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Correlation Between Teacher Efficacy And Effective Professional Learning Communities

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CORRELATION BETWEEN TEACHER EFFICACY AND EFFECTIVE PROFESSIONAL LEARNING COMMUNITIES

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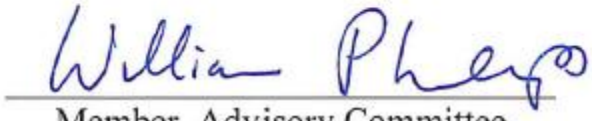

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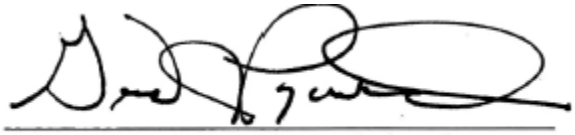

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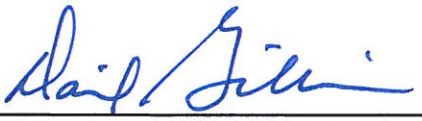
X 

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DAVID G. GILLIAM

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DEDICATION

I dedicate this dissertation to my family. My wife, Dawna, has been beside me for 30 years and without her love and support, this would never have been possible. Her investment and sacrifice has been just as great as mine has and I love her more than anything.

Next, I dedicate this to my daughter, Rebekah, and my son, Benjamin. They are such a blessing in my life and I pray that they stand firm and fulfill the plans that God has for their lives.

Finally, I dedicate this to my parents John and Paula Gilliam. They taught me the value of education and supported me throughout every aspect of my career and life. I am fortunate to have them as my parents and I truly appreciate everything they have done.

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Thank you to my Lord and Savior Jesus Christ. All things are possible through Him.

ABSTRACT

High levels of teacher efficacy are consistently identified as having a strong impact on student achievement. This is reasoned by Donohoo (2016) as "If educators' realities are filtered through the belief that they can do very little to influence student achievement, then it is very likely these beliefs will be manifested in their practice" (p. 7). Conversely, when educators believe they influence student achievement the results are very positive. Hattie (2016) indicates that a strong collective efficacy is the greatest single factor that influences student achievement.

The questions addressed by this study examine the relationships between teachers' collective-efficacy and professional learning community (PLC) variables. A deeper understanding of the relationships between collective-efficacy and Professional Learning Communities could lead to enhancing the existence of PLC's in schools and the discovery of the most effective practices within professional learning communities.

This study used results of the Professional Learning Community Assessment-Revised (PLCA-R) and correlated it with the results from the Teacher Efficacy Beliefs Scale Collective Form (TEBS-C). The study then aligns the correlated results with the Learning Forward Standards for Professional Learning to inform and guide discussion on possible best practice/most efficient practice within our professional learning communities.

This study administered the survey in five Madison County middle schools. All schools are working to enhance professional learning communities within their schools. These initiatives are carried throughout the district and coordinated as part of a district initiative. Professional learning community strategies are documented in the

Comprehensive District Improvement Plan and in the Comprehensive School Improvement Plan for each school. The intent of this study is to identify the areas of greatest impact and the areas of greatest need.

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INTRODUCTION

Overview

In 1983 A Nation At Risk made the accusation that the United States has "squandered the gains in student achievement made in the wake of the Sputnik challenge. Moreover, we have dismantled essential support systems which helped make those gains possible. We have, in effect, been committing an act of unthinking, unilateral educational disarmament." (USNCEE, 1983, p. 1).

Since that time the American education system has undergone a variety of improvement initiatives including No Child Left Behind Act of 2002 and the new Every Student Succeeds Act. Accompanying these congressional acts is a bevy of high accountability state testing. Furthermore, Dufour and Marzano (2011) state:

> Contemporary American educators confront the most daunting challenge in the history of public schooling in the United States as they are called upon to raise academic standards to the highest level in history with common core standards that are so rigorous and include such challenging cognitive demands that they align with the highest international benchmarks (p. 5).

Problem Statement

The need to improve student achievement results is imminent as educators are tasked with finding the most appropriate way to increase student scores. In addition, this call for increased rigor in our public schools comes at a time when funding for public

education is unstable and constantly facing budget reductions. Recently the Kentucky Department of Education reduced Flex-Focus funding for textbooks and professional development by 50% (Spears, 2017). In addition, the most recent federal budget proposal suggested large cuts to Title I funding and the elimination of Title II funding which supports and enhances teacher quality (Camera, 2017).

The need to generate better results while budgets shrink have educational leaders on a quest to find highly effective, highly efficient systems for professional learning. Teacher Efficacy and Professional Learning Communities, derived from Bandura's Social Learning Theory (1997), are two strands that offer promising results for school improvement in an era of the aforementioned budget constraints. More specifically, educators need to consider organizational structures which are the cornerstone of professional learning communities.

> Teacher professional learning communities may be a cost-effective strategy for teacher professional development in impoverished communities. Many aspects of effective professional learning communities can be supported through institutional structures and incentives within schools themselves, without the need to pay for teachers' transportation and room and board to attend off-site training sessions (Sargent and Hannum, 2009, p. 260).

The purpose of this study is to identify the significant correlations between these two promising strands of educational research that make implications of increased student achievement in schools.

Rationale for the Study

It is a common opinion supported by abundant volume of evidence that the classroom teacher is the most important factor when it comes to student learning. Ernest Boyer once stated that, "When you talk about school improvement, you are talking about people improvement. That is the only way to improve schools…" (Sparks, 1984, p. 39). Rivkin, Hanushek, and Kain (2005) noted that a succession of good teachers could go a long way toward closing existing achievement gaps across income groups. According to Wright, Horn and Sanders (1997), the most important factor affecting student learning is the teacher. In addition, the results show wide variation in effectiveness among teachers. The immediate and clear implication of this finding is that seemingly more can be done to improve education by improving the effectiveness of teachers than by any other single factor.

Researchers continue to recognize that if the teacher is ineffective, students under that teacher's tutelage will achieve inadequate progress academically, regardless of how similar or different they are regarding their academic achievement (Wright et al, 1997). Furthermore, Rowan, Correnti, & Miller (2002) note. "the important problem for U.S. education is not simply to demonstrate that differences in effectiveness exist among teachers, but rather to explain why these differences occur and to improve teaching effectiveness broadly" (p. 10).

Improving teacher effectiveness has been the purpose of professional development in the United States. Unfortunately, many of our efforts have been unsuccessful. Traditional Professional Development efforts often don't change teacher practice and have had no measurable effect on student achievement (Yoon, Duncan, Lee, Scarloss, &

Shapley 2007). For too long we have relied on an ineffective professional development model that most public schools in the United States still use. This issue has been addressed by Anthony Rebora in an Education Week article,

> Historically, administrators have favored the workshop approach, in which a district or school brings in an outside consultant or curriculum expert on a staff development day to give teachers a one-time training seminar on a garden-variety pedagogic or subject-area topic (Rebora, 2011, p. 1).

Traditional, stand-alone professional development must evolve if we want to improve professional practice. According to Joyce and Showers (1996) stand-alone training has a less than 10% chance of being implemented to improve instructional practice in the classroom. This is unacceptable in today's educational environment, therefore, considering the demands placed on educators, the economic reality of funding, and the state of stand-alone professional development, a better solution for increasing student learning and increasing the effectiveness of teachers should be implemented. As asserted by Darling Hammond, Wei, Andree, Richardson, and Orphanos (2009) "The time and opportunities essential to intense, sustained professional development with regular follow-up and reinforcement are simply not in place in most contexts, as evidenced by the short duration of most professional development activities" (p. 27).

Purpose of the Study

This research will demonstrate and quantify the relationship between professional learning communities and teacher efficacy. Results of the research will be used to advocate for the implementation of professional learning communities as an effective way to increase efficacy of teachers.

Professional learning communities should lead to a measurable increase in student achievement as teachers work in a collaborative environment to improve their professional practice. Darling-Hammond (2009) has asserted "Enabling educational systems to achieve, on a wide scale, the kind of teaching that has a substantial impact on student learning requires much more intensive and effective professional learning than has traditionally been available" (p. 2). Considering the volume of resources invested into professional development and the lack of results from this professional development it is noted that the implementation of professional learning communities would lead to an increase in the effectiveness of professional development and in turn an increase in teacher effectiveness. Stephanie Hirsch, Executive Director of Learning Forward indicated these sentiments in a preface declaring:

> For many years, Title I of the Elementary and Secondary Education Act has required low-performing schools to set aside ten percent of their allocations for schoolwide professional development. Title II funding has resulted in the allocation of more than three billion dollars to professional development. More than 40 states have adopted standards calling for effective professional development for all educators accountable for results in student learning. In addition, several national studies on what distinguishes high-performing, high-poverty schools from their lower performing counterparts consistently identify effective schoolwide collaborative professional learning as critical to the school's success. Yet as a nation, we have failed to leverage this support and these examples to ensure that every educator and every student benefits from highly effective professional learning (as cited by Darling-Hammond et al, 2009, p. 3).

Definition of Terms

1. Professional Learning Community (PLC): Educators committed to working collaboratively in ongoing processes of collective inquiry and action research to achieve better results for the students they serve. Professional learning communities operate under the assumption that they key to improved learning for students is continuous job embedded learning for educators. (DuFour, DuFour, Eaker, Many, & Matos, 2016)

2. Professional Development: A comprehensive, sustained, and intensive approach to improving teachers' and principals' effectiveness in raising student achievement. (National Staff Development Council, 2007)

3. Teacher Efficacy: Teachers' belief or conviction that they can influence how well students learn. (Guskey, 1998)

4. Collective Efficacy: The perceptions of teachers in a school that the faculty as a whole can execute the courses of action necessary to have positive effects on students. (Goddard, 2001)

5. Collective Inquiry: The process of building shared knowledge by clarifying the questions that a group will explore together. In PLCs, collaborative teams engage in collective inquiry into both best practices regarding teaching and learning as well as the reality of the current practices and conditions in their schools or districts. (DuFour et al, 2016)

6. Formative Assessment: An assessment for learning used to advance and not merely monitor each student's learning. Formative assessments are used to ensure any student who experiences difficulty reaching or exceeding proficiency is given additional

time and support as well as additional opportunities to demonstrate his or her learning. Formative assessments are also used to help students monitor their own progress toward an intended standard of proficiency. (DuFour et al., 2016)

7. Collegiality: Relationship among people within a profession, field, organization, or office, characterized by trust, openness, concern, and cooperation. (Education.com, 2012)

8. Collaboration: A systematic process in which people work together, interdependently, to analyze and impact professional practice in order to improve individual and collective results. (DuFour et al., 2016)

CHAPTER TWO

LITERATURE REVIEW

Overview

This chapter reviews the literature relevant to this research study, the correlation between teacher perceptions of professional learning communities and teacher efficacy. This study will examine the perceptions of teachers about their school as a learning organization and their perceptions of collective teacher efficacy within their professional learning community.

It includes a review of professional learning communities and teacher efficacy. The researcher included in the review of professional learning communities literature that considered the historical development of professional learning communities, current thoughts around effective professional learning communities, relationship to effective professional development, and impact on student achievement.

Additionally, a review of the literature regarding teacher efficacy as well as the theoretical framework, which serves as a basis for this study, is included. Contained in the review is literature on teacher self-efficacy and teacher collective efficacy. Studies indicate that both collective teacher efficacy and professional learning communities are linked to student achievement. This review includes literature discussing that relationship and demonstrates the connectedness of these two factors in improving outcomes for students.

Professional Learning Communities

Emergence of Professional Learning Communities

High-stakes accountability has prompted a paradigm shift, over the past 20 years, in the approach that educators are taking with professional development of teachers (Finley, Marble, Copeland, & Ferguson, 2000). This reform transverses professional development from merely being a conduit for the attainment of new knowledge for teachers. Many elementary, middle, and high schools are working to become PLCs (Sparks, 2002).

Dufour (2004) notes that PLCs have become one of the most popular ideas in education today. Most public school districts and schools focus on enhancing professional learning communities formulated from the concept that student learning will improve when adults commit themselves to working collaboratively to improve teaching and learning and take actions that are consistent with that purpose (Thompson, Gregg, & Niska, 2004).

The concept of professional learning communities is derived from business models of organizational learning that leverage collaboration to improve results. Education realized the benefits of these learning models and modified practice to fit the needs of schools and districts (Dufour 2002; Fullan, 2007) and ultimately enhancing this idea to become a learning community that strives to develop collaborative work cultures for teachers. Reichstetter (2006) defined this initiative as, "A professional learning community is made up of team members who regularly collaborate toward continued improvement in meeting learner needs through a shared curricular-focused vision (p. 1)."

Eventually the term PLC became common in educational organizations throughout the nation using the works of DuFour at Adlai Stevens High School and Hord at the Southwest Education Development Laboratory (SEDL) as models to continue professional growth and increase teacher engagement in school leadership (Joyce, 2004).

However, this movement toward creating a professional learning culture in schools has faced evolutionary challenges. Collaborative environments have traditionally been non-existent in American schools as most teachers have been expected to work in isolation (Little, 1990). This is due, in-part, to school structures such as individual classrooms and schedules that do not include common collaborative time. DuFour (2004) expressed significant concern that some schools are proclaiming the existence of a professional learning community without any significant structural or philosophical changes in practice. The pedestrian use of the term PLC for seemingly any type of meeting (grade level, team, school, district, or state) has caused DuFour (2004) to warn, "The term has been used so ubiquitously that it is in danger of losing meaning" (p. 6).

The research regarding the failed implementation of PLC initiatives in schools indicates a lack of understanding and commitment necessary to change the culture (DuFour, 2004). Principals and school leadership often search for shortcuts that stifle development and result in limited, and sometimes negative, growth (Hord,1997). Therefore, change efforts must include a comprehensive system of support and commitment from school-level stakeholders to become learning organizations. Senge (1990) identified learning organizations as "organizations 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). The challenge for education is the application of this philosophy so that the focus of all improvement is around student learning rather than organizational efficiency. It is the desire of practitioners that student learning will improve when adults make a commitment to collaborative discourse regarding teaching and learning. These collegial conversations foster a culture that improves learning and achievement (Burney & Elmore, 2000).

