature on professional learning communities and knew that, while I had read some, I wasn't completely well-versed, but knew that I wanted to get teachers together on a regular basis and do professional learning and growing together</p> <p>-We could have a weekly professional development session with staff. And so that gave me the fuel to have a standard meeting once a week.</p> <p>-PLC took off here in the building, it absolutely took off because not only at the time was, I becoming more informed on PLCs as I worked through my doctorate we were also bringing in consultants and continuing to professionally develop teachers with the transformation zone.</p> <p>- And so, when the PLC meets my PLC leaders lead. where at one point as I was beginning of the PLC journey as a new principal, it was me leading these PLCs with myself and my assistant principal.</p> <p>- It has become revised and honed to work very well for my two PLC leaders. And, you know, if either one of those PLC leaders would leave to go to a different position, we probably would have to do some training with the new Person.</p> <p>--we have the leader of course running the meeting, but the agenda is set from the beginning of the plan</p>

**Table 5, continued**

<p>-They felt comfortable enough to share with me and I think that helped build that strong relationship and give them the opportunity to really become, even in their first year, instructional leaders.</p> <p>-When I go in there, I use my notebooks, I've got PLC notes and then that's just a way for my social worker and I to support teachers and give them some insights.</p> <p>-My literacy coach sits right next to me or across the way, six feet away, and she will take great notes and then I do have one interventionist that my literacy coach has trained.</p> <p>-f you've got eight step PLCs and tap or a system of good foundation, with instructional rubric that you evaluate teachers, you have the PLC model for the PDs was how to teach, and then you've got eight step that goes along with your curriculum to tell you what to teach.</p> <p>-And the fidelity piece for me is inspection. It's walk-throughs.</p> <p>-I really empowered my social worker to take over Tuesday PLC. And I'm just a listener. I take notes. I do chime in when I, if I know something that's going on that I can help support.</p> <p>-I'm leading that. I'm directing those things too. So, I have dual role and that's really hard for an administrator sometimes you wear your administrator hat, your coach hat and just your support person hat.</p> <p>-And so, you've got to empower the ones that want to do better, that want to take the leadership role, but just aren't there yet. You've got to help them become that leader. The other ones that are already there, you don't want them to get burned out, because you're always giving them the thing. Cause you know, you trust them so much so that's a fine balance. That's the administrator piece.</p> <p><b>Addressing resistance within a PLC:</b></p> <p>-Not really. Once we started seeing success</p> <p>-there are always going to be your pushbacks, but you can't focus on that now. You've got to focus on the ones that want to get better.</p>	<p>phase at the beginning of each unit in time or within each two weeks to four-week period, here's our goal. So, our goal maybe for this quarter, our goal for this month is we want to work on identifying central idea.</p> <p>-it sounds great to just dive into PLCs, but like you said, without the systems in place, it becomes impossible to you.</p> <p>-My primary function has become an observer. unless I see something that is completely inappropriate out of hand, not on task, whatever it may be, I can just sit back and observe them as they do the cycle within the PLC itself.</p> <p>-I flipped my assistant principal and I flip flop. So, if one week I'm an ELA PLC, the next week I go to math. And then if I'm an ELA, he's in math, if I'm in math, he's any, so we flip flops. So, one of us is there during the PLC.</p> <p><b>Addressing resistance within a PLC:</b></p> <p>-unless I see something that is completely inappropriate out of hand, not on task, whatever it may be, I can just sit back and observe them as they do the cycle within the PLC itself.</p> <p>-The resistance has come from, and it really is finding a place for where do you within the PLC process in a secondary school, that's small. They need to feel like it's authentic.</p> <p>-My science teachers have really struggled in the past year or so regarding why are we a part of PLC? Why can't we be our own PLC? Well, let me show you the sixth grade. I learn science test that has so much math in it. Therefore I need you to be a part of math PLC. And so, it's been a work in progress.</p>
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Responses from participants to questions 2 and 12, provide insight into the perception of how implementing the PLC elements of shared mission, vision, and values and focus on results impact responsiveness of leadership, an enabling factor of collective teacher efficacy. While both participants indicated similar points of initial resistance, the responses focused on their perceived roles was different. Principal 1 indicated a significant presence in professional learning community sessions and heavy involvement in the everyday process. However, Principal 2 indicated more of an observer role. While some of this may be attributed to leadership aiming to give credit to teachers sharing in the leadership responsibility, some of it may be the dynamic that allows for responsiveness of leadership in each individual setting.

