THE EFFECT OF PROFESSIONAL LEARNING COMMUNITIES ON PERCEIVED TEACHER SELF-EFFICACY

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This qualitative case study examined the effect of PLCs on teacher self-efficacy, and whether the type of PLC structure on each campus affected efficacy. The overarching research question that guided the study was, to what extent does perceived teacher self-efficacy change as a result of the practice of PLCs? Participants were selected using purposive and convenience sampling. Ten teachers and two principals on two different campuses participated in teacher focus groups and one-on-one principal interviews, respectively. The available literature on the topics of professional development, professional learning, teacher collaboration, and teacher self-efficacy yielded the discovery that collaborative practices can be used to improve a school and/or district or used to enhance positive practices that already occur. This study adds to the body of research as it develops the area of teacher efficacy and influence of PLCs. Using the coding software, NVivo, focus group data were coded into themes and further comparisons were made with categories derived and saturated until conclusions were drawn. The data show teacher self-efficacy increases as a result of PLCs when teachers are able to experience positive feedback from teammates, shared leadership, trust and honesty, and a freedom to fail. For those teachers who are not on a campus where PLCs are present, the data suggest they created their own PLCs as the need arose. These teachers experienced all of the same benefits of those teachers on a campus where a formal PLC structure existed; however, their stress level was higher.
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CHAPTER 1
INTRODUCTION

The purpose of this study was to examine perceived teacher self-efficacy as it relates to collaborative professional development. Doughney (2008) defined teacher self-efficacy as the perceived ability to achieve a desired level of performance in either a personal or professional setting. He explained that beliefs about one’s agency can “impact how people feel, think, act, and motivate themselves” (p. 22). Levels of efficacy can vary among individuals and teams and can be affected by factors outside the control of teachers or school leaders. Philpott, Furey, and Penney (2010) discussed how teachers feel inadequate to take on the increasing responsibilities imposed upon them by state and local governments, as well as their communities. As leaders of teachers, it is incumbent upon school administrators to facilitate teacher professional development in ways that help teachers increase their efficacy, not in ways that diminish confidence by being burdensome and futile.

Research shows that teachers learn more efficiently when they collaborate (Hadar & Brody, 2010) and that collaboration is largely accomplished by the act of talking to one another and learning together through activities and discussions centered around topics that are relevant to teachers. Indeed, lasting change occurs when the concepts of “teachers teaching teachers” (Sturko & Gregon, 2009, p. 37) and team development are fully embraced by campus staff. Sturko and Gregon confirmed what teachers know to be true: an intermittent or one-time professional development session is not effective in developing lasting change. Therefore, grounding professional development practices in the effective use of language through meaningful learning opportunities for teachers can, over time, improve practice. Musanti and Pence (2010) studied the idea that it is through the use of deliberate and robust language that we
learn, not simply repetition, practice, or study. The concept of teacher discourse was used in their research to frame the discussion about how the use of effective language skills can transform a learning community. The researchers characterized the acquisition of knowledge as either given, received, procedural, or constructed through language. Effective application of collaborative professional development could impact the efficiency and success of teachers on a campus, transforming the learning experience for students.

This chapter introduces the research and includes the statement of the problem, the conceptual framework graphic, the purpose statement, research questions, significance, delimitations, and assumptions. Definitions of terms related to the study are presented, as well as an outline for the chapters that follow.

Statement of the Problem

Over the past several decades, an increasing number of districts moved toward a collaborative model of professional development rather than the historical format of a presenter or presenters and an audience (Battersby & Verdi, 2015). Indeed, there is a recent trend in many districts to increase the amount of teacher collaboration among teams, within departments, and during professional development sessions. While formats vary from district to district, and even campus to campus, most conform to what is becoming a standard model, that of professional learning communities (PLCs). Though some districts refer to these learning groups as teams or departments, most have adopted the name professional learning communities. The definition and construction of professional learning communities have been thoroughly researched and fleshed out by those such as DuFour and Eaker (1998) and Huffman and Hipp (2003 & 2010), as well as others that are discussed in the review of literature. Briefly, a PLC is a team of teachers who
commit to a long-term effort to plan their lessons, using similar goals and language, in an effort to improve student achievement (Crafton & Kaiser, 2011). While the format is simple, true collaboration can be complex and elusive. Factors such as building relationships and trust, as well as crafting common goals and vision, all play a role in how effective a PLC is. Many schools struggle to implement PLCs effectively, despite the wealth of information available on PLC structures.

PLCs can take on many forms, including online and in-person formats, and the size and scope can vary, depending on the setting. For example, a PLC of English teachers on a middle school campus may have a different culture and climate than a PLC of educators in an online graduate course. I have been involved in multiple online community settings where collaboration was required and, although the facilitator attempted to create an atmosphere where collaboration occurred organically, few experiences were as beneficial as I had hoped. Most left me ill-equipped to handle the challenges on my campus and certainly did not increase my perceived efficacy as a school leader. Largely due to the ambiguity surrounding the concept of collaboration in the work place (Forte & Flores, 2014), I neither felt more competent as an educator nor had increased efficacy as a result of participating in a PLC.

If the use of PLCs exists on a campus, the intent of this study was to determine whether they improved the practices of teachers and met their needs, the needs of their students, and the needs of their schools by increasing perceived teacher self-efficacy. If these criteria were met, it must be concluded that professional development through PLCs has the potential to create lasting change instead of simply meeting an arbitrary requirement by school district administration to check the proverbial box marked collaboration.
The sentiment of discontent between collaborative professional development practices and gainful learning is mirrored in the research as teachers express concern that the training policies put into effect in some states limit teacher and school autonomy, stifling creativity and hindering true and valuable learning (Forte & Flores, 2014). Therefore, the problem for this study was to determine if a more focused effort towards collaborative professional development, using the PLC structure, increases perceived teacher self-efficacy and to determine if the added component of teachers self-selecting professional development influences teacher self-efficacy as related to increased teacher learning. Of further importance was the effort to determine what model or structure of a PLC exists at the campuses included in the study, and whether that chosen model impacts the effectiveness of the PLC and increases perceived teacher self-efficacy.

Conceptual Framework

Figure 1 represents the conceptual framework for this study and is based on the community of inquiry framework proposed by Garrison, Anderson, and Archer (2000). The components of their structure encompass three areas: social presence, cognitive presence, and teaching presence. Each of the three sections overlap visually in a Venn diagram to form cross sections that added depth to the study. For this study, the social presence of team meetings is enhanced with the cognitive presence of reflection, and teachers begin to make changes in their teaching practices. When reflection is coupled with the teaching presence layer, as true collaboration, the impact of collaborative efficacy emerges (Hadar & Brody, 2010). Finally, as the occurrence of regular team meetings is normalized and teachers practice research-based collaborative techniques, strong, more effective teaching patterns emerge (Williams, Tabernik, & Krivak, 2009). The framework serves this study well as the layers reveal the culminating query
of whether or not teachers experience an increase in perceived self-efficacy when the three presence descriptions are applied.

![Cognitive Presence](image1.png)

**Figure 1.** Community of inquiry framework. This figure explains the impact of teacher collaboration on self-efficacy and is based on the work of Garrison, Anderson and Archer (2000).

Originally crafted by Garrison, Anderson, and Archer, to evaluate the effectiveness of online education, this three-presence framework has grown in use over the last decade to support a variety of learning platforms (Swan & Ice, 2010), but it lends itself to the study of collaborative learning particularly well.

**Purpose Statement**

The purpose of this qualitative study was to examine effective collaborative practices and their effect on perceived teacher self-efficacy. During the scope of this study, research was
conducted examining what PLCs looked like on each campus and how the PLC model influenced teacher self-efficacy. Of further interest was the extent to which variations in the chosen PLC model increased or decreased efficacy.

Research Questions

The overarching research question was as follows: To what extent does perceived teacher self-efficacy change as a result of the practice of PLCs? To examine this greater question, the following two sub-questions were explored:

1. Do teachers perceive PLCs to be beneficial to their self-efficacy?
2. Is there a variety of PLC models practiced on the different campuses and, if so, is there evidence of increased teacher efficacy based on the PLC model a campus chooses?

Of specific interest is the study of whether the implementation of PLCs impacts perceived teacher self-efficacy. As chapter 2 shows, data on the impact of PLCs and collaborative groups reveal an effect on collective efficacy; however, this study focused on the personal efficacy of each teacher.

Significance of the Study

District leaders continuously try to improve the processes through which they educate their teachers. Initiatives related to professional development trickle down to campus leaders who, in turn, implement changes to improve professional development practices. The teachers in this study have undergone several phases of change in the campus professional development program, each change designed to improve teacher learning and student achievement. While the subject of the effects of professional development on teacher performance has been researched ad nauseam (Avalos, 2011; Battersby & Verdi, 2015; Crafton & Kaiser, 2011; Devlin-Scherer &
Sardone, 2013; Eaker, DuFour, & DuFour, 2002; Hadar, & Brody, 2010; Huffman & Hipp, 2010; Musanti & Pence, 2010; Sturko & Gregon, 2009; Wiefbenrieder, Roeshen-Winter, Schueler, Binner, & Blomeke, 2015; Williams, Tabernik, & Krivak, 2009), whether or not perceived efficacy improves as a result of changes in the delivery and structure of the professional development program has not been studied. Thus, this study is important for adding to the literature on improved teacher efficacy as a result of collaborative professional learning.

As teachers collaborate more effectively, they are likely to feel more confident in their teaching skills and their collective professional responsibilities. Voelkel and Chrispeels (2017) studied the impact of PLCs on a California school district by surveying 310 teachers and 16 principals, examining the impact of PLC training on their collective efficacy. The authors concluded the execution of PLCs had a large, positive impact on teacher collective efficacy, specifically when the PLC practices of collective goals and focusing on results were implemented. Doughney (2006) researched job-embedded teacher professional development and PLCs. Part of his research focused on determining whether job-embedded professional development impacts teacher efficacy, using the framework called Levels of Use, which describes the range of behaviors that are evident in learning, growing, and using new skills. In his study, Doughney examined data related to a team of 23 teachers who worked together collaboratively to study, learn, and plan, using the backward design approach to lesson planning. Doughney discovered the following five results of collaboration between teachers that emerged from the interviews conducted: “designing work, collaboration, desired results, student engagement/student needs, and change in thinking” (p. 129). These data suggest that teachers feel they have improved their practice in meeting student needs by changing their thinking through collaboration and changes in their cognition.
Therefore, from the findings of this study, district leaders may consider the benefits of teacher self-selection and collaborative engagement for the improvement of professional development strategies, and, if they do not already employ those structures, they may begin to do so. From findings that reveal that teacher perception of self-efficacy increases as a result of collaborative learning opportunities, school leaders may see fit to change their approach to the delivery of professional development.

Delimitations

This study was conducted using a sample of teachers and principals that work in the same district where I am employed, representing the population of district employees who are required to participate in professional development activities. Surveys and interviews occurred during the 2017-2018 school year to examine teachers’ perceptions of the effects of the changes in professional development practices over the 2015-2017 school years. This study was limited by the relatively small sample size, 12 participants. Further, some of the teacher participants could be considered to be under my professional purview, at the time. There may have been some instances where the participants felt like there could be negative professional consequences related to an expression of perceived low efficacy. Bracketing was used to alleviate as much of that influence as possible.

Assumptions

There are two assumptions inherent in the study that could be said of almost any study. It was assumed that all focus group discussions and all interview responses reflected the true and accurate sentiment of the participants. Also, it was assumed that all participants accurately
recalled their perceived efficacy prior to the changes in professional development that occurred over the course of the previous two years.

Definition of Terms

The list that follows presents several key terms, as defined specifically in relation to this research.

• Coaching. This approach is a teaching configuration used to encourage peer interactions and promote collaboration by grouping teachers together and working towards solving a specific problem identified by the school leaders (Crafton & Kaiser, 2011).

• Collaboration. Professional staff collaborate when they work together in a continuous cycle of searching for answers, using what they learned in the classroom, reflecting on the results, and engaging in further inquiry (Hipp & Huffman, 2010).

• Efficacy or self-efficacy. Efficacy is measured by the confidence one has in one’s ability to achieve a standard or goal (Doughney, 2008).

• Face-to-Face Professional Development. Through this medium, administrators train and develop teacher skills, where participants and presenters are in the same room interacting with one another.

• Inclusion. The most intense variation of collaboration is when special education students are included in a general education classroom, with focused teacher support (http://www.specialeducationguide.com/pre-k-12/inclusion/).

• Mentoring. This is the relationship between a novice teacher and an experienced teacher where both benefit from the sharing of ideas and practices (Crafton & Kaiser, 2011).
• Online Professional Development. This method provides instruction via a computer-mediated format intended for use where teachers do not work in close proximity. This format is typically used to connect teachers who are the only ones who teach their particular subject on their campus with those on other campuses in the same situation (Battersby & Verdi, 2015).

• Professional Learning Communities. Such communities are comprised of a team of educators who engage in a long-term effort to plan and implement tools and to develop language specific to their learning community in an effort to improve student achievement (Crafton & Kaiser, 2011).

• Self-selection. The act of allowing teachers to choose their professional development experiences can be described as self-selection. Restrictions include, but are not limited to, connecting the professional development to a professional goal, completing the experience within or outside of a particular time frame, or requiring a reflective piece as documentation of completion.

Organization of the Study

This study is organized into five chapters. Chapter 1 offers an introduction to the study and includes the following sections: statement of the problem, conceptual framework, purpose statement, research questions, significance, delimitations, assumptions, and definitions of important terms. Chapter 2 reviews the available literature on the constructs of perception of self-efficacy, collaboration, and professional development. Chapter 3 looks at the methodology of the study and how the data were organized and synthesized, followed by chapter 4 which describes and analyzes the results of the study. Lastly, chapter 5 discusses the conclusions drawn, implications for action, and suggestions for areas of further study.
Summary

This chapter lays the foundation for why it was important to study the effects of collaboration on teacher perception of self-efficacy. As the literature clearly presents, both in this chapter and in greater detail in the chapter that follows, there is a relationship between collaborative practices and improved teacher performance (Crafton & Kaiser, 2011; Voelkel & Chrispeels, 2017). What I sought to determine was whether teachers perceive a positive impact on their skills and an increased effectiveness in the classroom as they collaborate with one another in a professional development setting, or whether they continue, throughout the year, to exist in the status quo, never realizing their full potential for change.
CHAPTER 2

REVIEW OF LITERATURE

The following pages include a concise examination of current research on professional development (PD) practices and the elements that are necessary to improve teacher efficacy, specifically related to teacher collaboration. Musanti and Pence (2010) described the concept of learning as using language to transfer ideas and thoughts from person to person. Hadar and Brody (2010) used their research “to stimulate professional development among teacher educators who are committed to learn how to infuse thinking into their curriculum” (p. 69) through collaboration. The synthesis of the research presented in this chapter yields the discovery that collaborative practices can be used to improve a school and/or district or used to enhance positive practices that already occur. Based on the research presented by Musanti and Pence (2010), Hadar and Brody (2010), and several others addressed in this chapter, we can conclude collaboration is helpful for both students and teachers and it is critical when establishing an effective strategy for developing a healthy school culture. The topics covered in this review of literature include professional development, professional learning communities, teacher collaboration, teacher self-efficacy, and gaps in the literature.

Throughout this chapter, references are made to the community of inquiry (CoI) framework, which is the basis for the conceptual framework that undergirded this study. The CoI framework is used to increase understanding and provide context for the factors that can contribute to an increase in perceived teacher self-efficacy. This framework consists of three components: social presence, cognitive presents, and teaching presence. The social presence provides insight into the ways teachers can infuse their personalities into their learning in order to ground the planning, based on the needs of their students. When teachers engage the social
presence for their planning, they are designing lessons based upon experience and expertise. The cognitive presence relies upon the ability of participants to communicate effectively with one another to construct meaning through collaboration. Lastly, the teaching presence combines the use of the social and cognitive presence to provide a platform upon which teachers can discover personal meaning in their collaborative experiences (Rourke, Anderson, Garrison, & Archer, 2001).

Professional Development

Teacher professional development always has been viewed as an important part of the education program on a school campus, particularly from a district or campus leadership perspective. Determining how and when teachers will engage in training and what the various training topics will be is an important task for school leaders. Professional development can be evaluated through the lens of the cognitive presence, as identified in the theoretical framework for this study. The process of increasing teacher efficacy is described in the following presentation of literature on professional development. The various studies outlined below confirm that professional development should be immediately applicable to the practice of the teacher, it should be experiential, and it should be as collaborative as possible.

Recent Trends in Teacher Learning

Using a constructivist approach, some authors explain how learning is the process by which individuals interact with their environment and use a self-initiated process to collate and integrate information into the cognitive structures that are already in place (Avalos, 2011). There are several trends that became relevant in recent years. The following items contain the most
prevailing themes in the research presented in Avalos’ article on the concept of mediation facilitation through collaboration:

- Partnerships with schools and universities are a growing trend.
- Understanding teacher co-learning through peer coaching, teacher networks, and professional learning communities is necessary.
- Whether teacher professional development is done overtly or covertly, it is usually not provided outside the school setting, which may or may not have an effect on how well teachers receive it.

Another concept that surfaced in the last several years of research is the idea that the principal is the lead learner on campus, thus is an active participant in the professional development, alongside teachers. Fullan (2014) wrote the following about the effects of a leader that learns with teachers, compared to one who simply disseminates information.

Hierarchical leadership can never influence the masses on any scale, but purposeful peers can have this effect. So, the principal’s role is to lead the school’s teachers in a process of learning to improve their teaching, while learning alongside them about what works and what doesn’t. (p. 16)

Teachers on campuses where principals adopt this mentality report that this lead learner perspective was the catalyst for change on their campus. According to Fullan, school leaders who embrace the development of four key areas to bring about reform will find more success than those who do not. Those areas suggested by Fullan are professional capacity, school climate, community involvement in the school, and guiding students through learning by setting learning targets and shaping the lessons around those targets.