Impact of Professional Learning Communities on Student Achievement

It is beneficial for student learning when schools restructure themselves as professional learning communities (DuFour & Eaker 1998; Hord, 1997; Newmann & Wehlage, 1995; Supovitz & Christman, 2003). This is a complex and slow process, and while results are not quickly or readily visible, the long-term benefits justify the energy and resources needed to transform a school into a learning community (Hord, 1997; Huffman, 2001). The members of a PLC maintain a clear focus on student learning and its connection to teacher practice. Instructional practices are changed based on student assessment data, resulting in improved student learning (Supovitz & Christman, 2003).

The research clearly indicates that a positive relationship exists between the implementation of professional learning communities and student achievement. Newman and Wehlage (1995) showed that academic achievement increased significantly in math, science, history and reading in schools that formed professional learning communities that increased opportunities for teacher collaboration. In addition, there was a narrowing of achievement gaps in math and science among low and middle-income students.

Reeves (2011) declared the link between the fidelity of PLC implementation and student achievement noting that effective implementation of PLC's leads to improved instructional practice. The benefit of collaboration is cited by Hattie's (2008) work as he concluded that the best way to improve schools is to organize teachers into collaborative teams that clarify what each student must learn. Researchers agree that isolation and a lack of collaboration have detrimental impacts on implementation of improvement initiatives. (Hord, 1997; McLaughlin, 1993). Newmann and Wehlage (1995) further noted that student learning can meet high standards if educators and the public give students three kinds of support--teachers who practice authentic pedagogy, schools that strengthen professional community, and supportive external agencies and parents.

Dunne, Nave & Lewis (2000) posited that teachers who leveraged a collaborative culture to provide constructive feedback to colleagues following a peer observation became more student centered and focused on ensuring that their students mastered the material as opposed to simply covering the material. It was also found that these teachers had a greater desire for continuous improvement than did teachers that did not participate.

The impact of structures that support collaboration are also noted in research and support the findings of a positive relationship between professional learning communities and student achievement. The physical plant and organization of the school may also linked to teacher isolation (Boyd, 1992). Studies have shown that when teachers are isolated (emotionally and physically), less change will happen (Fullan, 2007; Louis & Miles, 1990). Physical isolation is not the only type of isolation, however. If a school is organized around teacher communities, but the teachers do not utilize the set-up for meaningful conversations and purposes, isolation is still present, and change does not

occur (Smith & Keith, 1971). Sarason (1982) adds that the format for teacher-to-teacher or teacher-to-administrator conversations also has a lot to do with feelings of isolation and empowerment.

Characteristics of Professional Learning Communities

Professional learning communities have been the subject of a variety of studies and many researchers have sought to define the characteristics of these complex organizational designs. They are built on the premise that teachers will grow their professional knowledge and enhance their professional skills by actively engaging teachers in collaborative environments and subsequently improve student learning (Hord, 2009). Johnson and Johnson (2000) note that once people begin working together, sharing the same vision, achieving the same goals, and operating using the same belief system they become a PLC

A review of common theoretical frameworks around professional learning communities revealed common characteristics for their true development in an educational setting. The first of characteristic is a shared vision focused on student learning. Huffman (2003) asserts, in a study of 18 schools organizing PLC's, that the findings indicated that those schools who succeeded in sustaining shared vision and values had similar characteristics and student learning was the cornerstone of their vision.

Additional common threads for PLC's revealed in the literature are collaboration (Dufour and Eaker, 2009), identifiable membership, collective learning, and capacity building. Collaborative team learning creates momentum and synergy for continued improvement as Fullan (2007) notes that capacity will build on capacity as teachers work

together in a PLC. DuFour and Eaker (1998) posit that team learning should not be confused with team building. Team building centers on building relationships and enhancing a group's ability to work together while the core of team learning is a commitment to the continuous learning process (DuFour and Eaker, 1998) however, interpersonal skills of trust, collaboration, and communication are also frequently mentioned as important components throughout the literature.

Building capacity through collaborative professional development is a fundamental precept of professional learning communities (Wells & Feun, 2007). The targeted purpose of a professional learning community is to extend organizational capacity to encourage student learning (Hord, 2004). Lambert (2003) states "that if the principal, a vast majority of the teachers, and large numbers of parents and students are all involved in the work of leadership, then the school will most likely have a high leadership capacity that achieves high student performance." (Pg. 9)

In the following sections we will examine the literature from two of the major researchers on professional learning communities, Dr. Shirley Hord and Dr. Robert DuFour. The two models differ in nomenclature but are complimentary of each other and do not contradict in philosophy and implementation. Table 2.1 (Stegall, 2011) is provided below to further compare the models and demonstrate the common threads.

Table 2.1 Stegall's comparison of characteristics 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 Work of Rick DuFour

Dufour and Eaker (1998) further expounded on Hord's research by identifying six characteristics of professional learning communities: a) Collectively pursue shared mission, vision, values and goals, b) Work interdependently in collaborative teams focused on learning, c) Engage in ongoing collective inquiry into best practice and the current reality of student achievement and the prevailing practices of the school, d) Demonstrate an action orientation and experimentation, e) Participate in systematic processes to promote continuous improvement, and f) Maintain an unrelenting focus on results.

Dufour (2004) described 3 Big Ideas that represent the core principles of professional learning communities: Big Idea #1 is ensuring that students learn, Big Idea #2 is a culture of collaboration and Big Idea #3 is a focus on results. Dufour (2004) further posits that hard work and commitment is required to initiate and sustain this environment.

> If they fail to demonstrate the discipline to initiate and sustain this work, then their school is unlikely to become more effective, even if those within it claim to be a professional learning community. The rise or fall of the professional learning community concept depends not on the merits of the concept itself, but on the most important element in the improvement of any school—the commitment and persistence of the educators within it. (p. 11)

Dufour (2004) contends that every professional in a building must engage with colleagues in the ongoing exploration of three crucial questions:

1. What do you want students to learn?

2. How will you know when they have learned it?

3. How will you respond when a student experiences difficulty in learning?

Dufour's first question is supported by the work Robert Marzano (2003) who stated, "The first school level factor is a guaranteed and viable curriculum. I rank this as the first factor, having the most impact on student achievement" (p. 22).

The second question; "How will you know if they have learned?", is consistent with the formative assessment work of Stiggins (1997), and Black and Wiliam (1998). Educators are able to measure what students know and what students have learned by using a variety of imbedded assessments throughout the instructional process. Reeves (2011) states, "Formative assessment accompanied by data analysis, use of the assessment to improve teaching practices, and careful application of those improved teaching practices to student learning – will, in combination, have a strong probability of improving student results" (p. 27). Further research by Black and Wiliam (1998) analyzed over 250 studies on formative assessment and concluded, "The research reported here shows conclusively that formative assessment does improve learning. The gains in achievement appear to be quite considerable, and as noted earlier, amongst the largest ever reported for educational interventions" (p. 61).

The third question is "How will you respond when a student experiences difficulty in learning?" This question focuses on the two aspects of school structures; systemic processes for interventions and continuous improvement of instructional strategies.

The first aspect of responding to student difficulty in learning is the systematic processes that are in place to provide interventions for students. Most schools today offer some type of intervention program and DuFour, DuFour, Eaker, and Karhanek (2010) state "When a school creates a systematic pyramid of interventions, it is able to guarantee students that they will be given additional time and support if they struggle" (p. 224). Barber and Mourshed (2007) further assert that: "The best systems take these processes inside schools, constantly evaluating student performance and constructing interventions to assist individual students in order to prevent them from falling behind" (p. 38).

The second structural aspect in regard to responding to student difficulty in learning is continuous improvement of instructional strategies. Requisite for improvement in instructional strategies is teacher self-reflection and instructional improvement efforts. It is important for teachers to realize when students are struggling and then make the instructional changes through reteaching and differentiation in an effort to maximize student achievement (Hattie, 2008).

The Work of Shirley Hord

Hord (1997) offers a basic organization framework for the development of a professional learning community in an educational setting. Hord's (1997) theory of professional learning communities reflects the work of several researchers (Leithwood, Leonard & Sharratt, 1998; Louis & Kruse, 1995; Sergiovanni, 1994). As a result of this research Hord (1997) identified five characteristics, or dimensions, of a professional learning community that have become basis for scholarly discussion around this topic. While these dimensions are intertwined and function as a complementary collection supporting each other (Huffman & Hipp, 2000), they are distinct characteristics with

identifiable constructs. The following sections feature a description of each dimension identified by Hord (1997) and an analysis of the relevant literature for the five identified attributes of professional learning communities: a) Supportive and Shared Leadership, b) Collective Creativity, c) Shared Values and Vision, d) Supportive Conditions, and e) Shared Personal Practice.

Supportive and shared leadership.

The first dimension identified by Hord (1997) explicates the importance of leadership in development of a professional learning community. The research of Leithwood, et al. (1998) clearly supports that leadership contributes "significantly to school conditions fostering OL [Organizational Learning] processes" (p. 24). Hord (2004) makes it clear that professional learning communities are dependent on strong leaders willing to become the lead learner in their organization and O'Neal (1995) noted that it is critical for the principal to provide learning experiences for teachers.

Shared leadership within the context of a professional learning community requires a transferal from a "leader centered" organization to one focused on building "leadership capacity" (Lambert 2003). Hord (1997) affirms the value of school administrators and teachers working in tandem to share the leadership responsibilities within a school. Hord and Sommers (2008) stated "One of the defining characteristics of PLCs is that power, authority, and decision making are shared and encouraged" (p. 10).

The principal's willingness to decentralize his authority is a key variable in creating shared leadership (Hord, 2004). The research of Louis and Kruse (1995) focused on the principle of shared leadership and resulted in the identification of six key attributes

for building leadership capacity within a professional learning community: (interactive leadership, teacher support and involvement, the school vision embedded in daily activity, creating a culture of purposeful professional development, conflict management, and whole faculty study groups.)

Shared Values and Vision

Louis and Kruse (1995) noted the core of the professional learning community is a vision completely focused on student learning. This concept underscores Hord's (1997) second dimension of professional learning communities in which she stresses the importance of a belief and value system predicated on continuous learning. Central to this is a collective belief that all students can learn (Hord, 2004). This dimension emphasizes that these values should be collective and evident throughout the community.

Hipp and Huffman (2010c) detailed that a shared vision which guides teaching and learning is an essential elements of a professional learning community. Huffman (2003) found that visionary leadership and collaborative strategies are needed to support the work of teachers to develop a school vision. She also affirms that it is crucial for stakeholders to understand "that the emergence of a strong, shared vision based on collective values provides the foundation for informed leadership, staff member commitment, student success, and sustained school growth" (Huffman, 2003b, p. 32)

Sparks (1999) suggests that a professional learning community foster values that motivate teachers to improve practice. This motivation of personal practice ultimately results in collective responsibility for the entire system. This is supported by the work of

Newmann and Wehlage (1995) which shows the strong, positive correlation between high quality professional learning and student achievement.

Collective Learning and Application

Hord's (1997) third dimension, Collective Learning and Application, highlights the importance for all staff members to work collaboratively to design, implement, and measure learning. Hipp and Huffman (2010) identified the critical element of collaborative problem solving as an important aspect of this dimension.

Cowan (2003) notes that collective learning and application occur when "collaboration to achieve shared goals becomes focused, intentional, and urgent" (p. 79). Hord and Sommers (2008) assert that a professional learning culture will increase educator capacity when inclusive of protocol and collaborative practice.

Shared Personal Practice

The dimension of shared personal practice might seem as though it is the result of other practices and needs to be included in other dimensions however, it is significant enough to warrant individual attention. Shared personal practice that includes observing and assisting colleagues is the norm in a culture that performs as a true professional learning community (Louis & Kruse, 1995). Peer-to-peer observation naturally occurs in this environment and is a result of a commitment to continuous improvement. Midgley and Wood (1993) note that educators need "an environment that values and supports hard work, the acceptance of challenging tasks, risk taking, and the promotion of growth" (p. 252).

Hord (1997) emphasizes the importance of giving attention to individual contributions resulting in increased capacity of the group. Teachers become change agents as they provide support to one another and create an environment conducive to building professional capacity (Hord 2004). Research by Darling-Hammond (1998) demonstrates that teachers who collaboratively examine practice are more effective at promoting higher-order thinking among students. Educators that share personal practice with colleagues improve their instructional capacity and tear down institutional "silos" in the process (Hipp & Huffman, 2003).

Hord (2004) identified that there is a hesitancy on the part of educators to embrace shared practices as a norm. She acknowledges that this dimension is typically the last to be developed. Despite many educators' preference of isolation over collegial shared practice it is still a critical dimension of developing a viable professional learning community. Elmore (2000) states that "schools and school systems that are improving directly and explicitly confront the issue of isolation" (p. 32). Hord and Sommers (2008, p. 15) assert "This process is grounded in individual and community improvement, but can only be done meaningfully if there is mutual respect and trust among the members of the staff"

Supportive Conditions

Hord (1997) identified two categories of conditions that support the development of effective professional learning communities. She noted that there are interpersonal relationship factors and structural factors that support conditions necessary for a PLC to thrive. Louise and Kruse (1995) further support the need for both relationships and structures to maximize the efficiency of a professional learning community and a study by

Gilrane, Roberts, and Russell (2008) identified supportive conditions as a significant factor in the success of professional development programs.

Supportive Conditions-Relationships

Hord (2004) asserts that these supportive conditions determine when, where, and how a staff works. The conditions within this dimension identified as relationships include collegial conditions such as trust and respect. These conditions are necessary to support effective participation in team meetings and collaborative collegial work. Harlacher, Kattleman, and Sakelaris (2014) affirm that the development of effective relationships will reduce individual autonomy and enhance collegiality among teachers.