**Table 6.** *Open coding chart for Principal Interview Questions 4&10*

Principal #1	Principal #2
<p><b>How often and what process do you analyze strategies being used:</b></p> <p>-Well, a lot of that is driven from the data. So then, you look at the data then I think you have an agreement of, okay, we got to have this as a goal setting because we're all agreeing on the data about what the data is. So, you know, I think that's collaborative in that piece.</p>	<p><b>How often and what process do you analyze strategies being used:</b></p> <p>-our goal for PLCs was to do a deep dive into student achievement. What is the data telling us, what do we need to do because of the data?</p> <p>-We learned about the plan do study act cycle. And so, we plan for our goal for a particular unit. Then we enacted the unit in the do stage. We came back with the assessment data and studied it. And then we talk about what we're going to do in interventions to help us what worked, what didn't work, those types of things.</p>
<p><b>Process used when an existing intervention is not successful:</b></p> <p>-Well, a lot of that is driven from the data. So then, you look at the data then I think you have an agreement of, okay, we got to have this as a goal setting because we're all agreeing on the data about what the data is. So, you know, I think that's collaborative in that piece.</p>	<p><b>Process used when an existing intervention is not successful:</b></p> <p>- We came back with the assessment data and studied it. And then we talk about what we're going to do in interventions to help us what worked, what didn't work, those types of things.</p> <p>-so, what she did is she would come in and observe our PLC time and give right on time feedback to my PLC leaders</p> <p>-we're down now to analyzing items on our assessments and the standards, mastery, iRead assessments that our students are taking for each priority standard.</p>

Responses from participants to questions 4 and 10, provide insight into the perception of how implementing the PLC elements of collective inquiry and commitment to continuous improvement impact effective systems of intervention, an enabling factor of collective teacher efficacy. While both participants referenced the use of data in their decision-making, Principal 2 outlined a specific course of action related to interventions using the “plan, study, act cycle.”

### **Observations from Coding of Principal Interviews**

#### **Principal 1**

Principal 1 is a Caucasian male serving in the capacity of an elementary principal in a rural setting. He has been leading the school in the implementation of professional learning communities for over 4 years. During that timeframe, the data indicate school growth in student achievement.

During the interview protocol, the first prompts focused on the PLC elements of shared mission, vision, and values; and collaborative teams through the lens of advanced teacher influence. Principal 1 responded to the prompt— “describe the process used to develop your school’s mission, vision, and values” — by describing the retreat that was organized when he began that allowed him to share his vision of focusing on relationships and implementing professional learning communities as the school’s primary means of professional development. Additionally, Principal 1’s response to the question— “how were PLCs formed and how, if at all, have these groups evolved over time”—provided insight into the value attached to intentional scheduling and structures as a means for ensuring successful implementation of PLCs.

The next prompts focused on the PLC elements of collective inquiry and an orientation towards action and a willingness to experiment through the lens of goal consensus. Principal 1 responded to the prompt— “how are PLC goals created”—by emphasizing the use of data to

determine root causes and capitalize on existing structures to develop and implement strategies that support growth. Principal 1 responded to the prompt— “what process is used to ensure all points are heard before deciding a course of action”—with an emphasis on transparency to maintain relationships and trust when decisions, sometimes, are made based on a hierarchical structure rather than through collaboration and the process of consensus building.

The next interview prompts focused on the PLC elements of collaborative teams and an orientation towards action and a willingness to experiment through the lens of teacher’s knowledge about one another’s work. Principal 1 responded to the prompt— “how do PLC members interact and provide feedback to each other”—by describing Friday PLCs and the conversations focused on what student success looks like and the supports provided to each student to achieve that success. The response to that prompt was reiterated again and the importance of establishing and fostering trusting relationships was emphasized in the context of learning from each other and to trust that the philosophy and shared goals will guide the work regardless of who is leading.

The next interview prompts focused on the PLC elements of commitment to continuous improvement and focus on results through the lens of cohesive staff. Principal 1 responded to the prompt— “what opportunities exist to learn from each other to enhance effectiveness”—with an emphasis on sharing strategies and complimenting colleagues on their successes. Additionally, he shared the importance of having a common understanding of expectations and how success will be determined to adequately provide supports. This also supported Principal 1’s response to the prompt— “how are common formative assessments used in PLCs”—which focused less on the assessments and more on the structure of using the results to determine success, support, and enrichment.

The next interview prompts focused on the PLC elements of shared mission, vision, and values and focus on results through the lens of responsiveness of leadership. Principal 1 responded to the prompt— “what is your primary function in the PLC process”— by indicating a significant presence in professional learning community sessions and heavy involvement in the everyday processes. While the significant presence in sessions started out to ensure support was being offered to implement processes, it has shifted as an opportunity to use the time and presence to foster the relationships he has with staff. The prompt— “how do you address resistance within a PLC”—emphasized the idea that developing collaborative relationships had led to shared goals and an environment where resistance was no longer an issue.

The final interview prompts focused on the PLC elements of collective inquiry commitment to continuous improvement through the lens of effective systems of intervention. Principal 1 responded to the prompts— “how often and using what process do you analyze strategies being used” and “what process is used when an existing intervention is not successful— by emphasizing the data collection and goal setting structures in place to ensure students remain the focus for decisions.