Crafton and Kaiser (2015) discussed coaching and mentoring as two tools administrators use to help promote teacher learning. Coaching, in their study, was used to encourage peer interactions and promote collaboration by grouping teachers together and working towards solving a specific problem identified by the school leaders. Mentoring between teachers
occurred mostly between student teachers and experienced teachers, where the goal was to impart wisdom from mentor to mentee.

Professional Development Self-Selection

When teachers are given the opportunity to voluntarily participate in additional professional development outside the schedule provided by the district, Barrett, Butler, and Toma (2013) found several factors more likely to be true. They are the following: the students in those teachers’ classrooms, and in the school as a whole, were usually less successful on standardized tests, teachers were from smaller schools and smaller school districts and from schools with higher student teacher ratios.

Professional Development and Electives Teachers

Teachers of elective courses are not immune to the need for collaboration just because they are not being tested at a state or federal level. With the recent renovations to teacher appraisal systems across the nation, the same demands are placed on music and other elective teachers to participate in a PLC, without providing the structure for that to take place. Often, teachers in the fine arts and career and technology education departments have no one on their campus who teaches the same subject, yet they are being evaluated on whether or not they plan, learn, and grow with their departments. It is incumbent upon school leaders to provide a structure for these teachers to be able to work with people who teach the same content areas as they do (Battersby & Verdi, 2015). Battersby and Verdi’s research supports the social presence of the framework applied to the current study, confirming that as regular collaborative meetings take place, personal practice evolves, and more productive teaching patterns emerge.
Brener, McManus, Wechsler, and Kann (2013) examined the effects on student health and health education when teachers participated in professional development and there was collaboration between and among departments on school campuses. All of the data were drawn from a study that the Center for Disease Control (CDC) conducts every other year, so immediately the reader questions the depth of data and rigor that could be reached with such an infrequent non-specific data source. The literature reviewed for this topic reveals little in the way of groundbreaking evidence and simply reinforces the common knowledge that professional development can improve the knowledge and skills of teachers.

The CDC data were collected from nationwide surveys conducted in the years 2000, 2002, 2004, 2006, 2008 and 2010, limited to grades 6-12. Respondents included principals and lead health education teachers (LHET), with the surveys being self-administered and voluntary. The conclusions focused around several main findings. There is a broad spectrum concerning the amount of PD administered to the LHET’s and the amount of collaboration that takes place between health education staff and other related support staff. These support staff include cafeteria staff, physical education teachers, and campus and district nutrition services. This variance occurred most in 2010, but the authors offer no reason for the isolated event.

Looking at the years 2000 to 2010 as a whole, trends in professional development vary between an increase and a decrease across the states, but there is a distinct increase in collaboration in all but two states. A closer look reveals an increase in PD focused mainly on the areas of nutrition and physical activity. The researchers postulated that the reason lies in the nationwide efforts of many companies and organizations to bring awareness to obesity. There was also a push for drug-use prevention (95.7% of schools) and HIV prevention (89.9% of
schools). Brenner et al. (2013) suggested a more thorough survey process that includes a saturation of the LHET community over several years and a qualitative component that can explain why the changes may have occurred. This study reinforces the notion that well-trained teachers will provide more valuable learning experiences for their students, which should lead to improved overall student achievement.

Components of Effective Professional Development

Several authors attempted to define the term professional development within the context of understanding collaboration better. Philpott et al. (2010) presented five areas of professional development that district and school leaders should focus on in order to accommodate the changing needs of the students and the teachers that serve them. They are listed as follows: detailing a policy for inclusion that is district-wide, providing diversity training that embraces the variety of cultures represented by the teachers and the students, training teachers on how to nurture their students and develop an awareness of the differences that exist in their classrooms, implementing an inclusion program for special education and English language learners, and lastly, providing meaningful experiences that demonstrate inclusion and how it should look for real learning to occur.

Sturko and Gregon (2009) identified 20 commonalities in the research about professional development and sorted them into three categories: (a) environments and context where teachers learn; (b) the differences in learning experiences when teachers engage in two different professional development activities; and (c) items related to the process of teacher learning and collaboration. The process of participating in professional development, practicing the skills learned, and then reflecting on the practice increased teacher confidence and competency
concerning building integrated lesson plans. Feelings of connectedness increased as the teachers in this study worked with individuals with whom they would not normally connect. Relatedly, Avalos (2011) offered the following list that describes the two main factors that contribute to effective professional development.

1. Factors influencing professional development:
   a. Macro conditions described as processes in the federal and state education system.
   b. School cultures that include attitudes and structures at the local level.

2. Effectiveness of professional development:
   a. There is a variety of professional development formats that meet the needs of teachers in different ways, including curricular information and student management.

   b. Most curricular professional development formats are either year-round or a two- or three-day intensive program. Research supports the effectiveness of both types.

Online Collaborative Professional Development

The use of an online community, or computer-mediated communication, has emerged as a solution to the problem of connecting singleton teachers (those who are the only teachers of their subject on a campus). Certainly, participation in online collaboration, where collaboration would not otherwise have occurred, contributes to the social presence of the CoI framework and can positively impact teacher self-efficacy. Online collaboration allows teachers to connect with those who teach similar subjects on different campuses and provides an opportunity to engage in professional development outside the school day, rather than during the day when most teachers feel rushed or simply have no time to attend professional development sessions. Teachers engaging in online learning experience higher levels of interaction than those learning face to
face. The research is unclear at this point whether that leads to greater learning, but the potential is there for this type of professional development (Battersby & Verdi, 2015).

Fusco, Haavind, Remond, and Schank (2011) found, in their study of online seminars, that there were some very specific factors that make online learning more successful. First, experience on the part of the facilitators may improve the quality of the class. Second, more choices are not always better. However, this might be true of all types of professional development. Third, increased familiarity with technology is making it increasingly possible for a variety of teachers to participate and that diversity among participants provides a robust collection of posts. Making online courses accessible and easy to use for participants is vital. Lastly, individuals must feel that their efforts are worth it. Principals and school leaders play a major role in defining the value of professional development experiences. Teachers must feel like their time is well spent in order to engage fully in the experience.

Professional Learning Communities

The concept of PLCs has been well known for several decades. Overcoming the stigma of it being just another education trend, PLC work continues to prove its value in increasing teacher collaboration (Hipp & Huffman, 2003), leading to higher student achievement scores (Crafton & Kaiser, 2001), bringing about more enjoyable and beneficial professional development experiences (Hadar & Brody, 2010), and decreasing teacher isolation (Eaker, DuFour & DuFour, 2002). The ease with which campus leaders implement a campus vision can also be improved by a well-run PLC structure, which could have lasting effects on the school and community. The CoI framework illustrates the importance of implementing PLCs with intentionality. By creating a culture where PLC teams meet regularly (social presence) and
reflect upon their teaching practices with one another (cognitive presence), increased efficacy will occur (Voelkel & Chrispeels, 2017). Hipp and Huffman (2003) published their seminal work in their book *Reculturing Schools as Professional Learning Communities*, and began the discussion about the power of PLCs to change the culture of a campus and infiltrate all interactions between staff members, from well-planned team learning experiences to spontaneous conversations about a lesson gone awry. The studies reviewed in this section support Hipp and Huffman’s research, and help to expand the knowledge of what PLCs require of administrators and staff and how they can be used to increase teacher capacity.

A PLC, according to Crafton and Kaiser (2015), is a team of educators who engage in a long-term effort to plan and implement tools, and develop language specific to their PLC in an effort to improve student achievement. Language is particularly important in this context as most of the learning takes place in the form of discussion. “It is *language* that scaffolds a group’s activities towards its achievement; it is *language* that supports (or denies) the development of particular identities and relationships within a social activity” (p. 107). Of particular importance, in a PLC, is the need to create common language around what the vision and goals of a campus are (Hipp & Huffman, 2003).

While the phrase professional learning communities goes back decades, it was made popular in the late 1990’s by Richard DuFour and Robert Eaker, through their 1998 book *Professional Learning Communities at Work*. At that time, the PLC structure was framed almost entirely as the solution for broken schools. “Professional learning communities are our best hope for reculturing schools” (Eaker, DuFour, & DuFour, 2002, p. 9). Since then, learning organizations have emerged in the corporate world. As described by Senge (1990), a PLC is “one where people continually expand their capacity to create desired results, where new and
expansive patterns of thinking are nurtured, where collective aspiration is set free” (p. 3). This definition can be applied easily to an academic environment, especially in terms of encouraging new ways of thinking and focusing learning on a specific goal or objective.

The concept and practice of professional learning communities for improving teacher efficacy through collaboration provided the basic construct for the current study. It was for this reason that my study focused on the extent to which PLCs that provide collaborative learning increase teacher self-efficacy.

Factors that Facilitate Change

Factors necessary for a culture change include the following: collaboration by teachers; establishing a mission, vision, shared values, and individual and campus goals; focus on learning by all (teachers, school leaders, and students); concerted focus on school improvement plans by all stakeholders; and persistence punctuated with rewards and celebration (Eaker, DuFour & DuFour, 2002). There is an energy required to make change happen. Hipp and Huffman (2010) claimed that establishing a shared vision that was collaboratively formed can create the momentum for necessary change.

Huffman and Hipp (2010) discussed several case stories, ranging in degrees of success and failure of PLC implementation. The story of success at Lake Elementary is a powerful example of how collaborative teaching and learning can permeate a campus. The factors present for this school were unique to PLCs: shared and supportive leadership, shared values and vision, shared personal practice, supportive structures, and supportive relationships. At Lake, everyone played a role in developing the goals and reforms that would be used to improve the campus. The administration of Lake Elementary determined that the statement *We believe*... was to be a
rally cry for their campus. The teachers began to identify with the concept that whenever someone made the statement *We believe*… then the entire staff joins together to accomplish the goal. The teachers at Lake truly seemed to have a strong sense of importance and confidence that sharing their ideas and teaching strategies would empower other teachers, not impede their professional growth. They shared how the sense of trust took time to build, and was not something that every school should expect overnight, but it was accomplished over time and in the fires of adversity at Lake Elementary. The school underwent huge change during Hurricane Katrina, as they received 80 new students and three displaced teachers in the middle of the school year. The teachers were able to rebound from the shift in population and the rapidly changing needs of the students, because of the structures in place through PLCs. The staff was immediately welcoming and inclusive as they welcomed their new staff members as part of the family. When it came time to write the school improvement plan, everyone was involved – from the teachers to the students and even the parents who had younger children at home. The school administrators even worked into the school budget money to hire babysitters so that parents could attend the school meetings. Lake Elementary determined that collaboration was their focus and that informed every decision they made.

Capacity Building

In *Change Leader*, Fullan (2011) described hands-on work as deliberately working directly with colleagues in order to establish meaning and gain experiences. This practice describes perfectly the social presence of PLCs meeting on a regular basis. Colvin (2008) further clarified deliberate practice as repeated, reflective practice. Believing that talent is not something people are born with but instead, it must be developed from experiences,
Colvin promoted deliberate practice to allow knowledge to be deepened and developed. Building capacity within schools allows this to be accomplished. Through the process of growing others by investing and performing hands-on work with them, a passion and energy are created. The key to successful deliberate change is the practice of implementing a process and fostering it among teachers in a nonjudgmental atmosphere so that energy and passion can be sustained over time (Fullan, 2011).

Additionally, Fullan (2011) noted that new experiences must be offered to teachers in the areas that are applicable to their teaching assignments so they can engage and grow professionally. Behaviors must be changed in an accepting and empathetic way for positive feelings and emotions to attach to the intrinsic experience. The exposure to new skills and procedures lends itself to naturally reinforcing positive motivation for the new experience to become an instinctive behavior. Fullan explained, “The most meaningful experiences exhibit changes in behaviors that, given time and feedback, will lead to change within the peer culture” (p. 83).

According to Fullan (2005), capacity building requires policies, strategies, resources, and actions that are designed to move the system forward in achieving the fundamental purpose of all students learning at high levels. New knowledge, skills, competencies, resources, shared identity, and motivation to work together for greater change are vital. Capacity building within organizations will create accountability at a deeper level that yields action and results needed in schools (Fullan, 2011). According to Fullan, when new skills for teachers and administrators are built, there is an overall deeper motivation for improvement. This type of learning for educators must be on-going and not front-loaded. When new learning is forced on teachers all at once, then a sense of anxiety is created and the chance for translation into improvement in daily culture
within the system is decreased (Fullan, 2005). With capacity building, it also allows the focus to be on learning, instruction, and assessment, which Fullan (2011) called the heart of student achievement.

Capacity Building through Professional Learning Communities

Professional learning communities are the vehicles to building capacity within the educational system. Through this process, the goal is that teachers will see a change in personal practice and more productive teaching patterns, as identified in the personal presence component of the conceptual framework for the current study. One consistent barrier with this process is when educators do not fully understand how to implement and sustain this approach successfully, which leads to superficial PLC’s (Fullan, 2006). The members of a successful PLC understand the importance of creating a collaborative culture that focuses on building the capacity for continuous improvement towards a common vision (Hipp & Huffman, 2003). Teachers naturally learn from one another, but it is just as important for schools to learn from each other in a PLC culture. This means that school districts should collaborate externally as well as internally to truly have a systemic change. Fullan (2006) called this *lateral capacity building*. This kind of change does not happen until all leaders in an organization understand the implementation of PLC’s as a process, not a program, which can achieve a shift in culture across all entities. Dufour and Fullan called this “systemness” (2013, p. 18). Without “systemness,” pockets of achievement will emerge only in buildings where this process is successful, but a systemic culture change will not be achieved.
Eliminating Teacher Isolation

All one has to do is ask teachers what they think about the current state of education and it becomes almost immediately apparent that teachers feel nearly at a loss for how to move forward in a productive and meaningful way. Crafton and Kaiser (2015) began the report of their research on collaboration by discussing some of the reasons teachers struggle and/or leave the teaching profession. Their study was an overview of the tools that school leaders use to improve the performance of the teachers on their campuses. From that study, some themes emerged. The first is the difficult adjustment new teachers go through as they attempt to satisfy their principals, parents, community members, and district personnel – all while trying to learn how to teach effectively. Secondly, experienced teachers are not immune to feelings of wanting to leave teaching, as they often find themselves on an island working alone with little chance for self-improvement or engagement with other teachers in a professional setting. In fact, removing this isolation is one of the five steps Eaker, DuFour and DuFour (2002) listed as necessary to establish a collaborative community. The other factors are equally important and each one is crucial for the health of the change process. Figure 2 explains the phases of development in creating a culture of collaboration on a school campus and is based on the writings of Eaker, et al.

*Figure 2. Steps in creating PLCs. This figure shows the progression of growth as PLCs are implemented.*

Teacher Collaboration

Almost every author considered in this literature review attempted to define
collaboration. Some of the definitions included “interaction, learning, problem discussions and problem-solving, and…word sharing” (Forte & Flores, 2014, p. 95). Collaborative practices, as defined by Hipp and Huffman (2010), include professional staff working together in a continuous cycle of searching for answers, using what they learned in the classroom, reflecting on the results, and engaging in further inquiry. Devlin-Scherer and Sardone (2013) were able to construct their definition by analyzing the reflections of the participants of their three-year study involving two teachers working together as a collaborative team. The primary means of gathering data was through the reflections the participants were required to keep throughout the three-year study. The discussion of their experience was telling as they moved from the beginning stages of coexisting to coadunating (defined below). The following evidence is offered by Devlin-Scherer and Sardone, which they characterize as the seven stages of collaboration, based on the existing literature and supported by their data.

1. Coexisting describes an environment where participants do not interact at all. This setting can be found on more traditional campuses that do not encourage or accommodate teachers planning together.

2. Communicating advances the relationship as the participants develop an awareness of one another and begin to define their roles while maintaining their own decision-making abilities. At this stage, teachers begin to develop a trust with one another that allows for vulnerability in sharing ideas and experiences.

3. Cooperating is a state of existence wherein the partners begin to share information and plan together, but are still very much independent as they move through the program. It was at this stage that the teachers who participated in the study noted a hesitation to sign up for the program and fully embrace the use of technology.
4. Coordinating occurs when individuals share information frequently and also share in the decision-making responsibilities. Beyond making plans for the clerical work required to implement lessons, this stage calls for openness and a willingness to learn from one another.

5. Partnering in the field of education often looks like co-teaching. Teachers who partner together work very closely, planning lessons and creating assessments to meet the needs of their students. The subjects in the Devlin-Scherer and Sardone (2013) study found that partnering was a very successful and beneficial experience.

6. Collaborating, which is not, in fact, the last stage on the collaboration continuum, is when teachers work closely enough together to become a functioning system. Here we see a mutual trust among teammates and each member agrees upon all decisions.

7. Finally, the authors discuss the idea of coadunating as a relationship where partners are truly growing together. Teachers may start to discover new strengths and career interests, and those may diverge from one another; however, the professional growth is rooted in their shared experiences.

The seven stages Devlin-Scherer and Sardone defined are aligned closely with the three presences in the CoI framework. As teachers move through the seven stages, the progression towards actualizing an increase in teacher self-efficacy can be mirrored in the teaching, cognitive and social presences. Teachers meeting together on a regular basis, reflecting on their teaching practices, and engaging in true collaboration supports increased collaborative efficacy, more productive teaching practices, and changes to personal practices.

Teacher Mentoring

The recent literature on the topic of mentoring has helped educational leaders shape the
way they think about developing mentorship programs. The first step is to consider mentoring less in a supervisory capacity and more as a support structure for new teachers (Bieler, 2013), contributing to the teaching presence of the framework as teachers engage in true collaborative partnerships. Teacher mentoring can be defined as a relationship between two teachers, traditionally one novice and one experienced, where each is mutually benefited by the relationship. Traditional mentoring relationships instill the idea that mentors can act in a supervisory capacity and benefit little from the experiences. However, there is a movement to change that perception because research shows that, when done properly, mentor teachers can find as much value as mentees. The main goals of any coaching program implemented on a school campus should include a focus on actually improving the pedagogical practices of both teachers (Crafton & Kaiser, 2015).