The Danielson (2012) framework identifies the importance of strong supportive relationships in a professional learning community listing "teachers maintain a professional collegial relationship that encourages sharing, planning, and working together toward improved instructional skill and student success" (p. 84) as an indicator of teacher effectiveness. Additionally, teachers who feel supported by administrators and fellow teachers demonstrate a greater commitment to their jobs (Rosenholtz, 1991).

Supportive Conditions-Structures

Hord's (1997) identification of structural conditions that support the development of effective PLC's include an assortment of conditions such as time, materials, and buildings. Effective supporting structures include time to meet during the school day and physical proximity to peers (Hickman, Schrimpf, & Wedlock, 2002).

The most critical resource that educators must allocate is time. Cowan (2003) suggested that an organized logistical structure, including a specific time for

collaboration, empowers teachers and enhances the evolution of collegial behavior. A schedule for meetings that includes space and resources for the meeting will enhance this work however, researchers (DuFour, 2007; Hord & Sommers, 2008) note that time is the greatest challenge in creating a professional learning community.

Teacher Efficacy

Teacher efficacy has developed over the last three decades as an important variable related to student achievement and teacher implementation of innovation. Although definitions vary slightly among researchers Tschannen-Moran and Barr (2004) define it as the "collective self-perception that teachers in a given school make an educational difference to their students over and above the educational impact of their homes and communities" (p. 190). Teachers with a high sense of efficacy feel a personal accomplishment, have high expectations for students, feel responsibility for student learning, have strategies for achieving objectives, a positive attitude about teaching, and believe they can influence student learning (Ashton, 1984).

Researchers have found few consistent relationships between characteristics of teachers and the behavior of learning of students. Teachers' efficacy is an exception to this general rule (Woolfolk & Hoy, 1990, p. 81). Klassen, Tze, Betts, and Gordon (2011) stated that, "Teacher efficacy – the confidence teachers hold about their individual and collective capability to influence student learning – is considered one of the key motivation beliefs influencing teachers' professional behaviors and student learning" (p. 1).

The research indicates that teacher efficacy is positively related to a variety of teacher attributes that positively impact teacher performance (Ross, Bruce & Hoagboam-Gray, 2006; Ross & Regan, 1993), teacher motivation (Guskey, 1984; Midgley, Feldlaufer, & Eccles, 1989), and contributes to increased teacher retention (Ross & Regan, 1993). Highly efficacious teachers use effective classroom management strategies to build self-regulation in students, instructional strategies and routines to meet the individual learning needs of all students, and through their classroom practice, supportively influence student perceptions of their own abilities (Woolfolk, Rosoff, and Hoy, 1990).

Educators who possess positive efficacy are more likely to perceive instructional changes as impactful and, as a result, they will persist longer than less efficacious colleagues when teaching these students (Gibson & Dembo, 1984). Furthermore, teachers with positive teacher-efficacy are also prone to experiment with and confidently adopt new and innovative teaching practices to meet student needs (Allinder, 1994; Midgley, Feldlaufer & Eccles, 1989).

The literature frequently discusses efficacy through two strands: self-efficacy and collective efficacy. Bandura (1997) states that Self-efficacy describes an individual's perception of his/her ability to perform a behavior while collective efficacy refers to a group's shared belief in their ability to organize and execute actions required to achieve goals, further noting that the concept of collective efficacy builds on the concept of self-efficacy. The following sections explore the research specific to self-efficacy and collective-efficacy.

Individual Self-Efficacy

Bandura (1977) originally defined self-efficacy as "the conviction that one can successfully execute the behavior required to produce a given attainment" (p. 3). He offered that an internal system allows people to influence their own feelings, thoughts, motivations and actions. Tschannen-Moran, Woolfolk Hoy, and Hoy (1998) expanded on Bandura's definition of self-efficacy by describing it as:

> A cognitive process in which people construct beliefs about the capacity to perform at a given level of attainment. These beliefs influence how much effort people put forth, how long they will persist in the face of obstacles, how resilient they are in dealing with failures, and how much stress or depression they experience in coping with demanding situations. (p. 203)

Bandura (1977) described individuals' self-efficacy as shaped through four significant information sources: 1) mastery experiences, 2) vicarious experiences, or witnessing others' experiences, 3) social persuasion and 4) physiological and affective states.

Bandura (1977) identified mastery experiences as the most influential factor that shapes self-efficacy noting that when individuals perceive specific experiences as being successful, their efficacy beliefs become more positive. Furthermore, Bandura (1977) found that the effect of vicarious experiences on the observer is strongly related to the degree to which the observer identifies with the model. When the observer identifies closely with the model, the effect on efficacy is stronger.

Social persuasion experiences such as descriptive feedback or a “pep talk,” are mildly impactful on teacher efficacy (Bandura, 1977) as are the physiological and affective states. If the individual has a negative perception of the situation they are more likely to feel less efficacious. Conversely, positive perceptions of a situation can lead to an increase if efficacy. (Bandura, 1977)

Self-efficacy impacts behavior by influencing goals, outcome expectations, affective states, perceptions of obstacles or threats and opportunities (Bandura, 1997). When individuals believe that they will be successful on a given task or assignment, it appears that they internalize ambitious goals, work harder to realize them, persist when faced with obstacles, and develop coping skills and strategies to regulate their emotions. It is anticipated that these actions should yield greater success in accomplishing the given task or assignment.

A positive level of teacher self-efficacy has consistently been identified as a strong predictor of successful teacher outcomes (Hattie, 2016). Allinder (1994) noted that teachers with high degrees of self-efficacy make a stronger commitment to lesson planning/design additionally, highly efficacious teachers believe that their work is highly correlated to student achievement levels (Ashton & Webb, 1986). Pajares and Schunk (2001) observed that an individual’s perceived level of competence on a specific task impacts their willingness to exert effort toward that task and their resilience in task completion.

Collective Efficacy

Bandura (1997) defined collective efficacy as "a group's shared belief in its conjoint capability to organize and execute the courses of action required to produce

given levels of attainment" (Bandura, 1997, p. 477). Goddard (2003) uses language specific to education when he defines collective efficacy as “the perceptions of teachers in a school that the faculty as a whole can organize and execute the courses of action required to have a positive effect on students” (p. 184). The research of Woolfolk and Hoy (1990) affirmed that teacher self-efficacy impacts teacher attitude toward the educational process and overall instructional practice.

Bandura (1997) declared that collective efficacy is an extension of self-efficacy to the organizational level. The work of Hoy, Sweetland, and Smith (2002) noted the relationship between self-efficacy and collective efficacy:

> “As teachers experience successes and observe the accomplishments of their colleagues, as well as success stories of other schools, they develop beliefs in their own capabilities to succeed. It seems that personal teaching efficacy promotes collective efficacy, which reinforces personal teaching efficacy.” (p.91)

Bandura (1977) observed that group confidence is linked with greater success showing that the assurance placed in your team impacts the overall performance of the team. This concept is observable across the organizational spectrum as noted by Kim and Shin (2015). Bandura (1993) noted that this is specifically applicable in an educational setting when he observed higher levels of student achievement in settings where teachers held collective beliefs that they could impact student outcomes. Bandura (1997) affirms “the stronger the beliefs people hold about their collective capabilities, the more they achieve” (p. 480).

Research indicates that demographics and school culture impact the levels of collective efficacy exhibited by a faculty. Bandura (1993) found that schools with a greater number of economically disadvantaged and higher absenteeism had lower levels of collective efficacy. This however, does not doom low-income schools to failure. Rosenholtz (1991) and Ashton and Webb (1986) concluded that teachers made a difference when they believed they could. Goddard, Hoy, and Woolfolk-Hoy (2000) confirm through their studies that "Collective efficacy clearly shapes teachers' self-referent thought and the control work groups exert over their circumstance" (p. 24).

Goddard (2000) provides the illustration in Figure 2.1 as a simplified model of collective efficacy adapted from the teacher efficacy model of Tschannen-Moran, Woolfolk Hoy, and Hoy (1998).

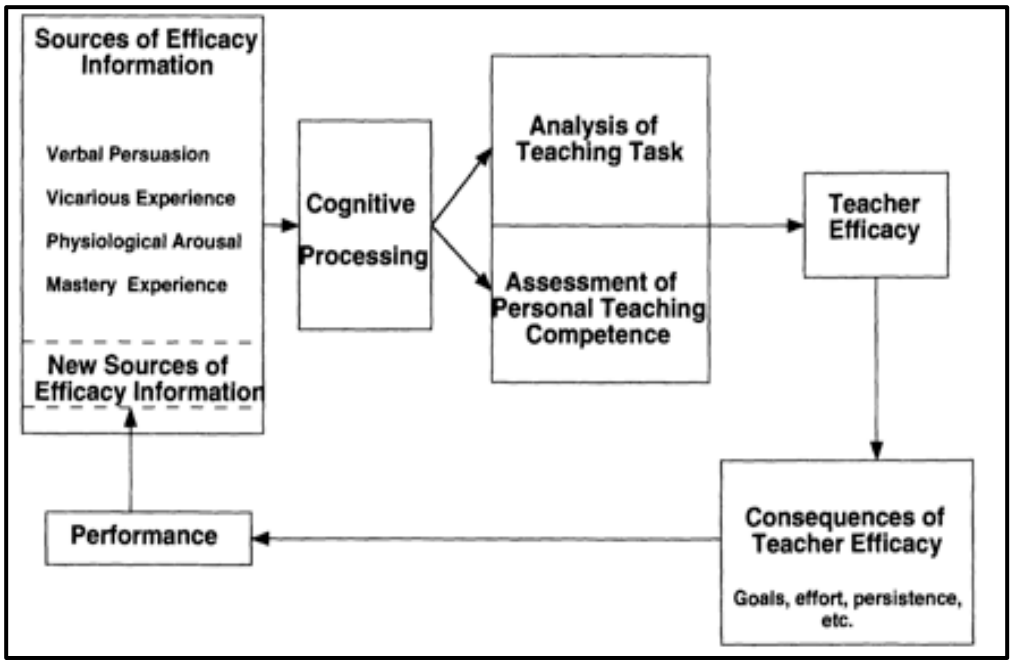

Figure 2.1 Goddard's Model of Collective Teacher Efficacy

Efficacy and Student Achievement

The early research by Ashton and Webb (1986) discovered a strong, positive correlation between teacher efficacy and student achievement. This was further supported by Anderson, Greene, and Lowen (1988) who found a similar correlation and that the effect was even greater in primary grades. Multon and Brown (1991) expanded the research to a meta-analysis of 39 studies and found a strong positive relationship. Rachel Eell's (2011) meta-analysis revealed a strong, positive association between collective efficacy and student achievement noting that the relationship extended across subject areas.

Recently, the link between efficacy and student achievement has been highlighted by John Hattie. In an analysis of over 1,500 meta-analyses Hattie (2016) showed Collective Teacher Efficacy at the greatest single factor that influences student achievement. Table 2.2 below represents the effect size of a sample of individual factors generally accepted to impact achievement. Note that Hattie (2016) recorded an effect size of 1.57 which is three times greater than socioeconomic status and five times greater than homework.

Table 2.2 Hattie Effect Size

Influence	**Effect Size**
Collective Teacher Efficacy	1.57
Prior achievement	0.65
Socioeconomic status	0.52
Home environment	0.52
Parental involvement	0.49
Motivation	0.48
Concentration/persistence/engagement	0.48
Homework	0.29
Note: Effect sizes are based on Cohen's d. The average effect size is d=0.40. This average summarizes the typical effect of all possible influences on education.	

Source: John Hattie

The abundance of the literature demonstrates the positive link between efficacy and student achievement and some studies show that the lack of efficacy has a negative effect on student achievement. Tschannen-Moran & Barr (2004) noted that when teachers experience a deficiency in collective efficacy they are more likely to experience decreased expectations, reduced effort, and lower levels of student achievement. Furthermore, low levels of collective efficacy negatively impact teacher resilience and effect teacher perceptions of students (Gibbs & Powell, 2011). The research suggests that success and support increase the confidence teachers have in their teams and subsequently lead to an increase in student achievement (Goddard, Hoy, & Woolfolk Hoy, 2004).

Correlation between PLC's and Teacher Efficacy

Professional learning communities build on the theories of organizational learning and create a setting conducive to collaboration therefore increasing teacher efficacy (DuFour, 2002). According to Smith and Knight (1993) teacher collaboration in the form of study team participation was related to higher levels of general teacher efficacy. Newmann and Wehlage (1995) found that the most successful schools are those that use organizational restructuring to help them function as 'professional communities.' These schools find ways to channel staff and student efforts toward a clear, commonly shared purpose for student learning. They create opportunities for teachers to collaborate and help one another. Teachers in these schools take collective responsibility for student learning and for constantly improving their teaching practices (p. 10).

In researching what matters most in teaching McLaughlin (1993) identified the important factors in collegial professional communities as capacity for reflection, feedback, and problem solving. McLaulin's findings suggest that the school workplace is a physical setting; a formal organization; an employer; and a social and psychological setting in which teachers construct a sense of practice, of professional efficacy, and of professional community. McLaughlin's findings were consistent with Rosenholtz (1991) who described effective schools as being places in which the teachers were encouraged to collaborate, share ideas and solutions to problems and learn about educational practice. She also found that as the teachers' practice improved, the students also benefited. Senge (1990) expanded on this and promoted the ideas of developing shared visions, working in teams and collaborating to produce a better product.

Criteria

A review of several scholarly articles revealed the most relevant literature on the subject of professional learning communities and teacher efficacy. Included in this research paper are the writings from the most respected researchers in the field. The writings of these researchers were reviewed for relevance to the construct of this paper and then included in the review.

Theoretical Constructs

The theoretical framework for this study emerged from Albert Bandura's (1977, 1986, 1997) Social Cognitive Theory which suggests that people have an internal locus of control and are able to self-develop, self-regulate, and self-reflect. These elements are foundational in the construct of efficacy. Bandura (1997) stated "Equipping people with a firm belief that they can produce valued effects by their collective action and providing them with the means to do so are the key ingredients in an enablement process." (p477).