## **Principal 2**

Principal 1 is a Caucasian female serving in the capacity of a middle school principal in an urban setting. She has been leading the school in the implementation of professional learning communities for 2 years. During that timeframe, the data indicate school growth in student achievement.

During the interview protocol, the first prompts focused on the PLC elements of shared mission, vision, and values; and collaborative teams through the lens of advanced teacher influence. Principal 2 responded to the prompt— “describe the process used to develop your

school's mission, vision, and values" — by emphasizing the transformation that happened when they aligned all the ways they typically approached education with the collaborative realization that their students needed something different. This realization was grounded in the foundation of relationships built between students, teachers, and families. Additionally, Principal 2's response to the question— "how were PLCs formed and how, if at all, have these groups evolved over time"—provided insight into the value attached to continued professional growth as a means of providing solid supports and structures to ensure successful implementation of PLCs; including the implementation of tracking systems and communication logs.

The next prompts focused on the PLC elements of collective inquiry and an orientation towards action and a willingness to experiment through the lens of goal consensus. Principal 2 responded to the prompt— "how are PLC goals created"—by sharing the process of using data to collaboratively formulate goals and implementation plans within each PLC. The structures in place to support this cycle of action were developed through an intentional process of training and collaboration. Principal 2 responded to the prompt— "what process is used to ensure all points are heard before deciding a course of action"—with an emphasis on the PLC's system and structures of taking the curriculum maps, the assessment results and calendars, and the instructional strategies that they've learned throughout the multitude of professional learning to determine how to get to increased proficiency.

The next interview prompts focused on the PLC elements of collaborative teams and an orientation towards action and a willingness to experiment through the lens of teacher's knowledge about one another's work. Principal 2 responded to the prompt— "how do PLC members interact and provide feedback to each other"—by emphasizing the natural level of accountability that exists within the PLC environment. She shared that her team has become stronger now that the

conversations have shifted. They used to talk about behavior and now the discussions are focused on instructional data and how to continue growing as a professional community of learners. Not only did this response emphasize the use of data, but it was also laced with the importance of establishing and fostering trusting relationships.

The next interview prompts focused on the PLC elements of commitment to continuous improvement and focus on results through the lens of cohesive staff. Principal 2 responded to the prompt— “what opportunities exist to learn from each other to enhance effectiveness”—with an emphasis on sharing strategies focused on achievement of collaboratively formed goals. Additionally, she shared that this is an area of focus she would like to see enhanced on a deeper level across PLCs. Having an open observation format among peers is an overarching goal and will continue to be a goal as they focus on fostering trusting relationships to achieve that goal. This also supported Principal 2’s response to the prompt— “how are common formative assessments used in PLCs”—which focused more on the structure of using the results to determine success, support, and enrichment than the assessments themselves. The weekly progress discussions to ponder what assessment data are telling the team about student understanding and how they are going to intervene to help individual students has helped support the building of community.

The next interview prompts focused on the PLC elements of shared mission, vision, and values and focus on results through the lens of responsiveness of leadership. Principal 2 responded to the prompt— “what is your primary function in the PLC process”— by indicating an initial presence in all professional learning community sessions and heavy involvement in the startup processes through research and implementation phases. However, she indicated the transformation into more of an observer role as the capacity of PLC leaders has evolved. The prompt— “how do

you address resistance within a PLC”—emphasized the idea that building trusting relationships greatly influences the authenticity of actions, which reduces resistance.

The final interview prompts focused on the PLC elements of collective inquiry commitment to continuous improvement through the lens of effective systems of intervention. Principal 2 responded to the prompts— “how often and using what process do you analyze strategies being used” and “what process is used when an existing intervention is not successful— by emphasizing the consistent use of student achievement data and the process of using that data as a lens when discussing future potential actions based on what the data are telling us and repeating the process every step of the way.

### **Themes**

Through the process of reviewing the interview recordings, transcribing the interviews, and open coding the interview responses, it became apparent that each participant viewed their role in professional learning communities differently. However, even with the lack of commonality related to perceived role, their responses to questions focused on the six PLC elements: (1) shared mission, vision, and values; (2) collective inquiry; (3) collaborative teams; (4) an orientation towards action and a willingness to experiment; (5) commitment to continuous improvement; and (6) a focus on results (DuFour & Eaker, 1998); largely aligned to the six conditions, described by Donohoo (2017a), that provide the environment for collective teacher efficacy to exist. These are: (1) Advanced teacher influence; (2) Goal consensus; (3) Teacher knowledge of one another’s work; (4) Cohesive staff; (5) Responsiveness of leadership; and (6) Effective systems of intervention.

Specifically, the themes that emerged as connection points for the alignment of these professional learning community elements and collective teacher efficacy enabling factors were:

(1) Trusting Relationships; and (2) Use of Data; and (3) Systems and Structures. Each participant's responses are layered with blatant and underlying references to the importance of and need for trusting relationships, use of data, and systems and structures to successfully implement professional learning communities and impact the development of collective teacher efficacy.

