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Assessing the Fidelity of School-Level Professional Learning Community Implementation

William W. Thigpen II

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ASSESSING THE FIDELITY OF SCHOOL-LEVEL PROFESSIONAL LEARNING
COMMUNITY IMPLEMENTATION

by

Will Thigpen

(Under the Direction of Juliann Sergi McBrayer)

ABSTRACT

As schools face increasing accountability, many have turned to professional learning communities (PLCs) as a possible solution. The challenge is that many schools are not implementing PLCs with fidelity. It is imperative that school leaders assess PLC practices to ensure that critical components are being implemented effectively. This research provides a framework for school leaders to assess school leader, teacher, and support staff perceptions of various PLC dimensions. Descriptive statistics were used to determine levels of agreement with statements related to six PLC dimensions. A one-way univariate analysis of variance tests (ANOVA) was used to analyze differences in mean responses by participants to determine if and how perceptions of PLC practices varied. Additionally, open-ended responses were analyzed to determine themes and patterns regarding the influence of PLCs on teacher retention and collective teacher efficacy. The results indicated that while PLCs were being implemented with fidelity, there were differences in perceptions based on participants' role and grade cluster. Additionally, findings indicated that teacher retention and collective teacher efficacy are both strongly influenced by effective PLC implementation. Future research is needed to determine if the findings hold true among suburban and urban schools across other parts of the United States and why perceptions vary among participants.

INDEX WORDS: Professional Learning Community (PLC), teacher retention, collective teacher efficacy, teacher attrition, professional learning.

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by

WILLIAM W. THIGPEN II

B.S., Georgia Southern University, Statesboro, Georgia, 2009

M.Ed., Georgia Southern University, Statesboro, Georgia, 2013

Ed.S., Georgia Southern University, Statesboro, Georgia, 2018

A Dissertation Submitted to the Graduate Faculty of Georgia Southern University in Partial
Fulfillment for the Requirements for the Degree Doctor of Education

Statesboro, Georgia

DOCTOR OF EDUCATION

COLLEGE OF EDUCATION

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COMMUNITY IMPLEMENTATION

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WILL THIGPEN

Major Professor: Juliann Sergi McBrayer

Committee: Cordelia Zinskie

Kitty Crawford

Electronic Version Approved:

December 2023

DEDICATION

This work is dedicated to my father, Gary Thigpen, my wife, Miranda, my mom, Pat, my sister, Shonda, and my kids, Marley, Eastan, and Lynley whose love and support made this possible.

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CHAPTER ONE

Introduction

In an age of increased accountability, schools are constantly seeking new ways to raise student achievement. The “No Child Left Behind Act” (2002) called for increased accountability in public education. The “Every Student Succeeds Act,” which was passed in 2015, continues to set the bar high for public educators. With such increased emphasis on accountability, schools have sought innovative and evidence-based practices for increasing student achievement. Professional Learning Communities (PLCs) have been packaged and marketed as one of these practices.

In 2009, a report released by the National Staff Development Council presented a focused vision of professional learning in the United States, noting the need for “sustained and intensive professional development related to student achievement gains” and described how “collaborative approaches to professional learning can promote change that extends beyond individual classrooms” (Darling-Hammond et al., 2009, p. 5). Additionally, findings included a lack of collaboration among teachers in the United States relative to other nations, and the fact that most professional development opportunities were limited to conferences, and a need for allocated time during the school day for professional learning. While the body of research touting the potential of PLCs to meet the needs identified in this report is significant, further research is needed to better understand the potential of PLCs to improve teaching and learning practices and better understand their impact on school improvement.

Many schools nationwide have chosen to implement PLCs as a means of school improvement. In the state of Georgia, motivation to implement PLCs includes maintaining compliance with the state licensing agency, the Georgia Professional Standards Commission

(GaPSC) for recertification, which now requires professional development via learning communities. PLCs are defined as “an ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve” (Dufour et al., 2016, p. 10). PLCs, when implemented effectively, provide a structure for teacher collaboration that often results in pedagogical shifts intended to have positive effects on student learning (Oldac & Kondakci, 2020; Peddell et al., 2020; Sinnema et al., 2011). The promise of job-embedded professional learning continues to drive the growth of PLCs in schools.

Despite growing popularity, the challenge is that many schools are not implementing PLCs with fidelity. Dufour et al. (2016) discussed common misconceptions and noted that the term “PLC” has become synonymous with “any loose coupling of individuals who share a common interest in education” (p. 10). For school leaders, it is not enough to simply provide meeting times for teachers to engage in professional development or send them to conferences. There are critical components that must be in place to ensure that such gatherings result in higher levels of learning for students. Research shows that teachers in high-performing schools are confident in the ability of their leadership to implement such components (Brown et al., 2017). For this reason, it is incumbent upon school leaders to assess school-level practices in relation to those identified as essential to PLCs.

Olivier et al. (2010) developed the *Professional Learning Community Assessment Revised* (PLCA-R) assessment tool to address this need. Through the administration of the PLCA-R, researchers are able to examine varied identified PLC dimensions to determine which areas are being implemented with fidelity, and which areas need further support. These six PLC dimensions include shared and supportive leadership, shared values and vision, collective

learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures. Research findings support focusing on these areas as they are correlated with increased collective teacher efficacy (Kılınc, 2021; Lee, 2020; Little, 2020), organizational commitment and teacher retention (Cobanoglu, 2020; Torres et al., 2020), and enhanced relationships and trust among colleagues (Akinyemi, 2020; Sahin & Yenel; 2021). By focusing on the PLC dimensions found in the PLCA-R, school leaders can ascertain if PLCs are being implemented with fidelity.

Schools in Georgia rely on PLCs as a means of professional growth. While various studies have addressed elements of the six PLC dimensions and their benefits to teachers and students, more empirical research is needed to determine which dimensions are being implemented with fidelity. Further research is warranted to better understand how school leaders are supporting PLCs if they are to serve as a means of improving student achievement.

Background

PLCs have been studied throughout many different countries for varied purposes. From elementary schools to institutions of higher education, researchers have sought to explain the effects of PLCs on various aspects of the educational realm. This background will examine transformational leadership as the theoretical framework that guided this study, PLCs, the effect of PLCs on student achievement, six dimensions of effective PLCs, and the assessment tool titled the Professional Learning Community Assessment Revised (PLCA-R). The effect of PLCs on student achievement is included as it strengthens the argument for the utilization of PLCs as a means of school improvement. This review of the literature will explore the findings of such research and highlight evidence that supports the use of the *Professional Learning Community Assessment Revised* (PLCA-R) as a tool for assessing and improving PLC implementation.

Transformational Leadership

The theoretical framework that shaped this study was transformational leadership. During its inception, Burns (1978) referred to transformational leadership as an exchange that occurs between leaders and followers during which both “raise one another to higher levels of motivation and morality” (p. 20). Furthermore, such exchanges build connections among the previously alienated while also exciting those who are apathetic. While Burns (1978) is credited for conceptualizing transformational leadership, others would continue to explore and define transformational leadership. Bass and Avolio (1994) elaborated on the idea of transformational leadership as that which motivates followers, asserting that transformational leaders go beyond simple exchanges and “motivate others to do more than they originally intended and often more than they thought possible” (p. 3). Additionally, the researchers used four “I’s” to describe the behaviors of transformational leaders: idealized influence, inspirational motivation, intellectual stimulation, and individualized considerations.

Leithwood and Jantzi (2000) described transformational leadership within the context of educational leadership and developed a model based on research conducted in school settings. This model described transformational leadership as having six dimensions: building school vision and goals, providing intellectual stimulation, offering individualized support, symbolizing professional practices and values, demonstrating high performance expectations, and developing structures to foster participation in school decisions. As the concept of transformational leadership continued to evolve into school contexts, its implications for school leaders also came into focus. This is where the theory of transformational leadership begins to intersect with the idea of PLCs and sets the stage for studies that examine their value.

Professional Learning Communities (PLCs)

The overall purpose of the PLC is to improve student learning through collaborative inquiry and action research (Dufour et al., 2016). As teachers gather to examine student work and build shared knowledge, their professional capacity begins to grow. Such growth is evident regardless of school leadership structures and cultural contexts. Chen and Mitchell (2015) demonstrated how PLCs can transcend educational cultures by examining their introduction into both Western and Asian contexts and found that although principals from schools in Ontario and Beijing faced challenges from different hierarchical structures, both found that PLCs were an effective vehicle for school improvement. Research has also demonstrated a positive relationship between collaboration among teachers and student achievement (Ronfeldt et al., 2015).

By enhancing teacher capacity through collaboration, schools not only improve student achievement, but also support the *whole teacher*. In a qualitative study of over 1,400 educators, Trust et al. (2016) found evidence to support that professional learning networks enhance affective, social, and cognitive aspects of teacher growth. Such collaboration also promotes teacher motivation and welfare which can aid in the prevention of teacher burn-out (Webb et al., 2009). In fact, the shared leadership created through PLC implementation has been found to predict organizational commitment (Cobanoglu, 2020) and a lack of shared leadership negatively impacts teacher retention (Torres et al., 2020). When implemented effectively, PLCs provide teachers with a platform to combine current research with practice. Linder et al. (2012) conducted a mixed methods study examining perceptions of elementary and middle school teachers in relation to various PLC tasks. In their findings, they noted that teachers began to question their own understanding of effective instructional practice as a result of PLC participation. Additionally, they found that autonomy and choice related to topics of study to be explored had a positive impact on teacher perceptions and even improved teacher comradery

(Linder et al., 2012). The development of such comradery is also evident in studies of enabling structures which have been found to increase social networking and improve academic optimism (Boz & Saylik, 2021; Sahin & Yenel, 2021).

McGee (2016) sought to measure the impact of PLCs on the practices of science teachers within a network of urban high schools characterized by low student achievement and high teacher turnover. In their study, regression models were utilized to measure the influence of formal learning and PLCs on changes in teacher practice. The results of the study revealed that “indicators of professional community model explained almost two times as much of the variance as the formal learning opportunities model” which included practices such as peer observation and feedback (p. 159).

Mintzes et al. (2013) studied the relationship between PLCs and self-efficacy. Their study utilized a mixed-methods approach to examine the effects of PLCs on a group of elementary science teachers who reported low levels of self-efficacy related to science instruction. The findings of the study suggested that over the course of three years, participation in PLCs not only improved self-efficacy among the teachers but also resulted in changes in classroom practices, student behavior, and increased outcome expectancies related to scientific practices (Mintzes et al., 2013). Additional studies have also demonstrated a connection between the type of shared leadership that results from PLC implementation and increased levels of self-efficacy. Little (2020) found that a year of participation in PLCs enhanced teacher reported self-efficacy. Similar results were reported by Lee (2020) and Kılınç et al. (2021) who demonstrated a relationship between shared leadership and self-efficacy.

The universalness of the effects of PLCs extends beyond the improvement of teacher quality and into student achievement. PLCs have been credited with increasing reading

achievement at the elementary, middle, and high school levels. Goodard et al. (2007) conducted a study of 47 elementary schools across the midwestern United States to examine the relationship between teacher collaboration and student achievement. Survey data were correlated with student achievement on state reading and mathematics assessments using hierarchical linear modeling. The findings demonstrated a statistically significant relationship between teacher collaboration and student achievement as students who attended schools characterized by high levels of teacher collaboration also performed higher on state assessments in reading and mathematics.

Williams (2013) designed a causal-comparative study to establish a relationship between PLCs and student achievement. The results of this study suggested that after three years of PLC implementation, student achievement in reading improved across all grade levels. Furthermore, Sigurðardóttir (2010) also established a strong relationship between school effectiveness and teacher perceptions of PLCs. Using a mixed method study conducted in two phases, the researcher not only used correlative statistics, but also conducted experimental research to show the positive effects of PLCs on the outcomes of national assessments in Iceland.

Transformational Leadership and PLCs

Vanblaere and Devos (2016) examined the role of transformational and instructional leadership in facilitating interpersonal PLC characteristics. In a quantitative study inclusive of 495 teachers from 48 Belgian primary schools, researchers found a relationship between teacher perceptions of school leadership and interpersonal PLC characteristics. In the study, characteristics of transformational leadership were positively associated with collective responsibility, while higher instructional leadership resulted in de-privatized practice. Both instructional and transformational leadership were associated with reflective dialogue among PLC members.

Luyten and Bazo (2019) conducted a quantitative study including 518 teachers in 95 Mozambican primary schools to examine the relationship between transformational leadership, PLCs, and teacher learning. Results of the study indicated that transformational leadership indirectly stimulates changes in teaching practices via PLCs. These findings support the connection between transformational leadership and PLCs and have implications for school leaders seeking to promote teacher learning through the use of learning communities. Because of the intersection of the theoretical underpinnings behind transformational leadership and the behaviors of PLCs, transformational leadership served as the theoretical framework for this study.

Six Dimensions of Effective PLCs

With the potential to serve as a catalyst for improving student achievement, increasing professional capacity, supporting affective aspects of professional growth, and improving overall teacher motivation and welfare, it is imperative that schools not only implement PLCs, but implement them effectively. In their efforts to *demystify* PLCs, Hipp and Huffman (2010) conceptualized six dimensions under which attributes of effective PLCs can be classified. The first such dimension, shared and supportive leadership, involves the school leader distributing and supporting leadership efforts among staff members. School leaders must provide guidance in the PLC process, but autonomy is a key element that energizes staff and contributes to comradery (Linder et al., 2012). Deficits in shared leadership can create cultures of compliance in which teachers struggle to find meaning in the work of the PLC (Wilson, 2016). Thessin (2015) conducted a qualitative study to “discover the impact of the provision of specific research-based supports on teachers’ collective work in PLCs” (p. 16). The study included 28 teachers being interviewed in six schools while also observing 13 PLC teams in action. The

findings noted that teachers in high functioning teams consistently credited school leadership with providing the necessary pre-conditions for PLCs to thrive. Additionally, such conditions included providing professional development on how to engage in PLCs, creating a culture of collaboration, and the readiness of school leaders to support PLCs through engagement and communication. Furthermore, struggling teams failed to meet such pre-conditions and often cited lack of training as a primary hindrance to effective work.

Not only must staff be included in the leadership process, but they should also be active participants in establishing the shared values and vision that guide their schools. Hipp and Huffman (2010) listed shared values and vision as the second dimension of effective PLCs. Brown et al. (2017) conducted a quantitative study which surveyed pre-kindergarten through third grade teachers to analyze relationships between perceived leadership abilities of school principals and student performance. The researchers discovered that high performing schools reported more confidence in their respective principals' abilities to implement PLCs in relation to a strong vision. Such vision can address the roadblock of isolation that often hinders effective PLCs (Dufour & Eaker, 1998; Lujan & Day, 2009).

Once PLC members have ownership of the work guided by shared values and vision, they must engage in the third PLC dimension of collective learning and application (Hipp & Huffman, 2010). Through the analysis of student work, PLC members develop reflective qualities that allow them to challenge their assumptions and grow as educators (Brodie, 2014). Additionally, data from the Data Informed Practice Improvement Project (DIPIP) centered on the work of mathematics teachers in grades seven, eight, and nine to discover that PLCs can aid teachers in developing reflective qualities. Sinnema et al. (2011) utilized a variety of qualitative data collection methods to study the influence of evidence-informed inquiry on social studies

teachers at the primary as well as secondary levels. The results of their study suggested positive effects as teacher practice was “shifted” and learner outcomes “stimulated” as a result of “evidence informed collaborative inquiry” (p. 252).

The fourth dimension identified by Hipp and Huffman (2010) was shared personal practice. As collective learning and application begin to take hold, the collaboration that occurs should result in mutual accountability and support (Dufour et al., 2016). In a qualitative study centered around five mathematics teachers in one South African high school, Chauraya and Brodie (2018) found that work centered around learner errors in mathematics led to conversations about instructional practice. In the study, each teacher interviewed between two and four learners about their errors and the reasoning behind them. Next, teachers discussed the errors and learner reasoning to develop a deeper understanding about the relationship between their practices and the errors. Furthermore, such conversations resulted in new and shared meanings of teacher practice. Fresko and Nasser-Abu-Alhija (2015) conducted a mixed-methods study to explore the use of induction seminars as PLCs. The findings of their study supported induction level staff in that PLC-type environments involve socialization, which can serve as an organic form of mentoring and professional learning for beginning teachers.

By identifying relationships as a supportive condition that must exist, Hipp and Huffman (2010) focused on collegial trust in their fifth dimension of effective PLCs. Gray et al. (2016) demonstrated the relationship between collegial trust and academic emphasis within PLCs. Through a quantitative study of 67 elementary, middle, and high schools, they were able to demonstrate a “reciprocal relationship” between enabling school structures and PLCs while asserting that one cannot exist without the other (p. 886). Thornton and Cherrington (2014) conducted case studies utilizing mixed methods to determine the level of relational trust

necessary for PLCs to operate effectively. In their study, they cited relational trust as a primary factor in determining the effectiveness of PLCs noting correlations between levels of trust and levels of collaborative inquiry. Thessin (2015) found that a culture of collaboration and trust were commonalities among teams deemed highly effective. Hallam et al. (2015) conducted a qualitative case study aiming to illuminate the impact of trust on collaboration among members of PLC teams. Their findings concluded that trust was an essential factor in collaboration, such as sharing teaching strategies and reviewing student learning data. Additionally, they found that principals influenced trust among PLC members (Hallam et al., 2015).

