PROFESSIONAL LEARNING COMMUNITIES AND TEACHER EFFICACY:
A CORRELATIONAL STUDY

A Dissertation
by
DAVID ANTHONY STEGALL

Submitted to the Graduate School
Appalachian State University
In partial fulfillment of the requirements for the degree of
DOCTOR OF EDUCATION

May 2011
Doctoral Program in Educational Leadership

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ABSTRACT

PROFESSIONAL LEARNING COMMUNITIES AND TEACHER EFFICACY: A
CORRELATIONAL STUDY
(May 2011)

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Literature suggests that increased teacher efficacy can have a positive impact on student academic achievement. Literature also suggests that teacher efficacy, as well as teacher effectiveness, can be improved. This research investigated the correlational relationship between professional learning communities (PLCs) as a structure for job-embedded professional development and participating teachers' self-efficacy. The specific research questions for this study were: 1) How closely does job-embedded professional development align to the National Staff Development Council's (NSDC) standards for professional development?; 2) To what extent are professional learning communities implemented with fidelity?; and 3) What is the relationship of professional learning communities and participating teachers' reported self-efficacy?

This quantitative study involved certified staff from 12 Title I elementary schools from a demographically diverse public local education agency (LEA) in the Piedmont region of North Carolina. The LEA has 36 schools in grades K-12 and serves more than 20,000 students, which ranks among the top 20 largest LEAs in the state, out of 115. The LEA selected for this research study had a self-reported structure of professional learning communities as a framework for conducting real-time professional development.

I compared the alignment of the LEA's professional development structure to the NSDC's standards for professional development through the Standards and Assessment Inventory (SAI) survey instrument. The guiding theoretical framework for this study focused on Bandura's (1986) social cognitive theory which presupposes that people act cognitively on their social experiences as well how these cognitions influence their behavior and development. Using social cognitive theory as a framework for improvement, teachers can regulate their self-beliefs (personal factors), improve their pedagogy and instructional practices (behaviors), and alter the structure of isolation that exists within many schools (environmental factors). Social cognitive theory exerts that humans' thought can regulate action. This theory also considers human behavior as individuals who adjust their actions based upon their self-beliefs or efficacy.

I also analyzed survey data on fidelity of implementation of PLCs through the lens of the Professional Learning Communities Assessment-Revised (PLCA-R) instrument. The characteristics of PLCs identified through this instrument are: shared and supportive leadership; shared vision and values; collective learning and application of learning; shared personal practice; and supportive conditions including relationships and structures. The levels of teacher efficacy were examined through the lens of the Teacher Sense of Efficacy Scale (TSES) survey which categorized efficacy into three subscales: efficacy in student engagement, efficacy in instructional strategies and efficacy in classroom management.

The findings from this study revealed a significant relationship between the components of professional learning communities and teacher self-efficacy. In particular the PLC component "shared and supportive leadership" revealed the largest degree of correlation

to the three components of self-efficacy. These findings are analyzed, implications for practice are presented, and suggestions for further research are offered.

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DEDICATION

This work is dedicated to my wonderful and supportive wife, Manda, and my unbelievable children, Owen and Ava. I set out on this journey to make you proud. I hope I succeeded. Thank you so much for being supportive and understanding throughout the entire experience. Boy I'm a blessed man. I love you with all of my heart!

ACKNOWLEDGEMENTS

To my colleagues in cohort 16, thank you for the thought provoking conversations and feedback along the way. In particular, Johnny Smith, you have been an amazing friend and support to me. You are a friend for life and I can't wait to see the great things that God has planned for you.

To my parents, Becky and Gary Stegall, thank you for your unconditional love, encouragement and understanding.

Most of all, I want to acknowledge the sacrifices and love that Manda, Owen, and Ava have shown. I know you've been patient and never appeared frustrated as I spent countless hours writing and researching instead of spending it with you. Don't fret; I'm ready to make up for lost time!

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CHAPTER 1

Introduction

Throughout the school year in K-12 schools across the United States, educators attend workshops, trainings, and other professional development events geared toward improving instructional practices. These professional development opportunities may be mandated by school or district leadership or self-selected by teachers. Like professionals in other fields, educators are expected to continually increase their knowledge base and use their new understandings to improve their skills and effectiveness. Since personnel costs comprise the largest segment of school funds, helping educators continually become more effective at their craft would benefit school districts. The motivation behind professional development is based on the assumption that quality professional development activities would translate into improved teacher knowledge and instructional practices. Joyce and Showers (2002) describe the importance of professional development stating that more informed and prepared teachers lead to more successful students. However, Joyce and Showers declared that a stand-alone training has less than a 5% chance of improving instructional practices in the classroom. Instead, if schools are provided with on-going and job-embedded professional development, and also provided with an on-going support structure with professional learning communities, the likelihood of improving teaching practices and learning increases to nearly 90% .

Unfortunately, many educators see little value in traditional standalone professional development with no follow up or support, even viewing much of it as a waste of time. "Most schools are characterized by isolated working conditions where teachers seldom see or

hear each other teach. Colleagues rarely communicate about instructional matters, especially by requesting or offering professional advice and assistance to each other in efforts to improve" (Rosenholtz, 1989, p. 429).

Guskey's (2000) theoretical work notes why this attitude of professional development may exist, "Many of the professional development experiences in which educators engage *are* meaningless and wasteful. Many are not well planned and supported" (p. 4). However, research on educational professional development indicates that significant improvements in education rarely occur in the *absence* of quality professional development (Guskey, 2000). Moreover, with changing requirements due to federal and state mandates such as "No Child Left Behind" (NCLB), advances in technology and more deliberate focus on global competition, educators must continually grow in their knowledge to keep pace. Given the fact that teacher effectiveness is the most dominant factor affecting student achievement gain in schools (Sanders & Horn, 1998; Sanders & Rivers, 1996; Stronge, 2002), finding ways to help teachers become effective for all students is a primary focus for schools across the nation.

The premise behind professional development is to improve the quality of instruction in classrooms across the United States. The National Staff Development Council, the country's largest non-profit professional association devoted to school improvement through professional development, recommends that, "every educator engages in effective professional learning every day so every student achieves" (National Staff Development Council, 2007, para. 2). The goal is to "develop thoughtful professionals who have the ability to assess and revise their own actions in order to improve the likelihood of success for their students" (DuFour, 1991, p. 57). Individual educators are expected to implement the

new learning, but the isolation of the classroom and lack of follow up from trainings may lead to a reversion to previous practices, thus the professional development fails to yield sustained improvement in behaviors. "Building shared knowledge is a critical element in professional development, but shared knowledge will improve schools only when people apply that knowledge" (DuFour, 2004a, p. 63). Collective problem solving, collaboration, encouragement, and reduced fear of risk taking are results of teams who work collaboratively. An analysis of studies evaluating the impact of these teacher teams determined that these teams resulted in higher levels of student achievement (DuFour, 1991). Furthermore, DuFour states that professional development must create a culture of collaboration where teachers work collectively to improve learning for all students.

Traditionally, even when professional development yields improved instructional practices, the improvement is often isolated to the individual teacher who received the training, leading to pockets of improvements throughout a school. As DuFour (2004a) explains, "Developing individual teachers' knowledge and skills is important but not sufficient. The challenge facing schools is expanding the ability of a team of teachers to achieve goals for all their students" (p.63). Unfortunately, the teaching profession is not always known as communal, instead being portrayed by some as "the second most private act in which adults engage" (DuFour, 1991, p. 35). How can schools and districts support this sense of community?

Scherer (2004) argues that the missing ingredient to achieving community is simply bringing people together. As people learn to hear each other, even when they disagree, they must learn to listen with openness. Over time, she expresses, colleagues will come to depend on each other and will appreciate the dialogue and ideas generated in those community

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meetings-even looking forward to the creative time of generating ideas, and problem solving issues. This reconnection of community, according to Scherer, allows team members to focus less on complaining and more on what they're trying to accomplish.   Others would argue that schools have been "bringing people together" for years, with little large-scale improvement to show for it. "There is nothing particularly virtuous about collaboration and teamwork per se. They can block change or inhibit progress as easily as they can enhance the process" (Guskey, 2000, p. 34). In order to make systemic changes with school improvement, the conversations of those meetings must be focused on critical elements.

Professional development alone may not bring about sustained improvements in instruction or in teacher efficacy. DuFour (1991) states, "Teachers who believe that their efforts cannot bring about meaningful change, who have lost hope that anything new will make a difference in their effectiveness or satisfaction, are unlikely to be affected by even the best staff development programs" (p. 39). Teachers must believe in their own abilities to influence student achievement. Those who have this sense of self-efficacy are most likely to benefit from professional development (DuFour, 1991).

The National Comprehensive Center for Teacher Quality (NCCTQ), Mid-Atlantic Comprehensive Center (MACC), and National Staff Development Council (NSDC) jointly created an issue brief on the most effective approach to professional development (Croft, Cogshall, Dolan, Powers, & Killion, 2010). They describe an approach to professional development coined "job-embedded professional development" (JEPD) that takes place with guidance, in real time, centered around actual practices taking place and in teams. JEPD affords teachers an opportunity to learn and collaborate as members of a learning community. Ingvarson, Meiers, and Beavis (2005) further characterize this approach to professional

development, stating, "It has become clear over recent years that teachers gain a great deal of valuable learning from opportunities to examine student work in collaboration with colleagues…in relation to standards for what students should know and be able to do" (2005, p. 9).

"Research points to the effectiveness of sustained, job-embedded, collaborative teacher learning strategies" (Darling-Hammond & Richardson, 2009, p. 52). In particular, one of the formats highlighted in the joint research brief on JEPD was an approach to professional development and teacher growth known as professional learning communities (PLC). PLCs, as a process, are also clearly aligned to the National Staff Development Council's standards for professional development, and provide a framework for developing effective teaching practices that will improve student achievement. Whether called Professional Learning Communities (Hord, 1997) or Professional Learning Teams (Daye, 2004), the goal is the same:

> A professional learning community provides staff development that has as its goal high levels of learning for all students, teachers, and administrators. It is a form of professional learning that is quite different from the workshop-driven approach. This powerful form of staff development occurs in ongoing teams that meet on a regular basis, preferably several times a week, for the purposes of learning, joint lesson planning and problem solving. These teams, often called learning communities or communities of practice, operate with a commitment to the norms of continuous improvement and experimentation and engage their members in improving their daily work to advance the

achievement of school district and school goals for student learning (Greene, 2006, p. 2).

In education, like many other professions, catchphrases are used out of context and clichéd with little consideration to their actual meaning. Too often these phrases come to characterize such a hodgepodge of terms and concepts that their accurate meaning becomes lost-in time, leaving the term out of favor. In the education realm, the term "Professional Learning Communities" (PLCs), or learning communities, is one such term that has become commonplace. The term PLCs means numerous things to many different people, and it has been coined to represent everything from school task forces to staffs engaged in learning together. DuFour (2004b) states,

> People use this term to describe every imaginable combination of individuals with an interest in education—a grade-level teaching team, a school committee, a high school department, an entire school district, a state department of education, a national professional organization, and so on. In fact, the term has been used so ubiquitously that it is in danger of losing all meaning (p. 6).

Professional learning communities are teams of educators committed to coming together in a systematic fashion to learn collectively, address actual student needs and to a focus on continual improvement. These terms may sound ambiguous, but the focus is not. Instead of teachers working in isolation, using strategies that may or may not be effective for all learners, PLCs draw the attention to how effective the teaching strategies that are being implemented are to reaching all students and showing growth with all students. Members of a PLC address academic issues and learn together. PLCs are not simply teams of teachers coming together that focus on procedures, facilities, or operational issues. They are instead,

"an ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve" (DuFour & DuFour, 2010, p. 18).

In the absence of meaningful attention to continually improving instructional practices to meet student needs, isolation and frustration occur. Rosenholtz (1989) states,

> Teachers establish insulating boundaries around their working lives and develop idiosyncratic goals, methods of attainment, and personal indices of their teaching success. Under these circumstances, self-fulfilling prophecies arise: teachers who fail to assist each other in solving common instructional problems convince themselves that they are alone, that few others suffer similar teaching dilemmas and are in need of collegial assistance, and that many classroom problems simply have no solutions (p. 430).

Definition of the Problem

The problem becomes then, how well does the process of implementing professional learning communities (PLCs) as a job-embedded professional development framework improve teacher self-efficacy, and in turn, student achievement? Enormous amounts of time and resources are designated for professional development in public schools across the nation. With such a prominent focus being placed on the continuous professional development for teachers, understanding a structure for professional development that improves teacher efficacy would draw great interest from educational stakeholders. A PLC would seem to provide the environment and support necessary for effective implementation of new teaching skills. It would seem that to be successful and sustainable as a

transformative approach to teaching and learning, the focus of educators must revolve around how successful students are learning the taught material, as well as the effectiveness of instruction. The practice of teachers working in silos of isolation would no longer be appropriate. Common assessments provide a gauge as to the effectiveness of instruction of all teachers and PLC teams commit to a transparent approach to not only their instructional strategies, but also student data. Learning gaps and strengths from common assessments provide direction for teams as to the needs of the students. Teams give and receive peer feedback and focus on capacity building of the group and a student-centered approach to instruction. The focus in PLCs shifts from teaching, to learning, and identifying what strategies and approaches to instruction are most successful in helping students learn. The PLC group is keenly focused on the specific needs of the students and the leadership must be supportive and shared (DuFour & Eaker, 1998).

Too often a student's success and growth have been dependent upon the expertise and experience of the teacher at the front of the room. In the educational community this practice has been termed "educational roulette."

> For much of the history of education, teachers worked in what were architecturally characterized as egg crate schools. Teachers typically worked in classrooms with no communication with other adults. Cell-like classrooms and cultures promoted insulation and isolation from other staff, leaving classroom teachers as self-employed individuals, doing their own thing, whatever that was. Single teachers in individual classrooms were given the authority to teach whatever they knew of curriculum and instruction to a fairly homogeneous student population (Hord, 2008, p. 10).

PLCs provide the framework and process for on-going learning and professional growth for educators. Most researchers agree that PLC teams have shared mission and vision as well as a commitment to collective learning and capacity building. What is also necessary are supportive conditions including time, physical space, and trust. This approach is a drastic movement from working in isolation, with little or no feedback on instruction from peers and absence of shared norms and goals.

Roland Barth explains, "If we truly believe that all children can learn, then we must believe that all educators can learn, even in the face of contrary evidence" (2005, p. 122). Creating learning environments that improve instruction for all students is at the heart of professional development standards that guide educators. The National Staff Development Council (NSDC) has adopted professional standards for professional development for educators. These standards are widely accepted as guidelines for effective professional development. NSDC outlines three major standards, with numerous descriptors for each:

Context Standards

Staff development that improves the learning of all students:

- Organizes adults into learning communities whose goals are aligned with those of the school and district. (Learning Communities)

- Requires skillful school and district leaders who guide continuous instructional improvement. (Leadership)

- Requires resources to support adult learning and collaboration. (Resources)

Process Standards

Staff development that improves the learning of all students:

- Uses disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement. (Data Driven)

- Uses multiple sources of information to guide improvement and demonstrate its impact. (Evaluation)

- Prepares educators to apply research to decision making. (Research Based)

- Uses learning strategies appropriate to the intended goal. (Design)

- Applies knowledge about human learning and change. (Learning)

- Provides educators with the knowledge and skills to collaborate. (Collaboration)

Content Standards

Staff development that improves the learning of all students:

- Prepares educators to understand and appreciate all students, create safe, orderly and supportive learning environments, and hold high expectations for their academic achievement. (Equity)

- Deepens educators' content knowledge, provides them with research-based instructional strategies to assist students in meeting rigorous academic standards, and prepares them to use various types of classroom assessments appropriately. (Quality Teaching)

- Provides educators with knowledge and skills to involve families and other stakeholders appropriately (Family Involvement)- (National Staff Development Council, 2001, p. 1)

These standards provide a framework for design of professional development initiatives. Key components of the framework are data-driven, collaborative learning communities, which are focused on continuous improvement.

Purpose of the Study

The purpose of this study was to examine the effects that participation in professional learning communities, which are implemented with fidelity, have on teachers' self-efficacy. Guskey and Passaro (1994) characterize teacher efficacy as "teachers' belief or conviction that they can influence how well students can learn, even those who may be considered difficult or unmotivated" (p. 628). Improved self-efficacy, or certainty, has been directly linked to improved instruction (Goddard, Hoy & Woolfolk-Hoy, 2000; Pajeras, 2000; Tschannen-Moran & Barr, 2004) and increased student performance (Bray-Clark & Bates, 2003). Understanding what approach to professional development increases teacher self-efficacy could prove to be invaluable to school leaders and educational stakeholders. Inviting or encouraging school staff to do well may improve school climate. However, Hoy and Woolfolk (1993) found that individual teachers' personal efficacy was not related to school morale. Expanding on their findings from their empirical study, Hoy and Woolfolk (1993) stated, "Environments that are warm and supportive interpersonally may make teachers more satisfied with their jobs or less stressed, but they appear to have little effect on a teacher's confidence about reaching difficult students" (p. 367).

In particular, this correlation study examines the role that participation in job-embedded professional development plays in impacting the levels of teacher self-efficacy as measured by the Teacher Sense of Efficacy Scale (TSES).

The primary question of this study is, "How does the process of Professional Learning Communities relate to teacher self-efficacy?" The operational research questions are:

1. How closely does job-embedded professional development align to the National Staff Development Council's standards for professional development?

2. To what extent are professional learning communities, as a form of job-embedded professional development, implemented with fidelity in the district samples?

3. What is the relationship of professional learning communities and participating teachers' reported self-efficacy?

My hypothesis was that on-site, job-embedded professional development that meets the National Staff Development Council's standards will lead to high levels of teacher self-efficacy. The literature suggests that teachers with high levels of self-efficacy use productive teaching practices (Goddard, Hoy & Woolfolk-Hoy 2000; Tschannen-Moran & Barr, 2004); believe in their own ability to positively impact student learning (Hoy & Woolfolk, 1993); and produce better student outcomes (Bray-Clark & Bates, 2003).

What is not clearly identified in the literature is if the process of professional learning communities, when aligned to the NSDC professional development standards, increases teacher self-efficacy. Although a significant body of research exists on professional learning communities that support its benefits to both educators and students, educators have much more to learn about the effects of professional learning communities on participating teachers' self-efficacy.

Stephen Sawchuk, an assistant editor for *Education Week* magazine specializing in teacher issues, shares, "Even as new forms of teacher training, such as collaborative teacher

teams, have grown popular, districts have done little to prove their efficacy" (2010, p. 16).

He goes on to state, "The final task for school districts is to better tie their professional-development spending to student outcomes and other measures of teacher improvement, something that has been lacking in nearly all the extant literature on the topic" (2010, p. 16).

Research Methodology

Participants in this proposed project included certified teachers from Title I elementary schools (n=12) in a diverse school district from the Piedmont region of North Carolina. The designation of Title I indicates that the schools qualify for and receive additional educational funding from the federal government based on poverty levels of the student attending the school. Schools in poverty were defined by the percentage of low socio-economic status (SES) students. Low SES students were defined as those meeting free or reduced-price lunch criteria, which are based upon household annual income levels. A Title I school must have either a percentage of students who qualify for free or reduced-priced lunch that was at least as high as the district's overall percentage or have at minimum 35% of students who qualify for free or reduced-priced lunch status (North Carolina Department of Public Instruction, 2008).