### **Trusting Relationships**

Huffman and Hipp (2003) emphasized the importance of relationships: "Without creating a culture of trust, respect, and inclusiveness with a focus on relationships, even the most innovative means of finding time, resources and developing communication systems will have little effect on creating a community of learners" (p. 146). Throughout the interview protocols, both participants mentioned relationships as a key component across almost every element of professional learning community implementation. Principal 1 said, "they felt comfortable enough to share with me and I think that helped build that strong relationship and give them the opportunity to really become, even in their first year, instructional leaders. Both participants shared that it was a process to develop trust and build relationships when they were first hired on in their positions. Additionally, they both emphasized the importance of continuing to build relationships across the staff to ensure the work could continue beyond their presence.

While responses emphasized relational importance when the questions were aimed at (1) shared mission, vision, and values; (2) collective inquiry; (3) collaborative teams; and (4) an orientation towards action and a willingness to experiment; the questions aimed at (5) commitment to continuous improvement; and (6) a focus on results deviated from relational importance and emphasized the importance of use of data.

## **Use of Data**

The element of professional learning communities focused on results is embedded throughout the interview responses. Principal 2 said,

I've really realized that if you don't measure what you're doing, if there isn't a level of accountability built into any system that you create, then it's not going to happen. What gets measured gets done, period. We were doing PLCs, but there wasn't the accountability piece. We weren't diving into data deeply. We weren't setting a goal. We weren't talking through the process of how we were then teaching to this goal intentionally. We are now analyzing items on our assessments and the standards, down to mastery. And we couldn't have done that without the accountability measures in place. We used to talk about behavior, but it's now about instructional data.

This directly supports the assumption that principals who focus on learning and utilizing evidence of learning, strengthen and improve professional practice (DuFour & Marzano, 2009, p. 63). While principals who focus on data use set the tone, DuFour and Eaker (1998), pointed to another theme: “The school that hopes to become a professional learning community must provide teachers with time to reflect, to engage in collective inquiry, to collaborate, and to participate in continuous improvement processes” (p. 123).

## **Systems and Structures**

The importance of systems and structures in place relates to enabling staff the time to meet to examine practice and student outcomes (Hipp & Huffman, 2010, p. 13). According to Hipp and Huffman (2010), “Time for teachers to work together is essential for school reform initiative” (p.19). Both interview participants indicated overarching structures that were in place to support the implementation of professional learning communities. Principal 1 shared,

If you have PLC model for professional development and TAP, or another system, for the instructional rubric that you evaluate teachers, and a model that goes along with your curriculum to tell you what to teach and if you can implement those three pieces with fidelity in a corporation, in a building, you're going to move the needle.

A strategic allocation of time for collaborative work, fiscal resources, and appropriate technology and instructional materials aligns with research on actions needed to support communities of learners (Hipp & Huffman, 2010, p. 19).

### **Summary**

Through the data collection and open coding processes, this qualitative study revealed that the elements of professional learning communities and the enabling factors of collective teacher efficacy are perceived to be interconnected in multiple ways. Every effort to present the perceptions of the two participants was made to provide their view of how the implementation of professional learning communities impacts the enabling factors of collective teacher efficacy. These interviews provide information to consider as a starting point for other school principals who wish to implement or redefine how they are implementing professional learning communities within their building to maximize potential impact. The data analysis process revealed three themes: (1) Trusting Relationships; (2) Use of Data; and (3) Systems and Structures. Each theme, if focused on as a foundational component when implementing professional learning communities, has the potential to support the enabling factors of collective teacher efficacy: (1) advanced teacher influence; (2) goal consensus; (3) teachers' knowledge about one another's work; (4) cohesive staff; (5) responsiveness of leadership; and (6) effective systems of intervention. Based on these revealed themes, chapter 5 considers assertions, future recommendations, limitations of the study, and conclusions.

## **CHAPTER 5. DISCUSSION AND RECOMMENDATIONS**

The purpose of this study was to examine the perceptions of school principals on the impact of PLCs on collective teacher efficacy in two Indiana schools. This study's design is grounded in the frameworks of DuFour and Eaker's (1998) six elements of PLCs and Donohoo's (2017a) six enabling factors of collective teacher efficacy. Although each of the two principals interviewed have implemented professional learning communities and have seen an increase in student achievement scores in the same timeframe, the ability to directly link their individual actions to results is limited. However, the researcher sought evidence to support the reference to enabling factors of collective teacher efficacy within the participants' responses to the questions about their implementation of specific PLC elements in order to determine perceived impact and identify any underlying themes. The themes that emerged can be used as a starting point for others planning to implement professional learning communities in a way that has the greatest potential of developing collective teacher efficacy.