Hipp and Huffman (2010) identified structures as supportive conditions in their sixth and final dimension of PLCs. While much of the PLC can and should be owned at the grassroots level, school leaders must ensure that resources are in place to support PLC efforts (Dufour et al., 2016). Gray et al. (2016) echoed the existence of a reciprocal relationship between PLCs and school structures, noting a correlation between such structures and academic focus. While all six dimensions are considered essential, a study conducted by Huffman and Hipp (2000) found that shared leadership, shared vision, and supportive conditions are interrelated and crucial to any learning community. One common characteristic shared by these dimensions is the direct impact school leaders have on each of these dimensions. Although elements such as time and isolation have been identified as roadblocks for PLCs, the removal of such barriers does not ensure effective collaboration (Lujan & Day, 2009; Wilson, 2016). For some staff, especially new teachers, learning to collaborate while also learning to teach can present challenges (Gardiner & Robinson, 2011). An understanding of staff perceptions relating to each dimension could serve as a powerful tool for supporting and growing PLCs within a school.

Hipp and Huffman (2010) were not the only researchers to conceptualize effective PLC dimensions. Hord (1996) also contributed to the research by identifying characteristics of PLCs. Instead of six dimensions, the researchers identified five attributes: shared and supportive leadership, shared vision for student learning, collective teacher learning, shared instructional practice, and supportive structures, conditions, and practices. Furthermore, while there are subtle differences in the identified characteristics, commonalities emphasized the role of school leadership in the PLC process. In their examination of a PLC that failed, Sims and Penny (2015) analyzed data teams in Texas through qualitative research. The researchers sought to explain why, despite structures for meetings centered around student data, there was no effect on instructional practices. After conducting interviews with six teachers and observing their PLC meetings in action, it was determined that a narrow focus on data coupled with the lack of support from school leadership resulted in little actual collaboration. School leaders in the study had failed to create a culture of collaboration in which teachers openly shared and discussed practices related to student data.

Professional Learning Community Assessment-Revised (PLCA-R)

The Professional Learning Community Assessment-Revised (PLCA-R) was designed by Olivier et al. (2010) as an assessment tool to measure practices in relation to six PLC dimensions (Hipp & Huffman, 2010). Researchers have utilized the PLCA-R in a variety of studies to measure various perspectives in relation to PLCs. For example, Parks (2014) used the PLCA-R to explore teachers' perceptions of PLCs in relation to their gender, years taught, educational level, and grade level at which they teach. The results of his study indicated a relationship between years of experience and perception of PLCs. Those with over 16 years of experience tended to view PLCs negatively while those with five or less years of experience had a more positive

perception of PLCs. As another example, Stamper (2015) used the PLCA-R to study the relationship between teachers' and principals' perspectives of PLCs dimensions in Kentucky. The findings indicated a significant difference in principal's perceptions of PLC dimensions compared to teachers within the same schools. When reviewing ranges from Likert scale responses, principals' perceptions of PLC dimensions were more positive across all dimensions than those of teachers. Furthermore, Lippy and Zamora (2012) analyzed and compared PLCs across 12 middle schools, and the results of this study revealed varying levels of PLC implementation from school to school. These findings could be utilized to improve the consistency of practice and the overall functionality of PLCs by supporting identified gaps and areas of weakness.

While the PLCA-R has been used to identify implementation gaps and variances in practitioner perceptions, not all studies have illustrated such disparities. Gillespie (2016) utilized the assessment to study the perceptions of principals and teachers within a Rapid City area school. Unlike Stamper (2015), Gillespie (2016) found no significant differences between the perceptions of principals and teachers. These findings provide the potential for utilizing the PLCA-R as an instrument to validate PLC functioning and cohesion among members of the learning community.

The applicability of the PLCA-R as a PLC diagnostic tool extends beyond the confines of educational systems within the United States. As PLC practices are becoming more universal, so is the need to assess and inform such practices. Dogan et al. (2017) translated and adapted the PLCA-R to be used with teachers in Turkey. During their study, they found that "organizational capacity is a statistically significant predictor for interpersonal capacities" (Dogan et al., 2017, p. 1203). PLCs can be the professional learning leveraged by school leaders for various aspects of

school improvement. In order for PLCs to realize their potential, certain conditions and behaviors must be present. In an effort to support school leaders in providing such conditions and promoting such behaviors, the PLCA-R is a useful tool in assessing PLC implementation. Through its administration, schools have learned that disparities sometimes exist among the perceptions of those involved in the PLC process, but by addressing such disparities in perceptions and behavior, school leaders can better support PLCs in their efforts for continuous school improvement.

In summary, extensive research across a variety of contexts has bolstered the credibility of PLCs as a vehicle for improving student achievement, increasing professional capacity, supporting affective aspects of professional growth, and improving overall teacher motivation and welfare. Despite such potential, many schools fail to realize the full benefits of PLCs because they lack critical conditions that must be met. Hipp and Huffman (2010) identified these conditions, or dimensions, and created an assessment instrument called the PLCA-R to support school leaders in identifying strengths and weaknesses related to PLC dimensions, and this assessment tool is at the crux of this study.

Statement of the Problem

Although Georgia has changed its requirements for certificate renewal to reflect participation in professional growth platforms such as PLCs, little has been done to ensure that school districts are implementing PLCs with fidelity. PLCs improve teacher quality and effectiveness by building collective teacher capacity. This not only has a positive impact on student achievement, but it also improves morale and promotes social aspects of teacher growth. The challenge is that the potential of PLCs has yet to be realized in some school districts due to a lack of implementation with fidelity. In order for PLCs to result in professional growth and

overall school improvement, there are essential conditions that must be present. If school leaders are to support teachers in the effective implementation of PLCs, they must first understand how critical dimensions of PLCs are functioning within their schools. School leaders need information about which dimensions of PLCs are being implemented with fidelity, and which dimensions present challenges with implementation. Without this critical analysis of the current state of PLCs, there is no way to ensure that the conditions necessary for PLCs to result in school improvement are in place.

Purpose Statement

The purpose of this quantitative study is to determine which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) are being implemented with fidelity and which areas need improvement. This study is intended to assess perceptions of school-level practices in relation to these six dimensions of effective PLCs among school leaders, teachers, and support staff within a rural school district in the southeastern United States.

Research Questions

The following equally weighted questions guided this study:

- 1) Which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) are being implemented with fidelity?
- 2) Which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) present challenges with implementation?

3) To what extent do perceptions of PLC dimensions vary according to role, content area, grade cluster, and years of experience?

4) How do PLC dimensions (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) influence teacher retention?

5) How do PLC dimensions (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) contribute to collective teacher efficacy?

Significance of the Study

With changes to recertification and licensure requirements, the state of Georgia has shown a tremendous amount of support for PLCs as a means of promoting professional learning. While research supports the potential of PLCs to support school improvement, more information is needed to ensure that school leaders in Georgia are creating the conditions necessary for this to occur. This study is intended to provide school leaders with insight into which dimensions of PLCs are being implemented with fidelity and which present challenges with implementation. With this information, school leaders can ensure that conditions are in place to support PLCs so that they will result in effective professional learning to advance school improvement.

Procedures

Research Design

This study utilized a non-experimental quantitative research design to collect data from school leaders, teachers, and support staff in order to describe the fidelity of PLC implementation relative to six dimensions associated with effective PLCs. Survey research was implemented in order to provide a numeric description of the perceptions of the selected population by studying a

sample of the population. In an effort to determine which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) are being implemented with fidelity and which present challenges, the researcher administered a survey. This method section includes the setting, participants, research instrument, and procedures used to address the research questions.

Setting

The study was conducted within the Curtis County School District (CCSD), a pseudonym, which is a rural school district comprised of four schools located in the southeastern United States.

Participants

The participants in this study were school leaders, teachers, and support staff in grades Pre-Kindergarten through grade 12 who participated in PLCs within the CCSD. This population included 11 school leaders, 134 teachers, and 50 support staff for a total of 195 potential participants. The desired response rate was 60% or ~117 responses. A recent study found the average response rate for online empirical studies was 34.2% (Poynton et al., 2019) but educational researchers provide many strategies for increasing response rates. One such strategy that was implemented throughout this study was the sending of weekly emails which were intended to thank those who had already participated and to remind those who had not to please consider participating. The survey window was also extended by two weeks for a total of six weeks to obtain additional responses. A total of 105 respondents participated in the study for a final response rate of 54%. While the desired response rate was not obtained, the sample was a balanced representation of the demographic groups being studied.

Instrument

This study utilized the Professional Learning Community Assessment Revised (PLCA-R) instrument which is described by its authors as a “formal diagnostic tool for identifying school-level practices that support intentional professional learning” (Hipp & Huffman, 2010, p. 30). The PLCA-R (see Appendix A) was developed by Oliver et al. (2010) in conjunction with what is now the American Institutes for Research. This instrument was selected by the researcher due to the alignment of the content it was designed to measure based on the purpose of the study. It is composed of 52 questions utilizing a 4-point Likert-scale to ascertain perceptions from school leaders, teachers, and support personnel as related to the six dimensions of PLCs to include shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures. The construct validity and internal consistency reliability of the PLCA-R instrument have been established by its authors who have had many opportunities to study this instrument through its extensive use across a variety of global contexts. Their most recent analysis yielded Cronbach Alpha reliability coefficients for factored subscales ($n=1209$): 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).

These demographic characteristics included role (school leader, teacher, support staff), content area (physical education, science, social studies, English Language Arts, mathematics, fine arts, CTAE, or not applicable), grade cluster (elementary, middle grades, or high school), and years of experience (1-5, 6-20, 20+). This information was used to identify any variance in response among subgroups. Additional data were also collected using open-ended questions

intended to gain additional insight into how PLCs influence teacher retention and collective teacher efficacy. These questions were as follows:

- 1) How do the elements (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, or supportive conditions-structures) of a PLC influence teacher retention at your school?
- 2) How do the elements of a PLC (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) contribute to collective teacher efficacy at your school?

Data Collection

This study utilized descriptive measures to assess school leader, teacher, and support personnel perception of practices related to six dimensions of PLCs. Written permission to use the Professional Learning Communities Assessment-Revised (PLCA-R) was granted from the author (Hipp & Huffman, 2010). An institutional cooperation letter was signed by the superintendent of the participating school district to indicate institutional support of the study. Permission from the research institutions' Institutional Review Board (IRB) was sought and obtained prior to administering the study.

Once all permissions were obtained, a recruitment email was sent to all school leaders, teachers, and support staff of the participating institutions. This email provided information about the study as well as information regarding informed consent for participation (see Appendix B). School leaders, teachers, and support staff who chose to participate in the study were provided with a link that directed them to an electronic version of the PLCA-R survey. The

survey was completely anonymous, and all data were collected as de-identified. Participation was completely voluntary as opting out at any time was an option, and participants were informed that the risks in participation were no greater than those of everyday life. Participants had four weeks to complete the survey and received a reminder via email each week to encourage participation. The researcher also had principals of participating schools forward the email message to the prospective participants. This way the emails came from someone familiar ensuring that they made it to the intended recipients' inboxes. Because the desired response rate was not obtained after four weeks, the survey window was extended for two more weeks. After six weeks, the survey was closed so that data could be analyzed to answer the research questions.

Data Analysis

Following the author's recommendations, the researcher used descriptive measures to analyze the data. Of the responses collected, means and standard deviations were calculated for each attribute (item statement). The online PLCA-R platform was used to determine the percentages at each level of agreement with the 52 attributes (items) included on the survey. Additionally, the mean and standard deviation for each attribute were calculated automatically using the PLCA-R platform. The researcher then reviewed each attribute individually to determine which items yielded the highest and lowest calculated means. The researcher focused on the six PLC dimension sections to determine which dimensions had a majority of high or low scoring attributes. According to the authors, a mean of 3.0 or higher out of 4.0 showed general agreement with the attribute. These were considered high ($M \geq 3.0$); therefore, statements yielding means of less than 3.0 were considered low ($M < 3.0$). Responses in each dimension were used to determine how well PLCs were being implemented with fidelity and which areas, if any, needed support.

Once all means were analyzed, the researcher referred to the calculated standard deviations (SD) for each item in order to account for outliers (variance within the group). A smaller SD indicated greater levels of agreement, while a larger SD was considered to be indicative of more variance among respondents (less agreement). This information was represented in tables with the calculated percentages, means, and standard deviations present for each survey item. The researcher also performed a one-way univariate analysis of variance tests (ANOVA) to examine the mean difference between the groups with the dependent variables (DV) expressed as a measure of the respondents' perceptions on the survey and the independent variables (IV) expressed as roles, content area, grade clusters, and years of experience. The researcher then compared the responses of the subgroups for each of the dimensions. For the dimensions that reflected an overall significant difference, a post hoc test was used to help determine which groups differed. ANOVA results are presented in tables by identifying respondent roles, sample size, mean, standard deviation, and distribution. ANOVA statistics including sum of squares, degrees of freedom, mean sum of squares, and F-values were also presented for each item. Open-ended responses were reviewed in order to identify patterns and themes in the responses. This was accomplished by first reading over the data that was organized by research question. Next, data were coded through bracketing and representing each segment with a word for each category. Finally, descriptions and themes were generated and represented in order to guide a narrative that represented each theme. Once these data were analyzed, themes and patterns were compared to the findings from the PLCA-R survey results. This process was also used to analyze the open-ended items included at the end of each of the six, dimension sections which allowed for comments to elaborate on responses in each section. A narrative is

included in the findings section of the study detailing themes related to each of the six dimensions (Creswell & Creswell, 2018).

Definition of Key Terms

For the purposes of this study, the following key terms were defined:

Professional Learning Community (PLC) – Dufour et al. (2010) defined a professional learning community as “an ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve” (p. 11).

Transformational Leadership – Burns (1978) referred to transformational leadership as an exchange that occurs between leaders and followers during which both “raise one another to higher levels of motivation and morality” (p. 20).

Chapter Summary

Increased accountability measures continue to motivate school districts to seek new and improved methods of school improvement. One such method, PLCs, has grown in popularity without necessarily yielding the intended benefits in terms of enhancing student achievement. School leaders must ensure that certain resources and conditions are present in order for PLCs to result in enhanced student achievement. By determining which dimensions of PLCs are implemented with fidelity, and which resulted in implementation challenges, school leaders can provide the support needed for PLCs to function successfully. Thus, the purpose of this quantitative study was to determine which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) were being implemented with fidelity and where areas in need of improvement occurred. This study was

intended to assess evidence-based practices in relation to these six dimensions of effective PLCs and how perceptions of those practices could be used to support the effective implementation of PLCs. The study included school leaders, teachers, and support staff across grades Pre-Kindergarten through 12 who participated in PLCs among four schools within one rural district in the southeastern United States. The research is intended to provide school leaders, teachers, and support staff with information on how to better support PLCs to improve student achievement.

CHAPTER TWO

REVIEW OF THE LITERATURE

Researchers have studied the existence and effects of professional learning communities (PLCs) across a variety of contexts. The purpose of this literature review is to examine existing research findings in order to inform research questions and methodology. Included in the literature review is an examination of the intersection between transformational leadership and PLCs as well as a deeper look at various elements of PLCs as defined by Hipp and Huffman (2010). The topics explored in this review of the literature will include transformational leadership, PLCs, shared and supportive leadership, shared purpose, collective teacher efficacy, shared values and vision, collective learning and application, shared personal practice, and supportive conditions inclusive of supportive relationships and supportive structures.