Conclusion

The review of relevant literature revealed a positive relationship between teacher collective-efficacy and student achievement. Additionally, the research shows that implementation of professional learning communities has a positive impact on student achievement.

Theorists agree on similar characteristics of work environments that contribute to enhanced efficacy and the research shows that implementing professional learning communities enhances the presence of these characteristics in the school environment.

The value of teacher efficacy, as an important variable in student achievement, is implicitly reflected in the research. Therefore, the development of collective-efficacy should become a central consideration in the structure of the school environment and it would be valuable for educators to pursue structures that increase participation in collaborative learning communities.

The literature clearly exhibits the value of increased teacher efficacy and the benefits of professional learning communities. Considering the gap in research on the correlation of implementation of professional learning communities and teacher reported collective-efficacy, this study sought to determine the relationship between the two.

CHAPTER 3

METHODS

Background of Study

The purpose of this quantitative study is to assess the correlation between teacher perceptions of the level of implementation of professional learning communities within their school and teacher perceptions of their collective-efficacy. This study further demonstrates the relationship between implementation of professional learning and teacher collective-efficacy. It reveals the importance of several components of professional learning communities in providing the structures necessary to increase teacher collective-efficacy. It extends the discussion of the impact of school structures on teacher performance and ultimately student achievement.

Furthermore, it will help sustain policies that currently support collaborative professional learning. School administrators will be concerned with the results of this study since all educators are tasked with the challenge of improving student achievement. This study could assist administrators with information that would help them make decisions about structures in their school that support the components of professional learning communities and collaborative environments.

Research Questions and Hypotheses

This study examines the levels of implementation of the six dimensions of Professional Learning Communities as described by Shirley Hord (2004) and the clear links between efficacy and improved teacher performance. The literature identifies some relationships that exist between teacher efficacy, student performance, and

implementation of professional learning communities. As a logical outcome of the review of literature regarding Professional Learning Communities and as they relate to teacher efficacy this study will attempt to enlighten and provide a basis for scholarly discussion on the following questions:

- What is the relationship between perceptions of Professional Learning Communities and Teacher Collective-Efficacy? I expect that this study will show a strong, positive relationship between the implementation of professional learning communities and teacher collective-efficacy.
- Which components of Professional Learning Communities have the strongest correlation to Teacher Collective-Efficacy? I expect that the component of Supportive Conditions-Structures will have the strongest positive correlation to teacher collective-efficacy and the component of Shared Supportive Leadership to also have a strong, positive correlation with teacher collective-efficacy.

Research Design

This quantitative study utilizes two survey instruments administered to teachers in 5 schools. The researcher analyzed, compared, and correlated the data to determine the relationships that exist between teacher perceptions of implementation of professional learning communities and data regarding teacher perceptions of collective-efficacy.

Context of Study/Site Selection

Madison County Schools is a K-12 school district in central Kentucky. The district has 12,000 students spread across 19 schools. There are 10 elementary schools, 5 middle schools, 2 high schools, a Kindergarten Academy, and an Alternative/Day Treatment Center. The population of minority students (12%), economically disadvantaged students (56%), and special needs students (9%) in Madison County Schools are distributed across all grade levels and throughout each school.

Madison County Schools began a district-wide effort to enhance the culture of professional learning in 2015. The district utilized the Standards of Professional Learning from Learning Forward to guide this work. To enhance and support this endeavor the district had several district administrators and principals participate in the Learning Forward National Conference for two consecutive years. Additionally, the district sent teams of principals and teacher leaders to the Learning Forward Summer Institute.

Structural changes within the district included the elimination of department heads within secondary schools and the creation of Lead Teacher stipends for those teachers willing to be trained and serve in a leadership capacity-particularly in leadership during times set aside for PLC meetings.

From 2015-2017 the district leveraged this work through Instructional Rounds and District Leadership Team Meetings. In 2018 the district revised the Instructional Round process and created a new district platform labeled District PLC's. This work brought teachers across the district together to work collaboratively on lesson design resulting from a strict interpretation of the academic standards. The work has also bled into two

additional district initiatives-Active Implementation of Math Design Collaborative and Continuous Classroom Improvement.

The district has measured progress and growth of it's PLC initiative by annually administering the Learning Forward Standards Assessment Inventory (SAI2) to all certified staff in the district.

The district's decision to utilize the Learning Forward Standards of Professional Learning was predicated on the fact that the Learning Forward Standards have been adopted by the state of Kentucky as the statewide standards for professional learning. Additionally, the training programs and curriculum supports for implementation were preferred by the district Chief Academic Officer over competing training programs. Particularly useful for this work was the Learning Forward-Standards Into Practice-Implementation Configuration Map and Rubric. This text assisted the district in clearly defining the roles and responsibilities for each member of a school/district staff in regard to creating a culture of professional learning.

Sample/Participants

Participants for this study are the teachers at the five middle schools within Madison County Schools. Each school has a student population that is largely reflective of the district demographics. Madison Middle School has 528 students and 39 full time certified staff members. Foley Middle School has 450 students and 39 full time certified staff members. Farristown Middle School has 456 students and 36 full time certified staff members. Clark Moores Middle School has 569 students and 42 full time certified staff members. B. Michael Caudill Middle School has 608 students and 43 full time certified

staff members. Each school operates under School-Based Decision Making Councils. Staff at each school are departmentalized in the areas of Math, ELA, Science, Social Studies, Special Education, and Related Arts.

Middle schools were chosen for this study for four main reasons. The first reason is that there are five middle schools in Madison County which provided enough participants for an adequate sample size and the ability to collect district-wide data.

Second, student populations at each middle school are similar in size and demographic composition helping to ensure the reliability of the data.

The third advantage of researching at the middle school level is the collaborative nature of middle schools. Each middle school in the district uses the teaming concept so teachers are frequently working together and sharing time during the school day.

Lastly, researching teachers from grades 6-8 should be applicable to schools at each end of the age spectrum. Implications from this research at the middle school level should be applicable and transferrable down to the elementary level and up to the high school level.

All five middle schools have been active participants in the district-wide effort to enhance the culture of professional learning. Four schools have sent teachers and administrators to the Learning Forward Summer Institute for training on teacher leadership and PLC implementation.

Each school uses a similar structure for PLC time and leadership at each school requires an agenda be presented and reviewed with the principal/assistant principal prior to a PLC meeting. All schools use some type of PLC protocol that is consistent

throughout the school but not the district (will likely look different at each school). The common time for PLC meetings is during the team planning time. Teachers that participate on multiple teams will typically meet with other teachers following the end of the instructional day. Each school has an expectation that these PLC meetings occur weekly. The agenda for the meetings vary from school to school and team to team but they generally focus their time around exploration of DuFour's 3 big questions to guide PLC work: 1. What do we want students to learn? 2. How will we know when they learn it? And 3. What are we going to do about those that did not learn it?

Data Collection

Instrumentation

The first primary instrument used in this study is the Professional Learning Community Assessment-Revised (PLCA-R) from Olivier, Hipp, and Huffman. This 52-question survey instrument is a questionnaire that measures staff perceptions of school practices related to six dimensions of a professional learning community and its related attributes. The questionnaire consists of statements about practices that can occur in schools. Respondents use a 4-point Likert scale to indicate the degree to which they agree or disagree with each statement.

The Professional Learning Community Assessment (PLCA) was initially created as a 45 question instrument intended to measure perceived implementation levels of the dimensions of a professional learning community as described by Hord (Oliver, Hipp, & Huffman, 2008). Hord and Hirsh (2008), noted the use of data to inform practice as a critical element in implementation of professional learning communities yet questions regarding a school's use of data was noticeably missing from this assessment. As a result

of this finding the PLCA was revised and re-named the PLCA-R. The original 45 questions remained on the revised assessment and seven questions, around the use of data, were added. The revised assessment continued to use the same four-point Likert scale ranging from 1 (Strongly Disagre) to 4 (Strongly Agree). Table 3.1 below details the statements/questions used to assess each dimension of professional learning communities.

Table 3.1 Statements from PLCA-R

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

Table 3.1 (continued)

	Shared Values and Vision
12	A collaborative process exists for developing a shared sense of values among staff
13	Shared values support norms of behavior that guide decisions about teaching and learning
14	Staff members share visions for school improvement that have undeviating focus on student learning
15	Decisions are made in alignment with the school's values and vision
16	A collaborative process exists for developing a shared vision among staff
17	School goals focus on student learning beyond test scores and grades
18	Policies and programs are aligned to the school's vision
19	Stakeholders are actively involved in creating high expectations that serve to increase student achievement
20	Data are used to prioritize actions to reach a shared vision
	Shared Values and Vision
21	Staff members work together to seek knowledge, skills, and strategies and apply this new le arning to their work
22	Collegial relationships exist among staff members that reflect commitment to school improvement efforts
23	Staff members plan and work together to search for solutions to address diverse student needs
24	A variety of opportunities and structures exist for collective learning through open dialogue
25	Staff members engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry
26	Professional development focuses on teaching and learning
27	School staff members and stakeholders learn together and apply new knowledge to solve problems
28	School staff members are committed to programs that enhance learning
29	Staff members collaboratively analyze multiple sources of data to assess the effectiveness of in structional practices
30	Staff members collaboratively analyze student work to improve teaching and learning

Table 3.1 (continued)

	Shared Personal Practice
31	Opportunities exist for staff members to observe peers and offer encouragement
32	Staff members provide feedback to peers related to instructional practices
33	Staff members informally share ideas and suggestions for improving student learning
34	Staff members collaboratively review student work to share and improve instructional practices
35	Opportunities exist for coaching and mentoring
36	Individuals and teams have the opportunity to apply learning and share the results of their practices
37	Staff members regularly share student work to guide overall school improvement
	Supportive Conditions-Relationships
38	Caring relationships exist among staff and students that are built on trust and respect
39	A culture of trust and respect exists for taking risks
40	Outstanding achievement is recognized and celebrated regularly in our school
41	School staff and stakeholders exhibit a sustained and united effort to embed change into the culture of the school
42	Relationships among staff members support honest and respectful examination of data to enhance teaching and learning
	Supportive Conditions-Structures
43	Time is provided to facilitate collaborative work
44	The school schedule promotes collective learning and shared practice
45	Fiscal resources are available for professional development
46	Appropriate technology and instructional materials are available to staff
47	Resource people provide expertise and support for continuous learning
48	The school facility is clean, attractive and inviting

Table 3.1 (continued)

	Supportive Conditions-Structures
49	The proximity of grade level and department personnel allows for ease in collaborating with colleagues

50	Communication systems promote a flow of information among staff members
51	Communication systems promote a flow of information across the entire school community including: central office personnel, parents, and community members
52	Data are organized and made available to provide easy access to staff members
	Collective Efficacy
53	Our faculty has a strong collective belief in our capabilities to carry out decisions and plans designed for school-wide improvements
54	Our faculty has a strong collective belief in our capabilities to produce high levels of learning for all students
55	Our faculty has a strong collective belief in our capabilities to create ways to improve the school environment
56	Our faculty has a strong collective belief in our capabilities to maintain effective communications with parents and the larger community
57	Our faculty has a strong collective belief in our capabilities to support each other in addressing new initiatives
58	Our faculty has a strong collective belief in our capabilities to maintain a school environment in which students feel good about themselves
59	Our faculty has a strong collective belief in our capabilities to provide input in making important school decisions
60	Our faculty has a strong collective belief in our capabilities to effectively communicate with school administration
61	Our faculty has a strong collective belief in our capabilities to work with disadvantaged or troublesome students
62	Our faculty has a strong collective belief in our capabilities to manage student behavior

The PLCA-R assessment has been administered to educators across the globe in numerous school districts and at varying grade levels. It has assisted educators to determine the strength of practices in their own schools within each dimension. Furthermore, researchers have used the assessment in their national and international projects to determine the strength of dimensions in schools that seek to implement the professional learning community framework. Given that PLCA-R items illustrate actual school-level practices, analysis of the measure should incorporate a review of individual items to determine the strengths and weaknesses of practices deemed essential within a

PLC. From this analysis, the school leaders can determine next steps (Professional Learning Community Assessment-Revised, n.d.).

The internal consistency of the PLCA-R has been confirmed through widespread administration (n=1209) with the following Cronbach Alpha reliability coefficients: Shared and Supportive Leadership (.94), Shared Values and Vision (.92), Collective Learning and Application (.91), Shared Personal Practice (.87), Supportive Conditions-Relationships (.82), Supportive Conditions-Structures (.88), and a one-factor solution (.97). (Professional Learning Community Assessment-Revised, n.d.).

Permission to use the PLCA–R was granted via email on February 13, 2018 by Dr. Dianne Olivier, author of the instrument (see Appendix D).

The second primary instrument, the Teacher Efficacy Beliefs Scale-Collective Form (TEBS-C) from Olivier, Hipp, and Huffman, will collect data regarding teacher perceptions of collective efficacy. This 10-item questionnaire with a one faction solution has been validated and shown to be a reliable measure of teachers' collective efficacy beliefs(Cronbach alpha Reliability Coefficient = .93) (Olivier, 2001). Participants use the 4-point Likert scale to make judgments about the collective strength of beliefs of faculty members at their schools. Respondents strongly agree, agree, disagree, or strongly disagree with statements generated from the stem "our faculty has a strong collective belief in our…".

The TEBS-C instrument is an organizational measure of the strength of teachers' beliefs in their fellow faculty members to produce high levels of learning with students or carry out decisions and plans designed for school-wide improvement

The tool offers an opportunity to examine an additional data set for assessing PLC-related variables within the context of the teaching and learning environment. Meeting the needs of all students and providing optimum learing opportunities for students and staff is the focus of PLCs. The incorporation of the TEBS-C into a comprehensive analysis of PLC's provides insight into perceptions among staff regarding their capabilities to positively impact student learning (Olivier & Hipp, 2008).

Permission to use the TEBS–C was granted via email on February 13, 2017 by Dr. Dianne Olivier, author of the instrument (see Appendix D).