School leaders should be encouraged by the perceived impact professional learning community implementation has had on the enabling factors of collective teacher efficacy; and student achievement, in this multiple-case study. It is evident that the emerging themes—(a) Trusting Relationships, (b) Use of Data, and (c) Systems and Structures—are perceived as essential components that link the action of implementing professional learning communities and the development of enabling factors of collective teacher efficacy.

## **Discussion of Findings**

The remainder of chapter 5 addresses the implications of this study, recommendations for future research, and limitations of this study. The data collected, coded, and analyzed from interviews provided the information to consider the research questions that guided this study:

1. What are principals' perceptions of the impact of PLCs on advanced teacher influence?
2. What are principals' perceptions of the impact of PLCs on responsiveness of leadership?
3. What are principals' perceptions of the impact of PLCs on teacher knowledge of one another's work?
4. What are principals' perceptions of the impact of PLCs on effective interventions for student academic achievement?
5. What are principals' perceptions of the impact of PLCs on goal consensus?
6. What are principals' perceptions of the impact of PLCs on cohesive staff?

### **Research Question 1**

Research question one investigated principal's perceptions of the impact of PLCs on advanced teacher influence, identified as one of the six enabling conditions for collective teacher efficacy and defined by how often and to what extent teachers are provided opportunities to participate in making school-wide decisions (Donohoo, 2017a). Participants were asked questions and given prompts focused on their actions implementing the following PLC elements: shared, mission, vision, and values and collaborative teams. Both principals shared their experiences related to how they went through the process of getting to know their teachers and staff when they began their roles and communicating their vision and values as they worked collaboratively to define their mission. Additionally, both principals identified how they formed their PLC groups in

a way that allowed similar grade level and content area teachers the time to collaborate on a regular basis within a strategic structure.

While responding to the questions that were aimed at understanding principal's perceptions of the impact of PLCs on advanced teacher influence, there were consistent references, by both principals, to establishing trusting relationships to ensure decisions being made are supportive of the mission, vision, and values that have been established collaboratively. The responses support the idea that both principals perceive the structures and systems in place and relationships built through the PLC process as impacting advanced teacher influence, an enabling factor of collective teacher efficacy.

## **Research Question 2**

Research question two investigated principal's perceptions of the impact of PLCs on responsiveness of leadership, identified as one of the six enabling conditions for collective teacher efficacy by Donohoo (2017a). Participants were asked questions and given prompts focused on their actions implementing the following PLC elements: shared mission, vision, and values and focus on results. Principal 1 indicated a more directly involved role within the PLCs than Principal 2. However, the factor of influence that supports the level of involvement of each of the principals was the relationships they had built throughout the process of implementation. Additionally, the use of data to support the decisions made within PLCs created the environment where resistance is limited because the results speak for themselves.

While responding to the questions that were aimed at understanding principal's perceptions of the impact of PLCs on responsiveness of leadership, Principal 1 emphasized his presence in PLC sessions as an opportunity to engage with teachers regularly and be a close part of the process. However, Principal 2 emphasized the use of communication logs to keep her in the loop without

the need to attend all PLC sessions regularly. While different, the responses support the idea that both principals perceive the use of data, structures and systems in place, and the relationships built through the PLC process as impacting responsiveness of leadership, an enabling factor of collective teacher efficacy.

### **Research Question 3**

Research question three investigated principal's perceptions of the impact of PLCs on teacher knowledge of one another's work, identified as one of the six enabling conditions for collective teacher efficacy by Donohoo (2017a). Participants were asked questions and given prompts focused on their actions implementing the following PLC elements: collaborative teams and an orientation towards action and a willingness to experiment. Both principals indicated a deeper level of colleague-to-colleague feedback as an area of future focus. While they both indicated collaborative relationships within the PLC groups, the goal would be to have a collegial open-door observation/feedback structure that encourages teachers to provide specific feedback based on actual observations of colleagues in a non-evaluative format. The structures support this as a possibility, but the relationships and trust require more time to implement without a potential negative impact in other aspects of the process.

While responding to the questions that were aimed at understanding principal's perceptions of the impact of PLCs on teacher knowledge of one another's work, both principals suggested that the educator effectiveness evaluation process that is unrelated to PLC implementation, influences the level of trust among colleagues and their willingness to invite others to observe implementation of strategies and provide feedback to one another. The responses support the idea that both principals perceive the relationships built through the PLC process as impacting teacher knowledge of one another's work, an enabling factor of collective teacher efficacy.

#### **Research Question 4**

Research question four investigated principal's perceptions of the impact of PLCs on effective interventions for student academic achievement, identified as one of the six enabling conditions for collective teacher efficacy by Donohoo (2017a). Participants were asked questions and given prompts focused on their actions implementing the following PLC elements: collective inquiry and commitment to continuous improvement. Both principals indicated the importance of structures being in place to collect and analyze data to use in the process of determine successful strategies and deciding when and how to change course when the data do not positively support continuing with the current plan of action.