Transformational Leadership

Beyond transformational leadership as a theory, researchers have begun to study the effects of transformational leadership on PLCs. Vanblaere and Devos (2016) sought to explore the relationship between perceptions of transformational leadership and PLC characteristics. Using a sample of experienced teachers across 48 primary schools in Belgium, the researchers deployed a survey consisting of items from the Professional Community Index, which was designed to measure interpersonal PLC characteristics, along with scales intended to measure teacher perceptions about transformational leadership. With a response rate of 70.6% the researchers conducted several multilevel regression analyses using PLC characteristics as the dependent variables. Findings revealed several implications for transformational leadership with respect to PLC characteristics. First, teachers' perceptions of school leaders' transformational leadership were a predictor for the PLC characteristic of collective responsibility. The higher

teachers accessed school leaders' transformational leadership on the survey, the more collective responsibility they experienced in the schools. Additionally, teachers who reported higher levels of transformational leadership within their schools also reported higher levels of the PLC characteristic of reflective dialogue. This was demonstrated as positive slope variance regarding reflective dialogue increased as transformational leadership increased. The greatest implications of their findings for school leaders interested in supporting PLCs were that "teachers' perceptions of transformational leadership were associated with participation in reflective dialogue and the presence of collective responsibility" (Vanblaere & Devos, 2016, p. 33)

Luyten and Bazo (2019) explored the effect of transformational leadership on learner centered practices via teacher learning and PLCs. Researchers invited 101 primary schools in Mozambique to participate and received responses from 95 for an overall response rate of 94.1%. Respondents completed questionnaires which were comprised of 5-point Likert items intended to assess effects of various factors on PLCs. Researchers compared results of teachers' responses to those of school leaders and found discrepancies in the perceived relationship between transformational leadership and PLCs. Of all of the correlations that were observed among teachers, the highest coefficient related to the effect of transformational leadership on PLCs. This finding did not hold true among school leaders as Luyten and Bazo (2019) stated "it seems as though school leaders and their teachers are living in different worlds, as their perceptions of transformational leadership and professional learning communities seem unrelated" (p. 21). Thus, further consideration and research is warranted as such differences in perception could have implications for school leaders and their approaches.

Professional Learning Communities (PLCs)

Zheng et al. (2019) explored the relationships among instructional leadership, PLC components, and teacher self-efficacy by testing four hypotheses. First, they hypothesized that principals' instructional leadership has positive effects on PLC components. Second, they hypothesized that principals' instructional leadership has positive effects on teacher self-efficacy. Third, they hypothesized that PLC has a positive effect on teacher self-efficacy. Finally, they hypothesized that PLC components mediated the effects of instructional leadership on teacher self-efficacy. To test these hypotheses, a questionnaire was distributed to 1400 elementary teachers in mainland China and returned by 1082 for a response rate of 77.3%.

The first hypothesis was supported as principals' instructional leadership had significant effects on all five of the studied elements of PLCs. The second hypothesis, however, was not supported as instructional leadership had no significant effect on teacher self-efficacy. Four of the five PLC elements explored, including collaborative activities, collective focus on student learning, de-privatized practice, and reflective dialogue, significantly predicted teacher self-efficacy, meaning that the third hypothesis was partially supported. Only a shared sense of purpose was found to have no significant effect on self-efficacy. A mediation analysis was conducted to determine the mediating effects of PLC components in relation to instructional leadership and self-efficacy. Results identified collaborative activity, de-privatized practice, and reflective dialogue as significant mediators, while shared sense of purpose and focus on student learning were not thereby partially supporting the final hypothesis. These findings demonstrated that PLCs mediate the effects of instructional leadership on teacher self-efficacy and indicated that participation in PLCs could increase teachers' efficacy beliefs (Zheng et al. 2019).

Little (2020) also examined the effects of teacher participation in PLCs and found that after a year of engagement in the PLC process, mathematics teachers reported higher levels of self-efficacy. Positive impacts on self-efficacy in the study were attributed to the social framework of PLCs as well as the demonstration of learning activities (Little, 2020). While considering organizational culture in addition to the utilization of PLCs, Lee (2020) also found that PLCs have a positive effect on teacher efficacy.

Ratts (2015) utilized descriptive and inferential statistics to correlate four years of student performance data on the Georgia Criterion Referenced Competency Test (CRCT) with teacher perceptions and practices related to PLCs. The study revealed a positive correlation between student achievement on the Georgia CRCT and collaborative practices associated with PLCs. Akiba and Liang (2016) conducted a four-year longitudinal study involving 467 teachers and over 11,000 middle school students to examine the effects of six different professional learning models on student achievement. Their findings concluded that teacher-centered collaboration, such as that which occurs in PLCs, had the greatest effect on student learning. Details among the findings were that informal communication and collaboration had positive effects and that conversations that centered around specific problems and focused on specific teacher approaches contributed the most to the enhancement of student learning.

In a two-year quantitative study, Ronfeldt et al. (2015) examined collaboration across 336 schools in the Miami-Dade school district. The findings represented responses from over 9,000 teachers across a variety of grade levels. The researchers concluded that not only is teacher collaboration associated with student achievement but that the quality of collaboration is positively correlated with the level of student achievement in both reading and mathematics. Teachers participating in the study indicated that they found collaboration centered around

instructional strategies to be most helpful. Student achievement data in the study validated such collaborative focus centered around instructional strategies but was also positively correlated with collaboration on curriculum and assessment. While these areas demonstrated the highest association with student achievement gains, collaboration in general, regardless of the focus, yielded improvements.

Adams (2016) sought to identify which PLC dimensions were associated with student mastery as measured by performance on the New York State 11th grade English Language Arts Regents exam. By correlating school leaders' perceptions of PLC functions with state assessment data, the researcher found that shared leadership was the strongest predictor for student achievement.

Although studies have demonstrated a link between PLCs and student achievement, there is evidence that improving PLCs does not always translate into improved student achievement. In their three-year longitudinal study of PLCs in Canadian Schools, Hurley et al. (2018) compared teacher perceptions of PLC growth over time to student achievement trends over the same span. The results of the study suggested that efforts to support schools in PLC growth produced no significant gains in reading achievement.

Masuda et al. (2013) conducted a qualitative study of teachers' attitudes and willingness to engage in professional learning at different stages of their careers. Through interviews of 16 teachers with varying years of experience, including preservice teachers with no experience, beginning teachers (1-5 years), midcareer teachers (6-20 years), and late-career teachers (20+ years), they were able to identify differences in teachers' attitudes toward professional learning based on career stages. Researchers found that teachers became more selective of their professional learning over time and were less willing to participate in "anything and everything"

as they advanced in their careers (Masuda et al., 2013, p. 10). However, they also found that as teachers progress through their careers and gained experience they started to value professional learning that involved collaborating with their peers and sharing with other colleagues. Teachers at all stages valued professional learning that was relevant and inclusive of an application component.

Shared and Supportive Leadership

In a quantitative study using both descriptive statistics and multiple regression analysis Huang et al. (2020) explored the impact of shared leadership on creativity in interorganizational teams. The study first considered the impact of team trust on team creativity correctly hypothesizing a positive relationship between the two variables. Next, the hypothesis that shared leadership positively affects team trust was supported through a hierarchical regression analysis. A third hypothesis was tested when team trust was included in the regression equation as a mediator between shared leadership and creativity. A decreasing coefficient in this equation supported the hypothesis that team trust mediates the relationship between shared leadership and team creativity. The results of the research study demonstrated that trust is a key factor in team creativity. Within the same study, it was determined that shared leadership promoted such trust. The researchers asserted that in order to increase the production of creativity, school leaders must “boost the sharing of knowledge and information” (Huang et al., 2020, p. 8).

Koeslag-Kreunen et al. (2020) examined school leadership behaviors to determine which approach best supports teacher teams in learning behavior. After identifying 61 teacher teams engaged in educational change projects that were considered to be innovative tasks, 52 participants were selected to complete a questionnaire with scales used to measure team learning, team leadership behavior, and task complexity. Results showed a significant positive correlation

between shared transformational leadership behaviors and team learning behaviors. Additionally, shared transformational leadership behavior predicted team learning behavior significantly. Another finding was that task complexity serves as a moderator between vertical empowering leadership behavior and team learning behavior. While vertical empowering team leadership positively influences team learning when the task complexity was low, vertical empowering behavior was not related to team learning when task complexity was high. Overall implications of this study were that team learning is best supported by shared leadership, and that transformational vertical leadership behavior was needed when innovative solutions were needed. This type of complex problem solving is what occurs within the educational setting, which is characterized by complex problems in an ever-changing landscape.

In their examination of the role of cognitive trust, Lyndon et al. (2019) identified factors that deepen our understanding of why sharing information and knowledge promotes trust and enhances creativity. Through a mixed-methods approach, Lyndon et al. (2019) examined data from 44 teams to examine the impact of cognitive trust as the antecedent for shared leadership. Cognitive trust, team learning, team creativity, and shared leadership were all measured using a 5-point Likert scale. A three-factor measurement model was used to test and support the hypotheses. What the researchers found was that cognitive trust, which is based on beliefs of team members' competency, positively influences shared leadership (Lyndon, 2019).

Furthermore, their findings also supported the idea that shared leadership can enhance creativity by demonstrating that "the indirect effect of shared leadership on team creativity via team learning was significant" (Lyndon, 2019, p. 1813). The qualitative portion of the study analyzed results of semi-structured group interviews. Participants from 22 teams offered insights which were examined to reveal four major themes including participant's experiences of

shared leadership in teams, reasons to exert leadership, and reasons to accept leadership and consequences of shared leadership. Lyndon (2019) included multiple quotes from participants that encapsulated the shared leadership phenomenon such as “leadership kept shifting between members” and that “everyone emerged as a leader at some point or the other. It was collective leadership” (p. 1814).

Cobanoglu (2020) found a positive relationship between shared leadership and organizational commitment among teachers in both primary and secondary settings. After collecting data from a sample of 512 teachers in the Malatya district of Turkey, Cobanoglu (2020) used a relational survey model to show that “shared leadership in schools significantly predicts teachers’ organizational commitment in a positive way” (p. 620). Based on these findings, Cobanoglu (2020) not only suggested increasing shared leadership in order to increase organizational commitment but also recommends increasing responsibilities among early career teachers as a method for increasing organizational commitment. This suggestion was supported not only by the positive correlation between organizational commitment and shared leadership but also by findings that showed that organizational commitment and perceptions of shared leadership tended to be higher among teachers with 20 or more years of experience. With teacher shortages continuing to grow nationally, such a suggestion could serve as part of the solution to combat teacher attrition.

Not only is organizational commitment an important factor in teacher retention, but job satisfaction is also a critical piece of the teacher shortage puzzle. Ward and Graham-Brown (2018) studied the impacts of implementing a shared-leadership model on a career and technical education campus and found that shared leadership positively impacted Career and Technical Education (CTE) teachers’ levels of job satisfaction. The researchers utilized a general

qualitative inquiry method which consisted of semi-structured interviews inclusive of 13 teachers working at a CTE high school in the southwestern United States. After one year of implementing a shared leadership model, participants were asked questions about their perceptions of shared leadership and its impact on job satisfaction. Transcripts were examined, and data were compiled based on themes that emerged from the interviews. Not only did participants express increased job satisfaction due to increased participation through shared leadership, but they also revealed that it “led to larger amounts of productivity, as well as new ways in which to teach content” (Ward & Graham-Brown, 2018, p. 45).

While many studies have highlighted the benefits of shared leadership, one study explored the impacts of a lack of shared leadership. Using a mixed-methods comparative study Torres et al. (2020) examined case studies and survey data from Denver, New Orleans, and Los Angeles to explore patterns related to shared leadership. Findings suggested that the lack of shared leadership in some Charter Management Organizations (CMOs) negatively impacts teacher retention. Recommendations from the study suggested that CMO leaders should increase teacher involvement in decision making.

Using a mixed method design to replicate a study previously conducted in the Netherlands within a Swedish context, Schildkamp et al. (2019) sought to determine what factors enable data teams and what are the perceived effects of data teams within schools. The respondents in the study included members from data teams across four schools within a municipality in Sweden. These teams were followed for 15 months and a combination of focus group and individual interviews were used to triangulate data. Researchers found that school leaders can have a direct impact on the effectiveness of data teams, both positively and negatively. On one hand, school leaders in the study who provided members with resources such

as time, encouragement, and a clear goal were found to enable the work of data teams, while those who failed to distribute leadership often held their teams back (Schildkamp, 2019).

While studies have supported the use and cited the many benefits of shared leadership, some research suggests that such benefits may be limited to context (Lumby, 2013; Oldac & Kondakci, 2020; Tian et al. 2016). Oldac and Kondakci (2020) hypothesized that distributed leadership contributes to between-school variation in student achievement across 40 public schools in Turkey. Using hierarchical linear modeling, descriptive statistics, and bivariate correlations, the researchers analyzed data derived from teacher-completed questionnaires consisting of items from multiple scales. Data from the distributed leadership scale served as an independent variable, while students' grade point average (GPA) scores were the dependent variable. This hypothesis was not supported and no significant direct effect of distributed leadership on student achievement was found. These findings support other studies which have failed to demonstrate a relationship between distributed leadership and student achievement (Lumby, 2013; Tian et al. 2016).

Liu (2019) examined the relationship between distributed leadership and collective teacher efficacy by gathering data from 298 Chinese urban primary school teachers. Findings revealed that distributed leadership can contribute to collective teacher efficacy which has been proven to be a predictor of student learning. Often systemic power, institutionalized norms, and shared understandings can interfere with autonomy and defy efforts to decentralize leadership (Wong et al., 2020). Kılınç et al. (2021) sought to investigate whether teacher trust influences teacher leadership and whether teacher leadership influences instructional practices through teacher self-efficacy. Using a cross-sectional survey consisting of quantitative scales measuring teacher leadership, teacher self-efficacy, teacher trust, and teacher instructional practices, Kılınç

et al. (2021) solicited responses from 618 teachers in Turkey. Results of a correlation analysis demonstrated a positive correlation among all variables. Among the researcher's findings were that there was an association between teacher self-efficacy and teacher instructional practice suggesting that teachers were more likely to have improved their instructional practices when they felt a higher sense of self efficacy. The researchers also found a positive association between teacher leadership and teacher self-efficacy suggesting that when teachers are afforded opportunities to impact instructional decisions and overall school improvement efforts, they tend to have higher levels of self-efficacy. Suggestions from the findings included offering teachers more opportunities to engage in shared leadership tasks such as making instructional decisions, which may enhance self-efficacy and increase engagement in modifying instructional practices, thereby enhancing school improvement efforts as a whole.

Shared Purpose

Ghosh (2020) found that shared leadership was contingent upon the existence of conditions in which shared understanding of purpose was clear. Findings from a study of team coaches' experiences revealed the need for open dialogue, a shared framework of knowledge, and responsiveness to team needs (Ghosh, 2020). In this study, qualitative research methods were utilized in order "capture team coaches' experiences of coaching amidst decentralised hierarchies" (p. 19). Six homogeneous participants were selected for the study using a defined criteria for team coaches including having accreditation, possessing at least five years of experience, and offering to consult as a team coach. After conducting two pilot interviews, semi-structured interviews were conducted using the six participants who were presented with randomly selected images and asked to reflect on their views toward team coaching in light of shared leadership situations. This study found that for shared leadership to develop, a focus on

developing collective awareness and enthusiasm regarding purpose of the team through open dialogue and the development of shared knowledge is necessary (Ghosh, 2020).

Not all studies support the assertion that shared leadership contributes to job satisfaction. In a quantitative study on how exploring cultural aspects of schools influence the emergence of participative leaders and their influence on teachers' outcomes of job satisfaction and burnout, Benoliel and Barth (2017) found that participative, or shared, leadership had varying effects dependent on cultural attributes such as Western versus non-Western values. Shared leadership reduced teacher burnout in state-secular schools which hold more democratic values, it actually increased burnout in ultra-orthodox schools where teachers tend to value hierarchal leadership.

Shared Values and Vision

Qadach et al. (2020) proposed and tested a model that examined the mediating role of collective teacher efficacy and shared vision on principals' instructional leadership and a teacher's intent to leave. They hypothesized that instructional leadership would positively predict a shared vision. From a total of 130 randomly selected schools, 130 principals and 1700 teachers participated in the study. The researchers were able to ensure that at least 30% of the teaching staff at each school were included to meet their desired random sampling minimum. Various measures were used to assess the different elements of the survey. In order to examine the principal's instructional leadership, teachers completed a questionnaire which measured 10 leadership functions using a five-point Likert scale. Collective teacher efficacy was also measured using a five-point Likert scale which measured 12 items related to collective efficacy for both instructional strategies and student discipline. Shared vision was measured using a survey asking respondents to indicate the extent to which they felt colleges were committed to school objectives. Finally, researchers had teachers rate items intended to measure their "intent

to leave” (p. 620). Data were aggregated at the school level and intra-class correlations were calculated to examine school level clusters. Data were analyzed as individual responses within school units which reflected a hierarchical structure. Descriptive statistics as well as correlations between study variables were reported for all group levels. One significant finding was that the researchers' hypothesis of a positive correlation ($y=.32, p<.001$) between instructional leadership and shared vision existed. The researchers also found a “significant negative relation between shared vision at the organizational level and teachers’ intent to leave at the individual level” (Qadach, et al., 2020, p. 625).

Research by Lingam and Lingam (2015) studied subordinates’ perceptions of school principal’s practices inclusive of inspiring a shared vision. Using quantitative research methods consisting of the administration of a questionnaire designed to measure perceptions of school leaders’ behaviors, Lingam and Lingam (2015) solicited responses from 17 teachers from both primary and secondary schools. Because the study was conducted on the small island of Niue near New Zealand, this sample was representative of 38% of teachers within the selected population. Means and standard deviations for five leadership practice dimensions were determined, and the dimension with the lowest overall mean was inspiring a shared vision. This dimension scored a mean of 4.0 out of 10.0 which correlated with “once in a while” on the questionnaire (Lingam & Lingam, 2015, p. 43). Findings indicated that teachers perceive that school leaders do not often engage in leadership behaviors, including inspiring a shared vision which has been shown to contribute to school improvement.