Reliability

Analysis of the data in this study confirmed internal consistency in the following Cronbach's Alpha reliability for coefficients for factored subscales. The following subscales indicate the instrument and the four variables in this study are reliable. Shared and Supportive Leadership (α=.915); Shared Values and Vision (α=.886); Supportive Conditions – Relationships (α=.833); and Supportive Conditions – Structures (α=.861). As Cronbach's Alpha reliability ranges between 0 on the lower end of reliability and 1 on the highest end, the following are generally accepted guidelines: > .9 = Excellent, > .8 = Good, > .7 = Acceptable, > .6 = Questionable, > .5 = Poor, and < .5 = Unacceptable (George & Mallery, 2003). The resulting reliability subscales on the Professional Learning Community Assessment Revised (PLCA-R) survey instrument fall within the excellent (>.9) or good (>.8) range on Cronbach's Alpha indicating high reliability. Table

3.2 has the reliability statistics for each subscale based on leadership-influenced characteristics associated with PLCs.

Table 3.2 Cronbach's Alpha Reliability

Reliability

Scale: Shared and Supportive Leadership

Reliability Statistics	
Cronbach's Alpha	N of Items
.915	11

Scale: Shared Values and Vision

Reliability Statistics	
Cronbach's Alpha	N of Items
.886	9

Scale: Collective Learning and Application

Reliability Statistics	
Cronbach's Alpha	N of Items
.906	10

Table 3.2 (continued)

Scale: Shared Personal Practice

Reliability Statistics	
Cronbach's Alpha	N of Items
.841	7

Scale: Supportive Conditions - Relationships

Reliability Statistics	
Cronbach's Alpha	N of Items
.833	5

Scale: Supportive Conditions - Structures

Reliability Statistics	
Cronbach's Alpha	N of Items
.861	10

Scale: Collective Efficacy

Reliability Statistics	
Cronbach's Alpha	N of Items
.909	10

Variables

This study used Collective Efficacy as a dependent variable. Results from the TEBS-C instrument were correlated with the six characteristics of effective PLCs – Shared and Supportive Leadership, Structural Conditions, Supportive Relational Conditions, and Shared Values and Vision.

Data Analysis

This study used existing data derived from previous research within Madison County Schools. The district has been participating in continual research regarding the implementation of PLC's for the previous four years. The data collected are responses from PLCA-R and TEBS-C instruments administered to teachers in the five middle schools within Madison County Schools. The surveys were distributed to, and collected from, certified staff members during a faculty meeting. The two instruments (PLCA-R and TEBS-C) were merged onto the same document so individual teacher responses could be aligned.

Survey responses were tabulated using Gradecam software and then imported into IBM SPSS Statistics 26 software package for analysis. Descriptive statistics and ANOVA were run to examine mean differences in teacher collective efficacy and mean responses in characteristics of effective PLC's (n=133). In addition, ANOVA were run to examine differences on the PLCA-R. A one-way ANOVA contrasted the overall collective efficacy mean scores of respondents with mean scores from the characteristics of effective PLC's.

I ran several statistical correlations to measure the relationship between the questions from both assessments. Those questions with a strong, positive correlation are

considered to have a strong relationship. I analyzed the correlations to see if any patterns emerge between the relationships of questions and the components of the variables.

Limitations of the Study

This research will be limited by the fact that it is based on teacher perception surveys. Gathering data through the use of a perception survey may pose an issue with reliability. There may be some level of ambiguity realized as individual interpretation of the question may influence the level of agreement or disagreement. Additionally, anonymous perception surveys typically have a limited response rate. Low response rates might skew the data.

As well, perception surveys have a tendency to polarize results. Individuals with generally positive feelings have a tendency to respond very positive and individuals with negative feelings might skew all of their responses low without respect to the individual questions. Realizing that this is a perception survey there is a possibility that the overall feelings toward the district may impact the results of the score.

Additional limitations exist since this proposed research survey will be administered to a limited sample size. The survey will be administered only at the middle school level and only in a single district. Perceptions from elementary and high school were not included in this study. Furthermore, the study only include classroom certified staff. Absent from the study will be the perceptions of classified staff and certified support staff beyond the classroom.

Finally, the surveys will be administered and compared at a single point in time. I do not plan to conduct a pre-assessment and/or post-assessment therefore the study will

not measure growth or change in perception but simply perceptions at that specific moment.

Summary

This is a quantitative study designed to assess the correlation between teacher perceptions of the level of implementation of professional learning communities within their school and teacher perceptions of their collective-efficacy. This study further demonstrates the relationship between implementation of professional learning and teacher collective-efficacy. This study will attempt to enlighten and provide a basis for scholarly discussion on the following questions:

- What is the relationship between perceptions of Professional Learning Communities and Teacher Collective-Efficacy?
- Which components of Professional Learning Communities have the strongest correlation to Teacher Collective-Efficacy?

This study utilizes two survey instruments administered to teachers (n=133) in five middle schools within the Madison County School District. The district has been focused on PLC improvement for several years and this research is part of that ongoing quest.

The five Middle Schools range in size from 450-608 students and 36-43 full-time certified staff members. Schools are similar in demographic makeup and governance.

The study administered the PLCA-R assessment to measure staff perceptions related to the six dimensions of a professional learning community. The study also administered the TEBS-C assessment to measure staff perceptions of collective efficacy

among the certified staff. Data collected through these assessments are proven to be reliable (α=.915, .886, .833,.861, .909).

This study used Collective Efficacy as a dependent variable and correlated it with the six dimensions of effective PLCs – Shared and Supportive Leadership, Structural Conditions, Supportive Relational Conditions, and Shared Values and Vision.

The study is limited in that it only surveyed middle school teachers in one district but the results should impact current practice as well as inform and guide future practice and research.

CHAPTER 4

RESULTS

Purpose Statement

The purpose of this study was to identify correlations between two strands of educational research that have the potential for positively impacting student achievement. It examined teacher perceptions of Professional Learning Communities within their school in the context of Hord's (1997) six dimensions of effective PLC's. Furthermore, it examined teacher perceptions of the collective efficacy of their faculty. The study correlated teacher perceptions between these two subjects and will seek to quantify the relationship between professional learning communities and teacher efficacy. Results of the research will be used to advocate for the implementation of professional learning communities as an effective way to increase efficacy of teachers.

Using the Professional Learning Communities Assessment-Revised survey of teacher perceptions of professional learning communities and the Teacher Efficacy Beliefs Scale Collective the researcher sought to determine the correlation between each teacher perceptions within each characteristic of professional learning communities and the teacher perceptions of collective collective-efficacy.

Research Questions

Two research questions guided how the results were collected and reported:

1. What is the relationship between perceptions of Professional Learning Communities and the perceptions of Teacher Collective-Efficacy?

2. Which components of Professional Learning Communities have the strongest correlation to Teacher Collective-Efficacy?

Data were collected using a survey comprised of PLCA-R and TEBS-C which featured a Likert scale rating of statements regarding Hord's six dimensions of a Professional Learning Community compiled with ten collective teacher efficacy items designed by Olivier (2001), and a demographic section for each certified staff member. As mentioned in Chapter 3 the survey yielded a strong internal consistence for Cronbach's alpha (A=.92) for the total items.

Descriptive Statistics

Five schools were invited to participate in the study and all five agreed to participate (100%). A total of 199 teachers were invited to participate and 133 agreed. See table 4.1 below for a school participation rate.

Table 4.1 Participation rates by school

School	Certified Staff	Participants	Participation Rate
Caudill Middle	43	33	76.7%
Clark-Moores Middle	42	22	52.4%
Farristown Middle	36	27	75.0%
Foley Middle	39	22	56.4%
Madison Middle	39	29	74.4%
Total	199	133	66.8%

The PLCA-R Instrument asked respondents to rate statements using a Likert scale 1-Strongly Disagree, 2-Disagree, 3-Agree, or 4-Strongly Agree. The mean of responses to each question reveal the general sentiment of teachers regarding each question. When

most teachers agree/strongly agree with a statement the mean will approach four. If most teachers disagree/strongly disagree with a statement the mean will move closer to one. In this survey most teachers agreed/strongly agreed with the statements from the PLCA-R. There are a total of 6,875 responses to statements on the PLCA-R. 3,744 responses were 3-Agree (54%) and 2,393 responses were 4-Strongly Agree (35%).

Responses were sorted by school. The mean of the questions from the PLCA-R ranged from 3.06 to 3.38 (see Table 4.2). Mean response to statements of the TEBS-C regarding Teacher Collective efficacy ranged from 3.08 to 3.32 (see Table 4.2).

Table 4.2 PLCA-R means by school

School	PLC Dimension Mean	Efficacy
B. Michael Caudill Middle	3.184341	3.254209
Clark Moores Middle	3.230324	3.240909
Farristown Middle	3.319956	3.288889
Foley Middle	3.385665	3.32381
Madison Middle	3.068426	3.088095

Table 4.3 represents the percentage of responses to each statement within the dimension of Shared and Supportive Leadership. The greatest number of positive responses was to the statement "Staff members use multiple sources of data to make decisions about teaching and learning" (96% agree/strongly agree) followed closely by "The principal is proactive and addresses areas where support is needed" (94% agree/strongly agree). This yields a higher mean for these two statements as you can see in table 4.4. "Staff members use multiple sources of data to make decisions about

teaching and learning" had a mean of 3.5 and "The principal is proactive and addresses areas where support is needed" had a mean of 3.42.

The question with which there was less agreement by teachers is "Staff members are consistently involved in discussing and making decisions about most school issues" (20% disagree/strongly disagree, mean 3.01). 17% of respondents disagreed and 4% strongly disagreed with the statement "The principal participates democratically with sharing power and authority" (mean 3.07).

Table 4.3 Shared and Supportive Leadership valid percent responses

Question	Strongly Disagree	Disagree	Agree	Strongly Agree
Staff members are consistently involved in discussing and making decisions about most school issues	5%	15%	56%	25%
The principal incorporates advice from staff members to make decisions	5%	10%	51%	35%
Staff members have accessibility to key information	2%	12%	57%	29%
The principal is proactive and addresses areas where support is needed	1%	5%	44%	50%
Opportunities are provided for staff members to initiate change	4%	11%	59%	26%
The principal shares responsibility and rewards for innovative actions	1%	7%	55%	38%
The principal participates democratically with sharing power and authority	4%	17%	50%	30%
Leadership is promoted and nurtured among staff members	3%	11%	47%	38%
Decision making takes place through committees and communication across grade and subject areas	2%	14%	47%	36%
Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority	0%	8%	68%	24%
Staff members use multiple sources of data to make decisions about teaching and learning	0%	4%	43%	53%

Table 4.4 Shared and Supportive Leadership means and standard deviations

Shared and Supportive Leadership Items Means in Descending Order

Descriptive Statistics

	N	Mean	Std. Deviation
Staff members use multiple sources of da ta to make decisions about teaching and learning	133	3.50	.572
The principal is proactive and addresses areas where support is needed	133	3.44	.632
The principal shares responsibility and re wards for innovative actions	133	3.29	.625
Leadership is promoted and nurtured am ong staff members	133	3.21	.759
Decision making takes place through co mmittees and communication across grad e and subject areas	132	3.17	.757
Stakeholders assume shared responsibilit y and accountability for student learning without evidence of imposed power and authority	133	3.16	.548
The principal incorporates advice from st aff members to make decisions	133	3.16	.777
Staff members have accessibility to key i nformation	133	3.14	.676
Opportunities are provided for staff mem bers to initiate change	133	3.07	.720
The principal participates democratically with sharing power and authority	133	3.06	.786

Table 4.4 (continued)

	N	Mean	Std. Deviation
Staff members are consistently involved i n discussing and making decisions about most school issues	133	3.01	.764
Valid N (listwise)	132		

Data from the dimension of Shared Values and Vision is located in Tables 4.5 (valid percents) and 4.6 (means and standard deviations). Mean values for statements in this dimension range from 3.36 to 3.06. The statements most agreed with are "Decisions are made in alignment with the school's values and vision" along with "Data are used to prioritize actions to reach a shared vision", and "Policies and programs are aligned to the school's vision" with means of 3.36, 3.35, and 3.34 respectively. The lowest means were recorded in responses to "School goals focus on student learning beyond test scores and grades" and "A collaborative process exists for developing a shared vision among staff" (3.09, and 3.06). All means within this dimension exceeded 3.0 and most respondents agreed or strongly agreed with each statement.

Table 4.5 Shared Values and Vision valid percents

Question	Strongly Disagree	Disagree	Agree	Strongly Agree
A collaborative process exists for developing a shared sense of values among staff	0%	13%	56%	32%
Shared values support norms of behavior that guide decisions about teaching and learning	0%	9%	63%	28%
Staff members share visions for school improvement that have undeviating focus on student learning	0%	8%	60%	32%
Decisions are made in alignment with the school's values and vision	0%	3%	58%	39%
A collaborative process exists for developing a shared vision among staff	2%	15%	57%	26%
School goals focus on student learning beyond test scores and grades	4%	19%	42%	35%
Policies and programs are aligned to the school's vision	0%	5%	57%	38%
Stakeholders are actively involved in creating high expectations that serve to increase student achievement	0%	7%	60%	33%
Data are used to prioritize actions to reach a shared vision	2%	5%	50%	43%

Table 4.6 Shared Values and Vision means and standard deviations

Shared Values and Vision Item Means in Descending Order

Descriptive Statistics

	N	Mean	Std. Deviation
Decisions are made in alignment with the school's values and vision	132	3.36	.540
Data are used to prioritize actions to reach a shared vision	133	3.35	.652
Policies and programs are aligned to the school's vision	133	3.34	.563
Stakeholders are actively involved in creating high expectations that serve to increase student achievement	133	3.26	.576
Staff members share visions for school improvement that have undeviating focus on student learning	133	3.25	.583
Shared values support norms of behavior that guide decisions about teaching and learning	133	3.19	.579
A collaborative process exists for developing a shared sense of values among staff	133	3.19	.641
School goals focus on student learning beyond test scores and grades	133	3.09	.830
A collaborative process exists for developing a shared vision among staff	133	3.06	.705

Table 4.7 illustrates responses within the dimension of Supportive Conditions-Relationships. This dimensions has the smallest number of questions (5) and respondents agreed with 50% of the statements and strongly agreed with 40% of the statements.