Kensington-Miller (2011) began her discussion of mentoring by describing the historical perspectives, beginning in 1970. Teacher mentoring began as a relationship between two teachers with the following characteristics: one was typically older than the other, had more classroom experience, and was tasked with helping the newer teacher by supporting him/her emotionally and professionally to navigate the first few years in a new school. Much of this definition still holds true today; however, more often we see that “a mentor provides an enabling relationship that facilitates another’s personal growth and development” (p. 293).

**Holistic Mentoring**

Bieler (2013) went so far as to develop what she called “holistic mentoring [that was] poised to explore all the factors that contribute to student teachers’ developing professional identities – their beliefs, goals, worldviews, life experiences, and expectations” (p. 24). She
believed that leaders must consider how the factors that influence a person outside of the workplace will affect their job performance. In order to make accommodations for that, a holistic mentoring program is required. The major components of this type of program are to, a) create opportunities where novice teachers can be honest and open about their experiences in the classroom with their mentor teacher, b) listen carefully and intently during these sessions and help mentees make connections between their experiences and their identity as educators, c) help teachers get to know their students as unique individuals with unique needs and desires, and d) engage “collectively and holistically” (p. 31) with teachers so that they can maintain the passion to continue to better the system of education.

Peer Mentoring

Peer mentoring is a very specific type of program and can be described as a relationship between two people, using the following words: “peer [coach], critical friend, professional friend, or [co-mentor]” (Kensington-Miller, 2011, p. 294). This situation differs from traditional mentoring settings in that both participants have comparable years of experience, teach the same subject, and are perhaps even similar in age and experiences. This strategy, in particular, Kensington-Miller argued, offers mentors the best chance to facilitate change and build long-term improvement through support and trust. In her study of peer mentoring, Kensington-Miller found the following five truths that emerged about peer mentoring.

1. Each relationship is different from the next.
2. Adequate time is required to establish a meaningful relationship.
3. As in all relationships, effective communication is important.
4. Commitment to the process is crucial.
5. An easy-to-follow, well-thought-out structure is required.

While most educational leaders would agree that peer mentoring seems beneficial, it is not always practical as the availability of similar staff members is not always a reality.

McCaughtry, Kulina, Cothran, and Martin (2005) shared Bieler’s (2013) view that mentors paired with beginning teachers who worked at similar schools, were relatively the same age, taught the same subjects, and had compatible personalities found greater success than those pairs that were randomly matched, but offered a broader view of teacher mentoring.

Benefits of Teacher Mentoring

McCaughtry et al. (2005) summarized the benefits as a relationship that provides a new teacher with a “sounding board” (p. 327) for issues that arise in and out of the classroom, a resource for curriculum questions, and even a renewed energy for mentor teachers as they are exposed to new teaching ideas and strategies. Good mentor teachers can be found in a variety of positions, including current teaching staff, central office curriculum personnel, and even university educators. “Effective mentor teachers possess rich and sophisticated content, curricular, and pedagogical knowledge and also have strong listening and communication skills that can support, motivate, and emotionally engage a protégé” (p. 327). Because of the support provided that facilitates both personal and professional growth, teachers who are a part of a mentorship program are more likely to continue teaching long-term, to be happy with their profession, to have a higher morale, and see better student achievement than those who do not.

Nanuscin and Lee (2008) asserted that beginning teachers who are mentored are more likely to engage in useful problem-solving conversations than those who had no mentor. This process not only leads to more effectiveness in the classroom, but is also an excellent model for
what teachers should be doing in their classrooms with their students. Sorenson and Goldsmith (2009) outlined three advantages to mentoring teachers, including two not otherwise mentioned in the research included in this paper. First, as previously mentioned, teachers experience improved job satisfaction. Second, teachers enjoy more exposure and recognition from their peers. Third, there is an increased potential for career advancement. A tertiary benefit is that the vision of the school is perpetuated and carried out as long as care is taken when choosing mentors and properly training them.

Developing a Teacher Mentor Program

Smith (2002) offered a detailed plan for executing his proposed three stages of the “mentor/protégé relationship: (a) establishing the relationship, (b) getting to work, and (c) evaluation and follow-up” (p. 47). There also are several suggestions McCaughtry et al. (2005) offered for use during professional development that can help get a program started. Successful programs include the following: 1) long-term, sustained learning opportunities that are relevant; 2) flexible lessons; 3) teambuilding activities; 4) practical ideas that can be easily incorporated into teachers’ lessons; and 5) multiple opportunities for reflection. McCaughtry’s team warned against short meetings providing concise, explicit information with few follow-ups; structured lessons that do not allow for discussion; impersonalization; pairing teachers randomly; and decontextualizing the information so that teachers cannot easily connect it to their classroom assignments. These only breed confusion and lack of enthusiasm and teachers cannot get a clear vision of the process or end goal.

The following suggestions for building a mentoring program are gleaned from the review of literature and are chosen because they were repeated over and over. First, administrators must
carefully match mentor and mentee teachers in order to create pairs of teachers who are compatible in age, interest, job assignment and goals. In addition, adequate time must be provided for relationships to be formed and meaningful discussions to be had. Lastly, a consistent list of expectations must be communicated to ensure that each team is reflecting on classroom practices, developing plans for improvement, and spending time thinking critically and creatively about student achievement in their classes and across the campus (Bieler, 2013; David, 2000; Devos, 2010; Hanuscin, & Lee, 2008).

Diversity in the Members of a Collaborative Team

Williams et al. (2009) attempted to find reliability in the practices that varied among the schools and teachers that participated in their study, as it relates to collaboration. With so many different types of schools, Williams et al. were hopeful that a wealth of knowledge and experience would emerge. The consortium of schools that made up the subject group in the Williams et al. study was eight rural schools, 14 suburban schools, six urban schools and two educational service centers. Of these schools, four were rated as Effective, 17 as Continuous Improvement, three were under Academic Watch, and four were considered to be in a State of Academic Emergency. This rating was assigned using the standard evaluation system at the Ohio Department of Education. Teachers reported that they felt more prepared to participate in planning after meeting with interdisciplinary teams.

Freeman and Huang (2014) examined the success of researchers publishing articles with individuals of similar ethnicities, compared to those publishing with more diverse teammates. They found that papers with four or more authors of varying ethnicities enjoyed increased citations in publications at a rate of 5-10% over more homogeneous research teams. The success
of these authors can be attributed to multiple factors, including more effective analysis due to a wide variety of perspectives. Freeman and Huang also suggest that access to a broader network, as individuals from several different social groups work together, could promote increased citations. This article is relevant to this research as it suggests not only that diverse teams have increased efficacy, as Williams et al. (2009) found, but those teams may also produce more quality work than less diverse teams.

Benefits of Collaboration

From a professional development perspective, the factors identified that increase student learning the most are a collaborative culture where school leaders “successfully promote high expectations, a spirit of inquiry, and an unwavering focus on learning for both students and adults” (Garmston, 2007, p. 69). This commitment to a common goal is paramount in laying the foundation for effective collaboration. The research shows that by building teams that can work together and focus on one vision, teachers can begin to see student success increase. When teachers practice a true collaborative structure, they engage the social and teaching presences of the CoI framework and practice true collaboration on a regular basis.

The most intensive type of collaboration could be considered the practice of inclusion, which is a classroom setting where special needs students, or second language learners, are learning alongside their general education peers and two teachers work together and equally share the load of teaching (http://www.specialeducationguide.com/pre-k-12/inclusion/). By incorporating inclusion practices into the classroom, teachers can help bridge the gap between students who require assistance because of ability and those who require it because of a cultural or language difference (Philpott, Furey, & Penney, 2010).
Hadar and Brody (2010) discussed the benefits they found to be associated with membership in a professional development community (PDC) as a result of their yearlong study of eight teachers participating in a PDC. The reflection writings done by the teachers and interviews conducted by Hadar and Brody yielded the following summary of the benefits of PDCs.

1. Improvement of teaching
   a. If teachers know and understand how to teach thinking effectively, students will be more likely to gain this knowledge at a level where they can apply it to their studies.
   b. Being involved in the PDC provided a resource for knowledge about how to teach thinking.
   c. The PDC provided a structure wherein teachers could reflect on their teaching skills.

2. Personal professional development
   a. Involvement in a professional learning community will improve the overall skills of the teachers.
   b. Because the teams were interdisciplinary, teachers had the chance to extend their own thinking while also offering insight into student learning across the various disciplines that were represented.
   c. Teachers felt comfortable talking about their mistakes and became more courageous in attempting challenging teaching strategies or tasks.
   d. Teachers were able to talk about student learning in a new and effective way.

3. Eliminating work isolation
   a. The PDC offers a chance for teachers to eliminate some of the personal isolation they feel as educators.
   b. Being a part of the PDC meant teachers could meet new colleagues they might otherwise not have had a chance to get to know.

In Crafton and Kaiser’s study (2015), it was explained that collaboration models vary from district to district and the term collaboration was defined as a setting where teachers are
working together as teams in order to implement a particular innovation facilitated by team meetings, observations of each other’s classrooms, and data that help identify the impact of the intervention on student achievement. Collaborative strategies were found to be successful if executed properly, particularly in the ways they impacted the dialogue that occurred among the teachers. Teachers were found to participate more in reflection about their work, which is believed to lead to improved skills. Participants noted the following things about engaging in peer coaching: (a) they felt like they had more opportunities to learn, (b) they experienced a higher level of motivation in terms of improving their teacher skills, (c) they reflected more often and with a greater focus, and (d) they reported a “deeper understanding about classroom practice” (p. 106).

Components of Effective Collaboration

Teachers must be aware that collaboration does not mean getting together to talk about lessons and challenging students. There is a difference between the act of bonding and chatting with your fellow colleagues and that of participating in a meaningful discussion that is goal-driven (Philpott, et al., 2010). The PLC framework calls for a more deliberate act of practicing reflection on teaching practices in order to encourage a change in personal practice.

In their multi-school study, Musanti and Pence (2010) categorized their findings into what was described as two critical incidences: resisting peer observation, and Good teachers are supposed to talk more about students. The problem of teachers resisting peer observation was solved through spending almost a year building relationships and then allowing teachers to be honest about their thoughts and feelings, even if the teachers were negative, questioning a practice, or in some way doubting the process. It became important for teachers to open up and
share in order to be accepting of others watching them teach. When examining the second critical incident, Musanti and Pence found that teacher success is intrinsically tied to student success. None of the seven participants could conduct a meaningful conversation that did not include some type of reference to how students would respond to the strategy being discussed.

There is yet another perspective offered by Battersby and Verdi (2015), where they described several versions of what PLCs should look like on a campus, including Hord’s (2015) model of collaboration: (a) a shared leadership environment, (b) creativity among team members, (c) shared values and vision, (d) a supportive culture, and (e) common goals regarding individual practices. Similarly, DuFour’s (2002) six components include the following: “(1) a focus on learning; (2) a collaborative culture, including shared beliefs, values, and vision, and an atmosphere of trust and respect; (3) collective inquiry into best practices; (4) an action orientation; (5) a commitment to continuous improvement; and (6) a results orientation” (p. 23).

Many perspectives are discussed in the research, but they all have a common thread: teachers must shift their thinking from focusing on teaching to focusing on learning (Hipp & Huffman, 2003).

Wiefenrieder, Roeshen-Winter, Schueler, Binner, and Blomeke (2015) looked at four aspects that contribute to teacher collaboration: depth, sustainability, spread, and shift in reform ownership. These four dimensions impact the ability to affect the implementation and sustainability of the desired norms, beliefs, and principles. A second impacting factor is identified as the term spillover, “the effects of school-based professional development on instructional practices above and beyond the direct effects on teachers who participated in the professional development” (p. 27).
Wiefbenrieder et al. (2015) suggested that to effectively implement a collaborative professional development program (CPD), five factors must be present: a focus on content, active learning, coherence among teams, duration of the program, and collective participation. The most important of these factors is a focus on content; however, there are two criteria that were proven to be particularly effective regarding the content: 1) content must adhere to the teaching assignments of teachers involved in the CPD, and 2) it must be practical. More specifically, Wiefbenrieder et al. coined the following six terms to describe effective CPDs: competence-orientation, participant-orientation, case-relatedness, a variety of instruction formats, stimulating cooperation, and fostering self-reflection.

Increasing Teacher Efficacy

Much research has been conducted in an effort to define and examine teacher efficacy over the last several decades, beginning with Bandura, as early as 1977, with his transformative book, Social Learning Theory, in which he suggested we learn most effectively though observation, imitation, and modeling. Voelkel and Chrispeels (2017) most recently published their seminal work on exploring the ways in which PLCs contribute to improved collective efficacy and found a positive correlation between the two. Additionally, they describe several commonalities where teachers report increased efficacy: principal leadership, communal school organization, orderly environments, and teacher control. Other researchers add to the body of knowledge by vetting new efficacy surveys and improving the ways we can measure and predict teacher efficacy (Skaalvik & Skaalvik, 2007). These studies, and more, are explored in the following paragraphs.
In his work on the relationships between school organization and teacher efficacy, Gaziel (2014) offered this definition of self-efficacy: “identifying a goal, assessing the necessary effort and abilities to achieve the goal and predicting the outcomes” (p. 282). Additionally, teacher efficacy is tied directly to student achievement and is generally actualized in the development of a healthy classroom environment and effective selection of lessons or activities, not the teacher’s ability to teach well. The CoI framework offers profound insight into the power of effective collaboration joined with reflection on teaching practices and the impact on efficacy. Teachers were found to extrapolate the perceived ability level of the students in their class onto their skills as educator, concluding that the lower the students’ intellect, the less effective they would be at teaching the material. This definition is useful for school leaders in determining the types of professional development that can be helpful to teachers. Teacher efficacy is also influenced by teachers’ sense of autonomy in the classroom, which is important for district leaders to understand as strict curriculum standards and program outlines confine teacher creativity and confidence (Gaziel, 2014).

In an effort to improve the way education researchers can measure and predict teacher efficacy, Skaalvik and Skaalvik (2007) sought to develop a scale using the following six areas as indicators of efficacy: instruction, adapting education to individual student needs, motivating students, keeping discipline, cooperating with colleagues and parents, and coping with changes and challenges. Their intent was to accurately measure efficacy in order to reduce teacher burnout, as the research shows those teachers who perceive themselves as less effective tend to burn out at a higher rate than those who have high self-efficacy (Pas, Bradshaw, Hershfeldt & Leaf, 2010). Skaalvik and Skaalvik’s (2007) data confirmed their hypothesis that the six factors listed above do accurately assess teacher efficacy. They also noted that an additional factor,
perceived external control (one’s perceptions of the limitations on the teacher-student relationship), was present and distinct from the others, but did not contribute to efficacy.

Collie, Shapka, and Perry (2011) confirmed Gaziel’s (2014) findings, and suggested that teacher efficacy is related to student behavior and achievement. When teachers perceive students are more driven academically, require less behavioral intervention, and show a desire to learn, educators experience higher efficacy. Voelkel and Chrispeels (2017) expanded on this research, identifying the ways PLCs influence collective efficacy.

In their research on the link between PLCs and collective efficacy, Voelkel and Chrispeels (2017) defined collective efficacy as “the beliefs that organizational members hold about their work groups’ capacity to organize and execute a plan of action necessary to reach desired goals, that is, enhanced student learning and performance” (p. 5). They also identified four factors that contributed to both collective and self-efficacy: mastery experience, vicarious experience, social persuasion, and affective (emotional) state. Collective efficacy factors also include analysis of the teaching task and assessment of teaching competence. In order to determine whether collaboration improved efficacy or efficacy improved collaboration, Voelkel (2011) conducted a mixed-methods study of a school district in California that included a quantitative survey examining PLC characteristics and efficacy factors, and a qualitative interview of teachers. He found that teachers had increased collective efficacy in the presence of a positive PLC experience. Not surprisingly, the more competent teachers were at completing PLC tasks, the more collective efficacy they experienced. Specifically, teams reported higher efficacy when they engaged in two practices: setting collective goals and focusing on results.

A re-occurring topic in the research related to teacher efficacy is the impact of student behavior on efficacy. Pas et al. (2010) examined the association between teacher efficacy and
problem student behaviors. They described teachers with low efficacy exhibiting diminished motivation and lack of follow-through in difficult tasks. Additionally, they pointed out that teachers who have low efficacy often blame their lack of success with students on external factors, such as the student’s home life or parental issues. Rarely do those types of teachers respond well to redirection and they tend to avoid collaboration. All of these factors indicate what Pas et al. described as a “feedback loop” (p. 23) between poor student behavior and burnout, fueled by low-efficacy.

Using Language to Grow Efficacy

Theories surrounding the concepts discussed above indicate the importance of language and how individuals self-select words to communicate thoughts as ideas. That process is crucial in order to learn about one another, and to develop true collaboration and learn new skills. Crafton and Kaiser (2011) went so far as to say that all higher-level mental functions begin at the social level and individuals build that capacity through interactions with varying social groups. This makes the concept of collective ownership vital, as members of each team must feel like their contributions are valid. The term “dialogism” is defined by the researchers as an exchange where one person’s verbal statement requires a response. This concept is crucial in the context of collaboration as it requires participants to evaluate their language and make sure they are encouraging discussion instead of simply making statements (p. 109).

Philpott, Furey, and Penney (2010) discussed how teachers feel inadequate to take on the increasing responsibilities imposed upon them by state and local governments, as well as their communities. It is incumbent upon school leaders to facilitate professional development in a way that helps teachers, not hinders them. One of the ways this can be accomplished is to
provide specific professional development, such as the effective use of language for collaboration.

Musanti and Pence (2010) studied the concept that language promotes learning, in addition to repetition, practice, and study. The concept of teacher discourse was used to frame the discussion about how effective language can transform a learning community and the authors characterized the idea of knowledge as either given, received, procedural, or constructed through language. Lasting change occurs when the concept of “teachers teaching teachers” (Sturko & Gregon, 2009, p. 37) and team development over the course of the year or years is fully embraced. An intermittent or one-time professional development is not effective in developing lasting change.