Berson et al. (2015) sought to explore school leadership behaviors that contributed to a climate of learning that yields favorable organizational outcomes. A test model was created linking charismatic leadership with shared vision and trust to determine whether either predicted

an organizational learning climate or contributed to favorable organizational outcomes. One hypothesis which was tested during the study was that “Perceptions of shared vision among team members will be positively associated with a climate of organizational learning” (Berson et al., 2015, p. 86). To test this hypothesis, 414 teachers and 69 principals along with 207 parents from Arab schools in Northern Israel participated in phone surveys. The findings of the study indicated that shared vision did not significantly predict an organizational learning climate (Berson et al., 2015). In their exploration of the relationships among instructional leadership, PLCs, and teacher self-efficacy, Zheng et al. (2019) found that while other PLC components mediated the effects of instructional leadership and positively predicted teacher efficacy, shared values had no significant effect.

Collective Learning and Application

The inclusion of documentation and artifacts begin to shift thoughts about teaching from a technical to an investigative process which leads to the problematization of the teaching practice (Damjanovic & Blank, 2018). This reflective process leads to new solutions and therefore new possibilities in teaching. In an attempt to identify behaviors that principals of high achieving schools use to attain results, Peddell et al. (2020) conducted interviews with 16 principals whose schools showed significant improvement on National Assessment Program results between 2016 and 2018. Researchers selected participants from the 20 highest ranked schools which were inclusive of schools from a variety of locations including major cities, inner regional areas as well as remote areas. Semi-structured interviews were recorded and the findings were thematically analyzed to identify meaningful patterns. Findings illustrated common behaviors among principals who led successful school improvement efforts. Significant among these was the emergent theme of developing a shared or agreed vision. Respondents articulated

the importance of shared vision and listed it as part of a required condition in order to prepare teachers for whole school improvement.

In an effort to understand the role of vision in effective school leadership, Mombourquette (2017) conducted a study that employed semi-structured interviews in order to interpret and articulate the perceptions of principals in Alberta, Canada. The study included 27 principals over a large cross section of Alberta including elementary, middle, and high school principals. Using a variety of student learning data, schools were identified as either high achieving or non-achieving schools. This information was then compared to responses from participants to determine commonalities in responses among high and non-achieving schools. These responses were analyzed using standard qualitative methods including thematic analysis. Findings revealed that schools that were categorized at high achieving schools were led by principals who were able to clearly articulate the school's vision while principals who operated without a clear vision led schools that were non-achieving.

Shared Personal Practice

In their examination of successful principals' behaviors in leading school improvement, Peddell et al. (2020) found that having a strong focus on collaborative solution seeking was a required condition essential to whole school teaching improvement. As the researchers analyzed themes among responses from school principals responsible for leading substantial school improvement efforts in Australia, researchers found that empowering staff through collaboration and allowing teachers to work together to solve problems in new ways were commonly cited practices. The facilitation of such collaborative processes by school leaders was also supported by a model based on alignment, capability, and engagement in relation to transformational leadership which was used as the theoretical framework of their qualitative study.

Not only do shared practices contribute to improved instructional practices, but providing opportunities for teachers to collaborate also helps with teacher retention. Kelly et al. (2019) investigated factors that contribute to early career teachers deciding to leave the profession. In a study of data from 2,144 Australian early career teachers noted that job satisfaction and intention to remain in the teaching profession were both impacted by teachers' ability to work with other teachers. Based on these findings, it was suggested that school leaders must ensure that collaborative work with colleagues is facilitated (Kelly et al. 2019).

Supportive Conditions: Relationships

In their examination of leadership and how it brings about organizational learning and outcomes, Berson et al. (2015) hypothesized that "Perceptions of trust among team members will be positively associated with a climate of organizational learning" (p. 87). Of all of the different mediating effects that were explored, only trust within the team significantly predicted organizational learning climate. Organizational trust was also found to have a positive mediating effect on the relationship between PLCs and organizational structure (Kalkan, 2016).

Akinyemi et al. (2020) explored the relationship between trust and positive relationships among teachers in communities of practice and its effects on professional development. Using a mixed methods research approach, the researchers combined face-to-face interviews with semi-structured questionnaires inclusive of both closed and open-ended questions to answer their main research question along with a variety of sub-research questions. The overarching research question guiding the study was based on how trust and positive working relationships among teachers in communities of practice were a conduit for professional development. Of the 64 participants, 95% indicated trust and good working relationships existed among teachers in their communities of practice. Respondents characterized trust and positive relationships as supporting

group members, willingness to help others, encouraging each other, and confiding in other colleagues. Of the participants, 96% indicated that they felt safe participating in communities of practice. Ninety-five percent of participants contributed communities of practice with new learning and improved practice. Teachers felt that working together and interacting with group members improved classroom management, teaching methods, handling learners in the classroom, improvement on content knowledge, and approaches to lesson planning. The findings in this study support the idea that relationships and trust are critical factors that must be present in order for communities of practice to yield desired professional learning outcomes.

Not only are relationships and trust among staff important to yield desired outcomes, but the trust that faculty have in their clients has also been identified as a contributing factor. In their analysis of the relationship between multiple school-level variables and student achievement, Oldac and Kondakci (2020) found that increases in trust in clients led to increases in student GPA scores. Trust in clients was the second strongest predictor of student achievement in the study, behind collective efficacy, and was an even stronger indicator than distributed leadership and teacher collaboration.

Supportive Conditions: Structures

It is important to note the role that relationships play in creating supportive conditions that contribute to professional growth and overall school improvement as such relationships do not occur by chance, but instead are strengthened through deliberate enabling of school structures. Kalkan (2016) sought to determine the relationship between PLCs, bureaucratic structure, and organizational trust. Noting the lack of research on the effects of school structure on PLCs, the researcher noted that “the effect of school structure on a professional learning community’s formation, development, and maintenance is often ignored” and noted such

oversight as responsible for the failure of many PLCs (p. 1620). Additionally, using a relational search model, the researcher set out to determine what teachers' perceptions of PLCs, bureaucratic structure, and organizational trust were, what type of relationship exists among these three variables, and whether or not organizational trust has a mediating effect on bureaucratic structure and PLCs. Data were collected from 805 primary teachers who were selected using a stratified sampling method. Findings revealed that teachers perceived that their schools operated as PLCs and that the bureaucratic structure of their schools was thought to be enabling. Among the same respondents, trust in the principal and other colleagues was found to have the highest value. Correlation coefficients were utilized to determine that subscales for PLCs and organizational trust and these were positively correlated with enabling bureaucratic structures when present. However, when the bureaucratic structure was found to be coercive, subscales for PLCs and organizational trust showed a significant negative correlation. In other words, teachers' perceptions of the organization as a PLC and trust within the organization increases when school structures are found to be enabling while both factors decrease under coercive bureaucracy. For this reason, Kalkan (2016) argued that bureaucratic structure should be considered for the "sustainability and development of professional learning communities" (p. 1632).

Expanding on the research of Kalkan (2016), Sahin and Yenel (2021) set out to determine the relationships between enabling school structure, teachers' social network intentions, and PLCs. Using a correlational survey model, the researchers solicited responses from 327 teachers using a questionnaire consisting of scales intended to measure enabling bureaucratic structure, networking intentions, and teacher perceptions on the effectiveness of PLCs. Findings of the study concluded that enabling school structure was high as perceived by the teachers

participating in the study. These teachers also had high social network intentions and also assessed PLCs to be functioning at a moderate level. Using path analyses it was determined that a moderate and positive correlation between enabling school structure and the social network intentions of teachers. A high positive correlation between enabling school structure and PLCs was also found. Finally, a low, positive, and significant relationship was found between the social network intentions of teachers and their assessment of PLCs. As enabling structures increased, so did social network intentions and perceptions of PLCs within schools. Based on the research findings the authors suggested creating enabling structures as a first step toward the usage of PLCs in schools and that such structures also contribute to the overall social network within the school.

Bureaucratic structure not only impacts the organization as a learning community, as well as the trust within, but it also affects individual teacher behavior. Cerit (2017) sought to determine the mediating effect of leader-member exchange (LMX) on the relationship between school bureaucratic structure and teachers' proactive behavior. Additionally, the relevance of proactive behavior within the context of organizations such as schools is that such behaviors contribute to organizational commitment, job satisfaction, and performance. Furthermore, the researcher hypothesized that enabling school structure would have a positive effect on teachers' proactive behavior, that enabling school structure would have a positive effect on LMX, that LMX would have positive effect on teachers' proactive behavior, and that LMX mediates the positive relationship between enabling school structure and teachers' proactive behavior. Participants included 264 teachers from 22 schools in Turkey. Results supported the hypothesis demonstrating that proactive behavior and enabling school structure are positively related. The researcher also confirmed that enabling school structure is positively associated with LMX and

that LMX has a direct effect on proactive behavior. The mediating role of LMX on enabling school structure and proactive behavior was also demonstrated as predicted by the final hypothesis. Based on the results, the researcher suggested that schools be structured as enabling in order to promote proactive behavior which he described as “change-focused action” (p. 787). Also recommended was that schools wishing to promote proactive teacher behavior take specific actions to design school structures as enabling.

Mitchell et al. (2016) explored the effects of enabling school structure and academic optimism on school achievement. The researchers hypothesized that faculty trust in clients (trusting relationships with students and parents), collective teacher efficacy, academic excellence (marked by high expectations), and enabling school structure would all be positively correlated with each other as well as a measure of achievement at the school level. The researchers also tested the hypothesis that faculty trust in clients’ collective teacher efficacy, and academic excellence will come together to create the general latent construct of academic optimism. Finally, the researchers hypothesized that enabling school structure would have a direct effect on academic optimism and together enabling school structure and academic optimism would explain a significant portion of the variance in student achievement over and above the effects of socioeconomic status. To test these hypotheses, data from a total of 1,713 teachers from 42 elementary schools and 16 middle schools were collected. Past student achievement and current student achievement were also used as relationships between all variables were explored using descriptive and bivariate correlational analysis. All three hypotheses were confirmed leading to implications for school leaders wishing to overcome the challenges of socioeconomic status. Firstly, all constructs measured including faculty trust in clients, collective efficacy, academic excellence, and enabling school structure were positively

correlated with student achievement at the school level. Secondly, such constructs combined together construct academic optimism. Finally, enabling school structures was positively correlated with and predictive of academic optimism and that schools with higher levels of academic optimism had higher student achievement regardless of socioeconomic status. Mitchell et al. (2016) suggested that school leaders create enabling structures in order to promote a culture of academic optimism and to help mitigate the negative effects of SES on student achievement.

Boz and Saylik (2021) also examined the impact of enabling school structure on academic optimism. The researchers hypothesized that enabling school structure is positively associated with teacher's altruistic behaviors as well as their academic optimism, both of which contribute to increased student achievement. The researchers also hypothesized that more altruistic behaviors of teachers would increase the academic optimism of a school and that teachers' altruistic behaviors play a mediating role between enabling school structure and academic optimism. To test these hypotheses the researchers collected data via a questionnaire consisting of 49 items measuring enabling structures, academic optimism, and altruistic behaviors using a 5-point Likert scale. The sample for the study included 707 primary school teachers in southeastern Turkey. A positive correlation between enabling school structure and school academic optimism was found. Additionally, a positive correlation between enabling school structure and teachers' altruistic behavior also existed. Based on these findings, Boz and Saylik (2021) stated:

Based on these results, it can be asserted that if teachers perceive an enabling climate within the border of school, they can work more enthusiastically and attach more importance to their job and students' achievement because when

principals give autonomy to teachers, they will strengthen the school academic optimism. (p.149)

Multiple studies have connected enabling school structure to student achievement. Some have done so indirectly by showing that enabling school structures contribute to conditions that have been shown to improve student achievement (Boz & Saylik, 2021; Mitchell et al., 2016). Oldac and Kondakci (2020) attempted to make a direct correlation when they hypothesized that enabling bureaucracy positively contributes to the between-school variation in student achievement across 40 public schools in Turkey. The researchers also hypothesized that hindering bureaucracy negatively contributes to the between school variations in student achievement. Data from the enabling school structure scale served as an independent variable while students' GPA scores were the dependent variable. Findings did not support the hypotheses and for this particular study, hindering bureaucracy and enabling bureaucracy were both significantly related to student achievement. The researchers noted that increases in hindering bureaucracy meant increase in GPA scores within the context of the study and that "it could be argued that the existence of hindering bureaucracy is more effective on student achievement than the existence of enabling bureaucracy" (Oldac & Kondakci, 2020, p. 774).

Chapter Summary

The intersection between transformational leadership and PLCs has been demonstrated through various studies. The perception of transformational leadership has been correlated with perceptions of PLC characteristics. Such characteristics inclusive of shared and supportive leadership, shared purpose, collective learning and application, shared personal practice, and the supportive conditions of relationships and structures have all been proven to have positive effects on schools ranging from improving student achievement to aiding teacher retention and

enhanced feelings of collective efficacy. Literature related to these topics supports the need for school leadership that supports PLCs through transformational leadership and creates an environment in which leadership is supportive and shared among teachers and various other stakeholders. This body of knowledge also supports the need for school leaders to create a sense of shared purpose among those involved in initiating school change. Collective learning and application serve as a cornerstone for implementing and sustaining school improvement. For this to take place, school leaders must support teachers and support personnel in sharing personal practice. Relationships and enabling structures within the school environment can both be leveraged in order to support school improvement and drive positive educational change.

CHAPTER THREE

METHODOLOGY

The goal of education has always been focused on student learning and shifts in accountability for student achievement have only increased pressure on schools to produce results (Every Student Succeeds Act, 2015; No Child Left Behind, 2002). As schools searched for answers, results of a National Staff Development Council Report noted a lack of collaboration relative to higher performing countries and called for more job-embedded professional development within the school day (Darling-Hammond et al., 2009). A combination of the aforementioned factors caused schools to embrace the concept of implementing professional learning communities (PLCs). The state of Georgia changed professional development and recertification requirements to reflect their commitment to job-embedded professional learning through PLCs (Georgia Professional Standards Commission [GaPSC], 2017). Despite attempts to utilize PLCs nationwide, findings reveal that many schools have failed to implement PLCs with fidelity (Defour et al., 2016). Teachers in high performing schools are confident in their respective school leaders' abilities to support critical components of PLCs while those in lower performing schools have less trust and confidence in their leaders (Brown et al., 2017).

In order to ensure that PLCs are resulting in the type of professional learning that positively impacts student achievement, school leaders must ensure that certain elements are being implemented with fidelity. This study was intended to provide school leaders with information on which elements, or dimensions, were being implemented with fidelity and which dimensions presented challenges with implementation. Additionally, this study explored variance in perceptions of PLCs across a variety of descriptive categories inclusive of respondents' roles,

content areas, grade clusters, and years of experience. Finally, this study examined the influence of PLC dimensions on teacher retention and collective teacher efficacy.

Research Design

This study utilized a non-experimental quantitative research design to collect data from school leaders, teachers, and support staff in order to describe the fidelity of PLC implementation relative to six dimensions associated with effective PLCs. Survey research was implemented to provide a numeric description of the perceptions of the selected population by studying a sample of the population. The research design that was used for this study is detailed in this chapter beginning with research questions that were used to guide the study. The chapter then describes the quantitative research design of the study along with an overview of the population, sample, setting, and participants that were utilized to conduct the study. A detailed overview of the research instrument as well as information on its development provided by its authors are also provided. This chapter concludes with a thorough description of the completed data collection and analysis process that will allow for by researchers who wish to recreate this study in their respective contexts.

Research Questions

To conduct this study assessing the implementation fidelity of PLCs, the following equally weighted research questions were used:

1. Which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) are being implemented with fidelity?
2. Which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-

relationships, and supportive conditions-structures) present challenges with implementation?

3. To what extent do perceptions of PLC dimensions vary according to role, content area, grade cluster, and years of experience?
4. How do PLC dimensions (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) influence teacher retention?
5. How do PLC dimensions (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) contribute to collective teacher efficacy?

The first question aimed to determine which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) were being implemented with fidelity among the schools participating in the study. This information provides insight into the perceived strengths of PLC implementation which could then be used by school leaders so that they could build upon effective practices. Insight into the perceived challenges of PLC implementation was provided by answering the second research question which allowed school leaders to adapt behaviors and provide targeted support for PLC implementation. By determining variance among perceptions based on a variety of contextual and demographic factors, the third research question sought to aid in discerning if perceptions of PLCs varied across various roles, content areas, grade clusters, and years of experience. The fourth research question explored the influence that various PLC dimensions had on teacher

retention. The final and fifth research question determined how PLC dimensions contributed to collective teacher efficacy.