While responding to the questions that were aimed at understanding principal's perceptions of the impact of PLCs on effective interventions for student achievement, both principals focused largely on using data to support schoolwide goal development and tracking. The responses support the idea that both principals perceive the use of data and systems and structures built through the PLC process as impacting effective interventions for student academic achievement, an enabling factor of collective teacher efficacy.

#### **Research Question 5**

Research question five investigated principal's perceptions of the impact of PLCs on goal consensus, identified as one of the six enabling conditions for collective teacher efficacy by Donohoo (2017a). Participants were asked questions and given prompts focused on their actions implementing the following PLC elements: collective inquiry and an orientation towards action and a willingness to experiment. While both principals indicated the importance of collaborative relationships throughout the process of developing schoolwide and individual PLC goals, Principal

2 expanded on how her PLC leaders utilize a cyclical process to study the data before collaboratively creating goals and cycling back to start again when those goals are achieved.

While responding to the questions that were aimed at understanding principal's perceptions of the impact of PLCs on goal consensus, the responses support the idea that both principals perceive the use of systems and structures, data, and collaborative relationships built through the PLC process as impacting goal consensus, an enabling factor of collective teacher efficacy.

### **Research Question 6**

Research question six investigated principal's perceptions of the impact of PLCs on cohesive staff, identified as one of the six enabling conditions for collective teacher efficacy by Donohoo (2017a). Participants were asked questions and given prompts focused on their actions implementing the following PLC elements: commitment to continuous improvement and focus on results. Many of the responses from both principals were like the responses to the questions focused on the perceptions of the impact of PLCs on teacher knowledge about one another's work. Both principals reiterated the importance of collaborative relationships within the PLC groups and the use of data to support decisions. The responses support the idea that both principals perceive the systems and structures in place, the use of data, and the relationships built through the PLC process as impacting cohesive staff, an enabling factor of collective teacher efficacy.

### **Assertions**

The participants' interview commentary and identified themes in the previous sections provide insight into principal's experiences implementing professional learning communities. The principal's responses to interview questions serve to clarify any perceived impact on collective

teacher efficacy. The interrelatedness of each theme is evident throughout both principal's responses. The themes that emerged have been analyzed leaving six assertions for principals and other school leaders to consider when implementing professional learning communities in their buildings. As indicated in this study's literature review, narrowing the focus of professional development efforts to focus on efforts with the greatest impact is essential to school reform efforts aimed at increasing student achievement.

***Assertion #1-Principals must foster collaborative, trusting relationships.***

Eaker and DuFour (2002) detailed the cultural shifts that need to occur when transforming schools into PLCs. These shifts include improvements in collaboration; developing a mission, vision, values, and goals; focusing on learning; leadership; focused school improvement plans; celebration; and persistence. Additionally, Huffman and Hipp (2003) emphasized the importance of relationships: "Without creating a culture of trust, respect, and inclusiveness with a focus on relationships, even the most innovative means of finding time, resources and developing communication systems will have little effect on creating a community of learners" (p. 146). Both principals interviewed for this study were able to foster collaborative and trusting relationships by listening to teachers, being present in meetings, modeling professional growth, and empowering teacher leaders. As Principal One said, "They felt comfortable enough to share with me and I think that helped build the strong relationship and give them the opportunity to really become, even in their first year, instructional leaders. In addition to the relationship building among staff, Principal One stated "I really homed in on the most important thing, which is relationships with students because you can't do anything else without building those." According to Huffman & Hipp (2003), supporting human capacity requires a culture of trust and caring relationships among staff and students (p. 13). This belief about the importance of and willingness to continually work towards

building relationships with staff and students provides a strong foundation for establishing and maintaining trust.

***Assertion #2-Principals must implement systems and structures that consistently support the mission, vision, and values of the school.***

LaRocco (2007) claimed that research suggests schools struggle in the development of structures that support the growth of PLCs, and while both principals in this study indicated a level of intentionality attached to shifting existing structures, they also indicated the importance of making it happen. Principal Two shared,

I had begun reading literature on professional learning communities and knew that, while I had read some, I wasn't completely well-versed, but knew that I wanted to get teachers together on a regular basis and do professional learning and growing together.

Through that willingness to learn and grow in her own capacity, Principal Two was able to identify needs and even brought an outside consultant in for a needs assessment and to receive training on how to effectively run a professional learning community.

Throughout the implementation of PLCs, structures often need adapted or replaced (Hipp & Huffman, 2010, p. 127). Specifically, schedules often require changes that allow for more opportunities for collaborative work (Hipp & Huffman, 2010, p. 127). Principal Two stated,

I sat down and looked at the schedule. I looked at how things were being implemented and created embedded professional development through the PLC model and I powered through every day. I was able to hire aides that can push into the rooms on days that I needed a PLC time.