Mean values and standard deviation of each question are recorded in Table 4.8. The mean of each question exceeded 3.0. The strongest agreement was with the statement "Caring relationships exist among staff and students that are built on trust and respect" with a mean of 3.55. The smallest amount of agreement was in response to the statement "School staff and stakeholders exhibit a sustained and united effort to embed change into the culture of the school" with a mean of 3.08 and 16% of respondents disagreeing with this statement.

Table 4.7 Supportive Conditions-Relationships valid percents

Question	Strongly Disagree	Disagree	Agree	Strongly Agree
Caring relationships exist among staff and students that are built on trust and respect	0%	3%	48%	48%
A culture of trust and respect exists for taking risks	2%	8%	47%	43%
Outstanding achievement is recognized and celebrated regularly in our school	1%	10%	48%	41%
School staff and stakeholders exhibit a sustained and united effort to embed change into the culture of the school	2%	14%	59%	25%
Relationships among staff members support honest and respectful examination of data to enhance teaching and learning	2%	8%	49%	42%

Table 4.8 Supportive Conditions-Relationships means and standard deviations

Supportive Conditions - Relationships Item Means in Descending Order

Descriptive Statistics

	N	Mean	Std. Deviation
Caring relationships exist among staff and students that are built o n trust and respect	132	3.45	.558
A culture of trust and respect exists for taking risks	132	3.32	.691
Relationships among staff members support honest and respectful examination of data to enhance teaching and learning	131	3.31	.680
Outstanding achievement is recognized and celebrated regularly in our school	131	3.30	.676
School staff and stakeholders exhibit a sustain ed and united effort to embed change into the culture of the school	132	3.08	.672

Data regarding responses to the statements within the dimension Supportive Conditions-Structures are found in Tables 4.9 and 4.10. Table 4.10 represent the means in descending order and standard deviations for answers to questions from the PLCA-R regarding the Structural Conditions variable. This data demonstrates that teachers perceive their school facility to be "clean, attractive and inviting" with a mean of 3.24. There was a high degree of agreement with the statement "data are organized and made available for easy access to staff members" with 95% of responses as agree or stronger and a mean of 3.24. The statement with the lowest level of agreement was "Communication systems promote a flow of information across the entire school

community including: central office personnel, parents, and community members" with a mean of 2.98 with a .701 standard deviation. Means in this dimension ranged from 3.24 to 2.98. In comparison with other dimensions this dimension had the lowest overall level of agreement.

Table 4.9 Supportive Conditions-Structures valid percents

Question	Strongly Disagree	Disagree	Agree	Strongly Agree
Supportive Conditions-Structures				
Time is provided to facilitate collaborative work	1%	13%	57%	29%
The school schedule promotes collective learning and shared practice	1%	11%	60%	28%
Fiscal resources are available for professional development	4%	12%	55%	29%
Appropriate technology and instructional materials are available to staff	3%	11%	49%	37%
Resource people provide expertise and support for continuous learning	2%	9%	63%	26%
The school facility is clean, attractive and inviting	5%	14%	32%	49%
The proximity of grade level and department personnel allows for ease in collaborating with colleagues	4%	12%	48%	36%
Communication systems promote a flow of information among staff members	2%	10%	58%	30%
Communication systems promote a flow of information across the entire school community including: central office personnel, parents, and community members	2%	21%	56%	22%
Data are organized and made available to provide easy access to staff members	0%	5%	66%	29%

Table 4.10 Supportive Conditions-Structures means and standard deviations

Supportive Conditions - Structures

Descriptive Statistics

	N	Mean	Std. Deviation
The school facility is clean, attractive and inviting	131	3.24	.887
Data are organized and made available to provide easy access to staff members	131	3.24	.528
Appropriate technology and instructional materials are available to staff	131	3.19	.756
The school schedule promotes collective learning and shared practice	131	3.16	.630
The proximity of grade level and department personnel allows for ease in collaborating with colleagues	131	3.16	.783
Communication systems promote a flow of information among staff members	131	3.15	.685
Time is provided to facilitate collaborative work	131	3.15	.658
Resource people provide expertise and support for continuous learning	131	3.12	.657
Fiscal resources are available for professional development	131	3.09	.749
Communication systems promote a flow of information across the entire school community including: central office personnel, parents, and community members	131	2.98	.701

Descriptive statistics for the dimension of Collective Learning and Application are found in tables 4.11 and 4.12. “School staff members are committed to programs that enhance learning” had the strongest agreement with a mean of 3.39 and 95% of

respondents agreed/strongly agreed with this statement. There was also strong agreement with the statement "Staff members plan and work together to search for solutions to address diverse student needs" with a mean of 3.37.

Respondents had a strong level of agreement with all questions within this dimension. The means ranged from 3.2 to 3.39 and nearly 90% of all responses were agree/strongly agree. The statements with the lowest level of agreement were "School staff members and stakeholders learn together and apply new knowledge to solve problems" and Staff members engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry" each with a mean of 3.20.

Table 4.11 Collective Learning and Application valid percents

Question	Strongly Disagree	Disagree	Agree	Strongly Agree
Collective Learning and Application				
Staff members work together to seek knowledge, skills, and strategies and apply this new learning to their work	1%	5%	59%	35%
Collegial relationships exist among staff members that reflect commitment to school improvement efforts	2%	4%	62%	33%
Staff members plan and work together to search for solutions to address diverse student needs	1%	6%	49%	44%
A variety of opportunities and structures exist for collective learning through open dialogue	0%	6%	66%	28%
Staff members engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry	2%	9%	58%	32%
Professional development focuses on teaching and learning	2%	11%	42%	46%
School staff members and stakeholders learn together and apply new knowledge to solve problems	0%	8%	64%	28%
School staff members are committed to programs that enhance learning	0%	5%	52%	44%
Staff members collaboratively analyze multiple sources of data to assess the effectiveness of instructional practices	0%	12%	44%	44%
Staff members collaboratively analyze student work to improve teaching and learning	0%	10%	49%	41%

Table 4.12 Collective Learning and Application valid percents means and standard deviations

Collective Learning and Application Item Means in Descending Order

Descriptive Statistics

	N	Mean	Std. Deviation
School staff members are committed to programs that enhance learning	132	3.39	.576
Staff members plan and work together to search for s olutions to address diverse student needs	133	3.37	.633
Professional development focuses on teaching and lea rning	133	3.32	.724
Staff members collaboratively analyze multiple sourc es of data to assess the effectiveness of instructional pr actices	132	3.32	.680
Staff members collaboratively analyze student work to improve teaching and learning	132	3.31	.644
Staff members work together to seek knowledge, skill s, and strategies and apply this new learning to their w ork	133	3.29	.598
Collegial relationships exist among staff members that reflect commitment to school improvement efforts	133	3.26	.602
A variety of opportunities and structures exist for collective learnin g through open dialogue	132	3.22	.543
School staff members and stakeholders learn together and apply new knowledge to solve problems	132	3.20	.563
Staff members engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry	133	3.20	.657
Valid N (listwise)	131		

The dimension of shared personal practice is recorded in Table 4.13 which shows the valid percent of responses to each statement. In this dimension respondents agreed with 92% of all questions within this dimension. The strongest level of agreement came to the statement "Staff members informally share ideas and suggestions for improving student learning".

Responses to statements within the dimension of Shared Personal Practice had mean values of 3.44 to 3.07 as illustrated in Table 4.14. The strongest level of agreement to the statement "Staff members informally share ideas and suggestions for improving student learning" and "Opportunities exist for staff members to observe peers and offer encouragement". The lowest level of agreement came to the statements "Opportunities exist for coaching and mentoring" and "Staff members regularly share student work to guide overall school improvement" with means of 3.09 and 3.07 respectively.

Table 4.13 Shared Personal Practice valid percents means and standard deviations

Question	Strongly Disagree	Disagree	Agree	Strongly Agree
Shared Personal Practice				
Opportunities exist for staff members to observe peers and offer encouragement	1%	2%	58%	40%
Staff members provide feedback to peers related to instructional practices	1%	5%	61%	33%
Staff members informally share ideas and suggestions for improving student learning	0%	2%	52%	46%
Staff members collaboratively review student work to share and improve instructional practices	2%	14%	56%	29%
Opportunities exist for coaching and mentoring	3%	11%	61%	26%
Individuals and teams have the opportunity to apply learning and share the results of their practices	0%	5%	62%	33%
Staff members regularly share student work to guide overall school improvement	2%	14%	61%	23%

Table 4.14 Shared Personal Practice means and standard deviations

Shared Personal Practice Item Means in Descending Order

Descriptive Statistics

	N	Mean	Std. Deviation
Staff members informally share ideas and suggestions for improving student learning	132	3.44	.542
Opportunities exist for staff members to observe p eers and offer encouragement	132	3.36	.556
Individuals and teams have the opportunity to appl y learning and share the results of their practices	132	3.29	.546
Staff members provide feedback to peers related to instructional practices	132	3.26	.588
Staff members collaboratively review student work to share and improve instructional pr actices	132	3.12	.688
Opportunities exist for coaching and mentoring	132	3.09	.693
Staff members regularly share student work to guide overall school improve ment	132	3.07	.656
Valid N (listwise)	132		

Table 4.15 illustrates the percentage of responses to all questions within each dimension of Professional Learning Communities. All dimensions had high levels of agreement with the statements (86%-93% agree/strongly agree). The dimension with the strongest level of agreement is Shared Values and Vision followed by Shared Personal Practice.

Table 4:15 Survey response distribution by dimension

Question Dimension	Strongly Disagree	Disagree	Agree	Strongly Agree	Total Responses
Collective Efficacy	0.9%	7.3%	53.7%	38.1%	1308
Shared and Supportive Leadership	2.3%	10.4%	52.4%	35.0%	1462
Shared Personal Practice	1.1%	7.4%	58.8%	32.9%	924
Collective Learning and Application	0.8%	9.2%	56.0%	33.9%	1196
Shared Values and Vision	0.6%	7.5%	54.4%	37.5%	1325
Supportive Conditions-Relationships	1.1%	8.7%	50.3%	40.0%	658
Supportive Conditions-Structures	2.4%	11.8%	54.4%	31.5%	1310

Teacher Collective Efficacy was measured through responses to the TEBS-C instrument. Table 4.16 illustrates the valid percent of responses in each category for each of the 10 statements on this instrument. Table 4.17 represents the means and standard deviations for each question on the instrument. "Our faculty has a strong collective belief in our capabilities to maintain a school environment in which students feel good about themselves" (mean 3.45) and "Our faculty has a strong collective belief in our capabilities to produce high levels of learning for all students" (mean 3.40) had the strongest level of agreement.

The two statements with the lowest level of agreement were "Our faculty has a strong collective belief in our capabilities to manage student behavior" (14% disagree/strongly disagree) and "Our faculty has a strong collective belief in our capabilities to work with disadvantaged or troublesome students" (16% disagree/strongly disagree).

Table 4.16 Collective Efficacy valid percents

Question	Strongly Disagree	Disagree	Agree	Strongly Agree
Collective Efficacy				
Our faculty has a strong collective belief in our capabilities to carry out decisions and plans designed for school-wide improvements	1%	8%	53%	38%
Our faculty has a strong collective belief in our capabilities to produce high levels of learning for all students	0%	4%	53%	44%
Our faculty has a strong collective belief in our capabilities to create ways to improve the school environment	0%	8%	55%	37%
Our faculty has a strong collective belief in our capabilities to maintain effective communications with parents and the larger community	0%	4%	57%	39%
Our faculty has a strong collective belief in our capabilities to support each other in addressing new initiatives	0%	6%	60%	34%
Our faculty has a strong collective belief in our capabilities to maintain a school environment in which students feel good about themselves	0%	2%	50%	47%
Our faculty has a strong collective belief in our capabilities to provide input in making important school decisions	1%	9%	60%	30%
Our faculty has a strong collective belief in our capabilities to effectively communicate with school administration	2%	9%	46%	44%
Our faculty has a strong collective belief in our capabilities to work with disadvantaged or troublesome students	2%	14%	50%	34%
Our faculty has a strong collective belief in our capabilities to manage student behavior	4%	10%	53%	34%

Table 4.17 Collective Efficacy valid percents means and standard deviations

Collective Efficacy Item Means in Descending Order

Descriptive Statistics

	N	Mean	Std. Deviation
Our faculty has a strong collective belief in our capabilities to maintain a school environment in which students feel good about themselves	131	3.45	.544
Our faculty has a strong collective belief in our capabilities to produce high levels of learning for all students	131	3.40	.564
Our faculty has a strong collective belief in our capabilities to maintain effective communications with parents and the larger community	131	3.35	.554
Our faculty has a strong collective belief in our capabilities to effectively communicate with school administration	131	3.31	.703
Our faculty has a strong collective belief in our capabilities to create ways to improve the school environment	131	3.30	.604
Our faculty has a strong collective belief in our capabilities to carry out decisions and plans designed for school-wide improvements	130	3.29	.640
Our faculty has a strong collective belief in our capabilities to support each other in addressing new initiatives	131	3.27	.569
Our faculty has a strong collective belief in our capabilities to provide input in making important school decisions	130	3.19	.624
Our faculty has a strong collective belief in our capabilities to manage student behavior	131	3.16	.753
Our faculty has a strong collective belief in our capabilities to work with disadvantaged or troublesome students	131	3.16	.742

Table 4.17 (continued			
	N	Mean	Std. Deviation
Valid N (listwise)	129		

Multiple Regression Analysis

A standard multiple regression analysis was performed on the data utilizing Collective Efficacy as the dependent variable and the six dimensions of effective PLC's as the predictor variables (see table 4.18).