This study utilized a non-experimental quantitative research design to collect data from school leaders, teachers, and support staff in order to describe the fidelity of PLC implementation relative to six dimensions associated with effective PLCs. Survey research was implemented in order to provide a numeric description of the perceptions of the selected population by studying a sample of the population. This survey approach was not only economical, but it also provided an expedient turnaround in data collection (Creswell & Creswell, 2018). This design also reduced some of the constraints that existed with experimental designs, or even qualitative methods, as it could be completed entirely online through an email in a cross-sectional fashion. This not only reduces the amount of time required, but also increases access to more participants which had proven increasingly difficult due to the COVID-19 global health pandemic. Moreover, a correlational design was utilized to allow for the exploration of potential relationships between factors, such as role, content area, grade cluster, and years of experiences, and individual perceptions of PLC elements, or dimensions (Creswell & Creswell, 2018; Lochmiller & Lester, 2017).

Population, Sample, and Sampling

According to Babbie (2015), population is defined as a “group (usually of people) about whom we want to draw conclusions” (p. 116). For the purpose of this study, the population included all individuals who served as a school leader, teacher, or support staff among one of the four schools in the Curtis County School District (CCSD), a pseudonym, which served students from Pre-kindergarten through twelfth grade. Participants in the study were delineated by grade

clusters which included grades P-5, grades 6-8, and grades 9-12. Participants were also delineated according to school roles which included school leader, teacher, and support staff.

CCSD is a small, rural district in southeastern United States. The county in which it is located is geographically small and has a population of around 11,000 people. CCSD serves approximately 2,200 students in grades Pre-Kindergarten through grade 12. Approximately 1,100 students attend the elementary school which serves grades P-5. The middle school, which serves grades 6-8, has approximately 500 students while the remaining 600 attend high school in grades 9-12. The demographic breakdown of the total student population is approximately 45% White, 28% Black, 22% Hispanic, and 5% multiracial. According to 2020 Georgia Census data, 29.34% of children living in the county between the ages of five and 17 were living in poverty. This was well above the state average which was 18.43% that same year. Because of the high percentage of students living in poverty, 100% of CCSD students qualified for free and reduced lunch. CCSD was also designated as a Title I school district due to its large percentage of low-income students.

Due to the relatively small population size, a convenience sample was used, i.e., all members of the population were invited to participate in the study. Because all members of the population were required to participate in school-level PLCs, participants were motivated to provide feedback in order to contribute to the overall improvement of the PLC process at their respective school sites. The survey results and findings were used to inform potential support, changes, and improvements, to the PLC process at both the district and school level. Due to the inclusion of the entire population in the study, stratification was not necessary to ensure that all desired characteristics were represented in the population; however, those wishing to replicate

this study by sampling a desired population may wish to incorporate this along with sample size determination in order to improve accuracy and representation (Creswell & Creswell, 2018).

Instrumentation

After a thorough review of literature pertinent to PLCs, it was determined that a survey developed by other researchers would be the most appropriate instrument to utilize for the study. The Professional Learning Communities Assessment-Revised (PLCA-R; see Appendix A) was selected by the researcher due to the alignment of the content it was designed to measure with the purpose of the study. The PLCA-R is described by its authors as a “formal diagnostic tool for identifying school-level practices that support intentional professional learning” (Hipp & Huffman, 2010, p. 30). It was developed by Oliver et al. (2010) in conjunction with what is now the American Institutes for Research. It is composed of 52 questions utilizing a four-point Likert-scale with the following ranges: 1= strongly disagree, 2= disagree, 3 = agree, and 4 = strongly agree. Ratings on this scale were used to ascertain perceptions of teachers (the current study extended to school leaders and support staff) related to six dimensions of PLCs. This was accomplished through the inclusion of the following subscales (Olivier et al., 2010):

1. Eleven (11) statements were designed to measure perceptions of shared and supportive leadership which is the degree to which school leaders participated democratically with teachers sharing power, authority, and decision making.

2. Nine (9) statements were designed to measure perceptions of shared vision and values which is the degree to which the staff share visions for school improvement that have a focus on student learning, and these visions are consistently referenced in the staff work.

3. Ten (10) statements were designed to measure perceptions of collective learning and application which are the staff's ability to create learning tasks and solutions to address student's needs.

4. Two (2) statements were designed to measure perceptions of shared personal practice which is the degree to which teacher peers review and give feedback based on observing another's classroom behaviors in order to increase individual and organizational capacity.

5. Five (5) statements were designed to measure perceptions of supportive conditions surrounding relationships as measured by the collegial relationships among the staff including respect, trust, and norms of critical inquiry.

6. Four (4) statements were designed to measure perceptions of supportive conditions involving structures described as a variety of conditions within the school, such as size of the school, proximity of staff to one another, communications systems, and the time and space for staff to meet and examine current practice.

The construct validity and internal consistency reliability of the PLCA-R instrument had been established by its authors who stated:

The widespread use of the instrument provided an opportunity to review the dimensions for internal consistency. Our most recent analysis of this diagnostic tool has confirmed internal consistency resulting in the following Cronbach Alpha reliability coefficients for factored subscales ($n = 1209$): 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). This assessment tool has undergone construct validity (through

expert study and factor analysis), and has yielded satisfactory internal consistency for reliability. (Hipp & Huffman, 2010, p. 30)

Demographic information, including role (school leader, teacher, or support staff which is inclusive of instructional coaches, media specialists, and other staff who are neither school leaders or teachers), content area (physical education, science, social studies, English Language Arts, Mathematics, Fine Arts, Career Technical and Agriculture Education (CTAE) or not applicable), grade cluster (elementary, middle grades, or high school), and years of experience (Beginning teacher: 1-5 years, Midcareer teacher: 6-20 years, or Late-career teachers: 20+ years), was collected via the survey as well. This information was used to identify variance in responses among subgroups. Additional data were collected using two open-ended questions intended to elicit responses from participants on how PLCs contribute to collective teacher efficacy and how PLCs influence teacher retention. These questions were as follows: How do the elements (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, or supportive conditions-structures) of a PLC influence teacher retention at your school?, and How do the elements of a PLC (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) contribute to collective teacher efficacy at your school?

The survey that was utilized was designed to assess school leader, teacher, and support staff perceptions of PLCs related to six PLC dimensions inclusive of shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures. Furthermore, for the purpose of this study, demographic characteristics were used as independent variables to

explore differences in perceptions among participants while PLC dimensions were used as the dependent variables. These demographic characteristics included role (school leader, teacher, support staff), content area (physical education, science, social studies, English Language Arts, mathematics, fine arts, CTAE, or not applicable), grade cluster (elementary, middle grades, or high school), and years of experience (1-5, 6-20, 20+).

Data Collection

This study utilized descriptive measures to assess school leaders, teachers, and support staffs' perceptions of practices related to six dimensions of PLCs. Written permission to use the PLCA-R was granted from the author. An institutional cooperation letter was signed by the superintendent of the participating schools to indicate institutional support of the study.

Permission to conduct the proposed study was sought and obtained from the research institutions' Institutional Review Board (IRB) prior to administering the study.

Once all permissions were obtained, a recruitment email was sent to all teachers, school leaders, and support staff of participating schools. This email provided information about the study as well as information regarding informed consent for participation (see Appendix B). Advantages of such email surveys included the speed with which they could be sent to a large group, the economic advantage as most email vendors are free, the convenience with which such a survey could be sent via district email lists, and the simplicity of creating an online survey (Sue & Ritter, 2012). There were a few disadvantages to sending the survey via email that the researcher had to consider. Recipients could be inundated with email surveys because of their relative ease to create and send and sometimes email filters flag unsolicited messages or even gray or blacklist the sender (Sue & Ritter, 2012). The researcher overcame such challenges by having principals of participating schools forward the email message to the prospective

participants. This way the emails came from someone familiar ensuring that they made it to the intended recipients' inboxes.

School leaders, teachers, and support staff who chose to participate were provided with a link that directed them to an electronic version of the PLCA-R survey to which access was obtained from the survey authors. In order to gain access, the researcher completed a request form provided by the survey authors. Once the request was granted the survey authors provided instructions for the creation of an online account providing the researcher access to an online portal with an electronic version of the PLCA-R along with tools for customizing the survey and analyzing data collected. The electronic version of the survey was completely anonymous, and all data were collected as de-identified findings. Direct access to real-time responses and data were available in the online PLCA-R portal accessed through the PLC Associates website found at <https://survey.plcassociates.org/plc/survey/admin/> using the login credentials obtained from the survey authors when they granted access. These survey results were then downloaded into an Excel file for data analysis. Participation was completely voluntary as individuals were allowed to opt out at any time, and participants were informed that the risks of participation were no greater than those of everyday life. The email also contained information informing participants of the study and included IRB approval information. Participants provided implied consent by clicking the link and beginning the survey. If they decided not to participate, they exited the survey. The survey began by collecting demographic information including role, content area, grade cluster, and years of experience. Next, participants responded to 52 questions utilizing a 4-point Likert-scale with the following ranges: 1= strongly disagree, 2= disagree, 3 = agree, and 4 = strongly agree to measure their perceptions of six dimensions of PLCs including shared and supportive leadership, shared values and vision, collective learning and application, shared

personal practice, supportive conditions-relationships, and supportive conditions-structures. At the end of each of the six, dimension sections there was an open-ended response area for teachers to expand upon the responses provided on the survey. Finally, two open-ended questions designed to elicit responses on how PLCs contribute to collective teacher efficacy and how PLCs influence teacher retention were provided. These two questions specifically asked 1) How do the elements (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, or supportive conditions-structures) of a PLC influence teacher retention at your school? and 2) How do the elements of a PLC (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) contribute to collective teacher efficacy at your school?

Participants had four weeks to complete the survey and received reminders via email each week thanking those who had already completed the survey and reminding those who had not to consider participation. After the four-week window, the response rate was analyzed to determine whether or not the desired response rate was met. According to Fincham (2008), email response rates of 25% to 30% are common without follow-up and reinforcement; however, to ensure representativeness, a 60% response rate was the goal. Additionally, a recent study found the average response rate for online empirical studies was 34.2% (Poynton et al., 2019) . After four weeks, the desired response rate was not met as only 47% of potential participants had responded. With this in mind, the timeframe was extended by another two weeks and an additional email was sent to obtain additional responses.

Data Analysis

The researcher analyzed the quantitative data from the online PLCA-R survey instrument to answer the first three research questions. According to the Hipp and Huffman (2010), “When analyzing PLCA-R results, descriptive statistics are beneficial in determining the strength of the dimensions, as well as reviewing teacher responses for each individual item” (p. 35). Following the recommendations of the instrument’s authors, the researcher used descriptive measures to analyze the data. In order to answer the first two research questions, means and standard deviations were calculated for each of the 52 item statements as well as subscales for the six dimensions including shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures.

Reports generated by the PLCA-R online platform were used to determine the percentages at each level of agreement with the 52 attributes (items) as well as subscales for the six dimensions included on the survey denoting perceptions of PLCs held by school leaders, teachers, and support staff. Next, the mean and standard deviation for each subscale item were calculated using the PLCA-R online platform. The researcher then reviewed each attribute individually to determine which items yielded the highest and lowest calculated means. The researcher focused on the six PLC dimension sections to determine which dimensions had the majority of high or low scoring attributes. According to the authors, a mean of 3.0 or higher out of 4.0 showed general agreement with the attribute. These were considered high ($M \geq 3.0$); therefore, statements yielding means of less than 3.0 were considered low ($M < 3.0$). Responses in each dimension were used to determine which of the six dimensions were being implemented with fidelity and which of the six presented challenges with implementation. Data for the PLCA-

R responses are displayed in tables. Hipp and Huffman (2010) stated that the PLCA-R instrument can aid “educators and researchers in determining the strength of practices” for schools implementing PLCs (p. 30). The analysis of data relative to each of the six dimensions provides leaders with diagnostic information to identify which dimensions are being implemented with fidelity and which present challenges with implementation. Once all means were analyzed, the researcher referred to the calculated standard deviations (SD) for each item in order to account for outliers (variance within the group). A smaller SD indicated greater agreement, while a larger SD was indicative of more variance among respondents (less agreement). This information is represented in tables with the calculated percentages, means, and standard deviations present for each survey item.

To answer the third research question participants’ roles, grade clusters, content areas taught, and years of experience were used as the independent variables (IV). The six PLC dimensions served as the dependent variables (DV). The researcher performed a one-way univariate analysis of variance tests (ANOVA) for each PLC dimension by each of the independent variables (demographic categories). According to Creswell and Creswell (2018), an ANOVA is appropriate for “designs with categorical information (groups) on the independent variable and continuous information on the dependent variable” (p. 247). The researcher then compared the responses of the subgroups for each of the dimensions. For the dimensions that reflected an overall significant difference, a post hoc test was used to help pinpoint which groups differed. ANOVA results are presented in tables by identifying respondent roles, sample size, mean, standard deviation, and distribution. ANOVA statistics including sum of squares, degrees of freedom, mean sum of squares, and F-values were also presented for each item.

To answer the final two research questions, open-ended responses were reviewed in order to identify patterns and themes seen in responses. This was accomplished by first reading over the data that was organized by research question. Next, data were coded through bracketing and representing each segment with a word which represents each category (Creswell & Creswell, 2018). Finally, descriptions and themes were generated and represented in order to guide a narrative that represented each theme. Once these data were analyzed, themes and patterns were compared to findings from the PLCA-R survey results. For example, the researcher asked, did the open-ended responses align with perceptions and practices noted most frequently using the PLCA-R instrument? Such findings are reported in narrative form in the conclusion of the data analysis. This process was also used to analyze the open-ended items included at the end of each of the six, dimension sections which allowed for comments to elaborate on responses in each section. A narrative is included in the findings section of the study detailing themes related to each of the six dimensions (Creswell & Creswell, 2018).

Chapter Summary

In summary, this study was intended to determine educator perceptions related to the implementation of PLCs as well as how those perceptions vary by specified demographic factors and what influence PLCs have on teacher retention and collective teacher efficacy. A survey titled: *Professional Learning Communities Assessment- Revised (PLCA-R)* was administered to collect participant responses using a 4-point Likert scale. Additionally, demographic information as well as questions including role, content area, grade cluster, and years of experience were included in the survey along with two open-ended items related to teacher retention and collective teacher efficacy. Research questions one and two were answered using descriptive statistics gathered from the PLCA-R survey. Research question number three was answered

using a one-way ANOVA to examine the mean difference between the groups with the dependent variables (DV) expressed as a measure of the respondents' perceptions on the survey and the independent variables (IV) expressed as roles, content area, grade clusters, and years of experience. Research questions four and five were answered by reviewing the responses to open-ended questions. Once these data were analyzed, patterns and themes were compared to findings from the PLCA-R. The results of these findings are presented in Chapter four.

CHAPTER FOUR

RESULTS

This chapter includes an overview of the purpose of the study conducted, a rationale and overview of the research methodology utilized in the study, and an explanation of the research questions used to guide the study. The findings from each of the five equally weighted research questions are addressed through tables utilized to present both the quantitative data and narrative responses that explain each one in more depth. This chapter concludes with a summary of results and findings which serve as a foundation for the discussion and implications for future research found in Chapter Five.

The following equally weighted research questions were used:

1. Which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) are being implemented with fidelity?
2. Which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) present challenges with implementation?
3. To what extent do perceptions of PLC dimensions vary according to role, content area, grade cluster, and years of experience?
4. How do PLC dimensions (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) influence teacher retention?

5. How do PLC dimensions (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) contribute to collective teacher efficacy?

The findings represent responses from 81% of school leaders, 55% of the teachers, and 44% of the support staff in the population studied. Among those who participated in the study 34% were ELA teachers, 12% were math teachers, 15% taught either science or social studies, 12% identified as a physical education, fine arts, or CTAE teacher, and 27% responded that content area taught was “not applicable.” Among those participating 47% indicated that they work at the elementary level, 31% worked with middle school, and 22% worked in high school. When broken down by years of experience 32% of respondents were in years 1-5, 37% were in years 6-20, and 31% had 20 or more years of experience.

Quantitative Data Analysis

To answer research questions one and two which ask: “Which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) are being implemented with fidelity?” and “Which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) present challenges with implementation?” means and standard deviations were calculated for each of the 52 item statements. Reports generated by the PLCA-R online platform were used to determine the percentages at each level of agreement with the 52 attributes (items) as well as totals for the six dimensions included on the survey denoting perceptions of PLCs held by all participants. Next, the mean and standard deviation for each attribute were calculated using the PLCA-R

online platform. The researcher then reviewed each attribute individually to determine which items yield the highest and lowest calculated means. The researcher focused on the six PLC dimension sections to determine which dimensions had a majority of high or low scoring attributes. Consistent with the recommendations of the survey authors, means of 3.0 or higher out of 4.0 were interpreted as general agreement with the attribute. These were considered high ($M \geq 3.0$); therefore, statements yielding means of less than 3.0 were considered low ($M < 3.0$). Responses in each dimension were used to determine which of the six dimensions were being implemented with fidelity and which of the six presented challenges with implementation. Data for the PLCA-R responses are displayed in the tables below. Once all means were analyzed, the researcher referred to the calculated standard deviations (SD) for each item in order to account for outliers (variance within the group). A smaller SD indicated greater agreement, while a larger SD was indicative of more variance among respondents (less agreement). This information is represented in tables with calculated percentages, means, and standard deviations for each survey item.