Gaps in the Literature

There are two main gaps that exist in the current available research: (a) collaboration related to self-selection of professional development and (b) the effects of PLCs on self-efficacy. It is around these two areas that my research is focused in an attempt to fill these gaps. If data can be found to support the idea that self-selection and PLCs can improve teacher learning and efficacy, school leaders can shape PD in a way that is more beneficial to staff.

Collaboration and Self-Selection of Professional Development

The gaps in the literature exist at the cross-section of determining the benefits of collaboration and teacher self-selection of professional development. It is logical to assume that teachers who are able to choose their PD experiences will find greater value in them as well as have a more robust collaborative experience than those who are placed in learning environments
with individuals they did not choose. The literature does not offer research on how these two important professional development tools work together to build a teacher’s confidence.

Self-Efficacy Related to Collaboration

There is also a void in the literature about what happens when teachers are able to speak specifically about how collaboration impacts their confidence and level of efficacy. While teachers in all of the studies examined and summarized in this literature review were able to reflect about their participation in collaborative programs, how it helped them improve their relationships with other teachers, and how they improved lesson planning, most were unable to measure their efficacy. Over and over, the research refers to PLCs as the silver bullet for school reform (Hipp, et al., 2010) and student achievement. But if teachers don’t feel empowered and more confident – if efficacy doesn’t increase – then the reform becomes unsustainable. When we hyper-focus on student achievement, we become obsessed with the outcome and lose sight of the journey. Reggie Rivers made the claim in his TedTalk that “if you want to achieve your goals, [you shouldn’t] focus on them” (TedTalks, 2013, 00:24 seconds). The claim stems from the assertion that when an individual or an organization focuses on the behaviors necessary to achieve a goal, instead of whether or not the goal is being accomplished, it is more effective. If teachers are the ones who will change their behaviors in order to increase student achievement, then we must ensure they feel confident and capable. We must increase their self-efficacy. Then and only then will we see campus improvement.

Summary

Much has been written and analyzed on the topic of collaboration and the importance of teachers communicating and working together. It cannot be over-emphasized how crucial this
component of professional development is in the training and personal growth of teachers. Administrators at the school and central office level carry the burden of planning and implementing programs appropriate for their campuses that meet the needs of the teachers, in order to improve student performance. Principals who are dedicated to creating professional learning communities on their campuses must dedicate all of the appropriate resources, including time, money, and moral support, to ensure that teachers understand the importance of the program and are motivated to engage fully in the collaborative process.

The need for further research lies in the areas of teachers selecting the PD in which they participate and whether or not collaboration combined with self-selected professional development increases teacher efficacy. This chapter provides a review of literature related to the research questions for the current study. Chapter 3 provides details about the methodology used for the study.
CHAPTER 3

METHODOLOGY

The circumstances studied in this research are such that the intense analysis that a qualitative case study model provides was required. Further detail is provided on the nature of the changes in the professional development program in the participating district and why those changes may have impacted perceived teacher self-efficacy in a way that warrants review, and possibly replication in other districts.

Over the last two years, there was an overt effort by campus administrators, across the participating district, to implement PLC programs by requiring teachers to participate in weekly team meetings with a unique and distinct meeting format that includes goals for the meetings, curricular components that should be included each week, and established norms. Department leaders were given the same directive; however, their meetings were conducted with a larger team with the awareness that true collaboration and discussion can become cumbersome when the group gets too large. Thus, the collaborative focus was directed towards teams of five to six teachers. Campus administrators attended team meetings as appropriate and in congruence with district standards to ensure collaborative practices were being implemented throughout the 2015-2017 school year. These changes are particularly impactful at the high school level as a wider variety of subjects are taught than at the elementary and middle school levels, and collaboration is significantly beneficial.

As a result of the implementation of these changes, the purpose of this case study was to determine whether or not the change in frequency and style of the required team meetings affected perceived teacher self-efficacy in a positive or negative way. The table in Appendix A includes an example of the list of expectations that was communicated by the principal, at the
beginning of the year, to all team leaders at one of the high schools in the participating district. This table lists and defines the items that were discussed one-on-one with each team leader and describes the expectations school administration had for the format each team meeting should adopt (Personal communication, September 13, 2016). This scenario is one description of the two programs studied, as a description of the type of PLC program at that campus and its effect on teacher perceived self-efficacy.

Research Design

A qualitative methods case study approach was utilized in order to understand perceptions of teachers and principals at the two targeted campuses. For this research, aspects from both a critical case study and a longitudinal case study were used. A critical case study is a method of examining a single case to connect data and conclusions to the theoretical analysis. For this type of study, proper care was taken to ensure sound reasoning, linking the current research and the framework to the data analyzed (Bryman, 2012). An analysis of the long-term effort of continued implementation of PLCs was conducted, though only through collection of data at a single point in time. The longitudinal nature of the study stems from the three-year span of PLC implementation that was examined. The research was conducted using a deductive approach to examine whether or not quality PLC professional development can improve perceived teacher self-efficacy. The format of the case study design requires that the researcher provide a “detailed and intensive analysis” (p. 709) of just one setting or event. This strategy provides for a comprehensive picture of what circumstances are present in the situation. Data collection occurred in the form of one-on-one principal interviews and teacher focus group interviews.
As the literature review thoroughly details, there is evidence to suggest that when teachers work together they are more proficient at their jobs (Battersby & Verdi, 2015; Crafton & Kaiser, 2011; Eaker, DuFour, & DuFour, 2002; Hipp & Huffman, 2010, Voelkel & Chrispeels, 2017), indicating they will experience a higher sense of perceived self-efficacy. Therefore, interviews were framed with useful assumptions about teacher collaboration and learning to inform the research questions and participant responses. The research was based on a grounded theory approach, with the intent of confirming the idea that, as teachers collaborate in professional development settings and work together in a collaborative setting, their perceived self-efficacy will improve. The benefit of using a grounded theory approach is that the researcher can use an existing theory to frame the research questions and then build upon the expert knowledge with substantive data and analysis (Grbich, 2013).

Figure 3 describes the research process and sequence used in this case study, which was approved by the UNT IRB board. The stages are broken into three sections: data collection, data analysis, and findings and recommendations.

**Figure 3.** Schedule of the study. This figure explains the sequence of events for this study.
Research Questions

The overarching research question was as follows: To what extent does perceived teacher self-efficacy change as a result of the practice of PLCs? To examine this greater question, the following two sub-questions were explored:

1. Do teachers perceive PLCs to be beneficial to their self-efficacy?
2. Is there a variety of PLC models practiced on the different campuses and, if so, is there evidence of increased teacher efficacy based on the PLC model a campus chooses?

Participants

Purposive and convenience sampling was employed in this study. Purposive sampling is a method in which the sample is drawn based on potential participants’ relativity to the subject (Bryman, 2012). After consultation with district leaders, two schools within the district were chosen, based on the fidelity with which the principals implemented campus PLCs on each campus. Convenience sampling is based upon the location and accessibility of the sample for the researcher. The sample for this study included five teachers from two separate campuses (total of 11), employed at 9th and 10th grade high schools, as well as the principal from each campus. The sample included campuses in the north Dallas district where the study was conducted. This sample was chosen for convenience, as I am employed in the same district and was heavily involved in the changes in professional development that occurred over the last two years. The sample was also chosen purposely, to target teachers who are employed in the same district and, therefore, experienced similar professional development.

The qualifying characteristic for staff to be invited to participate in the study was that they were the teacher of record for at least one class of students. All qualifying teachers
throughout the district were invited to participate; five and six teachers from each campus, respectively, were randomly chosen from the pool of those who responded favorably.

I conducted all focus group sessions. As I am currently an assistant principal in my district, there was some concern that teachers would feel obligated to participate, and when they did, their responses might have been intentionally more positive so as to not speak negatively about their administration. Despite not being employed at either campus that participated, precautions were made to ensure anonymity for each teacher and a commitment to confidentiality on my part was firmly in place. Efforts to reduce the impact of these concerns were employed through bracketing (Fischer, 2009) and member checking, which is discussed further in the section below.

Instrumentation

The two instruments used for data collection were a focus group interview protocol (Appendix B) and a principal interview protocol (Appendix C). I began with focus group questions and followed up with any additional questions as teacher responses dictated, in hopes of gaining as much insight as possible (Berry, 1999). The questions used in the focus groups were adapted from the work of Norton (2013), who conducted a phenomenological study of 12 teachers (four in each group) to ascertain their thoughts about self-efficacy. Four data collection instruments were used in Norton’s study: focus groups, interviews, a self-efficacy survey, and open-ended survey questions. For this study, the focus group questions were adapted from the interview questions that were asked of the teachers in Norton’s study.

Validity of the focus group instrument occurred prior to the implementation of the study, through a field-testing first with four experts in the field, then with three teachers from the
English department and one principal, all from my campus. By limiting the teachers from my campus to the field test, the influence of teacher pressure to answer in a positive way was reduced.

Principals underwent a one-on-one interview (Appendix C) that revealed the PLC model present on each campus. From there, focus groups were conducted with teachers to determine perceived teacher self-efficacy. I employed the practice of member checking (responsive validation), which involves presenting data to the participants for confirmation that the analysis is correct, based on their responses (Bryman, 2012).

Data Collection and Procedures

In the fall of the 2017 semester, principals who were selected, after consultation with district leaders, were interviewed over the phone, during the school day, in order to determine the PLC structure on each campus. Following the principal interviews, teachers were randomly selected to participate in a 60-minute focus group. From the total of those who responded favorably to an email invitation to participate in the study, there were five teachers at one campus and six teachers at the second campus that participated. Incentives of a small food-related nature were provided for interviewees. Principals and teachers provided consent, in writing, prior to the interviews and focus groups. In summary, following the principal interviews, focus groups were convened in the following steps: (1) teachers were invited, by email, to participate in the focus group; (2) from those who responded favorably, five were randomly selected (one additional participant attending spontaneously at the time of the Meadows HS focus group); then (3) the two focus groups were conducted.
Data Analysis

Using the coding software NVivo, focus group data were coded into themes and further comparisons were made with categories derived and saturated until conclusions were drawn. Not only was data analysis conducted using the data from each focus group, but also data were compared between the schools. This process is known as fragmenting data. By extracting key words and phrases, the researcher is able to reorganize data to create themes and generalizations that might not otherwise have been connected because of the context of the response (Douglas, 2017). The findings were validated using the theoretical sampling method as data were coded exhaustively in order to extract all possible data points for analysis. Using theoretical sampling analysis, the teacher interviews were coded and concepts, categories, and conclusions were identified. Results from the teacher focus groups were triangulated with results from the principal interviews.

Limitations

The limitations of this study are related to participant consistency and sample size. The requirement of campus administrators that teachers and teams meet on a weekly basis creates some concern related to the amount of time required for these meetings; therefore, there is some chance that teachers could not meet the collaboration requirements set forth. As a result, teacher experiences may vary. There is a marginal chance that teams may not have met unless their support administrator was attending the meeting, which would not be every week (the minimum required meeting time). Additionally, there is an added required component to the meeting format that demands some effort on the part of the team leaders, as they need to prepare for meetings in more detail than in previous years. As of this school year (2017-2018), team
meetings must include a portion that celebrates either things occurring on campus or personal celebrations of the team members. This is in an effort to create the relationships required to form effective collaborative teams (Crafton & Kaiser, 2011; Hipp & Huffman, 2010; Musanti & Pence, 2010). The sample size is a concern when considering generalization across other districts, but may be useful for the district in which these high schools are located.

Summary

In this chapter, the research methods are outlined to describe the case study approach used to examine how PLCs affect teacher self-efficacy. This study is intended to create a comprehensive description of the factors that increase teacher efficacy and determine whether or not collaborative practices do indeed have an effect. In chapter 4, I discuss the findings of the study, as well as analysis and presentation of the results.
CHAPTER 4

PRESENTATION OF FINDINGS

As stated in chapter 1, the purpose of this study was to examine perceived teacher efficacy related to participation in collaborative professional development. The two main sections detailed in this chapter are a presentation of data collected from campus principal interviews and a presentation of data collected from teacher focus groups. Within each section, the research questions are considered as they relate to the themes that emerged through data analysis. The overarching research question was as follows: To what extent does perceived teacher self-efficacy change as a result of the practice of PLCs? To examine this greater question, the following sub-questions were explored:

1. Do teachers perceive PLCs to be beneficial to their self-efficacy?

2. Is there a variety of PLC models practiced on the different campuses and, if so, is there evidence of increased teacher efficacy based on the PLC model a campus chooses?

The research was based on a grounded theory approach, with the expectation of confirming the idea that PLCs increase teacher self-efficacy. Through a teacher focus group protocol (Appendix B) and a one-on-one principal interview protocol (Appendix C), data were collected, analyzed, and examined and yield the following eight themes: 1) the role of the principal, 2) description of professional development (PD) programs, 3) description of PLC protocols and minimum expectations, 4) changes in teacher behavior as a result of PLC implementation, 5) perceived or suggested changes in the PLC process, 6) early-career efficacy compared to current perceived efficacy, 7) PLCs and relationships, and 8) teacher feelings about PLCs. These themes and their relation to the CoI conceptual framework and research questions are discussed in the sections of this chapter that follow.
Participant Demographics

Of the four principals asked to participate in this study, two responded favorably. Both were female and have been the head principal on their current campus for eight years. Interviews were conducted over the phone during October of 2017. Following the principal interviews, focus groups of teachers were conducted at the same two campuses. The focus groups consisted of five teachers at one school and six teachers at the other school, including one male participant in each group, with teaching experience ranging from 1 to 32 years. The focus group at Lewis High School (pseudonym) was comprised of five mathematics teachers of the following subjects: algebra 1, algebra 2, geometry, and calculus. The focus group at Meadows High School (pseudonym) was comprised of six English teachers who teach English 1, English 2, yearbook, Advancement via Individual Determination (AVID), academic literacy, and Peer Assistance Leadership (PALs). The teachers at Meadows HS each teach at least three different classes each day and one teaches five different classes.

Presentation of Principal Interview Data

The sections that follow include an exhaustive presentation of the data collected through the one-on-one interviews conducted with the principals at Lewis High School (principal pseudonym: Jane) and Meadows High School (principal pseudonym: Sandra). Each interview was conducted over the phone, after consent was procured. Data include information related to seven of the eight themes that emerged from the comprehensive work of data. The category of teacher feelings about first-year efficacy was not applicable for the principal interview portion.
Table 1

**Principal Statements Describing Their Role**

<table>
<thead>
<tr>
<th>Building Maintenance</th>
<th>Individual Staff Needs</th>
<th>Team Management</th>
<th>Setting Expectations</th>
<th>Student Growth</th>
<th>Public Relations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jane (Principal at Lewis HS)</td>
<td>I am overseeing a large campus and all facets of it…one certainly is the safety and security of the campus and making sure that all the systems are in place to make sure that our students and staff are safe and accounted for every day. And then we’ve got the budget aspect.</td>
<td>And then there's also the human resources side of it and the staffing. Not only the hiring, but then making sure that we're tending to the well-being of our staff inside and outside of the school house.</td>
<td>Making sure that I'm empowering everyone on the campus to serve in either formal or informal leadership roles to building that capacity</td>
<td>Instructional leadership to make sure that we are inspecting what we expect, making sure that our leaders have the capacity and that we'll continue to build capacity within our teacher leaders, at the same time making sure that my administrative team and I are coming alongside of our teacher leaders to help guide the instruction.</td>
<td>[T]here's certainly…a public relations [aspect], particularly with communication between all of our stakeholders. And that's something that we can absolutely never lose sight of, particularly at a campus like Lewis High School. There, we've got just a wide variety of stakeholders all coming with different experiences and ultimately having the same expectations for their students but coming at it from different angles.</td>
</tr>
</tbody>
</table>

| Sandra (Principal at Meadows HS) | Ensuring that every aspect of our campus is running smoothly and efficiently and safely. And so overseeing some of the simpler things like the physical [space] of the building and how students and teachers move through the building and maintaining it, to ensuring | I just really believe that part of my role is helping people get to where they need to be. Whether…they just want a change or a leadership role. My first couple of years here it really just took me a long time to get to know the staff…I feel like I know the staff | Each curricular department has an admin. assigned as a support person for that team. And we each have what I would call a core curricular department (the four core: math science, English, social studies, as well as foreign language) and then we each also | Having those conversations with people and finding out what they want, and communicating what you want for them. Letting them know the expectations that you want to see. | [The admin team can support students by] trying to be creative about ways to help deliver [lessons] to them more effectively so that they really do understand and master it and can count that in their bag of successes before they move on. So if there’s |
that we have effective instruction and student performance is going well and students are improving and growing academically.

really well now… I just try to say yes as often as I can and keep them happy.

have a second department (fine arts, PE, health, athletics) and so, as the administrator for that curricular department, we attend meetings, we collaborate with the team, especially if there is something coming up that the team might think is going to present a challenge or might need a revision… We’re really there to be a part of the team, not to lead the team or to direct the team, but just to support.

something that they want to… bring in for support or be flexible in how the students are grouped – we’re just there to kind of help think through that with them.
The Role of the Principal

Not surprisingly, the answers to questions regarding the role of the principal were multi-faceted, and had many similarities and differences. In order to examine both perspectives easily, the responses are listed in Table 1. The themes that emerged are listed as column titles: building maintenance and planning, individual staff growth and management, team growth and management, setting expectations concerning the responsibilities for each staff member and addressing needs as they arise, student growth and management, and public relations.

The role of the principal is complex, as these two principals described. They are not only responsible for the physical and emotional well-being of the students and staff, but for their academic development, as well. The effort required to give attention to and thoroughly consider all the details that are required to make each day successful is staggering. These two principals both address issues related to the community, safety, and growing capacity among their staff. Only Sandra, principal at Meadows HS, discussed how administrators can play a direct role related to student achievement.

Description of Professional Development (PD) Programs

During the in-depth interview, Jane, the principal at Lewis High School, described her PD program as one that is designed around her assessment of campus needs, shifting from more traditional staff meeting content, typically that of disseminating information, to providing rigorous professional learning for the teachers. She stated the following.