All certified staff at the participating schools (n=417) received paper copies of the Standards Assessment Inventory (SAI) survey. This survey measures how closely job-embedded professional development within the school aligns with the National Staff Development Council's (NSDC) standards for professional development. Additionally, a random sample of certified teachers from the same schools (n=144) were given paper copies of both the Professional Learning Communities Assessment-Revised (PLCA-R) survey,

which measures fidelity of PLC implementation, as well as the Teacher Sense of Efficacy

Scale (TSES) survey, which measures teacher efficacy—and asked to complete the surveys

anonymously. Participation in the study was completely voluntary, anonymous, and

confidential. Survey data were analyzed using a number of methodologies. Paper copies of

surveys were distributed to randomly selected participants by their school principal or

designee who collected the surveys with no identifiable information on them. The researcher

did not directly distribute, administer, or collect any surveys. There was no direct link

between the researcher and the participants.

Significance of the Study

In 2007 McKinsey and Company published an executive summary report, *How the

World's Best-Performing School Systems Come out on Top.* The report outlined results of

their analysis study of 25 of the world's high-performing school systems, including the top

ten performing systems. They examined traits, practices, and tools that these high-

performing school districts use to improve student achievement. Spending was not the

highest predictor of success, with very little improvement variances across countries after

increased funding. Neither was class size. Of 112 studies that examined the impact of class

size reduction on student achievement, only nine showed any positive relationship. Three

things identified as having the greatest positive impact on student performance were: (a)

getting the right people to become teachers, (b) developing them into effective instructors,

and (c) ensuring that the system is able to deliver the best possible instruction for every child.

According to the study, when teachers are hired into the profession, these high

performing systems focus relentlessly on continuous learning with embedded professional

development. At the teacher level, these same systems focus on three areas of the classroom: (a) helping individual teachers become aware of their specific weaknesses in their own instructional practices, (b) helping individual teachers gain an understanding of effective practices, and (c) assisting individual teachers in making necessary improvements to their instructional practices. This is accomplished through high levels of expectations, a shared purpose, and a collective belief in his or her own ability to make a difference in the education of the students he or she serves. Teachers are expected to learn from each other in teams, share knowledge on effective practices, give each other feedback, and encourage one another.

In an interview with the Journal of Staff Development, the lead author of the executive summary, Sir Michael Barber, shared how professional development is structured and supported in successful school districts. "You see a lot of embedded professional development . . . . There's very much a focus on improving pedagogy built into the routines of teachers" (Crow, 2009, pp. 10-11). He went on to say, "There are teams of teachers working together, planning lessons, reviewing student work, comparing student work from different classes, and trying to understand why certain pedagogies seem to work more effectively than others" (p. 14).

The largest portion of school revenue is devoted to school personnel, so it is logical that developing this resource is imperative. With the understanding that professional development for teachers is an essential element in schools, districts across the nation are investing enormous amounts of time and resources to professional development programs and approaches. Teachers and administrators are looking more to the education research base to find effective instructional practices, and effective ways to prepare, develop, and

sustain quality teaching within the profession. Research on the effectiveness of on-going, job embedded professional development has been scrutinized throughout the educational community. Although the value of ongoing professional development has been acknowledged (Cooper, n.d.; Croft et al, 2010), sustained improvement and continuity over time have tended to be lacking. Training has tended to fall short of systemic change and improvement in teaching practices (Bray-Clark & Bates, 2003).

It is assumed that professional development improves teaching practices and student results. However, as Mizell characterizes, "Most states make no effort to determine the effects of the mandated professional development. Some educators may benefit, but many probably do not. No one knows" (2010a, p. 22). Clearly there exists a gap in the research on the impact that professional learning communities, as a form of job-embedded professional development closely aligned to the NSDC's standards for professional development, have on participating teachers' self-efficacy. This study sought to identify whether professional learning communities as a form of professional development, when closely aligned to the National Staff Development Council's recommendations for quality professional development, will impact teacher reported self-efficacy.

Definition of Key Terms

1. Teacher Self-Efficacy: An individual teacher's belief about their own capabilities to accomplish desired outcomes, to influence students and their belief in their own success. A strong sense of efficacy enhances human accomplishment and personal well-being (Bandura, 1994).

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2. Professional Development (Staff Development): "Processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of students" (Guskey, 2000, p. 16).

3. Professional Learning Communities (PLCs): Groups of educators committed to working and learning collaboratively in ongoing processes of collective inquiry into best practices and current reality; action orientation in order to achieve better results for the students they serve; a commitment to continuous improvement; and a focus on results to gather ongoing artifacts of learning. PLCs operate under the assumption that the key to improved learning for students is continuous, job-embedded learning for educators (DuFour, DuFour, Eaker, & Many, 2006).

4. Highly Qualified Teachers: To be deemed highly qualified, teachers must have: 1) a bachelor's degree, 2) full state certification or licensure, and 3) prove that they know each subject they teach.

   State Requirements: *No Child Left Behind* requires states to 1) measure the extent to which all students have highly qualified teachers, particularly minority and disadvantaged students, 2) adopt goals and plans to ensure all teachers are highly qualified and, 3) publicly report plans and progress in meeting teacher quality goals. Demonstration of Competency: Teachers (in middle and high school) must prove that they know the subject they teach with: 1) a major in the subject they teach, 2) credits equivalent to a major in the subject, 3) passage of a state-developed test (United States Department of Education, 2004).

5. Fidelity: "The degree to which specified procedures are implemented as planned" (Dane & Schneider, 1998, p. 23).

6. Collaboration: "A systematic process in which teachers work together interdependently in order to impact their classroom practice in ways that will lead to better results for their students, for their team, and for their school" (DuFour, DuFour, Eaker & Many, 2006, p. 3).

7. Job-embedded: Teacher learning that is grounded in day-to-day teaching practice and is designed to enhance teachers' content-specific instructional practices with the intent of improving student learning (Croft et al., 2010, p. 2).

8. Collective inquiry: The process of teams of educators working together to build shared knowledge of their current practices and developing vital questions that the group will explore together (DuFour, DuFour, Eaker, & Many, 2006).

9. Certified staff: Full time school staff with licensure and certification in the area they teach.

Organization of the Study

The study is presented using the traditional five chapter structure. The research for this study will draw attention to the process of professional learning communities as a method for conducting job-embedded professional development and its relationship on teacher efficacy.   Chapter 1 provides an introductory section that describes the issue and state the research problem. This section also includes the purpose and significance of the study. The key terms that are pertinent to the study are defined and a brief historical perspective of professional development as it relates to the field of public education is given.

The second chapter includes a comprehensive review of literature in respect to significant issues relevant to professional development for teachers; the process of

professional learning communities and its impact on teaching practices; the impact of teacher effectiveness on student learning; and finally the role of teacher self-efficacy in improving teacher effectiveness. Chapter 2 further outlines the conceptual framework for the study. In Chapter 3 the research methodology and the process for data collection and analysis are explained. Chapter 4 presents the findings of the study.

In Chapter 5 the findings are discussed. Limitations, implications, and suggestions for further research are also addressed.

CHAPTER 2

Review of the Literature

This study sought to describe professional learning communities as a form of

professional development to increase participating teachers' reported self-efficacy. The

review of the literature is divided into the sections that examine professional development for

teachers, the process of professional learning communities as a form of job-embedded

professional development, the impact of teacher effectiveness, and finally the role of teacher

self-efficacy. This review of the literature concludes with a conceptual framework for the

study.

Professional Development for Teachers

The primary purpose of professional development (PD), also known as staff

development, is to empower educators to approach their responsibilities from a different

standpoint, and/or utilize new strategies.   Hayes Mizell, the first distinguished senior fellow

of the National Staff Development Council and former director of the Program for Student

Achievement at the Edna McConnell Clark Foundation states,

> It is not a matter of getting more money or days for professional development, though
>
> both would be helpful. Rather, the change required is to make professional
>
> development responsive to the objective learning needs of teachers and their students
>
> (Mizell, 2010a, p. 23).

Mizell shares that in order to be meaningful professional development must increase the understanding of teachers in relation to the actual needs of their students, move teachers to develop new strategies, and cause teachers to actively engage in continual improvement. This sentiment is shared by the Annenberg Institute for School Reform, an organization founded through a $50 million gift from philanthropist Ambassador Walter H. Annenberg focused on supporting efforts and initiatives to improve the quality of learning for children:

> Effective professional development to improve classroom teaching also concentrates on high learning standards and on evidence of students' learning. It mirrors the kinds of teaching and learning expected in classrooms. It is driven fundamentally by the needs and interests of participants themselves, enabling adult learners to expand on content knowledge and practice that is directly connected with the work of their students in the classroom (Annenberg Institute for School Reform, n.d., p. 3).

Unfortunately, criticisms that persist around professional development for educators center around the fact that follow up and continuity over time are typically lacking. Unfocused "one shot workshops," isolated trainings without follow up, disjointed implementation of programs, and lack of connection to instructional practices have led to negative perceptions of the effect of professional development. DuFour's (1991) analysis of empirical studies concluded, "The research is quite clear that little growth occurs as a result of a single training session" (p. 60). Instead, his analysis concluded that the ideal schedule for professional development involves numerous trainings delivered in intervals of time that allow participants to integrate the new learning and share their results and concerns with peers. In addition, he concluded that "teachers must utilize a new skill twenty to thirty times

before they have sufficient mastery to incorporate it within their teaching repertoire, utilize it comfortably, and adapt it to the needs of their students" (p. 58).

Bray-Clark's and Bates' (2003) analysis of ways to improve teacher effectiveness states, "The bottom line is that teachers want and need practical in-service activities that address their genuine needs in the classroom, make them better teachers, and that improve student outcomes" (p. 14). Bray-Clark and Bates go on to say, "We believe that using teacher self-efficacy as an organizing concept around which teacher in-service training can be designed and evaluated presents a viable and promising means for advancing toward this end" (p. 14).

In the United States, educators have traditionally worked in seclusion. This level of autonomy and tradition of isolation have made it extremely difficult to implement collaborative work that is high-quality (Roy, 2010) given that educators typically lack the training and opportunities to practice new learning, reflect upon the impact of the approach, and receive focused, deliberate feedback from peers. Research supports the idea that ongoing feedback and support following professional development is vital for success in implementing an initiative (DuFour, 1991). Educators need to implement new skills and strategies with frequent coaching to ensure mastery of the skill.

A recent research status report of professional development for teachers by the National Staff Development Council revealed several key findings that may help educators plan for professional development needs of their schools. Among the key findings of research were that sustained and intense professional development for educators is directly related to student academic achievement gains; collaborative approaches to professional learning can promote school change that extends beyond individual classrooms; effective

professional development is intensive, ongoing, and connected to practice; effective

professional development focuses on the teaching and learning of specific academic content

and is connected to other school initiatives; and effective professional development builds

strong working relationships among teachers (Wei, Darling-Hammond, Andree, Richardson

& Orphanos, 2009). This meta-analysis of 1,300 research studies and evaluation reports

found that focused professional development that offered on average 49 hours of training in a

school year enhanced student academic achievement by 21 percentile points, while

professional development that involved less than 14 hours total of training in a year had no

significant effect on student achievement. Among the recommendations given by the report

were that PD should be connected to classroom practices; be intensive and sustained; aligned

with school needs; build interconnected working relations among staff; and focused on

student learning.

Professional development should be embedded in a school's practices including time

built in for teachers to work together to discuss pedagogy, analyze data, plan lessons, and

share best practices. Allen (2004) describes a learning organization as a structure in which

people collectively "expand their capacity to create the results they truly desire by nurturing

expansive thinking, collective aspiration, and the ability to see the whole together" (p. 94).

This approach suggests that through focused professional development, teachers will become

better equipped to handle the diverse and changing needs of students. This structure for

professional development openly encourages dialogue that addresses classroom practices, as

well as reflection on the impact of those practices on student learning. Hirsh (2010) also

concurs with the idea of teachers coming together in teams, "The most effective professional

development engages teams of teachers to focus on the needs of their students. They learn and problem solve together in order to ensure all students achieve success" (p. 1).

DuFour (2004a) writes, "Schools' traditions of individual teacher autonomy have worsened the traditional approach to staff development" (p. 63). Instead, DuFour endorses a site-based approach to PD that seeks to build the collective capacity and a shared knowledge of the teachers, and focuses on continuous improvement. "Effective professional development will do more than help a staff acquire new knowledge and skills. It will push the staff to act in new ways" (DuFour, 2004a, p.63).

Guskey's (2000) analysis of the literature on professional development explains that quality professional development must contain three key defining processes: (a) an intentional process, (b) an ongoing process, and (c) a systematic process. By clarifying the true intention of a professional development instead of conducting random or unrelated activities with little direction for participants, it becomes easier to measure goals and outcomes. The need for an ongoing approach to professional development lies in the understanding expressed by Guskey (2000) that professional educators must continue to grow throughout their career, analyze the effectiveness of their practices and make changes to their practices based upon new learning.

Guskey goes on to explain that successful professional development endeavors share four common principles. First, there must be a clear focus on learning and learners. This includes setting clear and measureable goals based upon student learning. Second, to be effective, professional development must have a systemic approach that focuses on individual and organizational changes necessary for improvement with continual follow-up necessary to review the effectiveness of those changes. Third, professional development

should focus on incremental changes that are guided by a grand vision. "The greatest success is consistently found when the change requires noticeable, sustained effort, but is not so massive that typical users must adopt coping strategies that seriously distort the change" (Guskey, 2000, p. 37). Finally, professional development should be ongoing and procedurally embedded. Guskey warns that a successful change effort is not an event that is removed from the teachers' day-to-day responsibilities, but instead they are a part of their daily activities that are both natural as well as recurring.

Given the importance and impact of professional development, the National Staff Development Council (2001) has developed and adopted standards for professional development that are intended to guide the planning and implementation of professional development in schools. Current literature and research on professional development support these twelve standards, which are grouped in three categories: context standards, process standards, and content standards.

Context standards focus on structure, culture, and system within which the learning should occur. NSDC recommends organizing teams of participants into learning communities that have the resources necessary to collaborate and learn with the support of the school and district leadership. Process standards focus on how the learning occurs. NSDC recommends that professional development be guided by data-driven decision-making that utilizes and monitors disaggregated student data to determine student needs. In addition, educators are encouraged to apply research to decisions and be guided by multiple sources of proven strategies. Participants are expected to share knowledge and strategies with one another and apply new knowledge while evaluating its impact on student learning. NSDC's context standards recommend educators holding high levels of expectations with an

appreciation for all students. The professional development should deepen the participants'

content knowledge and provide them with proven instructional strategies that are research-

based and effective.

      With a national focus on quality instruction as exhibited by federal legislation such as

the PL 107-110, also known as *No Child Left Behind Act* (NCLB), the spotlight has been

placed upon schools to adequately hire, train, and maintain highly qualified teachers.

Although highly qualified is not directly related to how effective a teacher is — instead it is

the process of teacher passing an assessment and accruing a set amount of certain course

hours in the content area in which they teach (No Child Left Behind, 2002). However, under

Title II of NCLB, federal funding to schools and districts must be aligned to research-based

professional development and, systems must be put in place "to measure the effectiveness of

specific professional development programs and strategies to document gains in student

academic achievement or increases in teacher mastery of the academic subjects the teachers

teach" (p. 202). It is the expectation that professional development activities be grounded in

research and be sustained, intensive, and focused on instruction.

      In reaction to the reauthorization of NCLB, the National Staff Development Council

(2009) made recommendations to a definition of professional development. This guiding

definition of effective professional development asserts that professional development should

have a direct impact on teacher practices and student learning. "The new definition calls for

every educator to engage in professional learning at the school as part of the workday"

(Hirsh, 2009, p. 10).

      The literature on effective approaches to professional development suggests that they

are ongoing, job-embedded, focused on collaboration, and have commitments to

interdependent learning environments, along with inquiry and reflection (Darling-Hammond & McLaughlin, 1995; Darling-Hammond & Richardson, 2009; Hord, 1997; Senge, 1990). In addition, effective professional development has a structured, collaborative culture with a focus on learning (DuFour & Eaker, 1998), where stakeholders are engaged in an ongoing commitment to continuous improvement (DuFour, 2004b) and where content knowledge and practice are shared among participants (Darling-Hammond & McLaughlin, 1995; DuFour & Eaker, 1998; Hord, 1997). Effective professional development induces educators to improve their instructional practices (Mizell, 2010b).

Professional Learning Communities as a Form of Job-Embedded Professional Development

      History of the emergence of professional learning communities. During the late 1980's, the focus of reform within schools began to shift from a traditional approach where teachers worked in isolation much like independent contractors within a school, to an approach that focused more on collaboration, accountability, and teacher efficacy. Rosenholtz (1989) brought attention to this topic with her published empirical research on teacher workplace conditions. She described effective school workplaces as being ones that encourage teacher collaboration; where teachers shared and analyzed with each other their instructional practices; and where teachers shared ideas to improve the quality of instruction. Most importantly, Rosenholtz found that student achievement and success increased as teachers shared ideas and improved their instructional practices. Unfortunately, Rosenholtz (1989) found that in most traditional school settings, teachers function as individuals in isolation who rarely share ideas; who don't seek or offer professional assistance; who

insulate themselves from self-disclosure of inadequacies; and who convince themselves that their problems are particular only to them. "Teachers avoid help seeking if they view it as potentially embarrassing or stigmatizing and if it again threatens their sense of professional adequacy" (Rosenholtz, 1989, p. 430).

In 1990, Peter Senge's book, *Fifth Discipline,* became a driving force in school districts and educational settings. The focus was on systems thinking in a learning organization, "where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (p. 3). In particular, the spotlight became focused on the idea of engaging teachers in teams that create and develop a shared vision that would guide their work, function as collaborative groups in order to improve their teaching and evaluate the effectiveness of their instruction. As complex systems, school leaders and employees function as interconnected subsets of a larger system where each individual is expected to work collectively to solve problems and continually improve and utilize the expertise of other team members.

This concept of teacher teams took shape in many forms across the country. As it did, the practice became identified by the term "learning communities." Astuto, Clark, Read, McGree, and Fernandez, (1993) labeled the process of educators coming together to seek and share knowledge and make improvements to their practices based on the new learning as a professional community of learners. Hord (1997) later coined the practice as professional learning communities and positioned it as a focal point of education discussions.

The professional learning communities (PLCs) approach to teaching shifts the focus away from an isolated teacher-centered approach to instruction. Instead, the focus becomes a

student-centered approach, where teachers work collaboratively and interdependently to focus on a shared mission, collective capacity building, inquiry into learning gaps, reflective practice and developing effective instructional practices to meet the individual needs of all students. Schools and districts slowly began to invest time and resources into these "restructured schools" where teacher workgroups are centered on enhancing their curriculum knowledge, sharing ideas, and developing local standards and assessments (Darling-Hammond, 1996).