Shared and Supportive Leadership

Table 1 illustrates the level of agreement with various statements focused on the first PLC dimension, shared and supportive leadership. Of the 11 statements, “Staff members use multiple sources of data to make decisions about teaching and learning” yielded the highest level of agreement with a mean score of 3.41 out of 4.0, and 56% of respondents indicated that they agreed with the statement and 29% were in strong agreement. The second highest rated attribute of shared and supportive leadership was “The principal is proactive and addresses areas where support is needed.” with a mean of 3.31, and 50% of respondents indicated that they agreed with the statement and 41% indicated strong agreement.

While all attributes fell within the general agreement range ($M = 3.0$), there were several items which yielded lower means indicative of less agreement. The lowest rated attribute, with a mean of 3.09, was “Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority” although 83% of respondents indicated that they agreed (54%) or strongly agreed (29%) with the statement. The next lowest was “Staff members are consistently involved in discussing and making decisions about most school issues” with a mean of 3.12. All other attributes, or item statements, yielded overall mean scores well above 3.0. Based on comments pertaining to shared and supportive leadership, participants noted the importance of communication and shared decision making. Sample responses included “I feel like input is listened to and taken into consideration”, “It has been great that administration has given teachers a voice”, “information from leadership meetings is not passed down”, and “grade level leaders are given more authority when it comes to decision making... instead of having input from all grade level staff.” See Table 1.

Table 1

Shared and Supportive Leadership

Attribute	SD%	D%	A%	SA%	Mean	SD
1. Staff members are consistently involved in discussing and making decisions about most school issues.	1	14	56	29	3.12	.68
2. The principal incorporates advice from staff members to make decisions.	0	7	58	35	3.29	.58
3. Staff members have accessibility to key information.	2	11	49	39	3.25	.72
4. The principal is proactive and addresses areas where support is needed.	0	10	50	41	3.31	.64
5. Opportunities are provided for staff members to initiate change.	1	13	51	35	3.31	.64
6. The principal shares responsibility and rewards for innovative actions.	0	12	50	38	3.26	.67
7. The principal participates democratically with staff sharing power and authority.	0	11	54	34	3.23	.64
8. Leadership is promoted and nurtured among staff members.	0	10	57	33	3.24	.61
9. Decision-making takes place through committees and communication across grade and subject areas.	0	11	56	32	3.21	.63
10. Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority.	3	14	54	29	3.09	.74
11. Staff members use multiple sources of data to make decisions about teaching and learning.	0	4	51	45	3.41	.57

Note: $n = 105$; SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree

Shared Values and Vision

Table 2 is comprised of responses to survey items consisting of attributes considered to be essential to the second PLC dimension, shared values and vision. Responses pertinent to this topic yielded relatively high means with most respondents either agreeing or strongly agreeing with each attribute statement. The items with the highest overall ratings were “Policies and programs are aligned to the school's vision” and “Data are used to prioritize actions to reach a

shared vision” which yielded mean scores of 3.44 and 3.42 respectively. The attribute that yielded the lowest mean score within the shared values and vision dimension was “Stakeholders are actively involved in creating high expectations that serve to increase student achievement” which was represented by a mean score of 3.19 and was the only attribute within the dimension that did not yield over 90% agreement (agree or strongly agree) from respondents. See Table 2.

Table 2

Shared Values and Vision

Attributes	SD%	D%	A%	SA%	Mean	SD
12. A collaborative process exists for developing a shared sense of values among staff.	0	7	59	34	3.28	.58
13. Shared values support norms of behavior that guide decisions about teaching and learning.	0	5	60	35	3.30	.56
14. Staff members share visions for school improvement that have an undeviating focus on student learning.	0	7	64	30	3.23	.56
15. Decisions are made in alignment with the school’s values and vision.	0	5	54	41	3.36	.57
16. A collaborative process exists for developing a shared vision among staff.	1	8	52	39	3.30	.65
17. School goals focus on student learning beyond test scores and grades.	1	9	49	42	3.31	.67
18. Policies and programs are aligned to the school’s vision.	0	4	47	48	3.44	.57
19. Stakeholders are actively involved in creating high expectations that serve to increase student achievement.	4	9	52	35	3.19	.75
20. Data are used to prioritize actions to reach a shared vision.	0	2	54	44	3.42	.53

Note: $n = 105$; SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree

Based on comments pertaining to shared values and vision, participants indicated a desire for more frequent communication of the school’s vision in order to provide more clarity and also noted a perceived overemphasis on standardized testing results. Sample responses included “A vision that is communicated to infrequently to be relevant will be difficult for staff to adopt”,

“there is increased pressure to make sure the learning is focused on how students will test”, and “Too much emphasis on test scores...when teachers are doing everything in their power to teach skills.”

Collective Learning and Application

Much like the items in the previous dimension, the 10 attributes comprising collective learning and application were perceived as strengths among the teachers who participated in the study as shown in Table 3. The statement with the lowest mean ($M = 3.22$) was “School staff members and stakeholders learn together and apply new knowledge to solve problems”. While the overall mean was high, there were several respondents ($n = 11$) who disagreed with the statement. Conversely, the statements with the highest means ($M = 3.40$) were “Professional development focuses on teaching and learning” and “Staff members collaboratively analyze multiple sources of data to assess the effectiveness of instructional practices”.

Based on comments pertaining to collective learning and application, participants indicated that most of the collective learning occurs through PLCs though trust and clarity can be barriers to collaboration. Sample responses included “Regarding item 24, this participant notes primarily grade level and departmental PLCs”, “Done through planning and grade level PLC's with Content and Data”, “Collegial relationships could improve,” and “staff collaboration is hindered by what Lencioni describes as an artificial harmony and fear of conflict.” See Table 3.

Table 3

Collective Learning and Application

Attributes	SD%	D%	A%	SA%	Mean	SD
21. Staff members work together to seek knowledge, skills and strategies and apply this new learning to their work.	0	4	57	39	3.35	.55
22. Collegial relationships exist among staff members that reflect commitment to school improvement efforts.	0	5	62	33	3.29	.55
23. Staff members plan and work together to search for solutions to address diverse student needs.	0	5	57	38	3.33	.57
24. A variety of opportunities and structures exist for collective learning through open dialogue.	1	3	59	37	3.32	.58
25. Staff members engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry.	0	8	58	34	3.27	.59
26. Professional development focuses on teaching and learning.	2	7	41	51	3.40	.70
27. School staff members and stakeholders learn together and apply new knowledge to solve problems.	2	9	55	34	3.22	.68
28. School staff members are committed to programs that enhance learning.	0	3	57	40	3.37	.54
29. Staff members collaboratively analyze multiple sources of data to assess the effectiveness of instructional practices.	0	6	49	46	3.40	.60
30. Staff members collaboratively analyze student work to improve teaching and learning.	0	6	52	42	3.36	.59

Note: $n = 105$; SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree

Shared Personal Practice

Items pertaining to the fourth PLC dimension, shared personal practice, were indicative of perceived strength among teachers participating in PLCs. Responses to all items represent a level of agreement with the statements attributed to shared personal practice. The statement “Staff members informally share ideas and suggestions for improving student learning” yielded the highest mean ($M = 3.46$) with “Individuals and teams have the opportunity to apply learning

and share the results of their practices” as the second highest ($M = 3.38$). Means for the statements “Staff members regularly share student work to guide overall school improvement” and “Staff members collaboratively review student work to share and improve instructional practices” generated the lowest means, ($M = 3.08$) and ($M = 3.16$) respectively. See Table 4.

Table 4

Shared Personal Practice

Attributes	SD%	D%	A%	SA%	Mean	SD
31. Opportunities exist for staff members to observe peers and offer encouragement.	0	7	57	36	3.30	.59
32. Staff members provide feedback to peers related to instructional practices.	0	11	59	31	3.20	.61
33. Staff members informally share ideas and suggestions for improving student learning.	0	0	54	46	3.46	.50
34. Staff members collaboratively review student work to share and improve instructional practices.	1	11	60	29	3.16	.64
35. Opportunities exist for coaching and mentoring.	1	6	50	44	3.36	.64
36. Individuals and teams have the opportunity to apply learning and share the results of their practices.	0	1	60	39	3.38	.51
37. Staff members regularly share student work to guide overall school improvement.	1	16	57	26	3.08	.68

Note: $n = 105$; SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree

Based on comments pertaining to shared personal practice, participants valued opportunities such as peer observations and coaching support however they felt that most of the support is focused on new or struggling teachers. Sample responses included “In the past I have done peer observations...I love this opportunity. There is so much that others do that you can add to your teaching toolbox. I would recommend to all”, “Opportunities also exist for new or struggling teachers to observe veteran teachers that can help them with areas that they may struggle in”, and “these coaching and mentoring opportunities are not as prevalent or effective

for all staff members as they should be. While most coaching attention is understandably directed toward new teachers, it would be beneficial for all staff.”

Supportive Conditions-Relationships

The responses to items within the fifth dimension indicated general agreement with statements attributed to supportive conditions-relationships. The statement “Caring relationships exist among staff and students that are built on trust and respect” produced the highest overall agreement ($M = 3.40$) with 99% of respondents indicating some level of agreement. “School staff and stakeholders exhibit a sustained and unified effort to embed change into the culture of the school” produced the lowest overall mean within this dimension ($M = 3.13$). Additionally, while the statement “Outstanding achievement is recognized and celebrated regularly in our school” produced an overall mean indicative of agreement ($M = 3.21$), several teachers ($n = 15$) disagreed with the statement. See Table 5.

Table 5

Supportive Conditions- Relationships

Attributes	SD%	D%	A%	SA%	Mean	SD
38. Caring relationships exist among staff and students that are built on trust and respect.	0	1	58	41	3.40	.51
39. A culture of trust and respect exists for taking risks.	0	6	60	34	3.29	.57
40. Outstanding achievement is recognized and celebrated regularly in our school.	2	12	49	37	3.21	.73
41. School staff and stakeholders exhibit a sustained and unified effort to embed change into the culture of the school.	3	11	57	30	3.13	.71
42. Relationships among staff members support honest and respectful examination of data to enhance teaching and learning.	0	7	56	37	3.30	.59

Note: $n = 105$; SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree

Based on comments pertaining to supportive conditions-relationships, participants seemed to value both relationships among adults in the building as well as those among all

stakeholders while indicating that both are areas in need of improvement. Sample responses included “I have had years when my team was strong and we were on a roll with teaching and learning”, “staff and stakeholders...implies both have to be equally engaged and that is not my experience”, and “I think caring relationships are a weakness in our school.”

Supportive Conditions-Structures

Responses related to the sixth dimension of *PLCs*, supportive conditions-structures generated high means indicative of general agreement with the attribute statements. While all statements yielded high means ($M \geq 3.0$), the statements “Appropriate technology and instructional materials are available to staff” and “Fiscal resources are available for professional development” produced the highest ($M = 3.45$) with 95% and 98% of respondents expressing levels of agreement. The attribute that generated the lowest mean ($M = 3.15$) within the supportive conditions-structures dimension was “Communication systems promote a flow of information across the entire school community including: central office personnel, parents, and community members”.

Based on comments pertaining to supportive conditions-structures, participants indicated that instructional materials and resources were available to staff and that professional development and the use of such materials are improving. Sample responses included “Staff technology seems to be on point”, “Every teacher is provided with either a laptop or an iPad. In some cases, teachers have both”, “Utilization of instructional materials and experts is improving,” and “Resources for professional development has so improved since I gained employment.” See Table 6.

Table 6

Supportive Conditions- Structures

Attributes	SD%	D%	A%	SA%	Mean	SD
43. Time is provided to facilitate collaborative work.	0	10	51	39	3.30	.63
44. The school schedule promotes collective learning and shared practice.	0	8	58	34	3.27	.59
45. Fiscal resources are available for professional development.	0	2	51	47	3.45	.54
46. Appropriate technology and instructional materials are available to staff.	0	5	46	50	3.45	.59
47. Resource people provide expertise and support for continuous learning.	0	7	49	45	3.38	.61
48. The school facility is clean, attractive and inviting.	1	4	54	41	3.35	.60
49. The proximity of grade level and department personnel allows for ease in collaborating with colleagues.	0	3	53	44	3.41	.55
50. Communication systems promote a flow of information among staff members.	3	4	56	37	3.28	.67
51. Communication systems promote a flow of information across the entire school community including: central office personnel, parents, and community members.	5	10	51	34	3.15	.78
52. Data are organized and made available to provide easy access to staff members.	1	4	59	39	3.33	.60

Note: $n = 105$; SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree

Findings

When analyzing the data collectively across all six PLC dimensions, mean scores generated by attributes within the dimensions of shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures were all greater than 3.0 indicating that respondents were in general agreement with the statements. Based on these results the researcher was able to conclude that all six dimensions were being implemented with fidelity. Additionally, based on these findings,

none of the six PLC dimensions presented challenges for implementation as all areas yielded means greater than 3.0. When analyzing the data sets for outliers, no outliers were identified.

Perceptions of PLCs by Demographic Characteristics

To answer the third research question, the researcher performed a series of one-way ANOVAs to analyze the mean difference in respondents' perceptions of each PLC dimension based on participants' roles, content areas, grade clusters, and years of experience. The researcher then compared the responses of the subgroups for each of the dimensions. For the dimensions that reflected a significant difference, a post hoc test was used to help identify the differences. Findings and results are presented in the tables and accompanying narratives below.

Shared and Supportive Leadership

For the first PLC dimension, Shared and Supportive Leadership, descriptive statistics as well as a one-way ANOVA were used to analyze the data. Tables 7-10 present the descriptive statistics for each group followed by the results of the one-way ANOVA in Table 11.

Table 7 shows that among the various perceptions analyzed, school leaders yielded the highest overall mean in terms of shared and supportive leadership ($M = 3.45$). Teachers had the lowest overall perceptions ($M = 3.16$). When analyzed by grade cluster, Table 8 shows that perceptions yield the highest means at the elementary level ($M = 3.34$) and are lowest at the high school level ($M = 3.10$). Table 9 provides data based on years of experience and shows that the more experience respondents had, the higher their overall perceptions of shared and supportive leadership as the highest perceptions came from those with over 20 years of experience ($M = 3.38$) and the lowest means were yielded from those with 1-5 years of experience ($M = 3.16$). Table 10 shows perceptions based on content area. Science teacher perceptions yielded the

highest overall mean ($M = 3.44$) while math teachers accounted for the lowest mean among content areas ($M = 3.02$). See Tables 7-10.

Table 7

Shared and Supportive Leadership by Role

Role	<i>M</i>	<i>SD</i>	<i>n</i>
Teacher	3.16	.53	74
Support Staff	3.41	.45	22
Leader	3.45	.33	9

Note: n = 105

Table 8

Shared and Supportive Leadership by Grade Cluster

Grade Cluster	<i>M</i>	<i>SD</i>	<i>n</i>
Elementary	3.34	.5	49
Middle School	3.17	.5	33
High School	3.10	.54	23

Note: n = 105

Table 9

Shared and Supportive Leadership by Years of Experience

Years of Experience	<i>M</i>	<i>SD</i>	<i>n</i>
1-5	3.16	.47	34
6-20	3.18	.56	39
20 +	3.38	.47	32

Note: n = 105

Table 10

Shared and Supportive Leadership by Content Area Taught

Content Area Taught	<i>M</i>	<i>SD</i>	<i>n</i>
ELA	3.06	.49	36
Math	3.02	.56	13
Science/SS	3.44	.55	16
PE, Fine Arts, CTAE	3.43	.49	12
N/A	3.36	.43	28

Note: n = 105

The ANOVA results are available in Table 11. Results of the one-way ANOVA were intended to test whether significance differences existed in perceptions related to shared and supportive leadership based on participants' role, grade cluster, years of experience, and content area taught. Given no significant difference in means, it was determined that the participants' role, grade cluster, and years of experience did not influence how they perceived shared and supportive leadership. However, there was a significant difference in means when content area taught was used as the independent variable. According to the results, participants who teach science, social studies, PE, fine arts, CTAE, or those who identify as N/A (likely counselors, administrators, instructional coaches, or other support staff), had higher overall perceptions of shared and supportive leadership than those who teach ELA or mathematics. See Table 11.