I would bring in whatever I was assessing on the campus that I thought teachers needed to learn more about. I would either bring in presenters or I would lean on our teacher leaders to present or an administrator on the team would lead. We’ve certainly done a lot of professional learning on, ‘What does all this data mean that we have and how does it guide our instruction?’ Not only accessing that - First of all, how to access it, how to read it, and then how to respond to it…We have been embedding professional learning before

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and after school for years…And before school starts, I plan out the dates and send them out to the staff two weeks before school starts. They know the dates for all their professional learning that's gonna be campus wide. That's the way I hold myself accountable for it. And then I respond to what I see happening on the campus and where I see the global needs are.

It is unclear what tools Jane uses to assess the staff; however, heavy involvement by administration in teams and department meetings (described below) seems to provide an adequate perspective of where the needs of the staff lie. The whole-group instruction is complimented with a strong PLC structure within individual teams and departments, as described in the next section.

Sandra, the principal of Meadows High School, described during the in-depth interview her multi-layered approach to professional learning, which includes whole-group instruction, online opportunities, small-group sessions, and optional learning experiences. The latter were designed based on a survey teachers completed wherein they described topics about which they were interested in learning. Sandra stated,

We continue to have the traditional approach to staff development where we gather as a whole staff, or usually we break into thirds and we do a rotation. But it’s really just kind of a large grouping of staff members anywhere from 30-130. It’s people together attending to the same topic and information for an extended period of time. And a lot of that is kind of one-way communication where there is a presenter or a team of presenters and most of the participants are just receiving information. Also, there are some progressive approaches where, here in the last couple of years, we’ve been able to offer some flexible options. We’ll have some flexible campus PDH sessions. Our teachers present a lot of those, and they are teacher-led and topic-driven. We have surveyed our staff to find out what topics they want to know more about. So we’ve tried to kind of tailor those to address some areas where our staff has specifically said, ‘I want more information.’ I think last year, every one of those sessions touched technology in some ways. … And this year we’ve opened it up a little bit more and teachers have gotten together who had similar goals and they have asked and gotten approval to do some individual book studies and topic studies and discussions. So it might be a group as small as three or it might be a full department, but it’s really not that big, like a third of the staff (20-30 people). It’s smaller and a little bit more intimate, but a lot more interactive. It’s not just that presenter and then passive receiver. It’s really been an interactive, participator development.
The goals she described are district-required and part of the appraisal process for teachers. Teachers are required to write a goal that includes a teacher action and an associated student outcome. It is an in-depth process, so when teachers who have similar goals come together to learn, there is a very specific topic upon which they are focused. While these PD programs vary in format, some similarities, such as a reliance on book studies, can be seen. Both principals believe they understand the needs of their teachers and are currently structuring their PD programs in order to meet those needs or have plans to implement changes in the future.

Description of PLC Protocols and Minimum Expectations

The principal of each school had widely varied descriptions of the PLC protocols they established for their campuses. Jane, principal at Lewis HS, described that she has clear minimum expectations for her subject teams and departments, and that campus administrators frequently attend meetings at the campus-level and district-level. The philosophy stems from her belief that administrators should be learning alongside the teachers they support. Below, she describes how this was an intentional change made to the structure of the administrative team and the roles they play in the PLCs.

[M]y first two years at Lewis, we definitely had more of a traditional model. Some administrators in charge of curriculum and instruction [and master schedule], and administrators in charge of student activities, and administrators in charge of facilities, and then I also happened to be, at that time, the only appraiser… I'm learning alongside the teachers. I'm there day-to-day, meeting, and collaborating, and learning with them. However, when it comes time for a master schedule, someone else is doing the master schedule for science. It didn't make sense and also some teachers were going to one administrator when it came to master schedule but that administrator wasn't the science administrator. Then they had to go to two different people. It really did not hold true to real professional learning communities and administrators owning those completely. In year three…we totally turned that upside down and…we all do our own hiring for our PLCs…We all do our own pieces of the master schedule and so that leads to a ton of collaboration and it also enables me to do a lot of real-time coaching of administrators
that want to be principals, because there's really no one single lane. We're all in each other’s lane.

Jane further described how she implemented the PLC structure and the minimum expectations she set – intentionally and over time. Not only did she involve her administrative team, but her teacher leaders as well, creating buy-in and establishing a clear vision. Additionally, the PLC meeting structure seems to have been intended to grow future leaders by taking the sole responsibility for planning and implementation off the shoulders of the team leaders and shifting it to include the other members of the team. As Jane described,

[T]here was an expectation that the team leader or the department chair did all of the planning and made all of the decisions and they came to the meetings…handed [the teachers] what they were going to be teaching…and there was a real comfort level in that. But what was happening is there was no real capacity building for future leadership or even informal leadership happening. And so we really had to come together as a leadership team to talk about really, ‘What should this look like?’ And the leaders were very open to it. They weren’t very comfortable with it, but they were very open to it. Because this whole idea of, ‘I'm gonna be able to share my leadership,’ at the same time that doesn't mean that we're gonna take away from your leadership. But there's a lot of power in empowering others.

Both principals described the minimal expectations they have for their staff. They addressed meeting frequency, elements of those meetings, topics of discussion, and what the driving focus of the meetings should be. In their one-on-one interviews, both Jane and Sandra communicated a strong belief in student-centered learning. Although Sandra, at Meadows High, does not use the term PLC at her campus, there seem to be elements of DuFour’s (2002) PLC structure in her description. She described the general procedures practiced by the teachers at Meadows HS.

A curricular team…a group of teachers who get together intentionally at least once a week, sometimes more often, to plan, and address, and revise, and work on a particular course. So like within the math curricular department, there is an Algebra 1 curricular team and there’s an Algebra 2 curricular team and those are really the settings where teachers spend most of their time. That’s their family. They are teaching the same thing, they are giving the same test, and they’re hopefully finding similar results from the
kiddos. Maybe needed to work to reteach or adjust, maybe teach the same things…[T]hey start with the district curriculum and often they’re talking about, ‘How did this go last year?’ and they’ll kind of jog their memory on, ‘This is really good, this is a little bumpier’…it’s really interactive.

In contrast, Jane, principal at Lewis HS, is very clear about the expectations she set for the meeting structure each PLC should have and the impact that guidance has on the efficiency of teacher planning time.

[The] minimal expectations that I have for our meetings, our collaborative time, is that they establish norms at the beginning of the year and then that they have an agenda that guides each of their meetings, and those norms are printed on the agenda. [T]hey hold themselves accountable collectively for the norms and for pacing themselves through the agenda…[W]e're no longer seeing this time really calendering, but we're spending it talking about, ‘Yes, we're gonna talk about the calendering and what we're gonna teach, but we're gonna embed more time and a greater emphasis on how we're gonna teach it and why we're teaching it.’ Like, ‘How does it align to the standard?’

Like at Lewis HS, the team leaders at Meadows HS have been encouraged to take a shared-leadership approach. In her in-depth interview, Sandra, principal at Meadows HS, outlined the role of the team leader during their PLCs as that of a facilitator who guides the discussion of the lesson planning, maintains a professional environment, and fosters innovation towards helping students succeed.

Every instructional team has a team leader, but that team leader is hopefully taking more of a facilitator role and not just doing everything. Not that we don’t have a few people who could probably improve on sharing the load a little more. But really those meetings are pretty interactive and those people are engaged in healthy discussion going on and even if there’s some different opinions, hopefully they are working towards coming to a place where everyone can agree: ‘This is going to fit the needs of my kids.’…[H]opefully they’re focused on helping the kids get it and be more successful with it and then the ones that are struggling, how can we reteach and retest maybe so that they can be working towards mastery and not just looking for the passing grade.

The two principals have contrasting visions for what team meetings should look like. Sandra, principal at Meadows HS, has taken a more unstructured approach and left it up to the staff to develop the details of their PLCs (referring to them as curricular teams and curricular
departments instead of PLCs), while Jane, principal at Lewis HS, developed a PLC program over several years, with clear intent and explicit expectations.

Changes in Teacher Behavior as a Result of PLC Implementation

As the data show, Meadows HS has not fully implemented a PLC structure. Principal Sandra’s one-on-one interview reveals some indicators of PLCs are in place, such as shared leadership, common goals, and common vision and mission; however, Meadows HS teachers are engaging in relatively unstructured planning times. In their in-depth interviews, the principals from both Meadows HS and Lewis HS described their perceptions of teacher behavior as vastly improved as a result of the implementations of PLCs. They discussed improved relationships between teachers, teachers feeling empowered, and an increase in the cultivation of leaders on their campuses, as well as more open lines of communication outside the PLC. Though Sandra, principal at Meadows HS, believes these improved changes are a result of PLCs, there is little evidence that points to that conclusion since PLCs have not been implemented at that campus. The data show an increase in her involvement in team meetings, allowing more time for her to get to know the teachers and for the teachers to feel more comfortable talking to her. Sandra explained,

I’m surprised at what people will tip-toe down to my office and share with me. And a lot of times it’s at 5:00 on a Friday. But it’s so hard to say ‘Yes, I do just have five minutes, come on in.’ But sometimes what you do get in those conversations is so valuable…[Y]ou find out as people become more comfortable with you, that there’s histories floating around. And something I would have never known because I wasn’t here when it occurred. I try as hard as I can to know what people’s strengths are and try to play to those strengths and set them up to be successful…This is a place of trust, I want to hear what you have to offer. I want to consider that, I want the input of the team leader or the department head, or both when we’re sitting at team meetings. I want everyone to feel good about where they are. And if they don’t, I want to know that too so that maybe we can find a place where they can.
In contrast, Jane, principal at Lewis HS, was able to fully describe the aspects of PLCs on her campus that improve teacher behavior. In her interview, Jane spoke directly to perceived teacher self-efficacy increasing as a result of PLCs on the campus. By allowing teachers to be a part of the planning process, and to contribute in a profound way, the teachers feel more confident and have a higher belief in their ability to achieve the task at hand. Some are even inspired to move into administration and further develop their leadership capacity. Jane explained shared leadership in teams and an increase in teacher leaders coming forward.

Teachers have always come together as a team but once I started talking about true professional learning communities where we're learning together, not where one person is in charge and we come and receive whatever the team leader is delivering...What I saw there is really more ownership from each teacher, and each teacher feeling more empowered. So, you start seeing each teacher giving more input and truly being involved and questioning, and not just going with the status quo...There's a big difference to me, besides teaming and them really being professional learning communities. They really were learning together, not only meeting to decide what we're gonna teach next.

I see more teachers voicing an interest in moving into leadership because they're starting to be able to see their own natural, innate leadership. It's given teachers more voice. It's not just that they have an opportunity but there's an expectation for them to participate and for them to share their thoughts. And when they're holding back, the team leader circles back around to them to make sure that she solicits input from them as well...more folks are coming forward and interested in moving into formal leadership roles because they're like, ‘Wow. I really can do this.’

There was a noticeable lack of responses related to student achievement or staff morale from both principals. Certainly, staff morale would be a secondary goal of implementing PLCs; however, there was not any discussion of teachers commenting on the positive ways PLCs impacted the campus culture or how PLCs have actually improved student achievement, either academically or socially.

Changes to the PLC Process

Both principals expressed a desire to expand upon their current model; however, Sandra,
the principal at Meadows HS, focused more on the various forms of professional development
and Jane, principal at Lewis HS, maintained her commitment to developing the culture of PLCs
and has tasked her staff with delving even further into a team planning approach. Again, Jane,
principal at Lewis HS, exhibited a skill for focusing the staff on a specific goal for each year.
She described a campus-wide book study she implemented last year, and this year implemented a
study on how the district lesson plans are written and the ways teachers can manipulate them
using the backwards-design method (Wiggins & McTighe, 2011) of planning their lessons. Jane
shared:

(W)e really are spending more time in our meetings, truly studying the district Stage One
and Stage Two curriculum documents and really analyzing what are the standards, and
how our daily lessons are in alignment with those standards…And we are really trying to
make sure that we're holding ourselves honest to truly backward designing…if I didn't
bring that teaming approach to planning, starting with those curriculum documents, there
was no way that we were going to be able to start implementing some standards-based
grading.

While Sandra, Meadows HS principal, has not fully implemented a PLC model, she has a
clear desire to improve the ways her staff learns. The teacher perspective may shed some light
on why the classic PLC model is not as feasible on this campus; however, Sandra’s efforts to
provide rich and applicable learning to her staff should not be diminished. In her description of
the goals she has for their PLCs, there is evidence of such efforts. Sandra explained,

I would like to expand [our PLCs] even more, which I think will kind of naturally occur.
I think that we have this positive path we are on and I think we are able to make more
options available to teachers and diversify those options. We have some that are doing
book studies this year as small as three and as big as a whole department and we didn’t
really have that last year. The closest we got was we had some teachers register to go to
the same workshop outside of school hours so they were able to count it as flex PD time,
but they went together so they had some follow-up discussion about it.

She also addressed the possibility of changing their meeting structure in the future as her PLC
fluency and the capacity for the staff to learn together increases.
Sandra: I don’t know what other models might be out there in our future that we might… I’m thinking something with teachers with like goals, even if they aren’t in the same curricular department, putting them together… We’re not there right now, but we have done some work on grouping goals so I think that might be a natural next step.

Researcher: So you’re thinking about taking it away from that curriculum-centered collaboration and grouping people outside their teams?

Sandra: I would like to… I think that structure of the curricular team - that’s naturally there. They have a common planning period; geographically their rooms are near each other – it’s easy to know all of those people. And they’re together at least once a week if not more, planning together, so they all know each other. I think it would be beneficial for teachers with same or similar goals who are in different departments - bringing them together.

This perspective implies a desire to broaden the program in a way that can meet the needs of the teachers in a new and creative approach. Using surveys and teacher interest to drive PLCs is in direct alignment with the Eaker et al. (2002) guidelines for effective PLCs, in that teachers must have a common goal towards which they are working. Sandra’s work this year, in preparation for the changes she plans to implement next year, has the potential to transform her Meadows campus and move teachers further along on their PLC journey, as long as she continues to develop her teacher leaders and she implements a shared leadership approach to teaming, with intent.

PLCs and Teacher-to-Administrator Relationships

As shown previously, both principals spoke about the importance of cultivating relationships with the staff they support. Jane, principal at Lewis HS, transformed the way she assigns her administrative team roles to honor this belief and provided more interaction time between the team and the supporting administrator. Sandra, principal at Meadows HS, described how helpful it is for the administrator to have so much access to the staff during team and
department meetings and found it useful in evaluating their performance throughout the year.

Sandra explained,

[The department that each administrator supports is] also the department we appraise and so that’s helpful because it gives us a much bigger picture of how that teacher moves through their week and their year. Rather than just having the goal conference and 45 minute observation, it’s often a weekly [planning] session that they are attending and it just gives more opportunity to learn about how that teacher might communicate or lead or think or problem solve.

Sandra also discussed the importance of the principal being familiar with each staff member so the principal can effectively gauge the group dynamic and make changes when relationships become toxic.

[Sometimes you can have a five-person team that is like oil and water and you change out one or two people and it goes so smoothly and everyone is best friends. So sometimes just changing one or two team members can make a big difference. Or changing whom the leader is. Some teams might need a different style and then other teams might not respond to that style at all. I think just being really familiar and really aware.]

Both principals had an intentional strategy and reasoning behind how they select administrators to support each department, but they were quite opposite. Jane, at Lewis HS, described how she makes decisions with her team, prior to the year beginning, about who will support which PLCs.

Our campus expectation at Lewis High School is that each administrator has particular PLCs that they work with, and I say ‘that they work with’ because they are in learning alongside of the teachers, they're not in meetings to supervise. We come together collectively before school starts to talk about which PLCs we would like to work with and why to make sure it's gonna be a fit and then…my expectation is that [administrators] attend all the professional learning that the district provides alongside of their PLCs. And before school starts when principals are on campus trying to get last minutes things done, we are all out at professional learning with our teachers. I feel like it ends up being a huge time saver in the end and it's a huge opportunity to build relationships and to build trust because we're now able to speak a common language.

Meadows principal Sandra had a different perspective, one based more on helping her administrative team gain experience instead of matching personality types.
[T]ypically, I rotate every year. I do that with multiple things on my admin team. I just really believe in developing every one as much as possible. I really believe everyone needs exposure to as much as possible so that they are ready to lead as principals. You need to learn it and get proficient with it and comfortable with it and be able to teach somebody else how to do it. And the curricular departments are a piece of that.

Both perspectives have their merit, but only Jane at Lewis HS is truly employing distributive leadership that stimulates a healthy PLC structure. Sandra at Meadows HS is simply attending team meetings and, while that has provided her with valuable information related to the appraisal system used on her campus, she is not promoting true PLCs.

Teacher Feelings about PLCs

This section describes teacher feelings about PLCs from the perspective of the principals. Because Sandra, Meadows HS principal, has not intentionally implemented a PLC program on her campus, there were no data around teacher feelings on that campus about PLCs that she could describe; however, in the sections that follow, we will find that teachers did view themselves to be part of PLCs and they had a considerable amount to contribute to this topic. Those perspectives are discussed in a later section.

Principal Jane, at Lewis HS, introduced the PLC structure several years ago and used a strategic method of comparing the current teaming structure with what she wanted the new PLC structure to be. Jane explained how she described the comparison to her staff.

[The staff was] very positive because I rolled out side by side what a team meeting is and what a professional learning meeting is and how they're similar and how they're different. I was very specific as to how I rolled it out and shared the big ideas with them as a PLC and what professional learning is versus coming together for a planning meeting, and they are two different things. I wanted to make sure that I established some common language around it. Again, if you want to get down to the truth... We have PLCs light because we simply, at Lewis High School, do not have additional time built in for that. We have the time built in for collaboration, but real PLC... We don’t have additional time.
There seems to have been an appreciation on the part of the teachers for clear and direct expectations for their behavior related to PLCs. Teachers were educated on the differences between the current practice and the desired practice, which provided them with benchmarks as they moved through the PLC implementation process.

Presentation of Teacher Focus Group Data

The teacher contributions from the focus group interviews vary from the principal interview data in a variety of ways. Teachers view almost everything that goes on in a school from a teacher perspective and rarely approach a topic from a holistic or whole-school point of view. As the themes are discussed in the following paragraphs, comparisons are considered.