Rosenholtz (1989) conducted a study of 78 schools to examine the workplace of teachers. She identified two types of schools: "learning-enriched schools" and "learning-impoverished schools." In learning-impoverished schools, teachers work in isolation and their belief in their ability to create meaningful change is greatly diminished. In learning-enriched schools, Rosenholtz found that educators worked in collaborative groups focused on improving teaching and learning. These groups created shared goals that focused on student achievement and learning. The study found that teacher collaboration led to improved pedagogy, increased teacher efficacy and increased levels of teacher commitment. These resulted in increased student achievement.

From 1990 to 1995, researchers at the Center on Organization and Restructuring of Schools at the University of Wisconsin-Madison investigated the most effective way to restructure schools in order to boost student achievement. The Center researchers analyzed data over a five year period from over 1,500 elementary, middle and high schools throughout the United States, as well as conducted field research in 44 schools, from 22 districts, in 16 states. In their report, (Newmann & Wehlage, 1995) they recognized that there was no simplistic recipe for improvement that worked in all areas consistently. However, they found

that the most successful schools in restructuring are those which function as professional

learning communities, offering higher levels of pedagogy and functioning better at increasing

student achievement. The researchers cautioned that building these learning communities

required certain conditions and a well-defined mission.

Similarly, in 1995, Lee, Smith and Croninger, working for the Center on Organization

and Restructuring of Schools, released a report on successful school restructuring efforts.

Their work involved 11,000 students in 820 schools across the United States. They found

that schools characterized as professional learning communities engage students in higher

levels of tasks. In these schools characterized as professional learning communities, teachers

and students are more committed to the goals and mission of the school, and the staffs work

more cohesively to improve classroom instruction. Also, according to the report, through

these PLCs student achievement increased in all core subject areas and achievement gaps

between student subgroups were decreased.

In *Learning by Doing* (2006) DuFour, DuFour, Eaker, and Many define the term

professional learning communities as, "Educators committed to working collaboratively in

ongoing processes of collective inquiry and action research to achieve better results for the

students they serve" (p. 217). They go further to explain that effective professional learning

communities are structured under the assumption that to fully achieve sustained improved

learning for students, there must be a structure of ongoing, job-embedded learning for

educators. This approach focuses on results-oriented goal setting for each member of the

organization in order to achieve high levels of learning for all students. Members of the PLC

are expected to work inter-dependently to achieve agreed upon common goals that are

focused primarily on student learning. From this perspective, collaboration in and of itself is

not the key. Instead, the key is that collaboration is focused on the classroom practices that will lead to greater student learning.

In PLCs, the emphasis is on collective inquiry, reflection on current instructional practices, reducing isolation of teachers, sharing responsibility for the learning of all students, and creating a capacity for learning. The learner's success becomes the priority in schools structured in this way. The focus slowly moves away from excuses and blame, to a change in the approach to instruction focused on the individual needs of the learners (DuFour, DuFour, Eaker, & Many, 2006).

DuFour (2004b), in particular, called on educators to continue moving forward with the work of PLCs, fearing that, like many previous educational reform efforts, initial enthusiasm will shift to poor implementation, lack of follow through resulting in abandonment of the effort.

> In this all-too-familiar cycle, initial enthusiasm gives way to confusion about the fundamental concepts driving the initiative, followed by inevitable implementation problems, the conclusion that the reform has failed to bring about the desired results, abandonment of the reform, and the launch of a new search for the next promising initiative. Another reform movement has come and gone, reinforcing the conventional education wisdom that promises, 'This too shall pass' (DuFour, 2004b, p. 6).

DuFour goes on to describe three theoretical "big ideas" that all professional learning communities must possess in order to accentuate sustainability until the point that they become embedded in the practices and culture of the organization.

1. Ensure that students learn. This concept requires a shift in thinking from a focus on teaching-centered approach to instruction to a focus on a learning-centered approach. Staff must respond to students who are having trouble. Teachers are expected to respond when students don't learn and adjust their instruction to meet the individual students' needs. The school commits to high levels of learning for all students as the fundamental purpose of the school, and is therefore prepared to examine the impact that all instructional practices have on learning.

2. Ensure a culture of collaboration, not just token congeniality. "Despite compelling evidence indicating that working collaboratively represents best practice; teachers in many schools continue to work in isolation" (DuFour, 2004b p. 8). DuFour goes on to state, "The powerful collaboration that characterizes professional learning communities is a systematic process in which teachers work together to analyze and improve their classroom practice. Teachers work in teams, engaging in an ongoing cycle of questions that promote deep team learning. This process, in turn, leads to higher levels of student achievement" (p. 8). This collaboration focuses on identifying essential curriculum that all students must master, creating common formative assessments, and analyzing common data to identify what works, as well as what doesn't work, and then adjusting instruction. The move is away from isolated and private instructional practices to open and honest dialogue. This dialogue includes discussion of analysis of student performance on common assessments in order to identify what truly is effective and abandon what isn't. Collaboration isn't random. It is focused on learning. It is also embedded into routine practices, there is time for collaboration that is built into the school day and calendar, and it is guided by established team norms.

3. Focusing on the results is the third "big idea" of professional learning communities. According to DuFour, too often, groups focus on intentions instead of results. Results should not be discounted or dismissed with excuses-the blame game. Instead, individuals, teams, and schools seek relevant data and information and use that information to promote continuous improvement. If students are not successful, based upon common assessments, then the educators must identify what approaches to instruction were successful in fostering student learning, and then use those approaches with fidelity throughout the school. Student achievement and learning, not intentions, are the driving force (DuFour, 2004b).

Haberman (2004) argues that learning outcomes should be the primary criteria for teachers and schools to measure their success. The focus must shift from teacher-centered to student-centered practices. But how does a school go about addressing issues of pedagogy and practice openly and honestly? Haberman (2004) identifies some key characteristics of successful learning communities that must exist, regardless of the grade structure of the school (p. 53):

- *Modeling*- In guiding student learning and development, teachers applied the same principles that guided their own learning and development.
- *Continual sharing of ideas*- Teachers shared ideas daily regarding vital issues of equity, instruction, curriculum, testing, school organization, and the value of specific kinds of knowledge.
- *Collaboration*- Teachers became involved in team teaching and other collaborative efforts in program development, writing, and research.

- *Egalitarianism*- Teachers dispensed with formalities. Anyone who took an interest could vote in a department meeting, especially students. The quality of ideas was more important than their source.

- *High productivity*- Teachers continually increased their workloads. No matter how high the output, they continually pressured themselves to create new programs, develop new courses, publish books and articles, and produce more research.

- *Community*- Faculty members valued community more than promotion. Finding a more stimulating learning community became the criterion that guided the movement of faculty to various institutions.

- *Practical applications*- Teachers asked themselves, "How does what we are doing help students, teachers, and schools? What did we do this week to help?"

Ingvarson, Meiers, and Beavis (2005) analyzed four studies conducted by the Australian Government Quality Teacher Programme, which were designed to improve teacher quality. The survey study included 3,250 teachers who participated in various professional development activities. The purpose of the study was to evaluate and examine the effectiveness and quality of various forms of professional development for teachers. The results indicated that the level to which an approach to professional development influences knowledge and application is increased when participants have opportunities to talk about their personal teaching practices, evaluate student learning, develop ideas collaboratively, and support each other in the implementation of new strategies. This approach had a noteworthy explicit effect on teacher knowledge. As teacher knowledge increased, the impact on teacher practice increased, as did student learning and teacher efficacy. The most

effective models of professional development gave participants opportunities to work collaboratively and to reflect on their practice. Furthermore, effective approaches engaged participants in a process of trying new strategies; provided ongoing support and coaching when problems or issues arose; and allowed teachers to "deprivatise their practice and gain feedback about their teaching from colleagues" (Ingvarson, Meiers & Beavis, 2005, p.16).

Reeves (2010) analyzed the effects of professional development on student achievement gains. He found that when schools come together in professional learning communities to engage in deep discussions about planning, implementing instructional strategies, and monitoring student results, that student achievement gains were significant. His analysis of schools from the United States and Canada who implemented PLCs uncovered that the deeper the implementation, the more dramatic the student achievement. The change in student percent proficient of state assessments grew by as much as 73% when schools moved from low levels of implementation of PLCs to high levels of implementation.

Too often schools fail to develop a process to adequately support teachers' professional growth. Given the importance of a collaborative culture with a focus on learning for all, (DuFour, DuFour, Eaker, & Many, 2006) it would seem that teachers can no longer work in a completely autonomous classroom, using concepts and principles of the 20th century factory model but instead must have a systematic way to collaborate with peers to share proven effective practices (DuFour & Eaker, 1998). Professional learning communities focus on a "success for all" approach with an interdependent culture, focused on helping every teacher grow, improving student learning, and enhancing the curriculum.

Teachers are not only expected to develop a repertoire of strategies, but they are also asked to monitor the growth and development of each individual student and adjust their

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teaching to the individual needs of each. DuFour, DuFour, Eaker, and Karhanek (2004)

contest that a school truly committed to the concept of learning for each student will develop

consistent, systematic procedures for responding when students do not learn. Schools and

classrooms should be results-focused and develop a plan for continuous improvement

through aligned assessment and data analysis. This use of data emphasizes a collaborative

approach to continual improvement and research into best practices.

Components and attributes of professional learning communities. With the

enormous amount of literature on professional learning communities, experts in the field vary

on their characteristics of PLCs; however, there are key attributes that have been identified.

Shirley Hord (1997), a well-respected and guiding force in the PLC movement, identified

through her research core characteristics of professional learning communities: supportive

and shared leadership, which no longer focuses on a top down approach to leadership;

collective creativity, including reflective dialogue into "best practice" and "current reality";

shared values, mission and vision, which guide decisions about teaching and learning within

the school; supportive conditions, including a willingness to accept and give feedback and to

continually work toward improvement; and shared personal practice highlighted by mutual

respect, openness and trust.

In *Professional Learning Communities at Work,* DuFour and Eaker (1998) describe in

detail a set of six characteristics that illustrate the process of professional learning

communities. These characteristics are generally accepted as descriptors of the process:

1. Shared mission, vision, and values. "What separates a learning community from an ordinary school is its collective commitment to guiding principles that articulate what the people in the school believe and what they seek to create" (p. 25).

2. Collective inquiry into best practices and current reality. "People in such a community are relentless in questioning the status quo, seeking new methods, testing those methods, and then reflecting on the results" (p. 25).

3. Collaborative teams focused on learning. "Although individual growth is essential for organizational growth to occur, it does not guarantee organizational growth. Thus, building a school's capacity to learn is a collaborative rather than an individual task" (pp. 26-27).

4. Action orientation and experimentation. PLC team members "develop, test and evaluate theories. They reflect on what happened and why, develop new theories, try new tests, evaluate the results and so on." Also, this climate of experimentation is "accompanied by a tolerance for results that may be contrary to what was anticipated" (pp. 27-28).

5. Commitment to continuous improvement. "Becoming a learning community is less like getting in shape than staying in shape" (p. 28).

6. Results orientation. "Focus on continuous improvement must be assessed on the basis of results rather than intentions" (p. 29).

The Center for Comprehensive School Reform and Improvement (2009), the Southwest Educational Developmental Laboratory (1997), and the National Association of Elementary School Principals (2008) identified similar characteristics to describe PLCs, including: shared values and vision; commitment to results; collective inquiry; supportive conditions; collaborative culture; focus on examining outcomes to improve student learning;

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supportive and shared leadership; and shared personal practice. Below is a summarization of key components:

Shared mission, vision, values and goals. A key component of professional learning communities is the adoption of a common mission, vision, values and goals that guide staff members as they focus on student needs. The mission is what the school's focus is and provides a framework for all activities within the school. The vision is a future self that the staff seeks to become. The values are entrenched in the daily actions of the staff and generally reflect the staff's agreed upon norms. The goals within a PLC are established by data-driven decisions. Gaps in student learning are identified through data and action-oriented goals are tied to improving these gaps.

Supportive and shared leadership. In professional learning communities, "Administrators and faculty hold shared power and authority for making decisions" (Hord & Sommers, 2008, p. 9). PLCs require a shift of leadership from a traditional top down style to a shared approach to decision-making that empowers the workers.

Collective inquiry and practice of learning. PLCs focus on continual growth and learning for participants. Professionals in a learning community work in teams with a shared purpose. These members relentlessly question the *status quo*, look for new ways of teaching, test those new strategies and then reflect upon the effectiveness of the method. Discussions move from traditional meeting discussions on operational issues such as creating schedules, field trips, etc., to discussions about actual student needs and establishing an effective

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learning environment. There is a shared commitment to curricular, assessment and

instructional decisions based upon student needs. Discussion focuses on research-based best

practices, and those strategies are implemented in the classroom.

Shared personal practice with feedback. Teachers interact in a collegial coaching

style to provide feedback and recommendations for improvement of instruction. This

coaching is a non-evaluative process, but is geared toward breaking down the walls of

isolation that many teachers experience. This practice involves "teachers visiting each

other's classrooms on a regular basis to observe, take notes, and discuss their observations

with the teacher they have visited" (Hord & Sommers, 2008, p. 15).

Focus on continual improvement and results. Professionals in a learning

community never settle for the *status quo*. They continually seek to improve and base their

efforts on observable and measureable results that drive instruction. Through the use of

student data and a results-oriented way of thinking, a sense of mutual accountability is

established.   Assessment and subsequent changes to instruction guide the work of the team

(Center of Comprehensive School Reform and Improvement, 2009).

Supportive Conditions. Conditions must be in place to make sure that PLCs aren't

just invitational but are common practice within the school. Hord (1997) cited two forms of

supportive conditions necessary for professional learning communities: structural conditions

and collegial conditions. Structural conditions include time to meet, physical space and

resources for the meeting. It also includes schedules set in place to allow teachers to visit

each other's classroom. Collegial conditions include trust and respect necessary to participate in the team meetings, agreed upon norms of behavior, and positive attitudes.

Table 1 illustrates a comparative view of attributes that the literature uses to define professional learning communities as well as the attributes that were used for this study.

Table 1

Comparative View of Attributes of Professional Learning Communities

Attributes used for study	Hord (1997)	DuFour and Eaker (1998)	Center of Comprehensive School Reform and Improvement (2009)	Southwest Education Development Laboratory (1997)	National Association of Elementary School Principals (2008)
Shared and Supportive Leadership	Supportive and Shared Leadership		Supportive and Shared Leadership	Supportive and Shared Leadership	Supportive and Shared Leadership
Shared Values and Vision	Shared Values, Mission, and Vision	Shared Mission, Vision and Values	Shared Values and Vision	Shared Values and Vision	Shared Mission, Vision, Values and Goals
Collective Learning and Application of Learning	Collective Creativity	a-Collective Inquiry into best practices and current reality b-Collaborative teams focused on learning c-Action orientation and experimentation		Collective Creativity	Collective Inquiry
Shared Personal Practice	Shared Personal Practice	Results Orientation	a- Shared Personal Practice b- Focus on examining outcomes to improve student learning	Shared Personal Practice	Commitment to Results
Supportive Conditions-Relationships		Commitment to Continuous Improvement	Collaborative Culture		a-Culture of Collaboration b-Continuous Improvement
Supportive Conditions-Structures	Supportive Conditions			Supportive Conditions	

The Impact of Teacher Effectiveness

Teachers are frequently faced with many challenges for which they are ill-equipped. Not only must they focus on curriculum and instruction, they are expected to acclimate to the culture of the school and community, meet the diverse needs of students, collaborate with peers, and continue growing professionally. Teachers control what goes on within their classroom and must know and teach what Schlechty (2002) calls the "right stuff." However, in many cases, teachers autonomously labor through hit and miss strategies to develop their range of approaches necessary to teach the right stuff. The level of instruction received by students can be dependent to a large degree upon the individual repertoire of the teacher to whom the student is assigned. This form of educational roulette or luck of the draw has huge ramifications. The New Teacher Project (2009) conducted an empirical study that went as far as to claim, "A teacher's effectiveness−the most important factor for schools in improving student achievement−is not measured, recorded, or used to inform decision-making in any meaningful way" (p. 3). Administrators lack the time or sometimes even the authority to help unproductive teachers improve. The process of evaluating teachers is devalued and little meaningful feedback is provided to teachers (The New Teacher Project, 2009). The quality of teaching matters in the learning of students. Unfortunately, the level of instruction is not equitable in all classrooms.

Sanders and Rivers (1996) suggest that the main influence on the variation in student achievement at school is the quality of the teachers. Their research showed that if two average third graders, with comparable abilities were given different teachers−one of them having three consecutive effective teachers, the other having three consecutive ineffective teachers− their cumulative performances differ by 52 to 54 percentile points after three years.

Even the differences of having three consecutive highly ineffective teachers compared to three consecutive average teachers yielded cumulative performance differences of between 21 and 35 percentile points.

Similarly, Haycock (1998) found that on average, least effective teachers were only able to produce student achievement gains of about 14 percentile points during the school year while instructing low-achieving students. However, teachers identified as the most effective teachers achieved gains, even among low-achieving students, that averaged 53 percentile points. Similar gains were evident among the scores of middle achieving and high achieving students. In a least effective teacher's classroom, a high achieving student could typically expect less than 2 percentile growth, compared to an average of 25 percentile points growth in a highly effective teacher's classroom. Middle achieving students gained an average of 10 percentile points growth in a least effective teacher's classroom, instead of the 34 percentile points on average gained by their counterparts in most effective teachers' rooms. Even after two years, the performance of students is still affected by former teachers.

Wright, Horn, and Sanders (1997) examined the results of the Tennessee Comprehensive Assessment Program (TCAP) assessment which is given yearly to all 3rd-5th grade students in Tennessee to examine relative magnitude of teacher effects. After adjusting for other factors on academic growth including student achievement, intra-classroom heterogeneity, and class size, the results showed that not all teachers have the same impact on student learning. Wright, Horn, and Sanders concluded that effective teachers are overwhelming the major factor affecting student academic gain, regardless of the students' prior academic levels

High expectations play a critical role in discovering success in every student (Clark, 2003). Student achievement and academic growth are consistent common threads in effective classrooms. As Clark stated, "I approach each year with the knowledge that I have only one year to make a life's worth of difference in each child in that classroom" (2003, p. xxvi). A meta-analysis of research conducted over a 35 year period demonstrates that schools that are highly effective produce results that almost entirely overcome the effects of student backgrounds (Marzano, 2003). Effective, engaging teachers have an impact on student achievement well past the year the student is assigned to them. Teachers identified as least effective, according to Marzano, have an impact on student achievement that is 39 percentage points less than that of the most effective teachers. Similar research identifies nine high yield instructional strategies that have proven effects on student achievement. They range from identifying similarities and differences with a 45% effect size gain to questions, cues, and advance organizers with an effect size of 22% (Marzano, Pickering, & Pollock 2001).

Marzano's research (2007) on teacher interaction with students found that the way a teacher responds to students within their classroom has a profound effect on the students' academic achievement. The effect size ranged from 4% due to physical touch to 23% due to smiles to an effect of 36% for duration of interaction with the student. Marzano (2007) observed, "If the relationship between the teacher and the students is good, then everything else that occurs in the classroom seems to be enhanced" (p. 150).