The model was significant (.000) therefore, collectively knowing the mean of responses to statements within the six dimensions of effective PLC's (Supportive Conditions-Structures, Supportive Conditions-Relationships, Shared Personal Practice, Shared and Supportive Leadership, Collective Learning and Application, and Shared Values and Vision) as measured by the PLCA-R allows one to predict Collective Efficacy better than not knowing these variables. ($F=35.531$, $p<.000$, $R2=.683$). The six predictor variables account for 68.3% of the variance in Collective Efficacy ($R2=.683$)

Supportive Conditions-Relationships and Supportive Conditions-Structures are significant predictors of Teacher Collective Efficacy while Shared and Supportive Leadership, Shared Values and Vision, Collective Learning and Application, and Shared Personal Practice are non-significant. Table 4.19 denotes the specific significance values for each dimension.

Supportive Conditions-Relationships and Supportive Conditions-Structures are positively related to Collective Efficacy. As they increase Collective Efficacy increases. The best predictor of Collective Efficacy in this research is Supportive

Conditions-Relationships (B=.371) followed by Supportive Conditions-Structures (B=.248) which is a small to moderate predictor. The values for each dimension are listed in Table 4.19.

Table 4.18 Regression Collective Efficacy on PLC Variables

ANOVA

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.826[a]	.683	.664	.25676
a. Predictors: (Constant), Supportive Conditions-Relationships, Supportive Conditions-Structures, Shared Personal Practice, Shared and Supportive Leadership, Collective Learning and Application, Shared Values and Vision				

Table 4.19 Coefficients on Collective Efficacy

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.270	.217		1.246	.216
	Shared and Supportive Leadership	.140	.089	.155	1.569	.120
	Shared Values and Vision	.015	.111	.015	.131	.896
	Collective Learning and Application	.146	.101	.142	1.447	.151
	Shared Personal Practice	.056	.088	.055	.633	.528
	Supportive Conditions-Relationships	.330	.075	.371	4.379	.000
	Supportive Conditions-Structures	.234	.078	.248	2.992	.003
a. Dependent Variable: Collective Efficacy						

CHAPTER 5

CONCLUSIONS AND DISCUSSION

Purpose Statement

The purpose of this quantitative study is to assess the correlation between teacher perceptions of the level of implementation of professional learning communities within their school and teacher perceptions of their collective-efficacy. This study demonstrates the relationship between implementation of professional learning and teacher collective-efficacy. It reveals the importance of several components of professional learning communities in providing the structures necessary to increase teacher efficacy and will help sustain policies that currently support collaborative professional learning.

Research Questions

This study assessed and provides a basis for scholarly discussion on the following questions:

- What is the relationship between perceptions of Professional Learning Communities and Teacher Collective-Efficacy?
- Which components of Professional Learning Communities have the strongest correlation to Teacher Collective-Efficacy?

Description of Research Design

This quantitative study utilizes the PLCA-R and the TEBS-C survey instruments administered to teachers in five middle schools (Farristown Middle, Foley Middle, Clark-

Moores Middle, B. Michael Caudill Middle, and Madison Middle) in the Madison County School District. There are 199 teachers in these five schools and a total of 133 surveys were collected (66.8%). analyzed, compared, and data correlated to determine the relationships that exist between teacher perceptions of implementation of professional learning communities and teacher perceptions of collective-efficacy.

The PLCA-R (52 questions) and the TEBS-C (10 questions) were combined into a single document along with eight demographic questions for a combined survey of 70 questions.

The statements from the PLCA-R are subdivided into sections which represent the dimensions of effective PLC's. Data were combined and analyzed within the context of these six dimensions and correlated with responses to statements from the TEBS-C measuring teacher perceptions of collective efficacy among staff. Reliability tests were ran on the data to check for consistency and reliability.

Descriptive Statistics were analyzed along with a multiple regression to determine the perceptions and the relationships that exist. Collective Efficacy was used as the dependent variable within the multiple regression to determine the impact of the predictor variables.

Summary of Findings and Implications

Descriptive Research

Descriptive statistics were analyzed and revealed that teachers agreed/strongly agreed with most statements that were presented (89.6% agree/strongly agree) on the PLCA-R and TEBS-C.

The TEBS-C section of the survey revealed a high level of collective efficacy among the respondents (91.8% agree/strongly agree). This indicates that the teachers believe their schools have the ability to positively impact student achievement and outcomes for students. The two statements with the lowest mean on this section of the survey were "Our faculty has a strong collective belief in our capabilities to manage student behavior" and "Our faculty has a strong collective belief in our capabilities to work with disadvantaged or troublesome students" with a mean of 3.16 for each statement. This mean is above the 3.0 mark and the majority of respondents (84%) agreed with the statements but the level of agreement was less than all other statements in this domain. This indicates that while teachers feel that they can positively impact outcomes for disadvantaged/troublesome\disobedient students teachers are less confident in those abilities.

The statements within collective efficacy with the strongest level of agreement are "Our faculty has a strong collective belief in our capabilities to maintain a school environment in which students feel good about themselves" and "Our faculty has a strong collective belief in our capabilities to produce high levels of learning for all students" (means of 3.45 and 3.40 respectively). This indicates that teachers are predominantly confident in their ability to positively impact outcomes for students.

Shared Values and Vision

The PLCA-R results showed that the PLC dimension with the strongest level of agreement (91.9 % agree/strongly agree) is Shared Values and Vision. This indicates that teachers generally agree that their policies, mission, vision, and goals are consistently aligned throughout the school and decisions are based on that collective practice. The

strong level of agreement from teachers in the sample group indicates a solid foundation for the emergence of effective professional learning communities. Huffman (2003) stated, “Changing the culture of an organization is a difficult and time consuming process that must have at its center the development and working knowledge of a vision shared by all stakeholders” (p. 22).

Building a shared vision requires collaborative work by teachers. Senge (1990) warned that the development of a vision be driven by teachers noting that a vision created by a leader is not typically sustained. Hord (1997) suggested that developing a shared vision requires a paradigm shift in thinking and professional practice. DuFour, DuFour, and Eaker (2008) suggested that teachers must connect with vision through personal experiences and values before it is truly a shared vision and Dufour and Eaker (1998) noted that when teachers work together to build a school vision they feel more connected and collaboratively work to accomplish collective goals. Given the research presented school leaders would be better served to create opportunities for teachers to assemble for the purpose of developing a shared vision rather than spending time developing the vision themselves.

Shared Personal Practice

Shared Personal Practice was the dimension with the second highest level of agreement (91.7% agree/strongly agree). This suggests that teachers feel that they leverage opportunities to work together collaboratively and share their best ideas/practice.

This dimension is more that just sharing lesson plans. It involves a genuine sharing of ideas that compel teachers to improve practice and subsequently increase

student achievement. This is difficult to accomplish because, as Huffman and Hipp (2003) found, it takes repeated practice before sharing becomes the norm.

It would benefit educators to put a stronger emphasis on shared personal practice and create structures that enhance the ability of teachers to collaborate. Job imbedded professional development is important but, as DuFour, DuFour, and Eaker (2008) note, it needs to extend beyond individual events such as workshops and courses. The research regarding Shared Personal Practice demonstrates that coaching, mentoring, feedback, and observation lead to improved efficacy. When teacher work in consultation with peers and reflect on personal practice their teacher efficacy is enhanced (Blasé and Blasé, 2006, p. 22). Sharing student work, peer observation, and non-evaluative feedback are effective methods that develop shared, supportive practice.

Collective Learning and Application

Collective Learning and Application has a significant level of agreement with the statements on the survey instrument (89.9% agree/strongly agree). This dimension incorporates the professional development and training that teachers attend and the level of commitment that teachers perceive around those initiatives. The focus is on application of knowledge rather than simply knowledge.

Leaders should emphasize the creation of an environment that supports collective learning and application. A significant challenge noted by DuFour and Eaker (1998) is a lack of willingness by teachers to share their practice with colleagues. This reluctance can be mitigated through environments that support collective learning and application which lead teachers to value collaboration, share information, and exhibit a willingness to improve practice (Huffman and Hipp, 2003). Routine dialogue with colleagues helps

connect learning with application and enhances pedagogical skills (Sparks, 2005), therefore, school leaders should structure purposeful opportunities for teacher collaboration that transfer professional knowledge into classroom application in the context of student learning. These opportunities should be intentionally designed to yield conversations about instructional practice, innovation, data, and intervention to meet student needs. A substantial amount of research supports the need for structures and routines, such as protocol accompanied by oversight and monitoring by the school and district (DuFour & Eaker, 1998).

Shared Supportive Leadership

Respondents disagreed/strongly disagreed with 12.7% of the statements within the dimension of Shared and supportive leadership yet this dimension had the highest mean (3.33) of any dimension. This dimension focuses on the leadership in the building and poses several questions directly concerning the building principal. Other statements assert the level of involvement that teachers have in leadership decisions. The high mean and lower level of agreement indicate that teachers are more polarized around this issue. Those with a positive perception of the principal/building leadership had a tendency to strongly agree (4 on the Likert scale) with statements on leadership while those with a negative perception were more likely to strongly disagree with those statements.

Shared leadership is very important. Hord (1997) noted that shared leadership within a professional learning community promotes a collective approach to school improvement. Reeves (2011) states

> 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).

Effective leadership should create experiences and opportunities for all to participate in leadership roles. Fullan (2003) describes this as "using capacity to build capacity" (p. vx). Shared leadership enhances and strengthens the leadership skills of the members of the PLC (Blase, Blase, Anderson, & Dungan, 1995). Shared leadership will enhance teacher efficacy and Bandura (1993) noted that collective efficacy does not get depleted by its use; it becomes expanded.

The principal is key in fostering a shared leadership culture (Fullan 2014). Hord (1997) stated the principal should "let go of the power and his/her own sense of omnipotence and thereby share the leadership of the school" (p. 17). Principals should seek out and strategically highlight teacher who are experts in key areas to improve collective pedagogy. The principal should take the lead role to transform culture by collaborating with teachers and supporting their work as a participatory member of the professional learning community (Marks & Printy, 2003).

This work cannot happen all at once, there is a progression for moving from a single leader team to shared leadership. Huffman (2003) recommends to initially focus on building capacity through minor problem solving and then progressing to larger, more polarizing problems. Developing a formal plan for shared leadership is an effective approach as well. Solansky (2008) found that teams using formalized shared leadership in performing specific tasks significantly outperform single leader teams.

Supportive Conditions-Relationships

The dimension of Supportive Conditions-Relationships has a strong level of agreement (90.3% agree/strongly agree). This reflects a strong culture of trust and respect within the schools. It is imperative for school leaders to support empathy and interaction among teams. Leaders should model sensitivity and be aware of the feelings that have a potential to disturb collaborative work. Leaders with their finger on the pulse of the school climate can address issues that might otherwise create dissention.

Leaders should work toward building a culture of trust and respect. Trust and respect are necessary for teachers to work together and have honest conversations around data and the areas for improvement. When an environment of trust is created people are more willing to accept professional feedback that leads to improvement (Louis & Kruse, 1995). Friedman (2005) determined that the trust among group members is critical to the existence of relationship conditions which support implementation of professional learning communities. Trust fosters collegial relationships which, in turn, build respect, norms of continuous learning and improvement, risk taking, and positive teacher attitudes (Hipp & Huffman, 2003).

Supportive Conditions-Structures

The dimension with the weakest level of agreement from teachers was that of Supportive Conditions-Structures (85.9% agree/strongly agree). This dimension also had the lowest mean (3.17). Statements in this category were centered around availability/dedication of resources. Resources included in these statements were time, funding, facilities, and communication resources. This gives us strong indication that while teachers are generally positive about allocation of these resources they are much

less likely to agree or strongly agree that the school has committed resources to support teachers.

Conditions must be in place to make sure that PLCs aren‘t just invitational but are common practice within the school. Two beneficial structures that school leaders can put in place to support effective implementation of a professional learning community are time and proximity.

Time is frequently mentioned as a barrier to collaboration in schools (Hord & Sommers, 2008). Principals can remove this barrier by scheduling time throughout the instructional day for job-imbedded professional learning (Louis & Kruse, 1995). Barton and Stepabek (2012) indicated that, “building time into the schedule for PLCs is one of the most important steps a principal can take” (p. 3).

The physical structure of the building and location of teachers within the building in relation to their colleagues is another structure that can impact the success of a professional learning community. If leaders expect teachers to continually collaborate and share practice the teachers must be located close enough to each other that is possible to communicate and visit during the school day. Louis and Kruse (1995) posit that student achievement increases when teachers are in close proximity to colleagues.

Building a true professional learning community requires more than just structures that increase opportunities for collaboration. Hargreaves and Fullan (2012) warn about “administrative contrivances” that create an illusion of collaboration. Such activities force people to be in the same room but do not establish the expectations and other structures necessary to compel teachers to collaboratively solve problems.

Findings

This study sought to answer the following two questions:

- What is the relationship between perceptions of Professional Learning Communities and Teacher Collective-Efficacy?
- Which components of Professional Learning Communities have the strongest correlation to Teacher Collective-Efficacy?

A standard multiple regression analysis was performed on the data utilizing Collective Efficacy as the dependent variable and the six dimensions of effective PLC's as the predictor variables.

The model is significant (.000) therefore collectively knowing the mean of responses to statements within the six dimensions of effective PLC's (Supportive Conditions-Structures, Supportive Conditions-Relationships, Shared Personal Practice, Shared and Supportive Leadership, Collective Learning and Application, and Shared Values and Vision) as measured by the PLCA-R allows one to predict Collective Efficacy better than not knowing these variables. ($F=35.531$, $p<.000$, $R^2=.683$). The six predictor variables account for 68.3% of the variance in Collective Efficacy ($R^2=.683$)

Supportive Conditions-Relationships and Supportive Conditions-Structures are significant predictors of Teacher Collective Efficacy while Shared and Supportive Leadership, Shared Values and Vision, Collective Learning and Application, and Shared Personal Practice are non-significant.

Supportive Conditions-Relationships and Supportive Conditions-Structures are positively related to Collective Efficacy. As they increase Collective Efficacy increases.