This attentiveness to creating the supportive structural and physical conditions is important to ensuring educators have the resources needed to be productive (Huffman & Hipp, 2003, p. 13).

***Assertion #3-Principals must consistently make, and support, decisions based on transparent, meaningful data.***

A principal's ability to create an environment of shared decision making is essential for PLCs (Boyd & Hord, 1994; Huffman & Hipp, 2000; Hipp et al., 2008; Lee et al., 1991; Leithwood

et al., 1998; Morrissey, 2000). Both principals emphasized the use of data in creating goals within PLCs. Principal One shared that goal setting is based on an agreement about what the data say. Additionally, Principal Two stated, “our goal for PLCs was to do a deep dive into student achievement. What are the data telling us, what do we need to do because of the data?” Because educational leaders often rely on their own knowledge, experiences, judgment, and beliefs to make decisions (Firestone & Riehl, 2005), this consistent use of data to base decisions makes those decisions less subjective and empowers everyone in PLCs with shared knowledge and belief about decision-making.

Principal Two shared that her PLC groups work together to create the goal within the PLC. While there are also school-wide goals created together based on data, each PLC lead collaborates to make decisions on goals that are based on data and supportive of the overall school-wide goals. This process has developed over time and allows her to empower instructional leaders to make data driven decisions without the need for her physical presence in every PLC meeting. Rather, she keeps up to date on the goals and progress using communication logs with each PLC. While this process has developed over time, the ability to support decisions through a shared leadership process allows for advanced teacher influence.

### **Recommendations**

As previously stated, with so many factors involved in the schooling aspect of education and the continuous limitation of resources, it is essential that educators narrow the focus of their efforts to raise student achievement. Even though Hattie’s (2015) meta-analysis suggested collective teacher efficacy is the most influential factor of influence on student achievement and Donohoo (2017a) suggested educational leaders should consider professional learning that focuses on understanding collective teacher efficacy and ways to create and sustain it in their schools, many

educators continue to provide professional development that lacks strategic alignment to the development of collective teacher efficacy. School leaders will continue to face difficulties with developing collective teacher efficacy without intentional, strategic planning of professional development opportunities. Utilizing the professional learning community framework as the core professional development structure seems to be a viable solution for school leaders trying to develop collective teacher efficacy. Additionally, intentional action focused on the themes that emerged from this research has the potential, as perceived by the participants of this study, to greater impact the development of collective teacher efficacy, and ultimately, student achievement.

Additional research could include studies focused on the emerged themes—(a) Trusting Relationships, (b) Use of Data, and (c) Systems and Structures—to examine specific, supportive actions. The overarching goal for future research is to further breakdown actions educational leaders can take to positively influence student achievement in their buildings.

### **Action Steps**

Principals and other educational leaders who are considering the implementation of professional learning communities or who are considering restructuring their professional learning communities can use the findings of this study to reflect on their own role and consider actionable items related to the development of collective teacher efficacy. To summarize, principals should:

1. Intentionally focus on building new relationships and strengthening existing relationships with staff.
2. Provide opportunities for staff to foster positive, trusting relationships with each other.
3. Engage in networking opportunities with other school leaders to engage in personal professional growth.

4. Become experts in data collection, analysis, and use to ensure what is being collected and measured allows for data driven decision-making.
5. Invest in efforts that will build the capacity of staff related to data collection, analysis, and use.
6. Regularly evaluate and reflect on existing systems and structures to ensure they support each other and continue to support the goals of the school.

### **Limitations**

As indicated previously, this study is limited by potential variations in interpretations of the PLC model by educational leaders. Further, there was a limited availability of schools with fully implemented PLCs and principals willing to participate in the study. While the study included interviews with one rural school principal and one urban school principal, perceived impact in various other school settings and structures may not generally apply.

### **Conclusions**

The purpose of this study was to examine the perceptions of school principals on the impact of professional learning communities (PLCs) on collective teacher efficacy in two Indiana schools. The themes that emerged from the interviews, (a) Trusting Relationships, (b) Use of Data, and (c) Systems and Structures, are perceived as essential components that link the action of implementing professional learning communities and the development of enabling factors of collective teacher efficacy.

Three assertions, which should serve as a foundation for principals implementing professional learning communities were also developed and are:

1. Principals must foster collaborative, trusting relationships.
2. Principals must implement systems and structures that consistently support the mission, vision, and values of the school.
3. Principals must consistently make, and support, decisions based on transparent, meaningful data.

The assertions are supported by the information collected during the principal interviews. It is recommended that both principals continue to support professional learning communities as the primary structure for professional development. Additionally, a focus on strategic actions focused on building trusting relationships, utilizing data, and building effective systems and structures is recommended. Although limitations were identified in the areas of minimal sample availability and diversity of sample, the ability to replicate the study allows for future research to expand beyond those limitations.