Not only do effective teachers assess students but disaggregate data to determine strengths, gaps, and opportunities for improvement (Williams, Kirst, Haertel, et al. 2005). Stronge (2002) cites 32 separate studies that show how effective teachers use a method of

monitoring student progress and potential. An absence of data is not the issue according to

DuFour, et al., 2006. "Data alone will not inform a teacher's professional practice and thus

cannot become a catalyst for improvement unless those data are in context to provide a basis

for comparison" (p. 148). In addition, the authors recommend that many teachers are poorly

trained to disaggregate data effectively alone, stating that the best way to help teachers utilize

data is, "to turn data into information that can improve teaching and learning...through team-

developed and team-analyzed common formative assessments" (p. 148).

Classrooms that are effective at increasing student achievement develop both

formative assessments that serve as a prescription to what needs to be re-taught or covered,

as well as summative assessments that serve as an autopsy of how effective the instruction

was. Frequent monitoring of student performance, in effective classrooms, is used to both

improve individual student performance, as well as to improve the instructional program

(Lezotte, 1991). Classrooms and schools that have effectively reduced achievement gaps

between white and minority students use frequent monitoring of student progress with

appropriate assessments (Maddahian, Fidler, & Hayes, 2006).

On January 8, 2002, President George W. Bush signed Public Law 107-110. This

law, a reauthorization of Elementary and Secondary Schools Act (ESEA), is also known as

No Child Left Behind Act or *NCLB* . The purpose of the law was to improve educational

standards and increase accountability for all schools across the nation tied to Title I and other

federal funding sources. Within the law are numerous specific guidelines that all public

school districts across the United States who accept federal funding had to implement,

including Title II- Preparing, Training and Recruiting High Quality Teachers and Principals.

Under this section of *NCLB*, provisions were clearly stated that teachers in core academic

areas were required to be "Highly Qualified" (HQ) in all of the subjects that they teach. The core academic areas were defined as English, reading or language arts, math, science, history, civics and government, geography, economics, the arts and foreign language.

The rationale behind this provision to define "Highly Qualified" status was based on the assumption that effective, engaging teachers have an impact on student achievement well past the year the student is assigned to them. The law requires districts to have in place professional development that has a "substantial, measurable, and positive impact on student academic achievement" as well as how the training of teachers will be a "broader strategy to eliminate the achievement gap that separates low-income and minority students from other students" (No Child Left Behind, 2002, p. 205).

The Role of Teacher Self-Efficacy

In education, when teachers are not afforded the opportunity to study and see the effects of their collective team efforts, their efficacy suffers. Bandura (1977, 1994, 1997) describes self-efficacy as an individual's belief about his or her own capabilities to accomplish desired outcomes, to influence others and a belief in his or her own success. Pajares and Schunk (2001) further describe the behaviors that people exhibit known as self-efficacy. According to the authors, this belief in personal competence impacts a person's effort and resilience, as well as influences the degree of success an individual ultimately realizes. Douglas Reeves (unpublished presentation), the founder of the Leadership and Learning Center and recipient of Brock International Laureate for his contributions to education, describes teacher efficacy as "the bone deep belief that teaching and leadership matter" (February, 2011).

Nearly 25 years ago, RAND researchers first evaluated teacher self-efficacy characteristics and student outcomes (Armor, Conry-Oseguera, Cox, King, McDonnell, Pascal, Pauly, & Zellman, 1976). They developed two questions intended to assess a teacher's belief that student motivation and learning were under the teacher's control. The first question asked whether or not the teachers believed that, "when it comes right down to it, a teacher really can't do much (because) most of a student's motivation and performance depends on his or her home environment" (p. 23). The second question inquired as to whether the teachers felt that "if I try really hard, I can get through to even the most difficult or unmotivated students" (p. 23). The responses to these two questions were used to measure the level that teachers felt they could impact the success of the students they were instructing. The RAND research questions were grounded in social learning theory. Social learning theory is founded in the belief that people learn both from their own experiences as well as by observing the actions and results of others' behaviors. The RAND researchers found that high teacher efficacy was a strong predictor in success of teaching reading to minority students. They also reported that high teacher efficacy was a predictor of the sustainability of federally funded initiatives at the end of funding and that teachers' sense of efficacy had a positive relationship to student achievement.

Albert Bandura developed social cognitive theory to explain people's actions. Social cognitive theory, unlike social learning theory, suggests we are not products of our own biology or environments. "Instead, we are products of our interplay between the external, the internal, and our current and past behavior" (Henson, 2001, p. 3). Bandura (1986) emphasized that cognition plays an important role in people's ability to develop self-control, construct reality and perform behaviors. "Using social cognitive theory as a framework,

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teachers can work to improve their students' emotional states and to correct their… personal factors, …behavior, …and environmental factors" (Pajares, 2002b, p. 2). Bandura's (1986, 1997) model of self-efficacy describes four sources of efficacy:

- Mastery experiences- Teachers' self-efficacy grows through personal successes.

- Vicarious experiences- Observing others succeed who are similar to oneself, through sustained efforts, provides teachers with a social model and raises their beliefs that they possess the capabilities to master comparable activities as well.

- Social persuasion- Coaching and persuasion can lead to greater effort and sustainability. Flourishing efficacy builders structure opportunities for teachers to be successful.

- Reduced stress reactions and negative emotions.

Through cognitive processing, these four sources lead educators to an analysis of their teaching performance and to an assessment of their personal teaching competence. Mastery experiences are considered to have the most dominant influence on teacher efficacy given that they provide direct feedback regarding capabilities and outcomes. "Although all four sources of information play roles in the creation of efficacy beliefs, it is the interpretation of this information that is critical" (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998, p. 230). How teachers analyze the task in relation to their perceived competence impacts their performance and effort to complete the task, meaning that their efficacy is determined by their judgment of their own ability to teach the task in question.

Tschannen-Moran and McMaster (2009) further explored these ideas of teacher self-efficacy by studying four different approaches to preparing 93 primary-grade teachers to use

a new literacy method. Teachers were randomly assigned into one of four groups, and each group received a different professional development approach:

- Group 1: Information on the new method, followed by question and answer time.

- Group 2: Information plus observing the presenter modeling the strategy.

- Group 3: Information plus modeling plus an opportunity to practice the strategy themselves.

- Group 4: Information on the program, plus modeling and practice time, as well as personal coaching and feedback.

 The researchers then measured each teacher's level of self-efficacy. Tschannen-Moran and McMaster's research indicates that the format of professional development that yields the highest sense of teacher self-efficacy was one which included an authentic mastery experience in the teacher's own classroom, along with supportive, specific verbal feedback and coaching. The experiences of personal successes, along with a supportive, collaborative environment to reflect upon the experiences and make changes to practices, greatly impact teachers' certainty and effectiveness of their pedagogy.

Isolation in a classroom can diminish this sense of efficacy since many of the strategies implemented may have little or no positive impact on student learning. Lortie (1975) conducted studies in which he examined the effects of isolation on hundreds of teachers. For many, this sense of isolation led to professional uncertainty, apathy, and avoidance of deep discussions about effective teaching. Rosenholtz (1989) found that educators with a high sense of self-efficacy were more likely to adopt new teaching strategies and behaviors and were more apt to stay in the teaching profession. She further states,

"Much of teachers' efficacy and willingness to confront new challenges hinges on the meanings they give to their own teaching failure or success" (Rosenholtz, 1989, p. 425).

Given that teacher efficacy is a personal belief in a teacher's capabilities to engage students and attain desired student outcomes, even with unmotivated, difficult or hard to reach students (Ashton & Webb, 1986; Tschannen-Moran & Hoy, 2001), finding ways to improve those levels of self-efficacy could have large scale ramifications on the classroom. A teacher's sense of efficacy affects his or her attitudes toward education.   Teachers with high levels of self-efficacy use productive teaching practices (Goddard, Hoy & Woolfolk-Hoy 2000; Pajares, 2000; Tschannen-Moran & Barr, 2004); believe in their own ability to positively impact student learning (Hoy & Woolfolk, 1993); and produce better student outcomes (Bray-Clark & Bates, 2003). An increased sense of self-efficacy can improve personal accomplishment and well-being (Pajares, 2000) as well as enhance their capacity to respond effectively to challenging and stressful situations (Bray-Clark & Bates, 2003). There is a positive correlation between collaboration among educators and high sense of self-efficacy for teachers (Ross, 1992).

Self-efficacy differs from self-confidence (Bandura, 1997) and self-esteem (Pajares, 2000, 2002a). Confidence and self-concept deal with a teacher's personal evaluation of self-worth or value associated with the actions in question. Self-efficacy is a judgment or belief in one's capability to perform a task or engage in an activity. "People who doubt their capabilities may believe that things are tougher than they really are, a belief that fosters stress, depression, and a narrow vision of how best to solve a problem" (Pajares & Schunk, 2001, p. 242).

Multon and Brown (1991) conducted a meta-analysis of 39 studies measuring self-efficacy beliefs of teachers and the positive influence on academic achievement of students. Their work successfully demonstrated that self-efficacy beliefs may mediate the effect of previous experience, skills or other self-beliefs on achievement. They found that self-efficacy beliefs had a positive relationship to student performance. Woolfolk and Hoy (1990) echoed the same message, stating, "Researchers have found few consistent relationships between characteristics of teachers and the behavior or learning of students. Teachers' self-efficacy. . . . is an exception to this general rule" (p. 81).

Summary

Given the body of research (Bandura, 1997; Goddard, Hoy, & Woolfolk-Hoy 2000; Multon & Brown, 1991; Pajares, 2000, 2002a; Tschannen-Moran & Barr, 2004) on the positive relationship between teacher self-efficacy and student achievement, as well as the research on teacher professional development and self-efficacy (Tschannen-Moran & McMaster, 2009), it would be valuable for educators to find an approach to professional development that increased participating teachers' reported self-efficacy. Previous researchers have made the recommendation for research on the relationship of teacher efficacy and job-embedded professional development. "The development of self-efficacy should become a central consideration in the design and development of in-service training…The value of self-efficacy as an important variable in teacher effectiveness is implicitly reflected in The National Staff Development Standards" (Bray-Clark & Bates, 2003, p. 20).

The literature clearly exhibits the values of professional learning communities as well as the benefits of increased teacher efficacy. Given the gap in research on the correlation of professional learning communities as a form of job-embedded professional development and teacher reported self-efficacy, this study sought to determine the relationship between the two.

Theoretical Framework

In formulating a framework for examining the relationship of PLCs as a form of quality professional development on participating teacher self-efficacy, social cognitive theory provided a foundation. Social cognitive theory (SCT) emerged from the social learning theories of how and why people behave in the manner that they do. SCT originates from the work of Bandura (1986). SCT explains how people acquire and maintain certain behavioral patterns, while also providing the basis for intervention strategies, asserting that people learn by observing the actions and reinforcements of others and the modeling after others, especially others with which they identify with. Evaluating behavioral change depends on environmental factors, people and behavior. Environment can be social or physical and behavior refers to the skills necessary to perform an action. The three factors environment, people and behavior are constantly influencing each other. SCT provides a framework for constructing, carrying out and evaluating programs. As Pajares (2002a) shares,

> From this theoretical perspective, human functioning is viewed as the product of a
> dynamic interplay of personal, behavioral, and environmental influences. For
> example, how people interpret the results of their own behavior informs and alters

their environments and the personal factors they possess which, in turn, inform and alter subsequent behavior.

Using this as a framework for improvement, teachers can adjust their self-beliefs (personal factors); improve their pedagogy and instructional practices (behaviors); and adjust the structure of isolation that exists within many schools (environmental factors). Social cognitive theory suggests that a human's thought can regulate action. It also views human behavior as the alteration of actions based upon self-beliefs or efficacy.

Within Bandura's social cognitive theory are core components of what it means to be human. Among those are: the ability to symbolize behaviors and actions to guide future behaviors; the ability to use forethought to predict the consequences of actions; the ability to learn vicariously through others' actions; and the ability to self-monitor through the process of self-reflection.

With the depth of research available that demonstrates the positive relationship of teacher self-efficacy and student achievement, I sought to determine if there is, and to what degree, a relationship between fidelity of PLC implementation and teacher self-efficacy. The National Staff Development Council's (NSDC) standards provided a framework for the evaluation of professional development, which provides a guide for quality professional development within this study.

To gauge how closely job-embedded school professional development at participating sites aligned to the NSDC standards, certified teachers from each site completed the Standards Assessment Inventory (SAI) survey. In addition, the Professional Learning Communities Assessment- Revised (PLCA-R) survey was distributed and completed by randomly selected participating teachers to provide the framework for measuring fidelity of

implementation of the PLC model as the process for implementing professional development. The five components of a PLC that were examined are:

1. Shared and supportive leadership,

2. Shared vision and values,

3. Collective learning and application of learning,

4. Shared personal practice, and

5. Supportive conditions including relationships and structures (Hord, 2004).

Finally, randomly selected participating teachers completed the Teacher Sense of Efficacy Scale (TSES) survey instrument as a framework to measure participant reported self-efficacy. This survey categorizes efficacy into three subscales: efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management. Figure 1 outlines the conceptual framework for this study:

Figure 1.

Conceptual Framework

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┌─────────────────────────────────────────────┐
│  School Professional Development is closely   │
│  aligned to the National Staff Development    │
│  Council's standards for professional         │
│  development, as measured by the SAI          │
│  instrument.                                  │
└─────────────────────────────────────────────┘
                      ↓
┌─────────────────────────────────────────────┐
│  Professional Learning Communities (PLCs)     │
│  are in place as a larger piece of the        │
│  school's professional development plan and   │
│  deployed with fidelity as measured by the    │
│  PLCA-R instrument.  Participants act          │
│  cognitively on their social experiences      │
│  through PLCs, as well as how these           │
│  cognitions influence their behavior and      │
│  development.  Participants in PLCs can        │
│  adjust their self-beliefs (personal          │
│  factors), improve their pedagogy and         │
│  instructional practices (behaviors), and     │
│  adjust the structure of isolation that       │
│  exists within many schools (environmental    │
│  factors).                                    │
└─────────────────────────────────────────────┘
                      ↓
┌─────────────────────────────────────────────┐
│  Levels of teacher self-efficacy are          │
│  measured by the TSES survey, from            │
│  participants in aligned PLCs deployed with   │
│  fidelity.  Through the social cognition      │
│  influences in PLCs, participants alter        │
│  their actions based upon their self-beliefs  │
│  or efficacy.                                 │
└─────────────────────────────────────────────┘
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CHAPTER 3

Methodology

This study was conducted utilizing a quantitative approach to inquiry. In this study, I sought to determine if there was, and to what degree, a relationship between fidelity of PLC implementation and participating teacher self-efficacy. I utilized the National Staff Development Council's standards for professional development as a framework for gauging the components of a professional learning community.

Research Questions

The primary question of this study was, "How does the process of Professional Learning Communities relate to teacher self-efficacy?" The specific research questions and data sources for the study were:

1. How closely does job-embedded professional development align to the National Staff Development Council's standards for professional development?

    a. Survey of participants perceptions of alignment of professional development to the National Staff Development Council's standards using the Standards Assessment Inventory (SAI)

2. To what extent are professional learning communities implemented with fidelity?

    a. Survey of participants using Professional Learning Community Assessment-Revised (PLCA-R)

3. What is the relationship of professional learning communities and participating teachers' reported self-efficacy?

   a. Survey of participants using Teacher Sense of Efficacy Scale (TSES), which was previously called the Ohio State Teacher Efficacy Scale (OSTES)

Research Design

The study was conducted using a survey design. Creswell (2009) describes a survey design as one that "provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population" (p. 145). Using a survey allows the researcher to make generalizations about a sample of a population and to make general inferences about the populations' behaviors, attitudes or characteristics (Fink, 2002). An exhaustive and convenient sampling of participating schools was employed.

Identifying the attributes of quality professional development that improves participating teacher self-efficacy could prove advantageous to school leaders and stakeholders interested in improving teacher engagement in professional development as well as improving the impact that professional development has on teacher behaviors. A survey provides a means of data collection that has a rapid turnaround. The survey data were collected in a cross-sectional manner, showing one point in time to provide a snapshot of participating teacher efficacy.

Description of Participating Schools

     A convenience sample was drawn from a demographically diverse public local education agency (LEA) in the Piedmont region of North Carolina. The LEA has 36 schools in grades K-12 and serves more than 20,000 students, ranking among the top 20 largest LEAs out of 115 in the state. The average teacher within the LEA has 15 years teaching experience, and the LEA ranks in the top quartile of the state in student academic performance. The district selected for this research study had a self-reported structure of professional learning communities as a framework for conducting real-time professional development. For this study, participating schools (*N*=12) within the LEA all met the criteria of Title I elementary schools serving students in grades Kindergarten through fifth grades. The Superintendent of the school district sanctioned administration of the three surveys and granted permission for the researcher to analyze collected data (see Appendix A). Table 2 presents the free and reduced lunch percentages for each school site.

Table 2

Free and Reduced Lunch Percentages of Schools (*N*=12)

School	Student Enrollment	Number of students who qualify for Free or Reduced Lunch	Percent F/R
School A	525	317	60.38%
School B	371	175	47.17%
School C	449	201	44.77%
School D	653	508	77.79%
School E	488	319	65.37%
School F	496	428	86.29%
School G	395	268	67.85%
School H	305	157	51.48%
School I	500	230	46.00%
School J	511	437	85.52%
School K	797	437	54.83%
School L	279	134	48.03%
Total	5769	3611	62.59%

Participant Selection

The study received exempt status from the International Review Board (IRB) on November 15, 2010 (see Appendix B). From each school site, all certified classroom teachers were invited to participate in this single stage exhaustive and convenience sampling study. Participation in this effort was completely anonymous and voluntary. No external rewards or offers were given, and a consent form was provided to all invited participants (see Appendix C). Identities of participants were protected. Since individual school locations were the target for this project, no demographic data was sought from the teachers.

Participants were asked to complete a paper survey that measures the job-embedded professional development within the school to the NSDC's Standards for professional development. Surveys were sent to each school site through the school principal. Administrators from each participating school received verbal directions about the study and

the methodology at a principal's meeting arranged by the superintendent. Following the meeting, administrators received written directions detailing the overall process for the study (see Appendix D). Surveys were provided to the principals in brown envelopes with directions describing the procedures. The researcher was not directly involved in the actual administration or collection of the surveys. Neither the respondents nor the non-respondents received any follow-up contacts following administration of the surveys, and their characteristics remain unknown. The units of analysis for this study are both individual respondents and schools.

Principals from each participating school received additional written directions for distributing and collecting the Standards and Assessment Inventory (SAI) survey (see Appendix E). This survey was distributed to all certified staff based at each school. Principals from each participating school also received written directions for random sampling selection procedures of participants to take the Professional Learning Communities Assessment- Revised (PLCA-R) and the Teacher Sense of Efficacy Scale (TSES) surveys (see Appendix F). Principals were asked to randomize selection of the participants for this survey by selecting every third name from an alphabetical listing of all certified teachers employed by the school. These teachers participate in ongoing, job-embedded professional development through the professional learning communities process that is already in place at their school site.