The best predictor of Collective Efficacy is Supportive Conditions-Relaionships (β=.371) followed by Supportive Conditions-Structures (β=.248) as a small to moderate predictor.

Research Question One

What is the relationship between perceptions of Professional Learning Communities and Teacher Collective-Efficacy?

Discussion

When all dimensions of an effective PLC are considered collectively there is a significant relationship that exists with Teacher Collective Efficacy. This research indicates that 68% of the variance in Teacher Collective Efficacy can be explained by the Dimensions of effective PLC's. When the dimensions of effective PLC's are in place there is a higher level of teacher collective efficacy and when collective efficacy is lower there is also a lower level perceived implementation of the dimensions of effective PLC's.

Research question two

Which components of Professional Learning Communities have the strongest correlation to Teacher Collective-Efficacy?

Discussion

The correlations showed each of the dimensions to be related to efficacy, but when controlling for other dimensions, four of the six dimensions became insignificant. Only Supporting Conditions-Relationships and Supporting Conditions-Structures had a significant individual relationship. Each dimension had a positive correlation meaning

that as the dimension increased teacher collective efficacy increased. Supporting Conditions-Relationships was the strongest predictor (b=.371) and Supporting Conditions-Structures is a small to moderate predictor (b=.248).

Implications

There are 3 implications that result from this research. The first is that improving the dimensions of PLC's as a whole will positively impact collective efficacy of teachers. Collective Efficacy, more than all factors, is a strong predicator of a school's performance (Hattie, 2017) and school leaders who work to enhance collective teacher efficacy will make greater strides in closing the achievement gap (Brinson & Steiner, 2007).

Implementing systems and structures that are indicative of these attributes should increase teacher efficacy. Creating systems that involve teachers in decision-making, align goals with the school mission, establish policies that are consistent with the vision, use data for decision-making, provide opportunities for teacher collaboration, and promote a flow of information through effective communication systems will increase teacher efficacy and subsequently student achievement.

The second implication from this research is that the dimension of Supportive Conditions-Relationships is the strongest predictors of Collective Efficacy. This indicates that schools must create an atmosphere of trust and mutual respect among staff members and establish caring relationships built on that trust. These relationships and conditions will support honest and respectful examination of the data that will enhance teaching and learning and sustain a united effort to embed change into the culture of the school. It is important to recognize the achievements of staff and the school as positive change occurs.

The third implication from this research is that the dimension of Supportive Conditions-Structures is a strong predictor of Collective Efficacy. This indicates that school leaders should put structures in place which support collaboration. One such structure is imbedded professional learning that allows for the time necessary to collaborate.

Considering these three implications and the available body of research the following recommendations result from this study. It is the recommendation of this researcher that school leaders work to implement the following: create opportunities for teachers to assemble for the purpose of developing a shared vision, work toward building a culture of trust and respect, create experiences and opportunities for all to participate in leadership roles, create environments that support collective learning, and structure purposeful opportunities for teacher collaboration.

Specifically the following actions are recommended: Leaders should model sensitivity and be aware of the feelings that have a potential to disturb collaborative work, have honest conversations around data and the areas for improvement, use capacity to build capacity. These opportunities should be intentionally designed to yield conversations about instructional practice and may include protocols accompanied by oversight from the district.

Insignificant Factors

Individually the dimensions of Shared Supportive Leadership, Shared Personal Practice, Collective Learning and Application, and Shared Vision and Values, once controlled for all other dimensions were not significant ($R^2 > .005$). This analysis,

combined with the collective significance and relationship, leads me to conclude that it is important for all dimensions of effective PLC's need to be in place in order to positively impact Collective Efficacy and subsequently student achievement (Hord, 1997).

Recommendations for Future Research

There are several opportunities for future research in this area. Given the data around the significance of Supportive Conditions-Relationships, a deeper understanding of the specific structures that impact Relationships is needed. Specifically, which leadership traits/styles create the highest levels of implementation of this dimension.

A second area for possible research would be within the dimension of Supportive Conditions-Structures. As previously mentioned, this dimension is primarily resource allocation. Most schools have very similar patterns and processes for allocation of resources and we all have limited resources. Research to determine the methods of resource allocation that yield the greatest perceived level of support within structures would be very beneficial.

Additional research could be done from a longitudinal perspective. One noted limitation of this study is that it is at a point in time. DuFour, DuFour, Eaker, Many, and Mattos (2016) describe the emergence of a professional learning community through various stages therefore conducting research in light of those stages could be beneficial. Future study could attempt to qualify the specific stage of implementation present at the school and then correlate the specific questions from the PLCA-R and TEBS-C to those stages. This research could be insightful and provide valuable information that could impact practice and conducting this research for an extended period of time, perhaps

several years, would allow for researchers to see the evolution of a professional learning community and see the impact of initiated actions.

Further research could also be done to measure the impact of these dimensions on self-efficacy. While a substantial body of research already exists on this topic a study of self-efficacy in conjunction with this study could give insight into the relationship between self-efficacy and collective-efficacy. The research in this study focused on collective efficacy and one would assume that there is a strong relationship between what teachers feel about the collective group and what teachers feel about their own ability to impact outcomes for students.

A final area for future research is the relationship of teacher leadership with each of the dimensions of effective PLC's and with collective efficacy. Many of the statements utilized in the PLCA-R form refers to "leadership" in a generic sense. The respondent and researcher is left to interpret and define "leadership". Many consider these statements and interpret "leadership" to mean the building principal however, leadership can look very different from school to school. Some schools effectively use lead teachers, committees, department heads, etc. to carry some of the leadership load. Those structures were not represented in this study but could significantly impact teacher perceptions on statements dealing with leadership.

Conclusion

Educators are tasked with improving student achievement while funding for public education has seen little or no growth in recent years. It is a common opinion supported by abundant volume of evidence that the classroom teacher is the most

important factor when it comes to student learning yet there is a wide variation in effectiveness among teachers.

Improving teacher effectiveness will have a greater impact on student achievement than any other factor and we have created complex systems of professional development in the United States to achieve this goal, unfortunately, many of our traditional professional learning efforts have been unsuccessful.

One method of professional learning for improving teacher effectiveness and subsequently student achievement is the creation of a professional learning community within the school. Research shows that implementation of professional learning communities has a positive impact on student achievement. Research further demonstrates that there is a positive relationship between professional learning communities and teacher efficacy. Results of this research should be used to advocate for the implementation of professional learning communities within schools as an effective way to increase collective-efficacy of teachers.

The value of collective-efficacy, as an important variable in student achievement, is implicitly reflected in the research. The development of collective-efficacy should become a central consideration in the structure of the school environment. Such structures would be valuable for educators to increase participation in professional learning communities that allow teachers to work in a collaborative environment which leads to a measurable increase in student achievement.

This study will add another layer of research to the body of research on the relationship between professional learning communities and teacher efficacy. The results

of this study determined that there is a strong, positive relationship between the implementation of professional learning communities and teacher collective-efficacy. Furthermore the component of Supportive Conditions-Relationships had the strongest positive correlation to teacher collective-efficacy and the component of Supportive Conditions-Structures also had a strong, positive correlation with teacher collective-efficacy.

Leaders should implement strong structures for resource allocation, including time for teachers to work collaboratively in order to encourage a higher functioning professional learning community. Leaders should also cultivate an atmosphere of trust and respect so a professional learning community can flourish and grow leading to an increase in collective efficacy among teachers and ultimately increases in student achievement and improvements in outcomes for students.

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APPENDICES

APPENDIX A: SURVEY INSTRUMENT

UNIVERSITY OF LOUISIANA
Lafayette

Department of Educational Foundations and Leadership
P.O. Box 43091, Lafayette, LA 70504-3091

February 13, 2018

David Gilliam
301 Highland Park Drive
Richmond, Kentucky 40475

Dear Mr. Gilliam:

This correspondence is to grant permission for the utilization of the *Professional Learning Community Assessment-Revised* (PLCA-R) for your doctoral dissertation research at Eastern Kentucky University. I am pleased you are interested in using the PLCA-R measure to *assess relationships between teacher perceptions of professional learning communities and teacher collective-efficacy.* This study's findings will contribute to the PLC literature and provide valuable connections between the PLC dimensions and collective-efficacy.

This permission letter allows use of the PLCA-R through the paper/pencil format or through school/district level online administration. While this letter provides permission to use the measure in your study, authorship of the measure will remain as Olivier, Hipp, and Huffman (exact citation on the following page). This permission does not allow renaming the measure or claiming authorship.

Upon completion of your study, I would be interested in learning about your entire study and would welcome the opportunity to receive an electronic version of your completed dissertation research.

Thank you for your interest in our research and measure for assessing professional learning community attributes within schools. Should you require any additional information, please feel free to contact me.

Sincerely,

Dianne F. Olivier

Dianne F. Olivier, Ph. D.
Joan D. and Alexander S. Haig/BORSF Professor
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APPENDIX B: IRB APPROVAL

Teacher Perceptions of Professional Learning Communities

Participation in this survey is voluntary. You are not required to answer any of the questions within the survey.

Directions: This questionnaire assesses your perceptions about the dimensions of a professional learning community (PLC). This questionnaire contains statements about practices that occur in schools. Read each statement and then select the response that best reflects your personal degree of agreement with the statement. Be certain to select only one response for each statement.

1=Strongly Disagree 2-Disagree 3=Agree 4=Strongly Agree

Shared and Supportive Leadership

1. Staff members are consistently involved in discussing and making decisions about most school issues.

2. The principal incorporates advice from staff members to make decisions.

3. Staff members have accessibility to key information.

4. The principal is proactive and addresses areas where support is needed.

5. Opportunities are provided for staff members to initiate change.

6. The principal shares responsibility and rewards for innovative actions.

7. The principal participates democratically with sharing power and authority.

8. Leadership is promoted and nurtured among staff members.

9. Decision making takes place through committees and communication across grade and subject areas.

10. Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority.

11. Staff members use multiple sources of data to make decisions about teaching and learning.

Shared Values and Vision

12. A collaborative process exists for developing a shared sense of values among staff.

13. Shared values support norms of behavior that guide decisions about teaching and learning.

14. Staff members share visions for school improvement that have undeviating focus on student learning.

15. Decisions are made in alignment with the school's values and vision.

16. A collaborative process exists for developing a shared vision among staff.

17. School goals focus on student learning beyond test scores and grades.

18. Policies and programs are aligned to the school's vision.

19. Stakeholders are actively involved in creating high expectations that serve to increase student achievement.

20. Data are used to prioritize actions to reach a shared vision.

Collective Learning and Application

21. Staff members work together to seek knowledge, skills, and strategies and apply this new learning to t heir work.

22. Collegial relationships exist among staff members that reflect commitment to school improvement efforts.

23. Staff members plan and work together to search for solutions to address diverse student needs.

24. A variety of opportunities and structures exist for collective learning through open dialogue.

25. Staff members engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry.

26. Professional development focuses on teaching and learning.

27. School staff members and stakeholders learn together and apply new knowledge to solve problems.

28. School staff members are committed to programs that enhance learning.

29. Staff members collaboratively analyze multiple sources of data to assess the effectiveness of instructional practices.

30. Staff members collaboratively analyze student work to improve teaching and learning.

Shared Personal Practice

31. Opportunities exist for staff members to observe peers and offer encouragement.

32. Staff members provide feedback to peers related to instructional practices.

33. Staff members informally share ideas and suggestions for improving student learning.

34. Staff members collaboratively review student work to share and improve instructional practices.

35. Opportunities exist for coaching and mentoring.

36. Individuals and teams have the opportunity to apply learning and share the results of their practices.

37. Staff members regularly share student work to guide overall school improvement.

Supportive Conditions- Relationships

38. Caring relationships exist among staff and students that are built on trust and respect.

39. A culture of trust and respect exists for taking risks.

40. Outstanding achievement is recognized and celebrated regularly in our school.

41. School staff and stakeholders exhibit a sustained and united effort to embed change into the culture of the school.

42. Relationships among staff members support honest and respectful examination of data to enhance teaching and learning.

Supportive Conditions- Structures

43. Time is provided to facilitate collaborative work.

44. The school schedule promotes collective learning and shared practice.

45. Fiscal resources are available for professional development.

46. Appropriate technology and instructional materials are available to staff.

47. Resource people provide expertise and support for continuous learning

48. The school facility is clean, attractive and inviting.

49. The proximity of grade level and department personnel allows for ease in collaborating with colleagues.

50. Communication systems promote a flow of information among staff members.

51. Communication systems promote a flow of information across the entire school community including: central office personnel, parents, and community members.

52. Data are organized and made available to provide easy access to staff members.

53. Our faculty has a strong collective belief in our capabilities to **carry out decisions and plans designed for school-wide improvements.**

54. Our faculty has a strong collective belief in our capabilities to **produce high levels of learning for all students.**

55. Our faculty has a strong collective belief in our capabilities to **create ways to improve the school environment.**

56. Our faculty has a strong collective belief in our capabilities to **maintain effective communications with parents and the larger community.**

57. Our faculty has a strong collective belief in our capabilities to **support each other in addressing new initiatives.**

58. Our faculty has a strong collective belief in our capabilities to **maintain a school environment in which students feel good about themselves.**

59. Our faculty has a strong collective belief in our capabilities to **provide input in making important school decisions.**

60. Our faculty has a strong collective belief in our capabilities to **effectively communicate with school administration.**

61. Our faculty has a strong collective belief in our capabilities to **work with disadvantaged or troublesome students.**

62. Our faculty has a strong collective belief in our capabilities to **manage student behavior.**

63. Number of years you have participated in a PLC: Answer 1=0-1, Answer 2=2, Answer 3=3, Answer 4=4 or more.

APPENDIX C: PERMISSION TO USE PLCA-R

July 2, 2018

Dear Mr. Gilliam:

I grant permission for you to conduct your study, **The Relationship between Teacher Perceptions of Professional Learning and Teacher Efficacy**, using survey instruments administered to teachers in Madison County Schools.

You have permission to use Madison County Schools facilities as the site for collection of your data.

Sincerely,

Randy Neeley

Interim Superintendent