For the second PLC dimension, Shared Values and Vision, descriptive statistics as well as a one-way ANOVA were used to analyze the data. Tables 12-15 present the descriptive statistics for each group..

Table 11

Results of One-Way ANOVA- Shared and Supportive Leadership

Variable		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Role	Between Groups	1.483	2	.742	2.935
	Within Groups	25.778	102	.253	
Grade Cluster	Between Groups	1.156	2	.578	2.259
	Within Groups	26.105	102	.256	
Years of Experience	Between Groups	.961	2	.481	1.864
	Within Groups	26.300	102	.258	
Content Area Taught	Between Groups	3.238	4	.810	3.370*
	Within Groups	24.023	100	.240	

* $p < .05$. ** $p < .01$.

Table 12 shows that among the various perceptions analyzed, school leaders yielded the highest overall mean in terms of shared vision ($M = 3.59$). Teachers had the lowest overall perceptions ($M = 3.25$). When analyzed by grade cluster, Table 13 shows that perceptions yield the highest means at the elementary level ($M = 3.39$) and are lowest at the middle school level ($M = 3.23$). Table 14 provides data based on years of experience and shows that the more experience respondents had, the higher their overall perceptions of shared values and vision as the highest perceptions came from those with over 20 years of experience ($M = 3.40$) and the lowest means were yielded from those with 1-5 years of experience ($M = 3.26$). Table 15 shows perceptions based on content area. Science teacher perceptions yielded the highest overall mean ($M = 3.5$) while ELA teachers accounted for the lowest mean among content areas ($M = 3.15$). See Tables 12-16.

Table 12

Shared Values and Vision by Role

Role	<i>M</i>	<i>SD</i>	<i>n</i>
Teacher	3.25	.51	74
Support Staff	3.43	.48	22
Leader	3.59	.39	9

Note: n = 105

Table 13

Shared Values and Vision by Grade Cluster

Grade Cluster	<i>M</i>	<i>SD</i>	<i>n</i>
Elementary	3.39	.53	49
Middle School	3.23	.46	33
High School	3.28	.49	23

Note: n = 105

Table 14

Shared Values and Vision by Years of Experience

Years of Experience	<i>M</i>	<i>SD</i>	<i>n</i>
1-5	3.26	.53	34
6-20	3.29	.52	39
20 +	3.40	.45	32

Note: n = 105

Table 15

Shared Values and Vision by Content Area Taught

Content Area Taught	<i>M</i>	<i>SD</i>	<i>n</i>
ELA	3.15	.47	36
Mathematics	3.19	.58	13
Science/SS	3.5	.49	16
PE, Fine Arts, CTAE	3.47	.48	12
N/A	3.41	.48	28

Note: *n* = 105

Table 16

Results of One-Way ANOVA- Shared Values and Vision

Variable		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Role	Between Groups	1.339	2	.670	2.744
	Within Groups	24.887	102	.244	
Grade Cluster	Between Groups	.533	2	.266	1.057
	Within Groups	25.693	102	.252	
Years of Experience	Between Groups	.325	2	.163	.640
	Within Groups	25.901	102	.254	
Content Area Taught	Between Groups	2.263	4	.566	2.361
	Within Groups	23.963	100	.240	

p* < .05. *p* < .01.

Results of the one-way ANOVA were intended to show differences in perceptions related to shared values and vision according to participants role, grade cluster, years of experience, and content area taught. Given no significant difference in means, it was determined that the

participants' role, grade cluster, years of experience, or content area taught had no influence on how they perceived shared values and vision.

For the third PLC dimension, Collective Learning and Application, descriptive statistics as well as a one-way ANOVA were used to analyze the data. Tables 17-20 present the descriptive statistics for each group. The ANOVA results are available in Table 21. Table 17 shows that among the various perceptions analyzed, school leaders yielded the highest overall mean in terms of collective learning and application ($M = 3.47$). Teachers had the lowest overall perceptions ($M = 3.28$). When analyzed by grade cluster Table 18 shows that perceptions yield the highest means at the elementary level ($M = 3.43$) and are lowest at the high school level ($M = 3.23$). Table 19 provides data based on years of experience. The highest perceptions came from those with 1-5 years of experience ($M = 3.37$) and the lowest means were yielded from those with 6-10 years of experience ($M = 3.29$). Table 20 shows perceptions based on content area. Science teacher perceptions yielded the highest overall mean ($M = 3.56$) while mathematics teachers accounted for the lowest mean among content areas ($M = 3.22$). See Tables 17-21.

Table 17

Collective Learning and Application by Role

Role	M	SD	n
Teacher	3.28	.46	74
Support Staff	3.45	.47	22
Leader	3.47	.40	9

Note: n = 105

Table 18

Collective Learning and Application by Grade Cluster

Grade Cluster	<i>M</i>	<i>SD</i>	<i>n</i>
Elementary	3.43	.48	49
Middle School	3.26	.44	33
High School	3.23	.43	23

Note: n = 105

Table 19

Collective Learning and Application by Years of Experience

Years of Experience	<i>M</i>	<i>SD</i>	<i>n</i>
1-5	3.37	.48	34
6-20	3.29	.5	39
20 +	3.35	.40	32

Note: n = 105

Table 20

Collective Learning and Application by Content Area Taught

Content Area Taught	<i>M</i>	<i>SD</i>	<i>n</i>
ELA	3.24	.45	36
Math	3.22	.48	13
Science/SS	3.56	.49	16
PE, Fine Arts, CTAE	3.36	.46	12
N/A	3.36	.43	28

Note: n = 105

Table 21

Results of One-Way ANOVA- Collective Learning and Application

Variable		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Role	Between Groups	.672	2	.336	.207
	Within Groups	21.395	102	.210	
Grade Cluster	Between Groups	.877	2	.438	2.111
	Within Groups	21.189	102	.208	
Years of Experience	Between Groups	.113	2	.057	.263
	Within Groups	21.953	102	.215	
Content Area Taught	Between Groups	1.327	4	.332	1.600
	Within Groups	20.739	100	.207	

* $p < .05$. ** $p < .01$.

Results of the one-way ANOVA were intended to show differences in perceptions collective learning and application according to participants role, grade cluster, years of experience, and content area taught. Given no significant difference in means, it was determined that the participants' role, grade cluster, years of experience, or content area taught had no influence on how participants perceived collective learning and application.

For the fourth PLC dimension, Shared Personal Practice, descriptive statistics as well as a one-way ANOVA were used to analyze the data. Tables 22-25 present the descriptive statistics for each group. The ANOVA results are available in Table 26. Table 22 shows that among the various perceptions analyzed, support staff yielded the highest overall mean in terms of shared personal practice ($M = 3.48$). Teachers had the lowest overall perceptions ($M = 3.19$). When analyzed by grade cluster Table 23 shows that perceptions yield the highest means at the middle school level ($M = 3.31$) and are lowest at the high school level ($M = 3.22$). Table 24 provides data based on years of experience. The highest perceptions came from those with 1-5 years of

experience ($M = 3.33$) and the lowest means were yielded from those with over 20 years of experience ($M = 3.23$). Table 25 shows perceptions based on content area. Science teacher perceptions yielded the highest overall mean ($M = 3.49$) while ELA teachers accounted for the lowest mean among content areas ($M = 3.12$). See Tables 22-26.

Table 22

Shared Personal Practice by Role

Role	<i>M</i>	<i>SD</i>	<i>n</i>
Teacher	3.19	.47	74
Support Staff	3.48	.49	22
Leader	3.46	.53	9

Note: n = 105

Table 23

Shared Personal Practice by Grade Cluster

Grade Cluster	<i>M</i>	<i>SD</i>	<i>n</i>
Elementary	3.28	.5	49
Middle School	3.31	.45	33
High School	3.22	.53	23

Note: n = 105

Table 24

Shared Personal Practice by Years of Experience

Years of Experience	<i>M</i>	<i>SD</i>	<i>n</i>
1-5	3.33	.5	34
6-20	3.26	.5	39
20 +	3.23	.47	32

Note: n = 105

Table 25

Shared Personal Practice by Content Area Taught

Content Area Taught	<i>M</i>	<i>SD</i>	<i>n</i>
ELA	3.12	.42	36
Math	3.15	.51	13
Science/SS	3.49	.49	16
PE, Fine Arts, CTAE	3.41	.47	12
N/A	3.36	.52	28

Note: n = 105

Table 26

Results of One-Way ANOVA- Shared Personal Practice

Variable		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Role	Between Groups	1.735	2	.868	3.814*
	Within Groups	23.201	102	.227	
Grade Cluster	Between Groups	.119	2	.060	.245
	Within Groups	24.817	102	.243	
Years of Experience	Between Groups	.175	2	.088	.361
	Within Groups	24.761	102	.243	
Content Area Taught	Between Groups	2.213	4	.553	2.435
	Within Groups	22.723	100	.227	

* $p < .05$. ** $p < .01$.

Results of the one-way ANOVA were intended to show differences in perceptions related to shared personal practice according to participants role, grade cluster, years of experience, and content area taught. Given no significant difference in means, it was determined that the participants' grade cluster, years of experience, or content area taught did not influence how they perceived shared personal practice. However, there was a significant difference in means when the participants' role was used as the independent variable. According to the results, participants who were in leadership or support staff roles had higher overall perceptions of shared personal practice than those who identified as teachers.

For the fifth PLC dimension, Supportive Conditions-Relationships, descriptive statistics as well as a one-way ANOVA were used to analyze the data. Tables 27-30 present the descriptive statistics for each group. The ANOVA results are available in Table 31. Table 27 shows that among the various perceptions analyzed, school leaders yielded the highest overall mean in terms of supportive conditions-relationships ($M = 3.5$). Teachers had the lowest overall

perceptions ($M = 3.18$). When analyzed by grade cluster Table 28 shows that perceptions yield the highest means at the elementary level ($M = 3.35$) and are lowest at the high school level ($M = 3.18$). Table 29 provides data based on years of experience and shows that the highest overall perceptions of supportive conditions-relationships came from those with over 20 years of experience ($M = 3.28$) and the lowest means were yielded from those with 6-20 years of experience ($M = 3.26$). Table 30 shows perceptions based on content area. Science teachers and non-content participant perceptions yielded the highest overall mean ($M = 3.4$) while ELA teachers accounted for the lowest mean among content areas ($M = 3.09$). Results of the one-way ANOVA were intended to show differences in perceptions related to supportive conditions-relationships according to participants role, grade cluster, years of experience, and content area taught. Given no significant difference in means, it was determined that the participants' grade cluster, years of experience, or content area taught did not influence how they perceived supportive conditions-relationships. However, there was a significant difference in means when participants' role was used as the independent variable. Much like the results for shared personal practice, participants who identified as leaders or support staff had higher perceptions of the existing supportive conditions-relationships than those who identified as teachers. See Tables 27-31.

Table 27

Supportive Conditions-Relationships by Role

Role	<i>M</i>	<i>SD</i>	<i>n</i>
Teacher	3.18	.47	74
Support Staff	3.45	.58	22
Leader	3.5	.47	9

Note: *n* = 105

Table 28

Supportive Conditions-Relationships by Grade Cluster

Grade Cluster	<i>M</i>	<i>SD</i>	<i>n</i>
Elementary	3.35	.53	49
Middle School	3.20	.47	33
High School	3.18	.51	23

Note: *n* = 105

Table 29

Supportive Conditions-Relationships by Years of Experience

Years of Experience	<i>M</i>	<i>SD</i>	<i>n</i>
1-5	3.27	.51	34
6-20	3.26	.51	39
20 +	3.28	.52	32

Note: *n* = 105

Table 30

Supportive Conditions-Relationships by Content Area Taught

Content Area Taught	<i>M</i>	<i>SD</i>	<i>n</i>
ELA	3.09	.44	36
Math	3.22	.61	13
Science/SS	3.40	.53	16
PE, Fine Arts, CTAE	3.35	.46	12
N/A	3.40	.51	28

Note: *n* = 105

Table 31

Results of One-Way ANOVA- Supportive Conditions-Relationships

Variable		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Role	Between Groups	1.749	2	.875	3.543*
	Within Groups	25.184	102	.247	
Grade Cluster	Between Groups	.658	2	.329	1.277
	Within Groups	26.275	102	.258	
Years of Experience	Between Groups	.011	2	.006	.979
	Within Groups	26.922	102	.264	
Content Area Taught	Between Groups	1.968	4	.492	1.970
	Within Groups	24.966	100	.250	

* $p < .05$. ** $p < .01$.

For the sixth and final PLC dimension, Supportive Conditions-Structures, descriptive statistics as well as a one-way ANOVA were used to analyze the data. Tables 32-35 present the descriptive statistics for each group. The ANOVA results are available in Table 36. Table 32 shows that among the various perceptions analyzed, school leaders yielded the highest overall

mean in terms of supportive conditions-structures ($M = 3.66$). Teachers had the lowest overall perceptions ($M = 3.24$). When analyzed by grade cluster Table 33 shows that perceptions yield the highest means at the elementary level ($M = 3.44$) and are lowest at the middle school level ($M = 3.22$). Table 34 provides data based on years of experience and shows that the more experience respondents had, the higher their overall perceptions of supportive conditions-structures as the highest perceptions came from those with over 20 years of experience ($M = 3.45$) and the lowest means were yielded from those with 1-5 years of experience ($M = 3.27$). Table 35 shows perceptions based on content area. Science teacher perceptions yielded the highest overall mean ($M = 3.56$) while ELA teachers accounted for the lowest mean among content areas ($M = 3.18$). See Tables 32-36.

Table 32

Supportive Conditions-Structures by Role

Role	M	SD	n
Teacher	3.24	.48	74
Support Staff	3.54	.47	22
Leader	3.66	.34	9

Note: $n = 105$

Table 33

Supportive Conditions-Structures by Grade Cluster

Grade Cluster	<i>M</i>	<i>SD</i>	<i>n</i>
Elementary	3.44	.45	49
Middle School	3.22	.52	33
High School	3.26	.49	23

Note: n = 105

Table 34

Supportive Conditions-Structures by Years of Experience

Years of Experience	<i>M</i>	<i>SD</i>	<i>n</i>
1-5	3.27	.52	34
6-20	3.30	.48	39
20 +	3.45	.46	32

Note: n = 105

Table 35

Supportive Conditions-Structures by Content Area Taught

Content Area Taught	<i>M</i>	<i>SD</i>	<i>n</i>
ELA	3.18	.5	36
Math	3.25	.46	13
Science/SS	3.56	.44	16
PE, Fine Arts, CTAE	3.31	.53	12
N/A	3.46	.44	28

Note: n = 105

Table 36

Results of One-Way ANOVA- Supportive Conditions-Structures

Variable		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Role	Between Groups	2.515	2	1.258	5.751**
	Within Groups	22.307	102	.219	
Grade Cluster	Between Groups	1.101	2	.551	2.367
	Within Groups	23.721	102	.233	
Years of Experience	Between Groups	.607	2	.303	1.277
	Within Groups	24.216	102	.237	
Content Area Taught	Between Groups	2.178	4	.545	2.405
	Within Groups	22.644	100	.226	

* $p < .05$. ** $p < .01$.

Results of the one-way ANOVA were intended to show differences in perceptions related to supportive conditions-structures according to participants role, grade cluster, years of experience, and content area taught. Given no significant difference in means, it was determined that the participants' grade cluster, years of experience, or content area taught did not influence how they perceived supportive conditions-structures. Again, participants' role was found to have the greatest influence on their perception of supportive conditions-structures. Like the previous two PLC dimensions, leaders and support staff had a higher overall perception of existing conditions related to supportive structures while teacher perceptions yielded significantly lower means.

The Influence of PLC Dimensions on Teacher Retention

In addition to the Likert-scaled items included in the first part of the survey, respondents were asked to respond to two open-ended questions at the end of the survey. These research open-ended questions were designed to answer the final two research questions: "How do PLC

dimensions (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) influence teacher retention?” and “How do PLC dimensions (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) contribute to collective teacher efficacy?” The intent of these questions was to solicit narrative responses that could be analyzed for themes/patterns and used to provide additional insight into the impact of PLCs. Specifically, these questions were intended to explore the influence of PLC dimensions on both teacher retention and collective teacher efficacy. The responses were analyzed carefully and categorized based on themes that emerged from common phrases found in the responses. Three themes emerged from the responses - 1) PLCs help teacher retention; 2) PLCs do not influence teacher retention and 3) Influence depends on the PLC. The themes that emerged from each item are presented in the tables below along with frequencies and sample responses. Overall, respondents either felt that PLCs helped teacher retention, that PLCs had no impact on teacher retention, or that the effect of PLCs on teacher retention varied depending on the PLC itself. See Table 37.