The study did not control for instructional factors. Once completed surveys were returned to researcher, all surveys were numbered, labeled by school, and entered into a database. Data analysis was conducted on the survey results. A correlation between data from the PLCA-R and TSES survey instruments was done to identify relationships.

Instrumentation

All certified staff (*N=417*) of the participating schools (*N=12*) were asked to complete
The Standards Assessment Inventory (SAI), which the National Staff Development Council
and the Southwest Educational Development Laboratory collaboratively developed. The
survey instrument takes about twenty minutes to complete. The SAI is used to measure how
closely school and district professional learning practices align with the National Staff
Development Council's Standards for Professional Development. The survey is designed to
allow schools to observe the comprehensive view of professional development that exists on
their site. A copy of the survey is included in Appendix G. The survey instrument was
purchased on two separate occasions by the researcher through the National Staff
Development Council (see Appendix H).

The 12 NSDC standards are divided into three categories: context standards, process
standards, and content standards. The SAI survey focuses five questions for each of the
twelve standards. The standards are:

1. Learning Communities (Context Standard)

2. Leadership (Context Standard)

3. Resources (Context Standard)

4. Data-Driven (Process Standard)

5. Evaluation (Process Standard)

6. Research-based (Process Standard)

7. Design (Process Standard)

8. Learning (Process Standard)

9. Collaboration (Process Standard)

10. Equity (Content Standard)

11. Quality teaching (Content Standard)

12. Family Involvement (Content Standard) (National Staff Development Council, 2010).

Development of the instrument and analysis of the reliability and validity of the SAI instrument was conducted by the Southwest Education Development Laboratory (SEDL). The instrument's construct reliability of the 60-question survey was found to be consistent and high across three pilot studies conducted by the developer for the overall scale, and consistently good for each of the 12 sub-scales. In each pilot study, 20 schools and hundreds of educators were selected to participate. The data from each pilot study were analyzed, and the reliability and validity measures were calculated. The overall internal consistency reliability of the instrument achieved an alpha coefficient of .98 (Southwest Educational Development Laboratory Evaluation Services, 2003).

In addition to consistent reliability, the instrument demonstrated superior content validity and the criterion-rated validity was supported, meaning that the ratings that teachers give their school's PD program were comparable to the ratings their schools received by experts (Hirsh, 2006). Finally, a construct validity analysis was conducted.

The construct validity of the SAI was examined by performing a factor analysis on each set of pilot data to determine if the items separated into twelve distinct "factors," or areas of focus. This would be expected if the items well-characterized the standards and if there are indeed twelve independent standards...In the first pilot data set, a seven-factor structure accounted for approximately 54% of the total variance. For the second pilot data set, a six-factor structure emerged accounting for

approximately 67% of the total variance. A five-factor structure, accounting for about 59% of the total variance was found in the third sample. These findings suggest that there are only five to seven distinct categories that are represented by the SAI items (SEDL, 2003, pp. 9-10).

Ideally, all 12 factors represented in the survey would have been reflected in the construct validity, however only five to seven standards seem to exist accounting for up to 67% of the total variance. The researchers reported that it was likely that several of the standards overlapped one another making it difficult to differentiate between them. Nonetheless, the researchers point out that analysis of the SAI "indicate that it is a reliable and valid measure of the degree that schools' professional development programs reflect the actions/activities set out in the NSDC standards" (SEDL, 2003, p. 11).

Randomly selected participants were also asked to complete a survey, Professional Learning Community Assessment-Revised (PLCA-R) by Olivier, Antoine, Cormier, Lewis, Minckler, and Stadalis (2009), that measures the fidelity of implementation of professional learning communities. A copy of the survey can be found in Appendix I. This assessment tool has been administered across numerous school districts and grade levels throughout the United States. The PLCA-R is a 52-item questionnaire that uses a four-point Likert scale, ranging from 1=Strongly Disagree to 4=Strongly Agree. The survey is divided into five broad categories:

1. Shared and supportive leadership

2. Shared values and vision

3. Collective learning and application

4. Shared personal practice

5. Supportive conditions including relationships and structures.

The internal consistency of the variables was analyzed using Cronbach's alpha, a commonly used statistic for measuring internal consistency of scores over different parts of an instrument. Cronbach's alpha reliability coefficient normally ranges between 0 and 1. The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale. George and Mallery (2003) provide the following guidelines for reliability ranges using Cronbach's alpha: "_ > .9 – Excellent, _ > .8 – Good, _ > .7 – Acceptable, _ > .6 – Questionable, _ > .5 – Poor, and_ < .5 – Unacceptable" (p. 231). Table 3 illustrates the results of internal consistency analysis using the Cronbach's alpha reliability coefficient for factored subscales.

Table 3

Internal Consistency Analysis for PLCA-R Subscales

PLCA-R Subscales	Cronbach's alpha Reliability Coefficients
Shared and Supportive Leadership	0.94
Shared Values and Vision	0.92
Collective Learning and Application	0.91
Shared Personal Practice	0.87
Supportive Conditions-Relationships	0.82
Supportive Conditions-Structures	0.88
One Factor Solution	0.97

Permission to use the PLCA-R survey was granted by the primary developer of the instrument (see Appendix J).

In addition to the PLCA-R survey, each of the randomly selected teachers was given the Teacher Sense of Efficacy Scale (TSES), which was previously called the Ohio State Teacher Efficacy Scale (OSTES) (Tschannen-Moran & Hoy, 2001) to measure teacher self-efficacy. A copy of the survey instrument is included in Appendix K. The TSES instructs

respondents to rate (on a scale from 1 to 9) their personal efficacy or the extent to which he or she can demonstrate the capabilities in regards to three key areas: classroom management, instructional practices, and student engagement. The survey has a full 24-item scale, as well as a 12-item short form. For this study, the 12-item short form was used. According to Tschannen-Moran and Woolfolk Hoy (2001), this teacher self-efficacy scale is considered better than previous measures of teacher efficacy given that it has a "unified and stable factor structure and assesses a broad range of capabilities that teachers consider important to good teaching without being so specific as to render it useless for comparisons of teachers across contexts, levels and subjects" (pp. 801-802).

Tschannen-Moran and Woolfolk Hoy (2001) analyzed and validated the reliability of the TSES. Reliabilities for the teacher efficacy subscales were 0.91 for efficacy in instructional strategies, 0.90 for efficacy in classroom management, and 0.87 for efficacy in student engagement. To examine the construct validity of the TSES, Tschannen-Moran and Woolfolk Hoy examined the correlation of the instrument to other existing measures of teacher efficacy and found strong correlations (2001, p. 801). Heneman, Kimball, and Milanowski (2006) validated the predictability and accuracy of the TSES finding coefficient alphas between 0.75 and 0.90 (p. 11). Permission to use the instrument was granted by the developers of the instrument (see Appendix L).

Data Analysis and Coding:

A quantitative analysis of the survey results was conducted. For the SAI survey results, descriptive analysis and comparison were performed. In addition, effect size analysis between the major subscale standards was conducted using Cohen's *d* as well as *t*-test

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analysis. A Cronbach's alpha statistical analysis to check for internal consistency of the scales had previously been conducted by the developer of the instrument. For both the PLCA-R and TSES survey results, descriptive analysis was carried out including calculating the mean and standard deviation for each set of results. A correlation analysis was conducted between the PLCA-R and the TSES results using a Pearson's correlation statistic. Finally, results from the four participating schools with the highest degree of alignment to the National Staff Development Standards for professional development were examined further. Collectively for those four schools, a correlation analysis of the PLCA-R and TSES was conducted.

Role of the Researcher

I used a deductive approach to gaining knowledge and collection data. Since this study deals with human behaviors as variables and quantitative research, the researcher utilized a logic model of analysis, focusing on inputs (the process of PLCs) and outputs (the level of teacher efficacy). I had no direct professional involvement with the participants of the study. I was not directly in charge of the actual administration or collection of any of the surveys. No follow-up contacts were made to respondents or non-participants and their characteristics remain unknown.

Ethical Considerations and Trustworthiness of Results

Surveys did not require any identifiable information from participants of the study, and all participants had a choice of whether to participate or not and for how long. Identities of participants were protected, and no identifiable information was collected. There were no

foreseeable risks for participating. Collection of results was consistent at all 12 sites.

Interested participants and the superintendent of the school district will have access to the

results at the conclusion of the research project.

CHAPTER 4

Findings

The findings presented in this chapter include quantitative analysis of the survey result for all three survey instruments utilized for the study. For the survey results, descriptive analysis, comparison, and effect size analysis were performed. A correlation analysis was conducted between the PLCA-R and the TSES results using a Pearson's correlation statistic. Finally, results from the four participating schools with the highest degree of alignment to the National Staff Development Standards for professional development were examined further. Collectively for those four schools, a correlation analysis of the PLCA-R and TSES was conducted.

The purpose of this study was to examine the correlational relationship between professional learning communities and teacher self-efficacy.

Research Questions

The primary question of this study was, "How does the process of Professional Learning Communities relate to teacher self-efficacy?" The specific research questions and data sources for the study were:

1. How closely does job-embedded professional development align to the National Staff Development Council's standards for professional development?

a. Survey of participants perceptions of alignment of professional

development to the National Staff Development Council's standards using

the Standards Assessment Inventory (SAI)

2. To what extent are professional learning communities implemented with fidelity?

a. Survey of participants using Professional Learning Community

Assessment-Revised (PLCA-R)

3. What is the impact of professional learning communities on participating

teachers' reported self-efficacy?

a. Survey of participants using Teacher Sense of Efficacy Scale (TSES),

which was previously called the Ohio State Teacher Efficacy Scale

(OSTES) and correlational analysis between the PLCA-R results and the

TSES results.

Descriptive Statistics

All certified staff (N=417) of the participating schools (N=12) were asked to complete

the Standards Assessment Inventory (SAI). Of the 417 certified teachers who were invited to

participate in the Standards Assessment Inventory, 47.0% (n=196) responded to the

instrument. Response rates for the SAI survey varied significantly among schools, ranging

from 17.5% to 85.0%. Randomly selected certified staff members from each school were

selected to take both the PLCA-R survey as well as the TSES survey. Of the 144 randomly

selected teachers who were selected to participate in the PLCA-R and TSES surveys, 72

(50.0%) responded to the PLCA-R survey while 71 (49.31%) responded to the TSES survey.

Response rates varied greatly from school to school, ranging from a low of 13.3% to a high

of 85.7%. Table 4 provides specifics about the survey participants.

Table 4

Survey Response Rates by School

School	SAI Sent	SAI Returned	SAI %	PLCA-R Sent	PLCA-R Returned	PLCA-R %	TSES Sent	TSES Returned	TSES %
School A	40	7	17.50%	14	2	14.29%	14	2	14.29%
School B	25	10	40.00%	9	3	33.33%	9	3	33.33%
School C	30	15	50.00%	10	7	70.00%	10	7	70.00%
School D	42	17	40.48%	14	5	35.71%	14	5	35.71%
School E	40	32	80.00%	14	12	85.71%	14	12	85.71%
School F	40	24	60.00%	15	10	66.67%	15	10	66.67%
School G	20	10	50.00%	7	4	57.14%	7	4	57.14%
School H	20	17	85.00%	7	5	71.43%	7	5	71.43%
School I	33	11	33.33%	11	4	36.36%	11	3	27.27%
School J	45	16	35.56%	15	2	13.33%	15	2	13.33%
School K	65	31	47.69%	22	13	59.09%	22	13	59.09%
School L	17	6	35.29%	6	5	83.33%	6	5	83.33%
District Totals	417	196	47.00%	144	72	50.00%	144	71	49.31%

In this chapter, the descriptive statistics and results are presented based upon the

collected data. I used the Statistical Package for the Social Sciences (SPSS) Version 17 for

portions of the statistical analyses.

Results for research question 1. The first research question asked: "How closely

does job-embedded professional development align to the National Staff Development

Council's standards for professional development?"

Table 5 contains a variance scale of the survey results for the 60-question SAI survey.

This survey provides a comprehensive view of professional development that exists for the

combined twelve Title I elementary schools that participated in the study. The twelve

National Staff Development Council standards for professional development are divided into

three categories: context standards, process standards, and content standards. The context

standards represent the structure of professional development. Process standards represent

the processes for implementing professional development. The content standards represent

the overall preparation that the professional development provides. The SAI survey provides

five questions for each of the twelve standards. The standards are:

1. Learning Communities (Context Standard)- Items tap teachers meeting as a
   community to discuss teaching improvements, observing other teachers'
   classrooms, mentoring new teachers, providing collegial feedback on classroom
   practices, and examining student work.

2. Leadership (Context Standard) – Items tap principals' beliefs about teacher
   learning, teachers' influence on principals' decisions, principals' commitment to
   teachers' opportunities to improve instruction, principals' ability to foster a
   culture of instructional improvement, and whether the principal is perceived as
   empowering staff.

3. Resources (Context Standard) – Items tap resources available to implement new
   instructional practices, opportunities to learn new technologies for instruction,
   availability of substitutes to cover teachers who are engaged in professional
   development, creativity used to expand human and material resources, and
   whether school goals determine resource allocations.

4. Data-Driven (Process Standard) – Items tap teachers' knowledge on using student
   improvement data to assess student needs, evaluating the effectiveness of
   professional development, planning for professional development programs,

discussing instruction and curriculum, and analyzing improvements in student learning with other teachers.

5. Evaluation (Process Standard) – Items tap the design of evaluation prior to professional development, the number of sources used to evaluate professional development, time set aside to discuss professional development experiences, the use of professional development outcomes to plan for future choices, and the use of student performance to evaluate professional development.

6. Research-based (Process Standard) – Items tap the use of educational research to select professional development programs, the use of research on effectiveness of school improvement efforts to decide on strategies, evidence of improvement programs' effectiveness for student achievement gains, and the effectiveness of improvement programs in schools with similar student populations.

7. Design (Process Standard) – Items tap teacher learning through a variety of strategies, the design of improvement strategies based on clear outcomes for teacher and student learning, teacher learning as part of the school improvement plan, consideration of teachers' prior knowledge and experience when designing staff development, and commitment to sufficient time with improvement initiatives to result in changes in instructional practice and student performance.

8. Learning (Process Standard) – Items tap opportunities to practice new skills, support for implementing new skills, promotion of deep understanding of a topic, learning through a variety of methods, and teachers' choice of the type of professional development they receive.

9. Collaboration (Process Standard) – Items tap learning about effective ways to work together, structuring time for teachers to work together to enhance student learning, teaching and learning goals dependence on staff's ability to work together, leaders encouraging sharing responsibility to achieve school goals, and principal modeling effective collaboration.

10. Equity (Content Standard) – Items tap adjusting instruction and assessments to meet the needs of diverse learners, showing respect for all of the student subpopulations, expecting high academic achievement for all students, creating positive relationships between teachers and students, and teachers receiving training on curriculum and instruction for students at different learning levels.

11. Quality Teaching (Content Standard) – Items tap teachers having opportunities to gain deep understanding of subjects, professional development models, instructional strategies to be used in classroom, teachers' use of research-based instructional strategies, professional development teaching effective student assessment techniques, and school administrators engaging teachers in conversations about instruction and student learning.

12. Family Involvement (Content Standard) – Items tap provision of opportunities to learn how to involve families in children's education, prioritizing the communication of the school's mission and goals to families and community, work done by school leaders with community members to help students achieve academic goals, the principal as a model of building relationships with students' families, and teachers' work with families to help them support student learning at home. (Vaden-Kiernan, Jones, & McCann, 2009, p. 10-11).

Table 5

Variance Scale of the Standards Assessment Inventory (SAI) Survey (*N*=196)

Standards	Mean	Std. Deviation
Context Standards	2.92	.2733
Learning Communities		
Leadership		
Resources		
Process Standards	3.02	.2496
Data-Driven		
Evaluation		
Research-Based		
Design		
Learning		
Collaboration		
Content Standards	3.11	.2492
Equity		
Quality Teaching		
Family Involvement		
Overall	3.02	.2554

Because there are differences in the number of respondents at each individual school, it would be difficult to make comparisons across schools. However, Table 6 presents the survey responses by context standards, process standards and content standards from each participating school site. Standards that are in bold represent response averages that are above the district overall average.

Table 6

Standards Assessment Inventory Survey Results by School

School	Standard	Mean
School A	Context	2.90
	Process	2.63
	Content	**3.15**
School B	Context	**3.38**
	Process	**3.26**
	Content	**3.33**
School C	Context	2.63
	Process	**3.04**
	Content	**3.14**
School D	Context	2.72
	Process	**3.10**
	Content	3.08
School E	Context	**3.53**
	Process	**3.26**
	Content	**3.50**
School F	Context	**2.97**
	Process	2.98
	Content	3.11
School G	Context	2.84
	Process	**3.12**
	Content	**3.19**
School H	Context	2.19
	Process	2.28
	Content	2.75
School I	Context	2.79
	Process	**3.13**
	Content	**3.38**
School J	Context	**3.00**
	Process	**3.26**
	Content	**3.25**
School K	Context	2.82
	Process	2.95
	Content	2.99
School L	Context	**3.24**
	Process	**3.52**
	Content	**3.52**

To determine the effect size or magnitude of a treatment effect of each set of standards, a Cohen's *d* Effect analysis was conducted. Cohen's *d* is used to measure the standardized difference between the means of two groups. Cohen (1988) defined effect sizes as small ($d = 0.2$), medium ($d = 0.5$), and large ($d = 0.8$). An ES of 0.0 designates that the distribution of scores for one group has common characteristics in complete agreement with the distribution of scores for a second group thus there is 0% difference.

Further analysis was conducted to compare the differences in the SAI standard means of two groups. An unpaired *t*-test was conducted to compare mean and variance of Content Standards to Context Standards, Content Standards to Process Standards, and Context Standards to Process Standards.

The SAI survey means tell the direction and magnitude of the differences between subscales. The *t*-test describes whether those scores significantly differ from each other and the Cohen's *d* assists in understanding how important those differences may be with larger effect sizes signifying more important differences. Table 7 represents the results of this analysis.

Table 7

Analysis of SAI Subscale Comparisons

Contrasts	t	Sig	Cohen's d
Context / Process	3.78	0.00	0.38
Context / Content	7.19	0.00	0.72
Process / Content	3.57	0.00	0.36

Effect size is the metric that signifies the extent of the effect caused by a factor. The effect size is independent of the sample size. Upon examining the effect sizes among the results for the three broad standards for professional development, there is a medium to large difference between the Content Standards and Context Standards (0.72). Between the

Content Standards and the Process Standards there was a small to medium difference (0.36).

Similarly, between the Context Standards and the Process Standards there was a small to medium difference (0.38).

The low number of respondents is a distinct limitation of this analysis. However, there are examples of schools (School B, School E, School J, and School L) that have high levels of alignment with the National Staff Development Council's professional development standards in all three areas. Conversely, there are examples of schools (School H and School K), which have lower levels of alignment with the NSDC's standards for professional development.

Results for research question 2. The second research question asked: "To what extent are professional learning communities implemented with fidelity?"

The PLCA-R survey that was administered measured the five components of a professional learning community. The five components of a PLC that were examined are:

1. Shared and supportive leadership,

2. Shared vision and values,

3. Collective learning and application of learning,

4. Shared personal practice, and

5. Supportive conditions including relationships and structures.

Table 8 contains the overall mean and standard deviation from the randomly selected participants (*N*=72) who responded to the survey.