The Role of the Principal

Unlike the principal statements about their role in the school, teacher statements focus on the principal’s role solely as it relates to them and their teams. Additionally, each group had a unified perspective on how the principal manages her role supporting teachers. The teachers at Meadows HS seem to perceive Sandra as taking a hands-off approach because of her confidence in their abilities to accomplish the learning they need to in order to be effective. The implication is made that the presence of multiple layers of leadership provide several opportunities for teachers to be coached, if there was ever an issue, before the principal would need to step in.

Teachers from Meadows HS explained:

Katie: She treats us like we are professionals. And she expects us to do what we need to do to be successful with kids. And I think I really appreciate that, that we've got that kind of confidence from her. And it's almost like, if she has to step in and say something, we're not doing it right.
Melody: It hasn't been explicit but we get the expectation [that administration trusts us] especially because there is the team, and then the team lead, the department chair. And then, in most of the meetings, if you email them and let them know, the admin will come in and sit in on your meetings.

One of the teachers at Meadows HS, Megan, was a former administrator and drew upon her own experience to shed light on one of the most important roles she thought an administrator plays: that of assessing teachers’ individual abilities and then pairing those with areas of strength with those with corresponding areas of growth. In that way, teachers can help teachers improve their craft. Megan explained her strategies when she was an administrator:

Part of my role as assistant principal [prior to this role as an English teacher] was matching teachers that needed [help]: ‘This teacher needs this kind of help. This one's doing it. You guys need to get together.’ Or helping young teachers: ‘You need to go... I'm gonna sit in here with your kids for a while. You go down and watch Miss So-and-So down there. You should see what she's doing.’

In contrast to the hands-off approach exhibited by Sandra at Meadows HS, the teachers at Lewis HS seemed to appreciate the highly involved approach Jane takes because that meant she assigned the learning activities instead of team leaders and department heads having to generate those items. Sarah, teacher at Lewis HS, even described having empathy for Principal Jane, empathizing with how difficult it must be to attend one team meeting after another, all learning something different. Sarah, from Lewis HS, gave her perspective:

I think yes, we sometimes get pushed [to do learning activities and sometimes] you get to choose...So I think it has evolved as well. Where it really should be something that we’re studying and learning about. And its easiest to do in a book study instead of random articles or other information that actually puts more work on the team leads to come up with that. Instead of ok, here’s a book. We’re just going to go through this book for the year. I know it’s easier for probably her as leadership to have everyone in the whole school doing the same thing. That way when she does go sit in the Special Ed or the English [department meetings] and they are doing their book study, it’s all the same book and it makes it easier than her reading three different books at the same time.

These statements are representative of the feelings of all focus group participants and are echoed throughout the comments of the other participants. The roles of the principals at each
campus are perceived through the lens of the principal’s individual personality. Teachers expressed either a relaxed or a hands-off approach for one and an involved, directive-driven approach for the other. Interestingly, teachers did not seem to prefer a different approach, but simply committed to following the expectations of their leader.

Description of PLC Protocols and Minimum Expectations

Table 2 lists the perspectives of the teachers gained during the focus group interviews at Lewis HS and Meadows HS, respectively. The first column represents expectations either directly or indirectly communicated to the staff by their respective principals on how to implement their PLCs. The second column includes data from the teacher focus group discussions about what the routine procedures have become as the teacher leaders implemented the PLCs.

The data show that teacher feelings are mixed when discussing the need for conducting meetings beyond planning for upcoming lessons. Some teachers feel that activities were forced upon them and some were grateful for the chance to learn from their peers. Teachers expressed an importance for administrators to gain buy-in so that all teachers on a campus will participate in learning activities, improving the experience.

In addition to the cogent remarks of the above teachers, John, teacher at Lewis HS, provided juxtaposition between the hallway PLCs and the real PLCs, offering the point of view that both a formal and informal version of PLCs is necessary for the emotional well-being and professional success of a teacher.

Our hallway PLCs are for kind of keeping your spirits up from time to time. That’s what those are for… I teach 7th period what [Amy] teaches 1st period so it’s nice to hear what went on. And, ‘Ok, what are we doing today? What’s going on? How did this go?’
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<th>Teacher</th>
<th>Minimum Expectations</th>
<th>PLC Protocols</th>
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<td>Amy (Teacher at Lewis HS)</td>
<td>I know for my team, if we don’t have anything to meet about, I’ll say we’re not meeting today so think about this or grade your tests or whatever it is that you need to spend your time doing.</td>
<td>If you have something to say, say it and be done with it. Let’s have that discussion. Don’t waste 20 minutes talking to me about what you did Saturday night because I really don’t care…But, we have other stuff that we have to get done. So, I think sometimes, times can be used more effectively.</td>
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<td>John (Teacher at Lewis HS)</td>
<td>We need to meet usually a minimum of once a month, or six weeks because we are doing the book study. But each year that is something set in for us (a book study) and I think it’s something to just give us guidance on the learning since we are a professional learning community. Maybe we all don’t know what to learn about or how to go about it, so here’s something: let’s do this book study.</td>
<td>In that PLC we’re discussing the book, the chapters. How are those pertinent for our students? How can we change our thought process to figure out what is best for the student right now, our grading, how does all of that kind of align with our district standards, what are we wanting from that…Also, disseminating information from leadership meetings that usually happen the day before or the morning of.</td>
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<td>Julie (Teacher at Lewis HS)</td>
<td>I can remember like two years ago they didn’t ever come down and say, ‘What’s your book study?’ We did tweeting. We had our own little hashtag and that fell apart. Nothing happened.</td>
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<td>Sarah (Teacher at Lewis HS)</td>
<td>Yeah, we would send like an article and you were supposed to tweet to this hashtag or like Google Classroom…It completely fell apart. So that’s where that buy-in, I think, comes in. A lot of people are like, what’s the purpose. I don’t really want to study this. But this is what they’ve been telling me I have to study. And even with that, when the book study is chosen for you, you kind of get that as well. ‘Why am I here? I didn’t pick this topic of study.’ So, I wish we had a little bit more choice in that.</td>
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<td>Teacher</td>
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<td>Emily (Teacher at Lewis HS)</td>
<td>I will admit I love learning with the math people, but I feel like that’s what we spend our time learning - is the math. I wish that the department stuff was separate. [L]earning form other people outside of my department - that’s why I liked so much the one I was in last year, was getting that input from other campuses or the science department or whatever. Having that PLC and learning such as ‘Here’s a list of targets or different things we can talk about. Pick a PLC. We’ll figure out how to make that work’. I want to know what science is doing and history is doing and what other campuses are doing and what other districts are doing.</td>
<td>‘Here's the calendar; this is what we're doing. Everyone agree? Okay. Anyone have any questions? Is there something we need to move around, change?’ It doesn't contribute to my learning at all. It's just, ‘Here's what we have to do. Here's what we have to get done. Check it off the list,’ it's how it seems to me.</td>
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<td>Katie (Teacher at Meadows HS)</td>
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<td>I think that while goals for the PLC have not been explicitly stated, our mission statement is very clear. We all know exactly what we're here to do. We're not just here to educate. As number one said, we do what's best for the kids. And our principal says all the time, ‘We're piloting this ship together.’ And I think that while the goals are not explicitly stated, the culture lends itself to that of unity and working towards a common goal.</td>
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<td>Megan (Teacher at Meadows HS)</td>
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These descriptions of the PLC minimum expectations and protocols provide a structure upon which the subsequent data can rest, providing a complete view of what activities took place and what changes were made (or not made) by the principals to increase teacher collaboration on each campus.

Changes in Teacher Behavior as a Result of PLC Implementation

Team leaders and teachers have different perspectives when it comes to PLC implementation, especially at Lewis HS where there was an emphasis placed on team leaders to share duties such as lesson planning and meeting preparations. Amy’s comments (teacher at Lewis HS) provide valuable insight into the merits of employing a collaborative approach to team meetings.

I’ve taken a step back and not done as much. So it’s interesting to see them step forward and pick up where I’m not. But I couldn’t do it without them because I’m drowning in my own work. And so, I’m like, ‘Man! How did I do this for several years?’ I don’t think I could survive without them because they do a lot for me. So it’s interesting to watch them, to step out of that shadow that I cast of trying to do it all by myself, because I can’t do it this year.

In addition to improving the efficiency of seasoned teacher leaders, the PLC at Lewis HS provided much needed support for first-year teachers. During the focus group interview, Emily, first-year teacher at Lewis HS, described how the open-mindedness of the team aids in the continuous sharing of new ideas and healthy dialogue about what would yield positive results. Additionally, she warned about becoming stagnant as an educator and suggested that being a part of a healthy PLC can mitigate that phenomenon.

[W]e’re really open to new ideas. Which, being a first year is super nice because I don’t feel like when I’m in a meeting I just sit and don’t know anything. I feel like my input is valued. And then I also think that it’s nice for everyone…you don’t get stuck in your own way because you’re going to have four people telling you, ‘Um, no…’ And I think that’s good! That’s something I’m super afraid of is being, like in ten years, so in my own way.
And then realizing, wow that is horrible! And so, with PLCs it's kind of impossible to be stuck in your own way unless you're just really stuck.

Overall, the teachers did not express a huge shift in their behavior, but further evidence shown in the section referring to teacher feelings about PLCs suggests they find value in the formal and informal PLCs they are a part of. Additionally, data show grading practices and other classroom procedures were piloted and implemented department wide at Lewis HS as a result of participation in a PLC.

Perceived or Suggested Changes in the PLC Process

In the focus group interview at Lewis HS, Amy described, again, how the process of disseminating the work of planning for more that one subject helped reduce her workload. In this particular quote, she indicated that, as more people contributed to the planning and she had to plan less, her mental capacity increased so that she could be more creative about her lessons instead of just doing the same thing from year to year.

The past several years, as the geometry team leader, I have taken the primary role in terms of, ‘Here’s the information and here’s what we need to try to get done’ and tried to give an overall view, because it is a lot of work to do individual units…Separating that out and giving units and planning for other people so that they are having a part in the process as well…I feel like it’s been beneficial letting everyone in on that and getting their input and feedback. Because they are working and saying, ‘Wait a second, I know we did this last year, but that doesn’t mean we have to do it the same way this year.’ And they find other better resources and activities, and come up with new ideas.

Teachers also expressed a desire to see inter-subject PLCs. Emily, from Lewis HS, described how she had a close personal friend who taught on the same campus and that they spoke often about what they were teaching, the students, and other issues they were having. She found value in these interactions as they expanded her perspective and even developed her empathy towards the students. Emily stated,
One of my closest friends here…teaches world geography and sometimes it’s just really refreshing to just go in her room and not see any math. And when I talk about what I’m doing or my struggles, she can’t say ‘Me too.’ because she’s not teaching the same thing. Which is really nice because I just want to say what I need to say…We have the same kids that we teach different things to and so just seeing what they are going through and what they tell her. I like that kind of thing. I think it also helps you to remember what the kids go through. When I’m in her room I see, ‘Oh my gosh, this is why they didn’t do my homework last night. Because you have this massive project due today.’

Those conversations can happen organically, or they can be part of a PLC structure intentionally put into place by administration, as a second teacher from Lewis HS referenced. Her experience was with a planned inter-department PLC group that completed a book study throughout the year. Amy explained it this way:

Last year we did a book study as the entire school as well…I was a facilitator and I got to sit with some people from different areas of the school that I never see during the school day. So that would be really kind of cool to have this larger community there. Then we got to talk to those people and meet with them and discuss ideas outside of just math. I loved that part.

During the focus group interview at Meadows HS, it was revealed there were some fundamental changes to the PLC process that the teachers spoke of. Referencing feelings of being overwhelmed and “doing the best they can with that they have” (Megan, focus group interview), these teachers are seeking ways to unify the group and expand the way they function as a team. However, these activities take time, and several Meadows teachers expressed a concern about the lack of planning time they have during the day.

Megan: [I would like] more opportunities to sit and maybe norm grades together. More opportunities to maybe do some team builders, and things like that. It may seem corny but it's like I feel like we need these things because, like I said, everybody is awesome on the team and everybody has a voice and everybody does their part, but…I want to do some more things to kind of bring us all together.

Steve: The other thing I've noticed too is that when you…talk to the teachers at different schools, even though we teach the same subject, there are different attitudes about what the role of the curriculum is. And we've had some of those heated discussions ourselves about how much we should follow and do or whether we were free to change or just not do things, whatever. And that's all part of the script of learning communities to do
anyway. And so I think for me, what I want to see in a learning community is the dialogue. Is it there and how much flexibility do you have to exercise that dialogue?

Katie: I think the biggest piece that's missing is having that second off period. Because there's no time. You cannot add more [time] and you can't take away the one time that teachers need to be able to do all their other responsibilities. And it just compounds everything, and it leads to frustrations.

Melody: I teach Academic Literacy. I would say that learning community has definitely not been strong because we don't have the time to meet, because so many people are meeting in so many other ways that that class has really suffered as a result of not having the time to plan and sit down and think through what we're trying to do with it.

Eventually, during the focus group interview, one Meadows HS team member, Jana, suggested it was more than just a lack of time or team-building experiences. Instead, she suggested it was a result of teachers’ mindsets about what they contribute to the PLC and how that affects the success of the group. While most teachers would prefer to cancel a meeting if, for example, the calendar for the up-coming unit is completed, Jana pointed out that that time could be spent cultivating relationships with one another, but it would require all teachers to buy in. Jana pointed out,

I think another thing is, going back to the mindset, it's not going to change unless people's mindsets change as far as if everybody's okay and they have their calendar set, then we don't meet. And I think that that needs to change because if we're not meeting to talk about the calendar, then we can meet to talk about, ‘Hey, let's do a team-builder. Let's do some more emails and PLC. How can this contribute? Let's do something.’ And then again but there's a time constraint.

The changes suggested by the teachers at Meadows HS are centered primarily on things teachers feel cannot be changed: workload and lack of time. There is little evidence to support Meadows teachers wanting PLCs on their campus, even if they were given the time. Lewis HS teachers, however, having already experienced the overwhelming benefits of PLCs, desire growth in their program, specifically by creating opportunities for more exposure to other subjects to provide a more cohesive campus environment for students.
Early-Career Efficacy Compared to Current Perceived Efficacy

Overwhelmingly, during the focus group interviews, the teachers from both campuses expressed they were better at building relationships with students than they were at teaching the curriculum effectively. Figure 4 below represents some of the major thoughts extracted from the focus group interview data, using a word cloud.

Figure 4. Teacher responses to feelings of efficacy during their first year. This figure was compiled using a word count analysis of teacher statements regarding feelings of efficacy during their first year of teaching.

Teachers at both schools lamented the lack of a collaborative planning in their early years and perceived it as a disadvantage as they tried to navigate the curriculum and learn to manage their time. One teacher even spoke about how she was better at building relationships during her first few years than she is now – that the toll of teaching for many years made her less able to build relationships and more focused on just teaching the material. One teacher from Lewis HS, Sarah, seems to have not fully escaped those first-year teacher feelings of being constantly behind, unable to have time to create something new or genuinely bond with the students. Her impact seems to have been present, but occurring by happenstance only. Two examples from Julie and Sarah, teachers at Lewis HS, are:
Julie: The first year, it was basically, ‘Here’s your textbook. Have at it.’ and there wasn’t a mentor, I barely saw my next-door teacher. So there was just a contrast going from [that situation] to [this situation]. Just a lot more support through the PLC…So it was a difference.

Sarah: Did I feel my first year that I was impacting students? I was trying to survive my first year. But honestly, I feel like I’m still in trying to survive mode. All the time. How does that impact students? Definitely the planning and not having time to do everything really impacts them on a day-to-day basis. But impacting them as people? I don’t think I saw that until they started coming back to me and saying, ‘Oh yeah! I remember doing SOH-CAH-TOA with you and it really helped.’ Or, one of my students is is in school now to become a math teacher because she had me and [another teacher] and we had an impact on her. So, finding out later that maybe we made an impact on them personally, I don’t hear that until much later. But mathematically, I think, yeah, I feel like I do sometimes. But other days it’s just ruling the jailhouse and trying to survive that part of it.

Promoting Efficacy

Figure 5. Factors involved in promoting efficacy. This figure shows situations in which teachers described experiences that influence an increase in their personal efficacy.
As the teachers at Lewis HS began to discuss how their efficacy improved as a result of their PLCs and how they felt empowered by their teammates, several examples emerged that contributed to increased feelings of efficacy, as a result of interactions they had with their teammates. Figure 5 contains five quotes from teachers at both campuses, representing the various scenarios that enabled them to grow from no or very little efficacy, to a higher efficacy.

Of note, at this point, is that Meadows HS does not have a functioning PLC, according to the Hipp and Huffman (2003) model, but teachers do consider themselves to be a part of one and assess those planning groups as effective and ineffective PLCs. Each of these statements is an example of one of the four factors that contribute to self-efficacy. Sarah, at Lewis HS, talked about gaining efficacy through an affective state experience (assessing efficacy through feelings and emotional reactions (Ellen & Frank, 2008)) where she had feelings of empowerment derived from interactions with her PLC. Julie, at Lewis HS, added that her social persuasion as a mentor encouraged her to pursue a leadership position on her campus. Emily and Ashley, from Lewis HS, benefitted from mastery and vicarious experiences, respectively. Emily described how each member of the PLC contributes to the group in his or her area of expertise, and Ashley profited from watching others try new things and then report back to the group.

During the focus group interview at Meadows HS, Katie described her time in professional learning at the district level as extremely helpful in teaching her new strategies or concepts that she brought back to her campus PLC. Through this experience, she gained a specialized expertise that she could use in her classroom and also teach her fellow teammates.