## APPENDIX A. INTERVIEW PROTOCOL AND QUESTIONS

### Introduction:

*To facilitate my notetaking, I would like to audio record our conversations today and request that you sign the release form. Only I will be listening to the recordings which will be eventually destroyed after they are transcribed. In addition, you must sign a form to meet our human subject requirements. Essentially, this document states that: (1) all information will be held confidential, (2) your participation is voluntary, and you may stop at any time if you feel uncomfortable, and (3) we do not intend to inflict any harm.*

*I have planned this interview to last no longer than one hour. Do you have any questions?*

*You have been selected because you have been identified as building principal who has been implementing Professional Learning Communities in your building for more than a year. My research focuses on PLC implementation's impact on the Collective Teacher Efficacy, as identified by John Hattie to be the number one influence on student achievement. The study does not aim to evaluate your leadership or techniques. Rather, I am trying to learn more about your perceptions of how each component of professional learning communities impacts your school community.*

## Questions:

How long have you been in your current position?

Tell me about your path to school leadership.

CTE FACTORS → PLC ELEMENTS ↓	Advanced Teacher Influence	Goal Consensus	Teachers Knowledge About One Another's Work	Cohesive Staff	Responsiveness of Leadership	Effective Systems of Intervention
<b>Shared Mission, Vision, and Values</b>	Describe the process used to develop your school's mission, vision, and values.	What vision guides your PLC work? How often is it revisited?	How do you determine the most effective strategies to use in teaching essential content?	How were your PLC norms established?	What is your primary function in the PLC process?	How does your work in PLCs combine the needs of individuals and school/district goals?
<b>Collective Inquiry</b>	What questions guided the foundation for your PLC journey?	How are PLC goals created?	Describe opportunities that exist for teachers to participate in action research collaboratively.	How do you decide what it is that students must learn?	How do you model the inquiry process for your own professional growth?	How often and using what process do you analyze strategies being used?
<b>Collaborative Teams</b>	How were PLCs formed and how, if at all, have these groups evolved over time?	What are some examples of your PLC norms? How were they created?	How do PLC members interact and provide feedback to each other?	How do your PLC structures engage teachers, assistants, and administrators?	How do you protect PLC time?	How are programs or changes implemented to ensure the greatest success?
<b>An Orientation towards action and a willingness to experiment</b>	To what extent do your teachers have control over what/how they teach?	What process is used to ensure all points are heard before deciding a course of action?	In what ways do you help teachers build collegial professional confidence?	In what ways do you help teachers build professional confidence?	How does evaluation impact the risk-taking environment?	How do you decide on which programs or changes are implemented to ensure the greatest success?
<b>Commitment to continuous improvement</b>	How are teachers encouraged to set goals for their own professional growth?	How do district and school goals provide the foundation for teacher professional growth goals?	How do your PLCs engage in providing peer to peer feedback?	What opportunities exist to learn from each other to enhance effectiveness?	How does your PLC structure influence Master Scheduling?	What process is used when an existing intervention is not successful?
<b>Focus on Results</b>	How are results used when identifying teacher leaders?	How are goals for student learning established?	How do PLCs celebrate small wins?	How are common formative assessments used in PLCs?	How do you address resistance within a PLC?	How do you know when students have mastered essential content?

*\*1-2 question prompts will be used from each CTE Factor column; starting with Advanced Teacher Influence and ending with those categorized as Effective Systems of Intervention. The questions across each of the 6 rows are focused on the implementation of PLC elements to allow for perceived impact on CTE factors. The use of additional questions will depend on the level of prompting needed to guide the conversational interviews with each participant. The 12 interview questions used were 1AC, 2BD, 3CD, 4EF, 5AF, 6DE.*

## Post Interview Comments and/or Observations:

## **APPENDIX B. EMAIL INVITATION TO PARTICIPATE**

April 2021

Dear Prospective Interview Participant,

As a Purdue University doctoral student, I am conducting a research study as part of my doctoral degree requirements. My study is entitled, Principal Perceptions of Professional Learning Community Impact on Collective Teacher Efficacy. If you are an Indiana Principal who leads in a building where professional learning communities have been implemented for at least a full year and you have demonstrated school growth in the area of student achievement post PLC implementation, this letter serves as an invitation for you to participate in this research study.

By agreeing to participate in the study, you will be agreeing to participate in an interview with the researcher and giving your consent for the researcher to include your interview responses in the data analysis. Your participation in this research study is strictly voluntary, and you may choose not to participate without fear of penalty or any negative consequences. You will be able to withdraw from participation at any time and all interview data will be deleted, including the informed consent agreement.

An informed consent agreement will be provided prior to the scheduled interview. There will be no individually identifiable information, remarks, comments or other identification of you as an individual participant.

The interview will last no more than 90 minutes. Your participation will contribute to the current literature on the subject of developing collective teacher efficacy. No compensation will be offered for your participation.

If you decide to participate after reading this letter, please complete the Google form here by April 15, 2021.

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