Table 8

Professional Learning Communities Assessment-Revised Subscale Mean and Standard Deviation Scores (*N*=72)

Subscales	Mean	Std. Deviation
Shared and Supportive Leadership	3.338	.4876
Shared Values and Vision	3.295	.4203
Collective Learning and Application	3.344	.3963
Shared Personal Practice	3.141	.4804
Supportive Conditions-Relationships	3.223	.4848
Supportive Conditions- Structures	3.132	.3573
Overall	3.259	.4411

Overall, the five components of a professional learning community that were measured using the survey instrument were implemented with fidelity across the 12 participating schools, based upon the results.

Results for research question 3. The third research question asked: "What is the relationship of professional learning communities and participating teachers' reported self-efficacy?"

As with the PLCA-R results, the mean and standard deviation for each of the subscales from the TSES were calculated. Table 9 reports the results of the analysis.

Table 9

Teacher Sense of Efficacy Scale Mean and Standard Deviation Subscale Scores (*N*=71)

Subscales	Mean	Std. Deviation
Efficacy in Student Engagement	6.958	1.163
Efficacy in Instructional Strategies	7.620	.9381
Efficacy in Classroom Management	7.363	1.132

To determine the relationship of professional learning communities, when implemented with fidelity and participating teachers' reported self-efficacy, a Pearson's correlation of the subscale scores for the PLCA-R and TSES was used. When determining a correlation, a positive value for the correlation implies a positive association between the two variables. Conversely, a negative value for the correlation suggests an inverse association between the two variables. A perfect correlation would result in r=1. The Pearson's correlation determined the linear relationship among the following subscales of professional learning communities: shared and supportive leadership (SSL); shared vision and values (SVV); collective learning and application (CLA); shared personal practice (SPP); supportive conditions-relationships (SCR); and supportive conditions-structures(SCS) to the subscales of the TSES survey; efficacy in student engagement (ESE), efficacy in instructional strategies (EIS), and efficacy in classroom management (ECM). Table 10 contains the results of the analysis at p<.05.

Table 10

Pearson Correlation of PLCA-R and TSES Subscales Scores (*N*=71)

		Efficacy in Student Engagement	Efficacy in Instructional Strategies	Efficacy in Classroom Management
Shared and Supportive Leadership	Pearson correlation	.467[*]	.492[*]	.451[*]
	Sig. (2-tailed)	.000	.000	.000
	N	71	71	71
Shared Vision and Values	Pearson correlation	.361[*]	.388[*]	.256[*]
	Sig. (2-tailed)	.002	.001	.032
	N	71	71	71
Collective Learning and Application of Learning	Pearson correlation	.263[*]	.316[*]	.143
	Sig. (2-tailed)	.027	.007	.234
	N	71	71	71
Shared Personal Practice	Pearson correlation	.432[*]	.324[*]	.154
	Sig. (2-tailed)	.000	.006	.201
	N	71	71	71
Supportive Conditions-Relationships	Pearson correlation	.287[*]	.260[*]	.259[*]
	Sig. (2-tailed)	.015	.029	.030
	N	71	71	71
Supportive Conditions-Structures	Pearson correlation	.289[*]	.355[*]	.184
	Sig. (2-tailed)	.014	.002	.125
	N	71	71	71

* Correlation is significant at the 0.05 level (2-tailed).

Fifteen of the factors indicated a positive significant relationship, while only three factors failed to show a significant relationship. A result is considered significant if the probability is unlikely to have occurred by chance. In an analysis of all fifteen significantly-related variables, shared and supportive leadership had the largest impact on teacher reported self-efficacy. A coefficient of determination (r^2) indicates that the predictors explain a percentage of the variance. The three strongest relationships were shared and supportive leadership to efficacy in instructional strategies with a coefficient of determination $r^2 = .242$

or 24.2%, shared and supportive leadership to efficacy in student engagement $r^2=.218$ or

21.8%, and shared and supportive leadership to efficacy in classroom management $r^2= .203$

or 20.3%. Table 11 shows the percent of shared variance and r^2 for each of the fifteen

significant correlations.

Table 11

Coefficient of Determination of Professional Learning Communities on Teacher Self-Efficacy

Correlation	r^2	Percent of shared Variance
Shared and Supportive Leadership-Efficacy in Instructional Strategies	0.242	24.2%
Shared and Supportive Leadership-Efficacy in Student Engagement	0.218	21.8%
Shared and Supportive Leadership-Efficacy in Classroom Management	0.203	20.3%
Shared Personal Practice-Efficacy in Student Engagement	0.187	18.7%
Shared Vision and Values- Efficacy in Instructional Strategies	0.151	15.1%
Shared Vision and Values- Efficacy in Student Engagement	0.130	13.0%
Supportive Conditions/Structures- Efficacy in Instructional Strategies	0.126	12.6%
Shared Personal Practice- Efficacy in Instructional Strategies	0.105	10.5%
Collective Learning and Application- Efficacy in Instructional Strategies	0.100	10.0%
Supportive Conditions/Structures- Efficacy in Student Engagement	0.084	8.4%
Supportive Conditions/Relationships- Efficacy in Student Engagement	0.082	8.2%
Collective Learning and Application- Efficacy in Student Engagement	0.069	6.9%
Supportive Conditions/Relationships- Efficacy in Instructional Strategies	0.068	6.8%
Supportive Conditions/Relationships- Efficacy in Classroom Management	0.067	6.7%
Shared Vision and Values- Efficacy in Classroom Management	0.066	6.6%

The results are shown at $p < .05$.

Finally, a Pearson's correlation of the four schools (School B, School E, School J, and School L) with the highest levels of alignment to the subscales of the National Staff Development Council's Standards for professional development was conducted. Table 12 represents the findings of the analysis.

Table 12

Correlation of Schools with High Levels of Alignment to the NSDC Standard Subscales

		ESE	EIS	ECM
SSL	Pearson correlation	.167	.387	.333
	Sig. (2-tailed)	.458	.075	.129
	N	22	22	22
SVV	Pearson correlation	.119	.383	.255
	Sig. (2-tailed)	.598	.079	.252
	N	22	22	22
CLA	Pearson correlation	.221	.296	.123
	Sig. (2-tailed)	.323	.181	.585
	N	22	22	22
SPP	Pearson correlation	.355	.245	.053
	Sig. (2-tailed)	.105	.272	.816
	N	22	22	22
SCR	Pearson correlation	.190	.264	.353
	Sig. (2-tailed)	.396	.234	.108
	N	22	22	22
SCS	Pearson correlation	.371	.416	.274
	Sig. (2-tailed)	.089	.054	.216
	N	22	22	22

*Correlation is significant at the 0.05 level (2-tailed).

When looking at the four schools with high levels of alignment for all three sets of standards on the SAI survey, the results indicate that the degree of connection to the National Staff Development Council's Standards for professional development has a negative impact on the relationship between fidelity of implementation of professional learning communities and its effect on teacher self-efficacy.

Summary

An analysis of the survey results indicate that although several schools' professional development structures were closely aligned to the National Staff Development Council's Standards, that alignment did not have a significant effect on fidelity of implementation of professional learning communities or its effect on participating teacher self-efficacy. Based on the results from the study, the process of professional learning communities had a positive correlation on teacher self-efficacy. Of the 18 possible relationships, 15 had positive significant correlations. The three strongest relationships were shared and supportive leadership to efficacy in instructional strategies, shared and supportive leadership to efficacy in student engagement, and shared and supportive leadership to efficacy in classroom management. The study shows that instructional leaders need to pay close attention to the structure and components of PLCs because they can positively affect teacher efficacy.

Closer examination of the four participating schools with the highest levels of alignment to the subscales of the National Staff Development Council's Standards for professional development revealed that although these schools had a strong alignment to the national standards, they did not have positive, significant relationships between PLCs and teacher efficacy. Although strong alignment of professional development offerings to the national standards has proven to be beneficial, the alignment does not relate to how effectively PLCs are deployed or increased levels of teacher efficacy.

CHAPTER 5

Analysis and Implications

This chapter includes a summary of the findings and how they relate to the research literature; analysis of the findings; limitations of the study; implications and recommendations to possible stakeholders; suggested areas for further research; and conclusions.

This study arose from a concern about the impact of job-embedded professional development on teacher self-efficacy. Research has long illustrated the power of teacher teams working together to improve instruction. "There is no limit to what the average person can accomplish if thoroughly involved. . . . this can most effectively be tapped when people are gathered in human-scale groupings--that is, teams, or more precisely, self-managing teams" (Peters, 1987, p. 282). However, without a sense of self-efficacy, or a belief that their efforts can bring about meaningful change, it is unlikely that the professional development will be effective (DuFour, 1991).

What has not been completely determined in the research literature is the relationship of these teacher teams, or professional learning communities, and teacher self-efficacy. Previous research had indicated that high teacher efficacy was a strong predictor of student success (Armor et al. 1976) and that teacher isolation diminishes self-efficacy (Lortie, 1975). Finding ways to improve self-efficacy could improve instructional practices and produce better student achievement. This study sought to address this gap in knowledge.

The study examined the relationship between professional learning communities and teacher self-efficacy in 12 Title I elementary schools that have a self-reported structure of

professional learning communities as a framework for professional development. The study used a theoretical framework based on social cognitive theory, which operates under the assumption that people's behaviors and development are influenced by their personal experience as well as social experiences of interacting and observing the actions and results of others' behaviors. Using this framework, educators can improve their behaviors, including instructional practices; alter their self-beliefs, or self-efficacy; and remove the structure of isolation that often permeates many schools.

Large amounts of dollars are spent each year in schools throughout the state on professional development. Previous research has determined that the gap is not about a need for more professional development (DuFour, 2004a; Reeves, 2010) but instead it's about continual improvement thorough professional development. Reeves (2010), states "High-impact professional learning has three essential characteristics: (1) a focus on student learning, (2) rigorous measurement of adult decisions, and (3) a focus on people and practices, not programs" (p. 21). To determine the comprehensive approach to professional development in the school district, every certified staff member at each participating school was asked to complete the Standard Assessment Inventory survey, which measures the structure of professional development and its alignment to the National Standards for Professional Development.

The study then analyzed the relationship between professional learning communities, a form of job-embedded professional development, and teacher self-efficacy through the lens of the components of professional learning communities as measured by the PLCA-R survey instrument (Olivier et al., 2009). These five components encompass the collective literature on professional learning communities including Shared and Supportive Leadership; Shared

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Values and Vision; Collective Learning and Application of Learning; Shared Personal Practice; and Supportive Conditions- Relationships and Structures (Center for Comprehensive School Reform and Improvement, 2009; DuFour, DuFour, Eaker, & Karhanek, 2006; DuFour, DuFour, Eaker, & Many, 2006; DuFour & Eaker, 1998; Hord, 1997, 2004; National Association of Elementary School Principals, 2008; Southwest Education Development Laboratory, 1997).

Previous research has shown the value and impact of professional learning communities on teacher knowledge, effective use of instructional strategies, and increased student achievement (Lee, Smith, & Croninger, 1995; Newmann & Wehlage, 1995; Rosenholtz, 1989; Wei et al., 2009).

This study addressed three major research questions related to professional learning communities and teacher self-efficacy. First, it sought to determine if the professional development structure of 12 Title I schools in the same district aligned with the recommended national standards for professional development. Second, the study sought to determine the degree of fidelity that these same schools implemented professional learning communities. The district selected for this research study had a self-reported structure of professional learning communities as a framework for conducting job-embedded, real-time professional development. Third, the study sought to measure the self-efficacy of participants in the professional learning communities as well as the correlation of professional learning communities and teacher self-efficacy.

To gather information from participants, surveys were used to determine alignment to the national standards, fidelity of implementation of professional learning communities and

the level of self-efficacy for participants. Principals of participating schools assisted in the

data collection.

Analysis of the Findings

The following section analyzes the study's findings from Chapter Four. They

analysis is related to the study's three major research question examined in the study.

Research Question 1: How closely does job-embedded professional development

align to the National Staff Development Council's (NSDC) standards for

professional development?

To measure the degree that the participating schools' professional development

structure was aligned to the NSDC standards, the Standards Assessment Inventory (SAI)

survey was administered to all certified staff (n=417) from each participating school (n=12).

The response rate for the survey was 47.0%. The SAI is a 60-question survey that provides

schools with a comprehensive perspective of the professional development structure and

focus that exists for their campus. The survey focuses five questions for each of the

identified twelve standards. These 12 standards are then further categorized into three broad

areas; context standards (learning communities, leadership and resources), process standards

(data-driven, evaluation, research-based, design, learning, and collaboration) and content

standards (equity, quality teaching, and family involvement). The context standards

represent the structure of professional development. Process standards represent the

processes for implementing professional development. The content standards represent the

overall preparation that the professional development provides. The SAI survey uses a five-point likert scale including 0-Never, 1-Seldom, 2-Sometimes, 3-Frequently, and 4-Always.

Collectively for the district, content standards (3.11) and process standards (3.02) were reported to be closely aligned to the National Staff Development Council's standards for professional development. Context standards (2.92) were moderately aligned to the National Staff Development Council's standards for professional development. Overall, the professional development offerings for these 12 Title I elementary schools (3.02) is closely aligned to the NSDC's standards for professional development.

Based upon these survey results, the collective group of participating schools in this district had a professional development structure that was closely aligned to the National Staff Development Council's standards for professional development. This is important to give a point of reference showing that there was not necessarily a need for more professional development or a gap in the alignment of the existing professional development to the national standards.

Further examination was conducted using Cohen's *d* statistical analysis to examine the effect sizes among the results for the three broad standards for professional development. In particular it determines what percentage of variance, or how far the means are spread out from each other. Based on this analysis there is a medium to large difference between the significance participants gave to Content Standards compared to that given to Context Standards (0.72) . Between the Content Standards and the Process Standards there was a small to medium difference in variance (0.36). Similarly, between the Context Standards and the Process Standards there was a small to medium difference in variance (0.38). The relative importance of this analysis is that there was a large disparity in the significance that

participants gave to the level that content standards (equity, quality teaching and family involvement) were in place as compared to the level that context standards (learning communities, leadership, and resource) were in place. This suggests that even though the district had a self reported established process for learning communities in place participants felt that the structure, resources, and leadership to support them was less significant than other structures necessary for a balanced professional development structure. This difference may be explained by traditions of autonomy that teachers have valued over the years. Adjusting to an approach of open dialogue with peers about strengths and weaknesses, sharing of resources as well as adjusting to a shared leadership approach as opposed to a top down leadership approach, may be a partial explanation of the differences in perceptions. DuFour (2004a) notes how the traditional approach to teachers working autonomously has negatively impacted the value of many professional development endeavors. As the PLCA-R results in this study exhibited, PLCs are being implemented in the district with fidelity, even though the SAI results show that participants credit them with less significance than they do other factors.

The National Staff Development Council has conducted research that indicates that quality professional development, if sustained and intensive, has a direct relationship to student achievement gains (Wei et al., 2009). However, professional development in and of itself may be of little impact on student achievement if teachers do not believe that the process can bring about meaningful change (DuFour, 1991). As numerous researchers have shared (Annenberg Institute for School Reform, n.d.; DuFour, 1991; Mizell, 2010a), it's less about the how much professional development teachers receive and more about the structure for using the new learning in meaningful ways and creating a process for teachers engaging

in a continual improvement process. Previous research (Bray-Clark & Bates, 2003) suggests that as important as the professional development structure is, a true measure of the value of professional development may be in using teacher self-efficacy as an indicator.

Of importance were the findings that survey participants felt less satisfied in the structure of professional learning communities, resources and leadership in place than other components of a balanced professional development structure. Even so, a closer examination of the structure and deep implementation of PLCs revealed that these structures were indeed in place. Of note is the fact that the five questions from the SAI survey that were labeled as "learning communities" were somewhat different from the focus of the PLCA-R survey components. For example, the SAI questions on learning communities focused on teachers having opportunities to observe one another teach, mentoring new teachers whereas the PLCA-R did not focus on either of those factors. Another caveat is the fact that the SAI's construct validity did not statistically support the entire 12 factor model identified by the NSDC standards. Analysis supported a five to seven factor model meaning that many of the questions on the SAI overlapped numerous components of the NSDC standards.

As the correlation analysis demonstrated, even with possible room for improvement on the structure of these context standards, there were definite positive correlations between PLCs and teacher efficacy. Improved alignment of these components to the national standards would possibly strengthen the correlation of PLCs and teacher efficacy.

Research Question 2: To what extent are professional learning communities implemented with fidelity?

The school district had a self-reported process in place that they termed as professional learning communities. To determine the extent that these PLCs were implemented, randomly selected participants were asked to complete the Professional Learning Communities Assessment- Revised (PLCA-R) which measures the fidelity of implementation of PLCs. This survey measures the five components of PLCs: shared and supportive leadership, shared vision and values, collective learning and application of learning, shared personal practice, and supportive conditions including relationships and structures. For this survey, supportive conditions are further separated into supportive conditions-relationships and supportive conditions-structures. The PLCA-R is a 52-item questionnaire that uses a four-point Likert scale, ranging from 1 = Strongly Disagree to 4 = Strongly Agree. Of the 144 randomly selected participants, 50.0% responded to the survey.

Analysis of PLC implementation revealed that collectively, professional learning communities were in fact implemented with fidelity at the 12 participating school sites. The internal consistent analysis of the survey revealed that three of the subscales had an internal consistency of excellent (> 0.9): shared and supportive leadership, shared vision and values, and collective learning and application of learning. In addition, two of the subscales had an internal consistency of good (> 0.8): shared personal practice and supportive conditions. Based upon the survey results, each of the subscales had a mean above 3.13. The relative overall rankings for the subscales were: collective learning and application of learning (3.344), shared and supportive leadership (3.338), shared values and vision (3.295),

supportive conditions-relationships (3.223), shared personal practice (3.141), and supportive conditions- structures (3.132).

Based upon the survey findings, the schools participating in the study did indeed have a job-embedded process for professional development that was very well aligned to the characteristics of professional learning communities identified by research (Center for Comprehensive School Reform and Improvement, 2009; DuFour & Eaker, 1998; Hord, 1997; National Association of Elementary School Principals, 2008; Southwest Education Development Laboratory, 1997). This aligns with what Reeves (2010) labeled as the critical variable for professional learning – deep implementation. These workplaces represent the types of learning-enriched schools characterized by Rosenholtz (1989) where collective learning, sharing and critiquing instructional practices, and transparency of student data are the norm. Isolation is replaced by collaboration.

Some of the participating schools conduct professional learning communities during the instructional day while others schedule them after school. In addition, some PLCs are facilitated by administrators or curriculum leaders, while others are facilitated by teaching members of the group. Professional learning communities have a localized design, so it is not as dependent upon what they look like to an outsider but whether or not they are implemented systematically and with fidelity. As the research suggests, teachers who simply come together are not necessarily considered a professional learning community. The structure of the meetings is important. The discussions must be student-centered and focused on capacity building, collective inquiry and continual improvement (DuFour, 2004b; DuFour, DuFour, Eaker, & Karhanek, 2004; DuFour, DuFour, Eaker, & Many, 2006; Hord, 1997). Lee, Smith, and Croninger (1995) reported that schools which implement PLCs with

fidelity have shown increased student achievement and decreased achievement gaps between student subgroups. Research conducted by Ingvarson, Meiers, and Beavis (2005) as well as research conducted by Reeves (2010) suggest that PLCs implemented with fidelity not only lead to an increase in teacher knowledge, improved instructional practices, and significant improvements to student academic achievement, but they could also lead to increased teacher efficacy.