Opportunities that I've gotten to go to, like PDH outside of my PLC, have equipped me to be a part of my PLC and then turn around and carry that over into the classroom. So it wasn't necessarily the PLC itself, it took a lot of outside information from the PDH, still from the district, and still in the subject that I'm teaching. But I think a lot of that got me excited about my primary PLC to then turn around and do it in the classroom.
The experiences that impact teacher efficacy are wide-ranging, but mirrored on each campus. Providing a safe environment for failure, encouraging teachers to try new things, and offering praise when appropriate are some of the major themes that emerged in this section. Certainly, playing a role are the relationships that develop between the teachers who participate in PLCs together, which is the topic of discussion for the next section. At Lewis HS, where PLCs are more established, a greater number of teachers provided evidence of increased efficacy as a result of PLCs. Only one teacher spoke about her PLC at Meadows HS, and even those comments were exclusive to receiving professional development at the district and attempting to share it with her PLC instead of experiencing learning with her PLC.

PLCs and Teacher-to-Teacher Relationships

One of the themes that emerged through data analysis, that was not directly a part of the focus group protocol, was the idea that relationships with the other teachers on your team play a vital role in how effectively the team works together. One teacher commented, “At the very base level, we’re all professionals. At the very least, we are professionals so I trust them, at least professionally” (John, Lewis HS, Focus Group Interview), but the data compiled in Table 3 suggest a well-functioning team requires more than a cursory professional relationship. The teacher statements made during the focus group interviews reveal the following five main factors that influence team effectiveness: 1) team stability in terms of longevity of employment at a certain position, 2) frequently adding first-year teachers and the taxing effect it has on veteran teachers, 3) the responsibilities associated with teaching multiple courses impeding on teachers’ ability to cultivate relationships, 4) how the difference in personalities plays a role in team dynamic, and 5) the role trust plays.
Table 3

Teacher Statements Regarding Factors that Impact Team Effectiveness

<table>
<thead>
<tr>
<th>Factors</th>
<th>Katie (Lewis HS): The ninth-grade teams have been a lot more stable. You've got a core of...people that have been there longer. The 10th grade team, on the other hand, I've been here five years and it's never been the same. Every year there's somebody different in it. I think the stability of the team has been critical too.</th>
<th>Ashley (Meadows HS): And of course now, if the curriculum changes, that just adds more chaos.</th>
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<tbody>
<tr>
<td>Stability</td>
<td>Ashley (Meadows HS): And of course now, if the curriculum changes, that just adds more chaos.</td>
<td>Emily (Lewis HS): You don’t know what you don’t know. It’s hard to be checking your blind spots, so it’s helpful to have someone. They can be checking on you. So a safety net.</td>
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<tr>
<td>First-Year Teachers</td>
<td>Megan (Meadows HS): I'll be very honest that because I have been on this team for so long and there's been so many new people that come in, that there are times when I kind of disengage because we're going over the curriculum, which I know very well.</td>
<td>Emily (Lewis HS): You don’t know what you don’t know. It’s hard to be checking your blind spots, so it’s helpful to have someone. They can be checking on you. So a safety net.</td>
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<td>Multiple Course Prep</td>
<td>Megan (Meadows HS): The other team members have kind of rotated in and out or been spread thin, and so I think if you would walk into our typical meeting, everybody seems a little frazzled 'cause we're all stretched enormously thin.</td>
<td>Jana (Meadows HS): If [a teacher] has 17 preps, and there's a day we don't have to meet, I don't want to take away from her time, but then again, it's the mindset. I don't want it to seem like we're just checking off a list, but then at the same time, there's always room for questions and open-ended conversation that sometimes maybe people didn't have enough time to prepare or whatever.</td>
</tr>
<tr>
<td>Factors</td>
<td>Teacher Statements</td>
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<tr>
<td>Personalities</td>
<td>Katie (Meadows HS): From the team leader my first year to the team leader now, there's a vast difference in the way that they wanted to see the team operate and what level of participation we were allowed to have.</td>
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<td></td>
<td>Megan (Meadows HS): We have a really good camaraderie, we work well together, we listen well together.</td>
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<td></td>
<td>Steve (Meadows HS): You have a sense of camaraderie, but you also have to balance personality types. And if you have too many chiefs and not enough Indians, then that's going to cause people to butt heads. And I think that for that to be successful, that each person has to look at themselves and say, ‘What is my role? Am I the best person at this? Should I be speaking, or is there somebody who's better than me, has more experience, that I should lend to that?’</td>
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<tr>
<td>Trust</td>
<td>Sarah (Lewis HS): It took me a long time [to trust]...[T]hat trust has to be there to know that they’re not commenting on you, they’re just trying to help you be the best version of yourself. Or the best teacher that you can be for your kids. And so, I think our team does a good job about that. I feel like I can say stuff and people won’t judge me for it and they’ll help think it through with me. And not say, That’s stupid.</td>
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<td></td>
<td>Melody (Meadows HS): I feel safe in my PLC. I feel like I can walk in sobbing, going ‘I don’t know what I’m doing. I’m having the worst day ever. I’m a horrible teacher. I should be fired.’ Or I can run in and go, ‘Oh my gosh! It worked! This is so exciting!’ And they’ll get excited with me. I think that we’ve really been able to develop a culture where we want everyone to succeed. And I think that that culture of support, and the ability to be honest with one another, has helped me to grow as a teacher in my classroom. It gives me confidence going in.</td>
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<td></td>
<td>Amy (Lewis HS): If you don't feel comfortable with the people you work with, you're not going to rely on them, despite the professional things that are required from you.</td>
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</table>
The importance of chemistry between teammates, consistency in group membership, and accommodation for new and seasoned teachers are among the major factors that impact teacher-to-teacher relationships in a PLC. Teacher perceptions around these themes were voiced with intensity, requiring that school leaders and principals take note. It is vital for teams to be assembled with more in mind than just qualification to teach. Attention must also be paid to personality types, varying strengths and weaknesses, and a willingness to work together for true team collaboration through PLCs to take place.

Teacher Feelings about PLCs

The last theme that surfaced through the data analysis of the teacher focus group interviews was the various feelings and perceptions teachers have concerning PLCs on their campuses. The two schools had contrasting views about their PLCs. At Lewis HS, where the PLC structure was firmly in place, and put there intentionally by school leadership, there were largely positive reactions coming forward about PLCs. However, at Meadows HS, responses were different. These teams meet almost exclusively to calendar plan and disseminate information. While some view their time together as consisting of valuable interactions, some have negative feelings about the expectations (or lack thereof) from administration.

Lewis High School Data

Several Lewis teachers discussed using PLCs to support the implementation of a new initiative or strategy across the department. In the quote that follows, the mathematics department head is discussing a retest/revise policy that the mathematics department implemented this year. Department head John stated,
Another thing [we are doing this year is] giving opportunities for retesting for our Algebra 1 kids and geometry and allowing that to be their First Try, Second Try. This is just your first time with this information, we’re going to practice this test here and then we’re going to try again. But talking with that as a collective and helping us to see and the students to see that this is a process.

Also considered is the luxury of having individuals go to PD outside the campus to learn a new skill, and return to teach everyone else. This can be efficient for campuses in terms of paying for the cost of the training and providing substitute teachers. In addition, teachers can attend seminars covering topics in which they are interested, and bring back that enthusiasm to the team so that it may be better received. Again, John explained,

It’s beneficial having all of those different minds coming together…Like we have Kagan that our coordinator will send us to and having different opportunities to go learn. That certainly has been helpful so sometimes it’s not just our PLC here talking amongst each other. But what we have learned and bring back to that PLC as a whole has been beneficial.

Another way the teachers use a divide-and-conquer mentality in their PLC is by dividing the lessons among the teachers so that each teacher is only responsible for planning a portion of the lessons throughout the year, instead of all of them. The first-year teacher on the Lewis team expressed immense gratitude about this practice, implying the lessons were better than what she would have prepared for her students if she had not been a part of her PLC. The issue of trust comes up again as teachers must rely upon one another to design a lesson that everyone is able to teach, wants to teach, and meets the needs of the students. Along with that assistance comes accountability for following the state standards, as Sarah, from Lewis HS, acknowledged.

Sarah: I also feel like it makes you get all of your TEKS covered. If you are working by yourself, like I did for a lot of years – Got it covered, great! Didn’t get it covered, great! I had nobody to watch out for me. So, you can teach whatever you like the best, maybe skim through the other things. I think it makes you accountable for making sure you cover what the state’s required of you.

Emily: It’s just been the saving grace for this year because there is just no way that I could do two different classes on my own. It helps a lot, not being told what you’re doing
each day, but discussing and understanding and having a general guideline. And then I do like having say in the ones that I plan. But I just think that I would actually die if I had to do each one because it does just get so overwhelming. And I think my kids would really suffer if I had to plan each one because I would just be really grumpy all the time because I would just be so stressed and eventually just not want to be around anyone.

Amy: My favorite part…is that the product we put together is so much better than I could do by myself. So the end result, the end product, the thing we bring forth to the students is the best that we can come up with within our group…Everyone brings such a different mind, different aspect to their teaching, their style. So all of it comes together, it’s pretty great.

The term *hallway PLC* was addressed by the teacher group at Lewis High School and John spoke about the benefits of the impromptu conversations that take place between classes that help him improve his lesson delivery throughout the day.

I find it super helpful to have the hallway aspect of it because, just being with them [helps]. Because I teach algebra in the morning and the people around me teach algebra in the afternoon and so its nice to be able to tell them what’s happening or hear how theirs went the day before and hear the bouncing back and forth.

*Meadows High School Data*

Several of the teachers provided statements that delineated between their experiences teaching a subject that has a PLC and one that does not, for example teaching English 1 versus teaching PALS. This dynamic typically presented when that PALS teacher was the only one on that campus, so to find other teachers that teach the same class, a teacher must go outside the home campus.

Megan: [T]he ninth grade team is my lifeline. It's amazing. [My team leader has] been my lead since I started, and it's really supportive. It's a really good community to be a part of. I feel like [my] voice is equal and that it's valued. And we're able to kind of grow together and form our ideas together. My other team that I'm on, PALS I'm the team leader, and there is no team for that. There's people in the district who all teach the same thing, but I begged and pleaded to get some kind of a PLC together, give us a Pull-Out Day, and I can't get anyone to go for it. And so that's been really disheartening. I do have the cosponsor this year, which is new so I'm trying to change that dynamic on my campus, but I haven't been able to make any other connections.
Katie: I have a similar experience with Yearbook. We do not have any learning community as far as Yearbook from the district level. You're just kind of on your own.

A few teachers have some clear ideas about ways they need to improve, but fear that teacher mindset may get in the way. Not only do some teachers feel that it is unnecessary to discuss things beyond the curriculum, but some are of the opinion that because the district provides a written curriculum to each teacher, there is no need to even discuss lesson plans. These same teachers alluded to the consequence of the scripted curriculum impeding teacher creativity. Therefore, the team meetings consist of topics such as what lessons are taught on which days, and who will be taking care of making copies.

Jana: We just meet to talk about curriculum and calendar. If we're meeting to talk about our social-emotional learning or ‘how are you doing?’ kind of situation, I think that's not a priority right now, so sometimes it may seem irrelevant if we meet outside of talking about the curriculum, and I think that's a problem.

Melody: [S]ometimes it might seem like a waste to go through curriculum documents and talk about things that people could read on their own that they don't always, and I think that's part of what makes a team a team is knowing where everybody is and that is part of our district planning is that we are planning as a team and that we're, maybe not in exactly the same place, but we're doing, for the most part, the same curriculum and pretty close to the same way, and that we're learning from each other by doing that, ideally.

Steve: [B]ut one of the things that my previous district was much stronger in is that spirit of ‘make it take it.’ Coming together as a group, working with teachers from all subject areas and being able to talk about, ‘Oh what's happening in science?’ or ‘What are you all learning? Oh, we can use that same idea in English. Oh, let's collaborate together, let's create some kind of lesson. Let us do the writing for the science.’ It was way more holistic and it was way more collaborative. And I think that's the big piece that's missing with scripted curriculum.

The views and opinions of the teachers regarding PLCs seemed largely affected by the intention with which the principal implemented the program. If the principal communicated to the staff that PLCs are important and provided an implementation plan, it was better received. Without direction and apparent value of the PLC concept, teachers lacked the enthusiasm and commitment to the program.
Summary

The two principals and 11 teachers who participated in this study provided data through one-on-one principal interviews and focus group teacher interviews that support the conclusions that PLCs can and do affect the perceived self-efficacy of teachers. The differences in the way the principals of the two schools, Lewis High School and Meadows High School, implemented their PLC and professional development programs impacted the culture and climate of the campus. Gruenert and Whitaker (2015) defined culture as “the social glue that holds people together” (p. 6). Certainly, the teachers on both campuses found a way to bind themselves to each other, even when the PLC structure was loosely defined. Also of note is the implication that just because a principal mandates a program and perceives it to be beneficial and well-received by the staff, there may still be dissenters and those that are not fully bought-in who may impede systemization of a PLC program. These themes and others are discussed further in chapter 5, Discussion and Recommendations.
CHAPTER 5
DISCUSSION AND RECOMMENDATIONS

This chapter describes an analysis of the data collected through one-on-one principal interviews and teacher focus group interviews. A comparison of participant responses was guided by the themes gleaned from the research and are described below. Also explained are the data through the lens of the CoI framework developed in chapter 1 and the three presences: social, cognitive, and teaching.

The purpose of this study was to examine perceived teacher self-efficacy as it relates to collaborative professional development. The published research thus far speaks to the collective efficacy of teams of teachers working in collaborative groups. This study attempted to extract the personal perceptions teachers have related to their own efficacy as a result of working on a collaborative team, or PLC. In order to do so, I interviewed two principals, Jane at Lewis High School and Sandra at Meadows High School. Following the principal interviews, focus groups of teachers located at the respective campuses were conducted. The focus groups consisted of five and six teachers each, including one male participant in each group, with their years of teaching experience ranging from 1 to 32 years.

The overarching research question was as follows: To what extent does perceived teacher self-efficacy change as a result of the practice of PLCs? To examine this greater question, the following sub-questions were explored:

1. Do teachers perceive PLCs to be beneficial to their self-efficacy?

2. Is there a variety of PLC models practiced on the different campuses and, if so, is there evidence of increased teacher efficacy based on the PLC model a campus chooses?

The one-on-one principal interview (Appendix C) and teacher focus group (Appendix B) protocols used to gather data supported the investigation of the topics related to the research
questions, within the construct of the CoI framework. Through the use of these instruments, adequate data were gleaned to draw the conclusions described in the paragraphs that follow.

Analysis of Data Related to the Literature

The literature reviewed for this study included an examination of current practices related to PD, PLCs, improving teacher efficacy, and teacher collaboration. Hadar and Brody (2010) used their research “to stimulate professional development among teacher educators who are committed to learn how to infuse thinking into their curriculum” (p. 69) through collaboration. We know, based on this synthesis of literature, that collaborative practices can be used to improve a school and/or district, especially in the areas of collective efficacy.

The data comparison of the principal interviews and teacher focus groups reveal information pertaining to the value of implementing PLCs on a high school campus and the effects PLCs may have on teacher self-efficacy. This section highlights the four main themes in the literature review, which guided this study: professional development, professional learning communities, teacher collaboration, and increasing teacher efficacy. Included in each section is evidence of data that represent the relevant themes derived from the data collected through the one-on-one principal interviews and teacher focus groups (PLC protocols and minimum expectations, changes in the PLC process, PLCs and relationships, and teacher feelings about PLCs).

Professional Development

The review of current research includes several authors’ (Philpott et al., 2010; Sturko et al., 2009; Avalos, 2011) perspectives on what factors are necessary for effective professional
development. The themes that surfaced from their analysis include: providing meaningful experiences for staff that are applicable to their teaching assignment, incorporating collaboration appropriately, creating a positive culture related to PD, and providing a variety of formats that meet the needs of different types of teachers.

The data from this study indicate both principals take a considerable amount of time assessing the needs of their teachers and designing a professional development program around those needs. Both principals use a variety of settings, including whole-staff, small groups, and online. In addition, both principals vary the professional development presentation style from single presenter to group presentations and experiences. The principal at Lewis High School seems to lay the foundation for a positive culture by publishing PD dates early in the year, setting expectations for attendance and participation, and following up with teachers throughout the process. In contrast, the principal at Meadows High School plans her PD as the year progresses, which was a point of frustration for the teachers.

Professional Learning Communities

The literature review established the effectiveness of PLCs through an in-depth review of the most prominent authors on the topic: Eaker, et al. (2002), Hadar et al. (2010), Hipp et al. (2010), and Voelkel and Chrispeels (2017). A synthesis of their work, along with others, provides us with a firm confidence in the idea that PLCs provide valuable opportunities for teachers to collaborate, increase student achievement scores, deliver more enjoyable and beneficial learning experiences to teachers, and reduce feelings of teacher isolation. Additionally, Fullan (2006) described how PLCs, if implemented correctly, could build capacity for continuous improvement on a campus and in a district.
The teacher responses mirrored the principal responses in this study, according to the style of PLC implementation the principal used. The principal at Meadows HS took a casual approach, placed very few expectations on the teams, and expected well-functioning PLCs to form organically. Her teachers feel that they could improve upon their collaboration practice, but lack the time or direction, so their meeting agendas rely heavily on planning when lessons will be taught (calendarizing) and other clerical items. In contrast, the principal at Lewis HS spent the last three years implementing and cultivating PLCs on her campus. Her teachers understand the difference between a team meeting and a PLC and hold each other accountable to the fidelity of the PLC structure.

Teachers and principals at both campuses expressed a desire for inter-subject PLCs. Because they have had some exposure to working with other subjects, the teachers felt working with multi-subject PLCs improved their perspectives on the stressors students feel, gave them ideas on teaching strategies, and increased feelings of connectedness within the campus. Lewis High School already completed a school-wide book study with groups assigned intentionally to mix the teachers from different subjects, but the principal from Meadows described a voluntary structure, which may be problematic given what research tells us about self-selection of PD and teacher learning (Barrett et al., 2013) and the lack of positive impact on teacher effectiveness.