Knowing that teacher effectiveness has a substantial impact on student achievement and success (Haycock, 1998; Marzano, 2003, 2007; Reeves, 2010; Sanders & Rivers, 1996), educators would benefit from implementing a process for improving teacher effectiveness the way PLCs have been reported to do. Similarly, given the research stating that high teacher efficacy may be a strong predictor of student success (Armor et al., 1976), examining the correlation between PLCs and teacher efficacy could prove beneficial to educators.

Research Question 3: What is the relationship of professional learning communities and participating teachers' reported self-efficacy?

To determine the self-efficacy levels of teachers who participate regularly in job-embedded professional learning communities, randomly selected participants were asked to complete the Teacher Sense of Efficacy Scale (TSES) survey. The TSES survey uses a scale to measure self-efficacy that ranges from 1-9. The construct validity was previously tested and verified by Tschannen-Moran and Woolfolk Hoy (2001). The predictability and accuracy of the twelve question survey was validated by Heneman, Kimball, and Milanowski (2006). The 12 questions on the survey are divided into three subscales: efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management.

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Based upon the survey results, participating teachers rated themselves on average highest for efficacy in instructional strategies (7.62 out of 9). The participants rated themselves on average lowest on efficacy in student engagement (6.96 out of 9). For efficacy in classroom management, participants had an average rating of 7.36 out of 9.

To determine if there is a correlation between PLCs and teachers' reported self-efficacy, a Pearson's correlation statistical analysis was conducted on the survey results. The six subscales of the PLCA-R survey (with supportive conditions separated out into relationships and structures) were compared to the three subscales of the TSES survey. Analysis revealed that of the possible correlation pairs, 15 of the factors indicated a positive significant relationship, while only three factors failed to show a significant relationship. A result is considered significant if the probability is unlikely to have occurred by chance. In an analysis of all fifteen significantly-related variables, shared and supportive leadership had the three largest levels of impact on teacher reported self-efficacy with a 24.2% correlation to efficacy in instructional strategies, a 21.8% correlation to efficacy in student engagement and a 20.3% correlation to efficacy in classroom management. This indicates the importance of a potential value of shared and supportive leadership within a school environment.

Given that 15 of the possible 18 correlations indicated a positive significant relationship, this study indicates that participation in a professional learning community may have a positive impact on teacher self-efficacy. These data support Bandura's theoretical framework of Social Cognitive Theory, which suggests that by building a social fabric within the organization that it is self sustaining and empowering, teachers gain a higher level of self-efficacy. Although the PLC component which had the largest correlation to increased self-efficacy was shared and supportive leadership, all six PLC subscales (five subscales with

supportive conditions divided into relationships and structures) showed significant, positive relationships. Of the three pairs of relationships that were not significantly correlated, all three involved efficacy in classroom management. Also, of the 15 correlations indicating a positive relationship, the two with the least significance involved efficacy gains in classroom management practices. Those two were shared and supportive conditions/relationships – efficacy in classroom management and shared vision and values – efficacy in classroom management. This would suggest that although professional learning communities have a positive correlation with teacher efficacy in general, that relationship is much less significant on teacher's efficacy in classroom management.

A closer examination was conducted on the four participating schools whose scores on the SAI instrument were all above the district average, in all three subscales of the survey. These four schools reported a professional development structure closely aligned to the national standards. A Pearson's correlation analysis was conducted to compare the correlation of the PLCA-R subscales to TSES subscales in these four schools. Although the participating district's professional development structure closely aligned to the NSDC's standards for professional development, this examination revealed that close alignment to the NSDC's standards did not strengthen the correlation of PLCs to teacher self-efficacy. In fact, the results indicate that a close alignment to the national standards may actually negatively impact the relationship of PLCs and teacher efficacy. The results indicate that in these four schools with a strong professional development structure closely alignment to the national standards there is no significant relationship between the PLCA-R and TSES survey. Out of the possible 18 relationships between PLCs and teacher self-efficacy examined in these four schools, none were determined to be significant.

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Even though the 12 participating schools as a whole had a professional development structure that was closely aligned to the national standards for professional development, the results indicate that this connection to the standards is important, but not directly related to increased teacher efficacy. In fact, the results of this study indicate that although professional learning communities have a strong significant relationship to teacher self-efficacy, this relationship may actually be negatively impacted by a strong alignment to the national standards for professional development. This reinforces the recommendations of Mizell (2010a) who stressed that an extensive amount of professional development, in and of itself, is not the change required. What is needed is constructing professional development that is responsive to the instructional needs of teachers and their students the way professional learning communities do. Further research on the effect of professional development alignment to the national standards has on teacher efficacy would add to the research base.

The conceptual framework utilized in this study provided an adequate outline for the project. If done again, increased focus should be placed upon understanding how the components of professional learning communities exhibit themselves at each site. A mixed-methods approach involving observations and focus groups may provide a deeper understanding of how PLCs impact teacher efficacy.

Limitations of the Study

This study was subject to the following limitations and assumptions:

1. The external validity of the study is limited.

2. Because of the narrow characteristics of the setting (Title I schools), generalizations are limited for all other settings.

3. Because of the narrow characteristics of the participants (elementary teachers), generalizations are limited to participants with different characteristics.

4. The study did not control for instructional factors.

5. The study was conducted during one isolated moment in time and did not measure growth of participants.

6. The study assumed that all participating sites utilized a similar approach to professional learning communities.

Implications and Recommendations

This was an exploratory study because there exists a gap in the knowledge of the impact that correct, systemic implementation of professional learning communities has on participating teachers' self-efficacy. Although the National Staff Development Council identifies learning communities as a necessary component of an overall professional development structure, their description of these learning communities varied greatly from the attributes used for this study and the findings of the study indicate schools with a professional development plan that closely aligns to the NSDC standards have no significant relationship between PLCs and teacher efficacy. Focus on the national standards, although important, does not impact teacher efficacy. These data give strong support to the link between the structure of PLCs as a framework for increasing teacher self-efficacy. Greater attention to the how PLCs are structured would be beneficial given the relationship they have

to teacher self-efficacy. Further research on the effect of the national standards on teacher self-efficacy would also provide greater insight.

Given that previous research findings on the SAI survey instrument suggest that there are only five to seven distinct categories that are represented by the SAI items (Southwest Education Development Laboratory, 2003), further research into how adequately SAI results reflect a true measure of all 12 National Staff Development Council's recommendations. Ideally, all twelve factors represented in the instrument would be evident, and although the researchers reported that it was likely that several of the standards overlapped one another making it difficult to differentiate between them, further research into the construct validity of the instrument could prove beneficial.

The findings indicate that Shared and Supportive Leadership have the largest correlation to Efficacy in Student Engagement, Efficacy in Instructional Strategies and Efficacy in Classroom Management. Reeves (2010) supports these findings, stating,

> Although teachers have an undeniably large influence on student results, they are able to maximize that influence only when they are supported by school and system leaders who give them the time, the professional learning opportunities, and the respect that are essential for effective teaching (p. 70).

He does continue on to warn of common barriers to school developing a shared leadership environment including traditional hierarchy, schools required compliance to the larger system, resistant opposition to change and blatant disrespect to research and professional learning by teachers (Reeves, 2010).

The importance of professional development has been established through previous research. Although a well-rounded approach to professional development is important, this

study's findings indicate that PLCs in particular are vital to improving teacher self-efficacy. These findings have implication for policy and procedures with schools. Decisions based upon these results could have a direct impact on student achievement and teacher success.

Implications for policies on professional development and resource allocation. Based upon the results of the study, policy makers interested in developing a sustained approach to increasing student achievement and increasing teacher efficacy may be interested in further study of the relationship that PLCs have to each. Establishing a clear relationship between each could lead to changes in policy requirements for professional development. Resource allocation that is generally aligned to policy requirements may be focused on establishing and maintaining PLCs in schools. In North Carolina the teacher evaluation instrument currently focuses on the teacher as an instructional leader as well as teacher as a continual learner. PLCs would seem to be a structure for empowering teachers in both of these endeavors.

Because this study is limited to Title I elementary schools, policy makers should proceed with caution before making extensive policy decisions from these results alone. This study does suggest that instead of arbitrarily allocating resources for professional development initiatives, some form of assessment of the impact that professional development has on teacher efficacy and student success should be considered. Further study on a broader population should be considered.

Implications for school districts and school administrators. School leaders who are looking for a proven process for engaging teachers in continual improvement could use

the results from this study to develop a sustained professional learning communities structure. The results from this study may provide a resource for developing buy-in from faculty members and stakeholders. Given that professional development as a whole didn't necessarily have an impact on teacher efficacy, but that PLCs as a form of focused, job-embedded professional development did, district leaders may want to rethink their approach to professional development. District leaders and school administrators could use the findings from this study when determining the allocation of funds for professional development and teacher training. Utilizing the sustained process of PLCs, while effective for improving instruction and teacher efficacy, does not itself incur long-term costs other than initial trainings. Reducing the amount of resources and funds necessary for establishing PLCs as compared to traditional approaches to professional development such as "one shot workshops" and expert trainers may allow those funds and resources to be allocated for other areas.

Based upon the findings of the study, school and district leaders may want to consider establishing the structure of PLCs in particular to increase teacher efficacy in instructional strategies and student engagement. Administrators interested in increasing teacher efficacy in classroom management may want to consider alternative approaches, or at least supplemental approaches to professional development, given the limited correlation that the subscales of PLCs had on efficacy in classroom management.

Administrators should, at the very least, develop a process for evaluating the impact and correlation significance that professional development has on student results and teacher efficacy.

Implications for teachers. Teachers hoping to improve instructional practices and build on the capacity of their colleagues would benefit from establishing a professional learning community structure, based upon the results from this study. In particular, novice teachers or teachers with low levels of self-efficacy in student engagement or low levels of self-efficacy in instructional strategies may benefit from participating in PLCs.

Suggested Areas for Further Research

The following recommendations for further research are based upon the findings presented in Chapter Four and the conclusions presented in Chapter Five:

1. Given the results of the study, further research into impact of each category of professional learning communities may provide deeper insight into what characteristics impact teacher efficacy the most. In particular, the forms of shared leadership that have the greatest impact on teacher efficacy might be considered.

2. Further research on the effect of professional development alignment to the national standards has on teacher efficacy would add to the research base.

3. A mixed-methods approach to research like this study would likely provide additional insight and understanding.

4. Replicating this study with a larger sample size would increase the statistical power of the results. It may also provide a deeper insight into the correlation of PLCs and teacher self-efficacy.

5. Further research in schools that serve students with different demographics than those used in this study would add to the research base.

6. This study was only conducted in elementary schools where a culture of sharing resources and practices may differ from those at middle schools or high schools. Further research conducted on middle school and high school staffs to determine if results are similar would add to the knowledge base.

7. Further research conducted in different regions of the country would provide greater perspective to the results.

8. Longitudinal research on the correlation of professional learning communities and teacher self-efficacy would add to the research base.

9. Given that this study focused only on teachers, further research to determine the role that school leaders play in professional learning communities would add to the knowledge base.

10. Further research into the SAI survey's construct validity would add to the knowledge base.

Conclusions

Several findings from this study confirm the literature. Several factors in schools may contribute to increased student achievement. Professional learning communities are an established structure of job-embedded professional development that has proven to improve student achievement (DuFour & Eaker, 1998; Hord, 1997; Lee, Smith, & Croninger, 1995; Reeves, 2010; Wei et al., 2009). Similarly, increased teacher self-efficacy has been shown to be related to increased student academic performance (Armor et al., 1976; Multon & Brown, 1991). This research examined the relationship that participation in structured PLCs that are deployed with fidelity has on participating teachers' self-efficacy. Based upon the findings,

there is a significant, positive relationship between the two. Most notable were the relationships between the PLC subscale, Shared and Supportive Leadership, to all three subscales of teacher self-efficacy. Participation in PLCs, based on the findings of the study, had much more significant correlations to increased efficacy in instructional strategies and increased efficacy in student engagement than it did on efficacy in classroom management. Concerning results from the study were the findings showing that schools with a staff development structure that is closely aligned to the National Staff Development Council's recommended professional development standards have no significant relations between the existing PLCs and teacher efficacy. These findings suggest a need for a deeper examination of the impact that alignment to the national standards has on teacher efficacy.

Schools that organize themselves into professional learning communities, and in particular find ways to develop a shared leadership structure, have the opportunity to increase teacher efficacy and more importantly have the opportunity to improve instruction for students. Given the current economic situation and the increased federal mandates for improving student achievement, educators could benefit from developing a structure of professional development that has proven results the way that participation in professional learning communities does. Utilizing and supporting PLCs may help schools and school leaders maximize their use of limited and valuable resources.

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APPENDICES

Appendix A: Permission Letter to Collect Data

Iredell - Statesville Schools

Igniting A *Passion* for Learning

**Institutional Letter Template for Educational Administrators
to Grant Authorization for Research**

I, Brady Johnson, from Iredell-Statesville Schools authorize/request David Stegall to collect data "in established or commonly accepted educational settings, involving normal educational practices" as stated in the IRB's *Request for Exemption of Research Involving Human Subjects*.

The data will be collected anonymously and archived without identifying information about participants. Once archived, I understand that David Stegall will use the data for correlating teacher participation in professional learning communities with reported self-efficacy.

A copy of the research results may be made available to Mr. Stegall's dissertation committee and other decision makers as appropriate.

9-20-10

Brady Johnson   Date
Superintendent
Iredell-Statesville Schools

9-22-16

David Stegall   Date
Doctoral student

Malcolm Baldrige
National Quality Award
2008 Award Recipient

Appendix B: IRB Approval

To: David Stegall
Leadership & Educational Studies, Les
CAMPUS MAIL

From: Robin Tyndall, Institutional Review Board

Date: 11/15/2010

RE: Notice of IRB Exemption

Study #: 11-0115
Study Title: Professional Learning Communities and Teacher Efficacy: A
Correlational Study
Exemption Category: (2) Anonymous Educational Tests; Surveys, Interviews or
Observations

This submission has been reviewed by the IRB Office and was determined to be
exempt from further review according to the regulatory category cited above under
45 CFR 46.101(b). Should you change any aspect of the proposal, you must contact
the IRB before implementing the changes to make sure the exempt status continues
to apply. Otherwise, you do not need to request an annual renewal of IRB approval.
Please notify the IRB Office when you have completed the study.

Best wishes with your research!

CC:
Barbara Howard, Leadership And Edu Studies

Appendix C: Exempt Consent Form

Professional Learning Communities and Teacher Efficacy: A Correlational Study

You are invited to participate in a research study about how professional development for teachers, in particular the process of professional development known as professional learning communities (PLCs), has on teacher efficacy. Through this study, I hope to examine the effects that participation in professional learning communities, which are implemented with fidelity, has on teachers' self-efficacy.

If you agree to be part of the research study, you will be asked to complete the attached survey on the professional development offerings at your school. In addition, selected participants will be asked to complete two additional short surveys. The first of these measures the extent that PLCs is implemented with fidelity. The second of these instruments measures teacher self-efficacy.

Identifying the attributes of quality professional development that improves participating teacher self-efficacy could prove advantageous to school leaders and stakeholders interested in improving teacher engagement in professional development, as well as improving the impact that professional development has on teacher behaviors.

Surveys will not require any identifiable information from participants of the study and all participants will have a choice of whether to participate or not, and for how long. Identities of participants will be protected and no identifiable information will be collected. There are no foreseeable risks from participating. Collection of results will be consistent at all twelve sites. Interested participants and the superintendent of the school district will have access to the results at the conclusion of the research project.

Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. You may choose not to answer any survey questions for any reason.

If you have questions about this research study, you may contact David Stegall at david_stegall@nccs.k12.nc.us or Dr. Barbara Howard, faculty advisor for the project, at howardbb@appstate.edu.

The ASU Institutional Review has determined that this study is exempt from IRB oversight.

Appendix D: Directions for Administering Surveys

November 29, 2010

Dear Administrator

Enclosed are the three survey instruments that I shared with you at your principal's meeting in November, as well as an envelope for returning the completed surveys. I am a doctoral student at Appalachian State University working under the supervision of Dr. Barbara Howard, Dr. Les Bolt and Dr. Jim Killacky. As part of my dissertation work, I am seeking to examine the effects that participation in professional learning communities, which are implemented with fidelity, has on teachers' self-efficacy. Below are the directions for selection of possible participants, distributing surveys, collecting surveys, and returning the completed surveys to me. Employee participation in this project is strictly voluntary and not a condition of employment with Iredell-Statesville Schools. There are no contingencies for employees who choose to participate or decline to participate in this project. There will be no adverse employment consequences as a result of an employee's participation in this study.

Beginning on or around **December 1, 2010,** please distribute **The Standards Assessment Inventory (SAI) survey to *all* certified staff** in your school along with the enclosed consent form. The survey instrument takes about twenty minutes to complete and is used to measure how closely school and district professional development practices align with the National Staff Development Council's Standards for professional development.

Additionally, please select a random sample from your certified staff to complete the **Professional Learning Community Assessment- Revised (PLCA-R) and the Teacher Sense of Efficacy Scale (TSES) surveys**. These two surveys are combined into one instrument for this project as selected participants should be provided both survey instruments together. For random selection of random participants for these two surveys, please select **every third name from an alphabetized list of all certified staff** in your school prior to December 6, 2010. Beginning on or around **December 6, 2010**, please distribute to the selected participants these combined surveys along with the enclosed consent form. Combined, the surveys take about twenty minutes to complete. The PLCA-R measures the extent that professional learning communities are implemented with fidelity. The TSES measures teacher self-efficacy.

For collection of these surveys, please designate the enclosed envelope or box in the main office for participants to return the completed surveys. On or around **December 17, 2010**, please return the completed surveys in the provided envelopes to ▮▮▮▮▮▮▮▮▮▮

Thank you in advance for your help. If you have in questions please feel free to call (704) 902-3752 or email david_stegall@nccs.k12.nc.us

Sincerely,

David Stegall

Dear Principal,

Enclosed in this envelope are copies of The Standards Assessment Inventory (SAI) survey. Beginning on or around **December 1 2010**, please distribute the surveys to **_all_ certified staff** in your school along with the enclosed consent form. The survey instrument takes about twenty minutes to complete and is used to measure how closely school and district professional development practices align with the National Staff Development Council's Standards for professional development.