The two campuses studied are at different places of the PLC implementation process. Lewis High School is three years into implementing PLCs, whereas Meadows High School is beginning to lay the foundation with a somewhat unclear plan for actual PLC progress. What is evident, however, is that when school administrators offer a highly structured PLC program, benefits are seen. When that is not the case, teachers find a way to create relationships that satisfy their need for collaboration, meaningful learning experiences, and minimization of
feelings of isolation. There is more stress involved in the latter, but the resiliency of an individual to seek out what is needed to maintain balance is notable.

Teacher Collaboration

As the literature reveals, there are several modes by which a teacher can experience collaboration: teacher mentoring (Kensington-Miller, 2011; Bieler, 2013; McCaughtry et al., 2005); PLCs, as discussed above; and other professional development experiences. The most effective components of a collaborative environment include a shared leadership environment, creativity among team members, shared values and vision, a supportive culture, and common goals regarding individual practices (Hord, 2015). Such experiences provide teachers with what McCaughtry et al. (2005) called a “sounding board” (p. 327), encouraging sharing of ideas and improved teaching practices.

In addition to the research-proven factors, the teachers at both campuses described several things that impacted (positively and negatively) the effectiveness of their PLCs: 1) team stability in terms of longevity of employment at a certain position, 2) frequently adding first-year teachers to the team and the taxing effect it has on veteran teachers, 3) the responsibilities associated with teaching multiple courses that impede teachers’ ability to cultivate relationships, 4) the differences in personalities and the role that plays in the team dynamic, and 5) the role of trust in these relationships.

The staff at Lewis HS enjoyed growing in leadership skills and contributing to the planning and learning, as their collaborative efficacy grew. This shift in practice was intentional by the principal and the teachers identified it as the biggest change they experienced with PLC.
implementation. Because the principal at Meadows HS has not yet fully implemented a PLC program, there were no data comparing teacher behaviors before and after implementation.

At the two campuses researched in this study, elements of collaborative practices were seen. At both campuses, teachers understood and were committed to the school mission, shared common goals, and most contributed to the team with a sense of shared leadership. At Lewis High School, the teachers seemed to be able to access untapped creativity that exists when teachers have more time to plan and be imaginative more easily because they meet in a collaborative setting more often. There was also a sense that they felt more supported by each other and the administration, although it is less clear why this was the case. The teachers at Meadows HS felt overwhelmed by their workload, in general, and only found relief when they created collaborative groups on their own.

Increasing Teacher Efficacy

The last section of the literature examined the factors that impact teacher efficacy. Gaziel (2014) and Collie et al. (2011) investigated teacher perceptions of student ability as a driving factor of their own efficacy. Voelkel and Chrispeels (2017) connected increases in collective efficacy to participation in a PLC and described the four factors that contributed to both collective and self-efficacy: mastery experience, vicarious experience, social persuasion, and affective (emotional) state. Certainly, the impact of targeted social interactions has proven out in a variety of studies, including this one.

Not surprisingly, most teachers in this study found value in their PLC. Those at Lewis HS had very specific areas they discussed that work well, and those at Meadows HS had few strategies that worked (likely because of the lack of direction on implementing PLCs), but knew
exactly what they wanted to do to improve and why it was important to do so. Because the principal at Lewis started her PLC program several years ago and did so very intentionally, she felt (and the teachers echoed) that they had a positive outlook on the efforts they were making to maintain the fidelity of their PLCs.

The teachers in this study described the experiences that had the most impact on their personal efficacy as follows: sharing an idea and receiving positive feedback from teammates, school leadership recognizing teacher leadership potential, having the opportunity to utilize strengths, enjoying trust and honesty among the team, and experiencing freedom to fail without judgments or ridicule.

Examination of the Community of Inquiry Framework

For this study, the CoI framework was used to provide a context within which to process the strategic use of the one-on-one principal interviews and teacher focus group protocols. As data were analyzed, correlations were drawn connecting the responses of the participants to the framework in such a way that meaningful conclusions could be drawn.

Social Presence: PLC Meetings on a Regular Basis

The data gathered during the teacher focus group interviews reveal a pattern of changes to personal practice as a result of teachers meeting on a regular basis to discuss lessons, norm grading, and consider revisions to current practices. At Lewis High School, the mathematics team implemented an entirely new grading procedure after participating in a PLC book study. As a result of a well-structured PLC program, the expectations of the teachers are that, if they are going to meet, it should be meaningful and positively impact their teaching practices. It was
stated several times that regular meetings should be canceled unless there is a designated purpose for the meeting.

Meadows HS teachers, though, expected to meet regularly but did not engage in experiences that changed their teaching patterns. Team meetings were comprised exclusively of calendar planning, task assignments, and dissemination of information. As one teacher, Katie, stated,

It [the PLC] doesn't contribute to my learning at all. It is what it is. It's just, ‘Here's what we have to do. Here's what we have to get done. Check it off the list.’

As this time, the Meadows principal structures professional learning outside the subject-level PLC so teams that teach together are rarely learning in small groups together, unless they initiate it. The principal does describe a protocol she is planning to implement next year that provides opportunities for teachers who have similar goals for the school year to connect and engage in learning together that is related to that goal. Despite the lack of learning as a team, at this time, teachers at Meadows HS still develop supportive relationships to help maintain a positive climate within their teams and for themselves.

Cognitive Presence: Reflection on Change in Teaching Practices

During the teacher focus group interviews, evidence of continuous reflections was found at Lewis HS, for both the individual subject-level teams and the whole department. Teachers discussed the value of gaining the perspective of other teachers in order to encourage change and growth from year to year. John explained,

You’re used to seeing something and having fresh eyes allows you to say, ‘You know, I’ve done it this way for five years, six years, whatever. You’re right, I could do something else.’ So it offers up ways for you to not get so one way. It allows you to see other [ways].
Teachers from both schools reported increases in collective efficacy (Voelkel, 2011) as a result of meeting together, even if those meetings were not truly collaborative. It can be inferred that simply having a support system in place, of any kind, helps improve efficacy and promotes a positive school culture.

Teaching Presence: Engagement in the Collaborative Process of Learning Together

As previously explained, the teachers at Lewis High School have the advantage of working at a campus where the principal prioritizes PLCs and has taken strides to implement them more fully each year. For these teachers, learning collaboratively is part of the school culture and informs how they teach, improving their practices, from their perspective, and, their efficacy.

Melody discussed the evolution of PLCs on her campus,

I was on the algebra 1 team last year and this year, but I just feel like as a team we are doing more team work. This year we have really divided up roles of planning. We’re taking more ownership in the lessons…To be able to dig in and really understand has helped.

Not only do those teachers meet as subject teams and departments, but there were other groups of teachers that participated in learning together that brought value, as well. This topic - learning with groups of teachers who teach something different - is something both principals mentioned in their interview as an area they wanted to expand upon next year. John discussed how PLCs seemed to appear in unexpected places.

I kind of feel like our little [math] leadership team last year was kind of our own PLC too. Because we went to NTCM [National Council of Teachers of Mathematics] and we would find things together that we would go to.

In summary, the data suggest that those teachers who function in all three presences (social, cognitive, and teaching) will have a higher self-efficacy than those who do not.
Additionally, the deeper into the framework teachers move as they experience changes to their practice, increased collaboration efficacy, and more productive teaching patterns, the more they will begin to flourish as a part of the team, not only acquiring more collective efficacy, but self efficacy, as well.

**Discussion**

Through the presentation of the review of literature and the subsequent study, it becomes clear that PLCs provide invaluable experiences for both teachers and administrators. Based on the data, the most beneficial outcomes include increased efficacy, feelings of support from peers and administration, opportunities to gain new perspectives, cultivation of trust, and diminished workload related to lesson planning and day-to-day tasks. It is also evident that implementing PLCs is something that requires time - time to implement over the course of several years, and time during the school day for the additional learning experiences.

What the data show, most surprisingly, is when the principal does not install a formal PLC structure; teachers will do it on their own. The teachers at Meadows HS created their own collaborative groups by connecting with teachers with whom they naturally are friends, who are close to them in proximity (side-by-side classrooms), or with whom they have attended trainings or conferences, etc. While teachers experience the same benefits of a formally implemented PLC program, they feel frustrated that they bear the burden of having to seek out their own PLC. They also described the phenomenon of knowing what they should do to make their team meetings more meaningful, but lacked either the personal drive or the participation from other teachers to follow through.
The purpose of conducting this study was to determine whether the existence of an established PLC program had a positive impact on teacher self-efficacy and the data show that it does. Additionally, teacher stress is reduced when PLCs are created for them so that they are not burdened with seeking out relationships necessary for professional growth. By adding to the body of research regarding teacher self-efficacy, the data presented from this study should be adequate evidence to justify the effort required to plan and implement PLCs for school and district leaders.

Implications for Action

The data show that school leaders must act on behalf of teachers in order to improve the format of their team meetings and make that time meaningful and worthwhile. As shown in Table 3, which describes the benefits and shortcomings that are present across a variety of meeting types, those that are in a PLC cite things such as trust, team chemistry, shared leadership, and workload as ways their teams create effective communities. Those that are not a part of PLCs find a lack of personnel stability, frustration at the disparity between first-year teacher needs compared to their own, and lack of time because of multiple-course teaching assignments, as reasons why they do not expand their growth as a team towards a PLC model. What seems to be true is that when school leaders put a structure in place for teachers to adhere to, improvements are made.

Recommendations for Further Research

Two main topics for potential future areas of study surfaced as the data were compiled and analyzed. Though not equal in depth, both are vital to the progression of the study of teacher
efficacy related to professional development and PLCs. The first topic is PLCs and their effect on campus culture. It may be assumed that campus culture would improve as a result of the implementation of a PLC program, but the focus group interviews revealed a sentiment that, no matter how beneficial PLCs are in the long-term, some teachers simply view themselves as not having enough time and, therefore, have no desire to participate in a PLC. Further study of these teacher perceptions, and whether or not there is a way to mitigate negative opinions about PLCs, is required.

Secondly, the data suggest that on campuses with PLCs, teachers feel more supported by administration. This is unexpected as one of the tenants of PLCs is a shared-leadership approach where teachers and administrators are equal parts of the team. Administrators bring their skills to the team and carry an equal weight as the other members, creating an environment where teachers and administrators are peers. But this idea surfaces several times, so it bears further study. Investigating what intangible strengths lie within a PLC that create more positive interactions between teachers and principals would be a significant addition to the body of research.

Conclusions

In order to thoroughly examine the data and ensure fidelity to the study, this section describes the relationship between the research question and sub-questions. These questions were carefully addressed through the one-on-one principal interview and teacher focus group. The data were found to support the research questions to the extent that conclusions could be easily drawn from the analysis.
The overarching research question was: To what extent does perceived teacher self-efficacy change as a result of the practice of PLCs? In the presence of a well-established PLC program, teacher efficacy increases dramatically. Teachers feel more competent on a day-to-day basis, are more comfortable trying new strategies, both academically and behaviorally, and they feel supported to take risks. In the absence of a PLC, teachers seek out individuals who can fill the void, but a lack of structure means the full benefits are not realized.

Do teachers perceive PLCs to be beneficial to their self-efficacy? The data suggest that teachers feel more confident in their own classrooms and also feel confident bringing ideas to the team, utilizing personal strengths and contributing without fear of being shamed. On a campus with no PLC, the strengths of other teammates go unnoticed and underutilized.

Is there a variety of PLC models practiced on the different campuses and, if so, is there evidence of increased teacher efficacy based on the PLC model a campus chooses? For the purposes of this study, the PLC model used to compare campuses was that of Hipp and Huffman (2003) and the five PLC tenants described in their book *Reculturing Schools as Professional Learning Communities*: 1) shared and supportive leadership, 2) shared values and vision, 3) collective learning and application, 4) shared personal practice, and 5) supportive conditions. This framework is well-known throughout the district and offers an assessment tool that can be used in further studies to analyze the degree of implementation on each campus. While neither campus in this study used the Hipp and Huffman structure, the tenants are broad enough to be applied in multiple settings and useful to compare as a measure of progress.

Against this framework, Lewis High School can be described as nearly fully-functioning. The principal has developed a culture of shared and supportive leadership, shared values and vision, collective learning and application, and supportive conditions. Still in progress is the
tenant of shared personal practice. Meadows High School has not yet started their PLC journey and the comparison of the efficacy felt by the teachers at the two campuses was striking. The teachers at Meadows HS are lacking in shared and supportive leadership, shared personal practice, and supportive conditions. Those teachers that had a community to learn with felt more competent in their abilities and safer to take risks. Those who did not felt overwhelmed and even described team meetings as frazzled.

Summary

After a careful review of literature on the topic of teacher efficacy and PLCs, it became evident that there was a void of research related to teacher self-efficacy in this area. In this study, I examined two high schools and interviewed the principal and members of a subject planning team on each campus. The data from one of those teams revealed a fully-functioning PLC, while the other team is still in the beginning stages. As a result, I was able to compare perspectives of each group of teachers and found that, when part of a PLC, teacher efficacy thrives. Without that support, morale wanes and feelings of being overwhelmed and unable to keep up with the workload ensue. Given the conclusions, it becomes incumbent upon school leaders to support their teachers through a careful implementation of a research-vetted PLC structure.
APPENDIX A

EXAMPLE CAMPUS PLC EXPECTATIONS
<table>
<thead>
<tr>
<th>What is the role of a team leader?</th>
<th>Facilitate collaboration, not divide and conquer</th>
<th>Conduct a weekly 30-minute meeting that includes the items listed below</th>
</tr>
</thead>
<tbody>
<tr>
<td>Celebrate</td>
<td>Share personal or professional celebrations</td>
<td></td>
</tr>
<tr>
<td>Address Four Essential Learning Questions</td>
<td>1. What are the students supposed to know</td>
<td>Objective, level of mastery, plan for review, influence of objective on planning</td>
</tr>
<tr>
<td></td>
<td>2. How are we going to know if they learned it?</td>
<td>Plan for formative and summative assessments</td>
</tr>
<tr>
<td></td>
<td>3. What will we do if they don’t learn it?</td>
<td>Intervention strategies for the individual teacher and the team</td>
</tr>
<tr>
<td></td>
<td>4. What will we do if they already know it?</td>
<td>Formative assessments, differentiation, plan appropriately to challenge students while maintaining district standards</td>
</tr>
<tr>
<td>Share best practices</td>
<td>What is working for everyone?</td>
<td></td>
</tr>
<tr>
<td>Nuts and Bolts</td>
<td>Clerical and basic planning items</td>
<td></td>
</tr>
<tr>
<td>How do team leaders accomplish this role?</td>
<td>It’s a challenge</td>
<td>Go against traditional team mentality</td>
</tr>
<tr>
<td></td>
<td>Truly collaborate, not divide and conquer</td>
<td>It is difficult to take the time unless it is a priority</td>
</tr>
<tr>
<td></td>
<td>Plan, plan, plan</td>
<td>Collaborative discussions must be planned ahead of time by the team leader</td>
</tr>
<tr>
<td>Accountability</td>
<td>Mid-year check</td>
<td>Conversations and share evidence</td>
</tr>
<tr>
<td></td>
<td>End-of-year check</td>
<td>Conversations and share evidence</td>
</tr>
</tbody>
</table>
APPENDIX B

FOCUS GROUP INTERVIEW PROTOCOL
Thank you for agreeing to participate in this research study, which involves examining effective collaborative practices and perceived teacher self-efficacy. I will ask you several questions about what PLCs look like on your campus, and how they influence your efficacy. I am also interested in the extent to which the chosen PLC model you use increases or decreases teacher efficacy.

I have assigned everyone a number and you will be referred to as such throughout the focus group to assist transcription and data analysis process. Table tents showing your numbers are provided. Each of you will be asked to identify your number prior to responding, and identify the number of the participant to whom you are responding, if applicable.

Do you have any questions? If so, let’s begin.

1. Describe your role at this school, and how long you’ve been here.

2. When you first started teaching, did you feel you were making an impact on the lives of your students? Why or why not?

3. What is the team you consider to be your primary PLC team? How did this PLC evolve overtime?
   
a. Probe, if necessary, for team member roles, meeting structure, presence of agendas, etc.

4. How do PLCs contribute to your learning?

5. If I were to drop in on a typical meeting, what would I see?

6. How do you PLCs help you to feel effective in the classroom?
   
a. Probe in what ways PLCs are improving student achievement.

7. Do you feel that required collaboration is effective? If not, do you find value in the collaboration that has occurred during this school year? If so, what aspects were particularly beneficial to you this year?
   
a. Probe a time when teachers in the PLC felt empowered to implement new procedures.

8. What part of the collaborative process do you find effective or ineffective?
9. Can you articulate your principal’s vision for PLCs?

10. Do you feel that collaborating with teachers outside your subject area would be beneficial?

11. Is there anything else you want to share?

Note: After reviewing examples of protocols used in research (E.g. Norton, 2013 and Voelkel, 2011), this focus group protocol was developed.
APPENDIX C

PRINCIPAL INTERVIEW PROTOCOL
Thank you for agreeing to participate in this research study, which involves examining effective collaborative practices and perceived teacher self-efficacy. I will ask you several questions about PLC characteristics on your campus. I am also interested in the extent to which the chosen PLC model used increases or decreases teacher efficacy.

I have assigned your school a pseudonym and will use that pseudonym throughout the interview, as necessary.

Do you have any questions? If not, let’s begin.

PLC Implementation

1. How long have you been a principal at INSERT SCHOOL NAME?
   a. Probe can you describe your role and responsibilities as principal?

2. What, if any, professional development programs have you implemented with your staff?

3. What PLC protocol, if any, do you use with your staff?

4. Please describe the involvement of administration in PLCs?

5. What, if any, adaptations have you made to suit the needs of your staff? How did you determine if those changes where needed?
   a. Probe: Can you provide examples?

6. What are your future plans concerning PLCs on your campus?

PLCs and Teacher Efficacy

1. What changes, if any, did you observe in the collaboration that took place after implementing your PLC structure?

2. How did the teachers respond to the implementation of PLCs?

3. What feedback have your received from staff concerning teacher confidence as a result of an increase in collaboration?

4. Do you perceive PLCs to have influenced the teaching practices on your campus? If so, in what ways? If not, what are the barriers that exist?
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