For collection of these surveys, please designate the enclosed envelope or box in the main office for participants to return the completed surveys. On or around **December 17, 2010**, please return the completed surveys ███████████████████████████████████ ███████████

Thank you in advance for your help. If you have in questions please feel free to call (704) 902-3752 or email david_stegall@nccs.k12.nc.us

Sincerely,

David Stegall

Appendix F: Directions for Distributing the Teacher Sense of Efficacy Scale (TSES) and
Professional Learning Communities Assessment-Revised (PLCA-R) Surveys

Dear Principal,

Enclosed in this envelope are the Professional Learning Community Assessment- Revised
(PLCA-R) and the Teacher Sense of Efficacy Scale (TSES) surveys. These two surveys are
combined into one instrument for this project as selected participants should be provided
both survey instruments together. Please select a random sample from your certified staff to
complete these combined surveys. For random selection of random participants for these two
combined surveys, please **select every third name from an alphabetized list of all certified
staff in your school** prior to December 6, 2010. Beginning on or around **December 6, 2010**,
please distribute to selected participants these combined surveys along with the enclosed
consent form. Combined, the surveys take about twenty minutes to complete. The PLCA-R
measures the extent that professional learning communities are implemented with fidelity.
The TSES measures teacher self-efficacy.

For collection of these surveys, please designate the enclosed envelope or box in the main
office for participants to return the completed surveys. On or around **December 17, 2010**,
please return the completed surveys ███████████████████████████████████████
███████████████

Thank you in advance for your help. If you have in questions please feel free to call (704)
902-3752 or email david_stegall@nccs.k12.nc.us

Sincerely,

David Stegall

NSDC Standards Assessment Inventory

Directions: Thank you for taking the time to complete this survey. It is best to complete this survey alone. When marking your responses, please fill in bubbles completely. You may use either a pen or pencil. Completing this survey will take about 15-20 minutes.

Please mark the responses that most accurately reflect your experiences at your school.

	Never	*Seldom*	*Sometimes*	*Frequently*	*Always*
1. Our principal believes teacher learning is essential for achieving our school goals.	⓪	①	②	③	④
2. Fellow teachers, trainers, facilitators, and/or consultants are available to help us implement new instructional practices at our school.	⓪	①	②	③	④
3. We design evaluations of our professional development activities prior to the professional development program or set of activities.	⓪	①	②	③	④
4. Our school uses educational research to select programs.	⓪	①	②	③	④
5. We have opportunities to practice new skills gained during staff development.	⓪	①	②	③	④
6. Our faculty learns about effective ways to work together.	⓪	①	②	③	④
7. Teachers are provided opportunities to gain deep understanding of the subjects they teach.	⓪	①	②	③	④
8. Teachers are provided opportunities to learn how to involve families in their children's education.	⓪	①	②	③	④
9. The teachers in my school meet as a whole staff to discuss ways to improve teaching and learning.	⓪	①	②	③	④
10. Our principal's decisions on schoolwide issues and practices are influenced by faculty input.	⓪	①	②	③	④
11. Teachers at our school have opportunities to learn how to use technology to enhance instruction.	⓪	①	②	③	④
12. Teachers at our school learn how to use data to assess student learning needs.	⓪	①	②	③	④
13. We use several sources to evaluate the effectiveness of our professional development on student learning (e.g., classroom observations, teacher surveys, conversations with principals or coaches).	⓪	①	②	③	④

	Never	Seldom	Sometimes	Frequently	Always
14. We make decisions about professional development based on research that shows evidence of improved student performance.	⓪	①	②	③	④
15. At our school, teacher learning is supported through a combination of strategies (e.g., workshops, peer coaching, study groups, joint planning of lessons, and examination of student work).	⓪	①	②	③	④
16. We receive support implementing new skills until they become a natural part of instruction.	⓪	①	②	③	④
17. The professional development that I participate in models instructional strategies that I will use in my classroom.	⓪	①	②	③	④
18. Our principal is committed to providing teachers with opportunities to improve instruction (e.g., observations, feedback, collaborating with colleagues).	⓪	①	②	③	④
19. Substitutes are available to cover our classes when we observe each others' classes or engage in other professional development opportunities.	⓪	①	②	③	④
20. We set aside time to discuss what we learned from our professional development experiences.	⓪	①	②	③	④
21. When deciding which school improvement efforts to adopt, we look at evidence of effectiveness of programs in other schools.	⓪	①	②	③	④
22. We design improvement strategies based on clearly stated outcomes for teacher and student learning.	⓪	①	②	③	④
23. My school structures time for teachers to work together to enhance student learning.	⓪	①	②	③	④
24. At our school, we adjust instruction and assessment to meet the needs of diverse learners.	⓪	①	②	③	④
25. We use research-based instructional strategies.	⓪	①	②	③	④
26. Teachers at our school determine the effectiveness of our professional development by using data on student improvement.	⓪	①	②	③	④
27. Our professional development promotes deep understanding of a topic.	⓪	①	②	③	④
28. Our school's teaching and learning goals depend on staff's ability to work well together.	⓪	①	②	③	④

	Never	Seldom	Sometimes	Frequently	Always
29. We observe each other's classroom instruction as one way to improve our teaching.	⓪	①	②	③	④
30. At our school, evaluations of professional development outcomes are used to plan for professional development choices.	⓪	①	②	③	④
31. Communicating our school mission and goals to families and community members is a priority.	⓪	①	②	③	④
32. Beginning teachers have opportunities to work with more experienced teachers at our school.	⓪	①	②	③	④
33. Teachers show respect for all of the student sub-populations in our school (e.g., poor, minority).	⓪	①	②	③	④
34. We receive feedback from our colleagues about classroom practices.	⓪	①	②	③	④
35. In our school, we find creative ways to expand human and material resources.	⓪	①	②	③	④
36. When considering school improvement programs, we ask whether the program has resulted in student achievement gains.	⓪	①	②	③	④
37. Teachers at our school expect high academic achievement for all of our students.	⓪	①	②	③	④
38. Teacher professional development is part of our school improvement plan.	⓪	①	②	③	④
39. Teachers use student data to plan professional development programs.	⓪	①	②	③	④
40. School leaders work with community members to help students achieve academic goals.	⓪	①	②	③	④
41. The school improvement programs we adopt have been effective with student populations similar to ours.	⓪	①	②	③	④
42. At my school, teachers learn through a variety of methods (e.g., hands-on activities, discussion, dialogue, writing, demonstrations, practice with feedback, group problem solving).	⓪	①	②	③	④
43. Our school leaders encourage sharing responsibility to achieve school goals.	⓪	①	②	③	④
44. We are focused on creating positive relationships between teachers and students.	⓪	①	②	③	④
45. Our principal fosters a school culture that is focused on instructional improvement.	⓪	①	②	③	④

	Never	Seldom	Sometimes	Frequently	Always
46. Teachers use student data when discussing instruction and curriculum.	⓪	①	②	③	④
47. Our principal models how to build relationships with students' families.	⓪	①	②	③	④
48. I would use the word empowering to describe my principal.	⓪	①	②	③	④
49. School goals determine how resources are allocated.	⓪	①	②	③	④
50. Teachers analyze classroom data with each other to improve student learning.	⓪	①	②	③	④
51. We use students' classroom performance to assess the success of teachers' professional development experiences.	⓪	①	②	③	④
52. Teachers' prior knowledge and experience are taken into consideration when designing staff development at our school.	⓪	①	②	③	④
53. At our school, teachers can choose the types of professional development they receive (e.g., study group, action research, observations).	⓪	①	②	③	④
54. Our school's professional development helps me learn about effective student assessment techniques.	⓪	①	②	③	④
55. Teachers work with families to help them support students' learning at home.	⓪	①	②	③	④
56. Teachers examine student work with each other.	⓪	①	②	③	④
57. When we adopt school improvement initiatives we stay with them long enough to see if changes in instructional practice and student performance occur.	⓪	①	②	③	④
58. Our principal models effective collaboration.	⓪	①	②	③	④
59. Teachers receive training on curriculum and instruction for students at different levels of learning.	⓪	①	②	③	④
60. Our administrators engage teachers in conversations about instruction and student learning.	⓪	①	②	③	④

Appendix H: Receipts of purchase for Standards Assessment Instrument (SAI) Survey

NSDC is LEARNING FORWARD

Invoice

Products Division Office
7 Josephine Dr.
Wheelersburg, OH 45694

Date	Invoice #
10/26/2010	1959-PH

Bill To

Ship To
David Stegall 295 Seven Spring Loop Statesville, NC 28625

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
			10/26/2010	UPS		

Quantity	Item Code	Description	Price Each	Amount
5	B244-STDS ASSE... SH-1	STANDARDS ASSESSMENT INVENTORY SHIPPING and HANDLING	48.00 16.50	240.00 16.50

PAID
10-26-10

Thank you for your business.

Total	$256.50

127

NSDC is LEARNING FORWARD

Invoice

Products Division Office
7 Josephine Dr.
Wheelersburg, OH 45694

Date	Invoice #
11/15/2010	1973-PH

Bill To	Ship To
	David Stegall 295 Seven Spring Coop Statesville, NC 28625

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
			11/15/2010	UPS		

Quantity	Item Code	Description	Price Each	Amount
5	B244-STDS ASSE... SH-1	STANDARDS ASSESSMENT INVENTORY SHIPPING and HANDLING	48.00 16.50	240.00 16.50

PAID
11-15-10
Visa

Thank you for your business.

Total	$256.50

Appendix I: Professional Learning Communities Assessment-Revised (PLCA-R) Survey

Professional Learning Communities Assessment - Revised

Directions:
This questionnaire assesses your perceptions about your principal, staff, and stakeholders based on the dimensions of a professional learning community (PLC) and related attributes. This questionnaire contains a number of statements about practices which occur in some schools. Read each statement and then use the scale below to select the scale point that best reflects your personal degree of agreement with the statement. Shade the appropriate oval provided to the right of each statement. Be certain to select only one response for each statement. Comments after each dimension section are optional.

Key Terms:
- #   Principal = Principal, not Associate or Assistant Principal
- #   Staff/Staff Members = All adult staff directly associated with curriculum, instruction, and assessment of students
- #   Stakeholders = Parents and community members

Scale: 1 = Strongly Disagree (SD)
           2 = Disagree (D)
           3 = Agree (A)
           4 = Strongly Agree (SA)

	STATEMENTS	SCALE			
	Shared and Supportive Leadership	SD	D	A	SA
1.	Staff members are consistently involved in discussing and making decisions about most school issues.	0	0	0	0
2.	The principal incorporates advice from staff members to make decisions.	0	0	0	0
3.	Staff members have accessibility to key information.	0	0	0	0
4.	The principal is proactive and addresses areas where support is needed.	0	0	0	0
5.	Opportunities are provided for staff members to initiate change.	0	0	0	0
6.	The principal shares responsibility and rewards for innovative actions.	0	0	0	0
7.	The principal participates democratically with staff sharing power and authority.	0	0	0	0
8.	Leadership is promoted and nurtured among staff members.	0	0	0	0
9.	Decision-making takes place through committees and communication across grade and subject areas.	0	0	0	0
10.	Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority.	0	0	0	0
11.	Staff members use multiple sources of data to make decisions about teaching and learning.	0	0	0	0

COMMENTS:

	STATEMENTS	SCALE			
	Shared Values and Vision	SD	D	A	SA
12.	A collaborative process exists for developing a shared sense of values among staff.	0	0	0	0
13.	Shared values support norms of behavior that guide decisions about teaching and learning.	0	0	0	0
14.	Staff members share visions for school improvement that have undeviating focus on student learning.	0	0	0	0
15.	Decisions are made in alignment with the school=s values and vision.	0	0	0	0
16.	A collaborative process exists for developing a shared vision among staff.	0	0	0	0
17.	School goals focus on student learning beyond test scores and grades.	0	0	0	0
18.	Policies and programs are aligned to the school=s vision.	0	0	0	0
19.	Stakeholders are actively involved in creating high expectations that serve to increase student achievement.	0	0	0	0
20.	Data are used to prioritize actions to reach a shared vision.	0	0	0	0

COMMENTS:

	Collective Learning and Application	SD	D	A	SA
21.	Staff members work together to seek knowledge, skills and strategies and apply this new learning to their work.	0	0	0	0
22.	Collegial relationships exist among staff members that reflect commitment to school improvement efforts.	0	0	0	0
23.	Staff members plan and work together to search for solutions to address diverse student needs.	0	0	0	0
24.	A variety of opportunities and structures exist for collective learning through open dialogue.	0	0	0	0
25.	Staff members engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry.	0	0	0	0
26.	Professional development focuses on teaching and learning.	0	0	0	0
27.	School staff members and stakeholders learn together and apply new knowledge to solve problems.	0	0	0	0

	STATEMENTS	SCALE			
28.	School staff members are committed to programs that enhance learning.	0	0	0	0
29.	Staff members collaboratively analyze multiple sources of data to assess the effectiveness of instructional practices.	0	0	0	0
30.	Staff members collaboratively analyze student work to improve teaching and learning.	0	0	0	0

COMMENTS:

	STATEMENTS	SCALE			
	Shared Personal Practice	SD	D	A	SA
31.	Opportunities exist for staff members to observe peers and offer encouragement.	0	0	0	0
32.	Staff members provide feedback to peers related to instructional practices.	0	0	0	0
33.	Staff members informally share ideas and suggestions for improving student learning.	0	0	0	0
34.	Staff members collaboratively review student work to share and improve instructional practices.	0	0	0	0
35.	Opportunities exist for coaching and mentoring.	0	0	0	0
36.	Individuals and teams have the opportunity to apply learning and share the results of their practices.	0	0	0	0
37.	Staff members regularly share student work to guide overall school improvement.	0	0	0	0

COMMENTS:

	Supportive Conditions – Relationships	SD	D	A	SA
38.	Caring relationships exist among staff and students that are built on trust and respect.	0	0	0	0
39.	A culture of trust and respect exists for taking risks.	0	0	0	0
40.	Outstanding achievement is recognized and celebrated regularly in our school.	0	0	0	0
41.	School staff and stakeholders exhibit a sustained and unified effort to embed change into the culture of the school.	0	0	0	0
42.	Relationships among staff members support honest and respectful examination of data to enhance teaching and learning.	0	0	0	0

COMMENTS:

	Supportive Conditions – Structures	SD	D	A	SA
43.	Time is provided to facilitate collaborative work.	0	0	0	0
44.	The school schedule promotes collective learning and shared practice.	0	0	0	0
45.	Fiscal resources are available for professional development.	0	0	0	0
46.	Appropriate technology and instructional materials are available to staff.	0	0	0	0
	STATEMENTS	**SCALE**			
		SD	D	A	SA
47.	Resource people provide expertise and support for continuous learning.	0	0	0	0
48.	The school facility is clean, attractive and inviting.	0	0	0	0
49.	The proximity of grade level and department personnel allows for ease in collaborating with colleagues.	0	0	0	0
50.	Communication systems promote a flow of information among staff members.	0	0	0	0
51.	Communication systems promote a flow of information across the entire school community including: central office personnel, parents, and community members.	0	0	0	0
52.	Data are organized and made available to provide easy access to staff members.	0	0	0	0

COMMENTS:

Source: Olivier, D. F., Hipp, K. K., & Huffman, J. B. (In progress). Assessing and analyzing schools as PLCs. In K. K. Hipp & J. B. Huffman (Eds.). *Professional learning communities: Purposeful Actions, Positive Results.* Lanham, MD: Rowman & Littlefield.

*Department of
Educational Foundations
and Leadership*

_____

*P.O. Box 43091
Lafayette, LA 70504-3091*

November 10, 2010

David Stegall
Associate Superintendent
Newton-Conover City Schools
295 Seven Springs Loop
Statesville, NC 28625

Dear. Mr. Stegall:

This correspondence is to grant permission to utilize the *Professional Learning Community Assessment-Revised* (PLCA-R) in your doctoral study at the Appalachian State University in North Carolina. I am pleased that you are interested in using the PLCA-R measure in your research on PLCs and its impact on participating teacher self-efficacy.

Upon completion of your study, I would be interested in learning about your results. If possible, I would appreciate the opportunity to receive an electronic version of your research.

Should you require any additional information, please feel free to contact me.

Sincerely,

Dianne F. Olivier

Dianne F. Olivier, Ph. D.
Assistant Professor
Joan D. and Alexander S. Haig/BORSF Professor
Department of Educational Foundations and Leadership
College of Education
University of Louisiana at Lafayette
P.O. Box 43091
Lafayette, LA   70504-3091
(337) 482-6408 (Office)
dolivier@louisiana.edu

Teachers' Sense of Efficacy Scale[1] (short form)

Teacher Beliefs		**How much can you do?**								
Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.		Nothing		Very Little		Some Influence		Quite A Bit		A Great Deal
1.	How much can you do to control disruptive behavior in the classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2.	How much can you do to motivate students who show low interest in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3.	How much can you do to get students to believe they can do well in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4.	How much can you do to help your students value learning?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5.	To what extent can you craft good questions for your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6.	How much can you do to get children to follow classroom rules?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7.	How much can you do to calm a student who is disruptive or noisy?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8.	How well can you establish a classroom management system with each group of students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9.	How much can you use a variety of assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10.	To what extent can you provide an alternative explanation or example when students are confused?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11.	How much can you assist families in helping their children do well in school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12.	How well can you implement alternative strategies in your classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Appendix L: Permission to use Teacher Sense of Efficacy Scale (TSES) Survey

COLLEGE OF
OHIO STATE UNIVERSITY
EDUCATION AND
HUMAN ECOLOGY
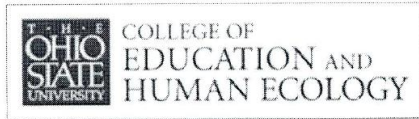
ANITA WOOLFOLK HOY, PH.D.

PROFESSOR
PSYCHOLOGICAL STUDIES IN EDUCATION

Dear *David,*

You have my permission to use the *Teachers' Sense of Efficacy Scale* in your research. A copy of both the long and short forms of the instrument as well as scoring instructions can be found at:

http://www.coe.ohio-state.edu/ahoy/researchinstruments.htm

Best wishes in your work,

Anita Woolfolk Hoy

Anita Woolfolk Hoy, Ph.D.
Professor

BIOGRAPHICAL INFORMATION

David Anthony Stegall was born in Kannapolis, North Carolina, on April 23, 1973. He attended public school in that city as well as in China Grove, NC, and graduated from South Rowan High School in 1991. He attended the University of North Carolina at Charlotte where he was awarded a Bachelor of Arts degree in Elementary Education in 1996 and was consequently hired as an elementary school teacher for Rowan-Salisbury Schools. He moved to Statesville, NC after getting married and taught 2nd and 5th grades for Iredell-Statesville Schools. After being promoted to an Assistant Principal at a middle school and later at an elementary school in Iredell-Statesville Schools, he received a Master of Arts degree in School Administration from Gardner-Webb University in 2001. In 2003 he was promoted to principal of Sharon Elementary in Iredell-Statesville Schools. In 2007 he accepted a position with Newton-Conover City Schools as their Director of Curriculum, AIG and ESL. He received an Education Specialist degree in Educational Leadership from Appalachian State University in 2007. Subsequently, he was promoted to Associate Superintendent in Newton-Conover City Schools in 2009 where he is currently employed. Dr. Stegall was awarded a Doctorate of Education in Educational Leadership in 2011 from Appalachian State University.

Dr. Stegall is a member of Phi Kappa Phi and lives in Statesville, NC with his wife Manda, and his two children, Owen, 11, and Ava, 8.