Table 37

Influence of PLCs on Teacher Retention Derived from Qualitative Data

Themes	<i>n</i>	Sample Respondent Statements
PLCs help teacher retention	77	<p>“The elements of a PLC can promote teacher retention because it helps to build relationships with colleagues and makes everyone feel safe to learn and grow”</p> <p>“Having a PLC where you feel supported, ideas are heard, and everyone is all in helps you feel like you belong. A sense of family/community helps the work environment which in turn influences teachers to want to stay”</p>
PLCs do not influence teacher retention	8	<p>“PLC does not influence my decision to stay or leave. As for others, I have heard them indicate the same”</p> <p>“The people who have left our dept left for reasons other than PLC, so I would have to say one doesn't influence the other”</p>
Influence depends on the PLC	8	<p>“Some PLCs are stronger than others. When a PLC is open to new staff members, there is great retention. When the PLC is unwelcoming to new staff, the retention is less”</p> <p>“When a teacher is a member of a high functioning PLC where they feel supported, valued and have positive relationships with their peers they usually choose to stay and collectively meet the challenge and demands of improving student achievement. However, when the PLC is dysfunctional, teachers generally have a negative feeling about the overall culture or environment of the school which in turn leads to a lack of motivation and they will more than likely choose to leave”</p>

Note: $n = 105$; 12 participants chose not to respond, were off topic, or responded “NA”

The most commonly recurring theme was that PLCs “Help teacher retention” ($n = 77$). Among these responses there were repeated references to the “community” and “support” that PLCs provide to their members through various forms “collaboration”. Included in the “PLCs don’t influence teacher retention” theme were statements related to compliance rather than

collaboration with more than one respondent expressing that PLCs are a “waste of time” Additionally, respondents in this category seemed to experience PLCs as a form of top-down information dissemination with statements such as “disseminate the message from the directives of the administration” and “so much ‘business’ we have to do in order to check boxed that we don’t focus much on instruction or sharing student work.” Regarding the last theme of “Influence depends on the PLC” respondents noted that certain PLC conditions have a positive impact on teacher retention while others may negatively affect teacher retention. In their responses, words and phrases such as “supportive” and “positive relationships” were associated with having a positive impact on PLCs while others such as “negative” and “lack of collaboration” were said to have the opposite effect and “influence teachers to leave.”

The Influence of PLC Dimensions on Collective Teacher Efficacy

The second open-ended question “How do the elements of a PLC (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) contribute to collective teacher efficacy at your school?” sought to provide insight into how PLC elements affect collective teacher efficacy. Three themes emerged from the responses - 1) PLCs help collective teacher efficacy; 2) PLCs don’t influence collective teacher efficacy; and 3) Influence depends on the PLC. The most common theme found in the responses ($n = 83$) was that respondents felt that PLCs help collective teacher efficacy. Common words that were used when describing this relationship were “collaborate” and “together”. There were only a few respondents who felt that PLCs had no influence on collective teacher efficacy ($n=3$) and one respondent even felt that veteran teachers should be able to “opt out of PLCs.” See Table 38.

Table 38

Influence of PLCs on Collective Teacher Efficacy Derived from Qualitative Data

Themes	<i>n</i>	Sample Respondent Statements
PLCs help collective teacher efficacy	83	<p>“I believe the elements of a PLC contribute to collective teacher efficacy at my school”</p> <p>“Teachers take a sense of ownership in what transpires at our school because they are involved in the development of school wide initiatives. This leads to greater teacher efficacy, as teachers develop a clear understanding of school level goals, and more importantly, how to hit those goals”</p>
PLCs don’t influence collective teacher efficacy	3	<p>“Currently, the elements in place for PLCs aren't contributing much to teacher efficacy”</p> <p>“I do not believe they do”</p>
Influence depends on the PLC	8	<p>“The PLCs that check all the boxes expect and see results. The other PLCs are very negative and the results are just not there. They tend to believe that the students just can't get it”</p> <p>“Teachers who demonstrate a strong self-efficacy also play a large role in the successful leadership of collaborative PLCs. Those teachers are responsible for creating a trusting, effective PLC focused on student’s growth and achievement and understand the shared vision. As a result, these PLCs have achieved collective teacher efficacy. On the flip side, those PLCs without strong leadership struggle with collective teacher efficacy”</p>

Note: *n* = 105; 11 participants chose not to respond, were off topic, or responded “NA”

While most respondents (79%) felt that PLCs helped collective teacher efficacy, the second most common theme was that influence depends on the PLC. Respondents who expressed such sentiment noted positive influences on collective teacher efficacy among those who participate in high functioning PLCs while also acknowledging that PLCs lack certain attributes then collective efficacy can struggle as a result.

Chapter Summary

The overall purpose of this study was to determine which dimensions of PLCs were being implemented with fidelity. Additionally, this study aimed to examine the impact of PLC perceptions based on participants' roles, grade cluster, content, and years of experience within the school system. Finally, the influence of PLCs on both teacher retention and collective teacher efficacy was explored. Data were collected from participants within the Curtis County School District which included school leaders, teachers, and support staff, by participants completing the Professional Learning Communities Assessment-Revised (PLCA-R) survey in addition to two open-ended questions. The survey was administered in the PLCA-R online platform which produced reports with descriptive statistics.

One-way ANOVA tests were performed to show the relationships between variables. In addition, open-ended responses were coded and analyzed for themes. The first two research questions were answered using means of responses to items found on the PLCA-R. Responses indicated that participants' perceptions of PLCs were high which was interpreted as all six dimensions of PLCs being implemented with fidelity while none of the dimensions were perceived to have produced challenges with implementation. Using an open-ended comment section that allowed participants to elaborate on responses, the researcher gained additional insight into participant perceptions regarding each PLC dimension. Comments reflected the importance of communication and shared leadership, the need for trust and clarity to improve collaboration, the value of peer observations and coaching beyond support for new and struggling teachers, and a need for improved relationships both among teachers and with stakeholders. The third research question analysis indicated there were significant differences in PLC perceptions in four of six PLC dimensions based on participants' roles within the school. The analysis showed that

mathematics and ELA teachers had significantly lower perceptions of shared and supportive leadership than those who teach other content areas. Additionally, perceptions of shared personal practice and supportive conditions including relationships and structures were significantly lower among teachers than those serving in leadership or support roles. Analysis of the open-ended questions intended to answer the final two research questions regarding the influence of PLCs on teacher retention and collective teacher efficacy showed that the majority of participants felt that PLCs had a positive impact on both teacher retention and collective teacher efficacy.

CHAPTER FIVE

CONCLUSION

This chapter begins with an overview of the study, including the statement of the problem, the purpose statement, research questions, and research methodology that guided the study. A summary of the results from Chapter Four will serve as the basis for more in-depth discussion of each research question, followed by implications for practice and recommendations for future research. This chapter ends with a conclusion summary of the study and a final impact statement.

Although well-intentioned and rooted in the desire to help provide quality education to American children, government mandates have increasingly created pressure on public schools to produce results on student achievement. Oversight at the federal level via legislation such as the “No Child Left Behind Act” (2002) and the “Every Student Succeeds Act” of 2015 (2021) has led to increased accountability at the state level resulting in an emphasis on standardized testing, the results of which carry heavy consequences for schools that fail to perform at expected levels. Seeking solutions to produce results that meet the rising expectations, many schools have turned to professional learning communities (PLCs) to increase student achievement. In response to research supporting the use of job-embedded professional learning (Darling-Hammond et al., 2009), the state of Georgia’s licensure agency (GaPSC) created requirements for all public educators to participate in PLCs. The problem is minimal oversight has been provided to ensure that PLCs are being implemented with fidelity and often misconceptions about PLCs result in surface level meetings with no real effect on student learning (Dufour et al., 2016). In order for PLCs to support student achievement there are certain conditions that must exist within a school. School leaders play a vital role in facilitating such conditions. It is therefore imperative that school leaders not only know the elements of an effective PLC, but also are aware of how such

elements are perceived among the teachers and staff members within their respective buildings. This understanding is and its perception among teachers and staff are characteristic of high performing schools (Brown et al., 2017), therefore supporting it will ensure that school leaders are able to support their staff in effective school improvement efforts.

In order to provide a framework for effective PLCs as well as a tool to assess the fidelity with which such elements are being implemented Olivier et al. (2010) developed the Professional Learning Communities Assessment- Revised (PLCA-R), which breaks the attributes of effective PLCs down into six PLC dimensions including shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures. A thorough review of the literature related to each dimension supported the inclusion of these dimensions and built a strong rationale for school leaders to consider each when deciding whether or not PLCs are being implemented with fidelity within their buildings.

A review of the literature denoted that shared and supportive leadership was found to enhance creativity and aid in learning teams seeking innovative solutions to problems such as those facing educators (Huang et al., 2020; Koeslag-Kreunen, 2020; Lyndon, 2019).

Additionally, shared values and vision were found to enhance collective teacher efficacy and linked to high achieving schools (Mombourquette, 2017; Qadach et al., 2020). Furthermore, shared personal practice not only changed teachers' instructional practices (Chauraya & Brodie, 2018) but also helped to support teacher induction and increased teacher retention (Kelly, 2019). Finally, supportive conditions inclusive of relationships among staff increased professional learning outcomes (Akinyemi et al., 2020) and enabling structures were found to increase trust

(Kalkan, 2016) and optimism (Mitchell et al., 2016) which are both conditions that are needed for effective PLCs.

This research also intertwines with the concept of transformational leadership (Burns, 1978; Leithwood & Jentzi, 2000) which has been found to support PLCs (Luyten & Bazo, 2019; Vanblaere & Devos, 2016). As noted in previous research, transformational leadership stimulates changes in teacher practices through PLCs (Luyten & Bazo, 2019). This study examined the supportive conditions needed in order to facilitate PLC work. As Burns (1978) noted, transformational leadership emerges when leaders and followers work together to raise motivation and morality. Shared leadership and supportive conditions inclusive of relationships and communication were examined in this study which all have an effect on collaboration within teams. Previous studies have also identified transformational leadership as a predictor of collective responsibility, team learning, reflective dialogue, and innovation solution finding which are all intended outcomes of professional learning communities (Koeslag-Kreunen et al., 2020; Vanblaere & Devos, 2016) and thus, this is why transformational leadership was selected as the theoretical framework for this study.

Discussion

This study focused on the perceptions of school leaders, teachers, and support staff in relation to six dimensions of PLCs. The overall intent of the researcher was to determine which dimensions of PLCs were being implemented with fidelity, and which dimensions presented challenges with implementation. Additional questions were posed to determine to what extent perceptions of PLCs varied by role, content area, grade cluster, and years of experience as well as how PLC dimensions contributed to teacher retention and collective teacher efficacy.

The participants in this research study were within the Curtis County School District (CCSD), a pseudonym, which consisted of one rural, public school district comprised of elementary, middle, and high schools. The participants included school leaders, teachers, and support staff who all participated in PLCs across the district. All schools were identified as Title I schools and characterized by high poverty with 100% of students eligible for free and reduced lunch.

The researcher used the Professional Learning Communities Assessment-Revised (PLCA-R) which was developed by Olivier et al. (2010) and added additional demographic and open-ended items in order to gather perceptions of PLC dimensions, to determine to what extent those perceptions vary by respondents, and to find out how said dimensions contributed to teacher retention as well as collective teacher efficacy. The results of the study are discussed in the following sections which address each of the five equally weighted research questions. Descriptive statistics including frequencies, means, and standard deviations were utilized to answer the first two research questions. Inferential statistics including univariate analysis of variance tests (ANOVA) were used to answer the third research question. The final two research questions were addressed by analyzing two open-ended items for themes and patterns found in open-ended responses seeking to determine how PLCs contribute to teacher retention and collective teacher efficacy.

Research Questions One and Two

The first research question guiding the study was: Which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) are being implemented with fidelity? Perceptions of each of the six PLC dimensions (shared and

supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) yielded high means ($M \geq 3.0$). According to the developers of the PLCA-R, means greater than or equal to 3.0 should be interpreted as general agreement with each statement. Based on these findings one can conclude that all six dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) are being implemented with fidelity.

The second research question guiding the study was: Which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) present challenges with implementation? As noted above, perceptions of each of the six PLC dimensions (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) yielded high means ($M \geq 3.0$). Because means greater than or equal to 3.0 were interpreted as general agreement with each statement, none of the six PLC dimensions were interpreted to have presented challenges to implementing PLCs with fidelity.

Findings related to Research Questions One and Two indicated that all six dimensions of PLCs were being implemented with fidelity and that none of the six dimensions were presenting challenges with implementation. These findings are significant as published research findings indicate that successful implementation of PLCs not only enhances professional learning (McGee, 2016; Trust, 2016), but has also been linked to increased student achievement (Ratts, 2015; Ronfeldt et al., 2015).

Research Question Three

The third research question guiding this study was: To what extent do perceptions of PLC dimensions vary according to role, content area, grade cluster, and years of experience? ANOVA results in Table 11 related to Shared and Supportive Leadership showed that there was not any significant difference in means based on role, grade cluster, or years of experience. The only significant difference in means found was by content area. Those who identified as a science, social studies, physical education, fine arts, or CTAE teacher had significantly higher perceptions of shared and supportive leadership than those who taught ELA or mathematics. ANOVA results showed no significant difference in perceptions related to shared values and vision when accounting for role, content area, grade cluster, or years of experience. Similar findings showed ANOVA results for perceptions of collective learning and application based on role, content area, grade cluster, and years of experience noted no significant difference. When shared personal practice was used as the dependent variable and role, content area, grade cluster, and years of experience were the independent variables, findings indicated significant differences in perceptions based on the participants' roles, specifically, those who identified as school leaders or support staff had significantly higher perceptions of shared personal practice than those who identified as teachers.

Additionally, ANOVA findings indicated significant differences in means among school leaders and support staff from those who identified as teachers regarding perceptions of supportive conditions-relationships. The results of the final ANOVA also showed a significant difference in means when measuring perceptions of supportive conditions-structures. School leaders and support staff had significantly higher perceptions than teachers in relation to this PLC dimension. Findings are consistent with research findings of Luyten and Bazo (2019) who

discovered discrepancies in PLC perceptions based on educator roles, specifically they found that school leaders often had higher perceptions of PLCs than teachers. Findings from this research contradicted research findings from Masuda (2013) that suggested that perceptions of professional learning vary by years of experience as there were no significant differences in perceptions found in relation to years of experience in these findings.

Research Question Four

The fourth research question guiding this study was: How do PLC dimensions (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) influence teacher retention? Findings presented emergent themes and responses indicative of each theme based on participants' responses to an open-ended item designed to elicit thoughts on how PLC dimensions (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and support conditions-structures) influence teacher retention. During analysis of the data sets collected, three prominent themes emerged. Overall, participants either indicated that PLCs helped teacher retention, that PLCs did not have an effect on teacher retention, and that the influence of PLCs on teacher retention could be positive or negative, depending on the PLC itself. For example, 73% of participants expressed that PLCs helped teacher retention while 13% indicated that PLCs did not have an effect on teacher retention. Finally, another 13% felt that PLCs could have a positive or negative impact on teacher retention depending on the individuals within the PLC and the culture that is created among PLC members. Such conditional factors support research findings that collaboration among teachers increases teacher retention (Kelly, 2019) and that effective instructional leadership combined with the type of collective teacher

efficacy or lack thereof play a role in teachers' intent to leave (Qudach, 2019). When shared leadership emerges through collaboration then teacher burnout is reduced (Benoliel & Barth, 2017). On the other hand, failure to create conditions that support shared leadership among groups can negatively impact teacher retention (Torres, 2020).

Research Question Five

The fifth research question guiding this study was: How do PLC dimensions (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) contribute to collective teacher efficacy? These findings presented emergent themes and responses indicative of each theme based on participants' responses to an open-ended item designed to elicit thoughts on how PLC dimensions influence collective teacher efficacy. During analysis of the data collected, three prominent themes emerged. Overall, participants either indicated that PLCs helped collective teacher efficacy, that PLCs did not have an effect on collective teacher efficacy, or that the influence of PLCs on collective teacher efficacy could be positive or negative, depending on the PLC itself and thus, these were identified as the three themes that emerged. For example, 79% of participants expressed that PLCs helped collective teacher efficacy while 3% indicated that PLCs did not have an effect on collective teacher efficacy. Finally, much like the results to research question four, another 8% felt that PLCs could have a positive or negative impact on collective teacher efficacy depending on the individuals within the PLC and the culture that is created among PLC members.

The overwhelming percentage of respondents who indicated that PLCs helped collective efficacy support findings in previous research that participation in PLCs enhances collective teacher efficacy (Lee, 2020; Little, 2020; Zheng et al., 2019). The feelings of those who

indicated that the effects of PLCs depend on the conditions within the PLC such as trust among individuals are consistent with research findings that indicated that efficacy increases with teacher trust (Kılınç et al., 2021). Such conditions are created by instructional leaders who also have an effect on collective efficacy through the conditions that are created (Qadach et al., 2020). As teacher autonomy is supported and enhanced through the PLC process, collective teacher efficacy is also enhanced (Boz & Saylik, 2021). Research findings have also shown that the quality of collaboration among PLC members affects student achievement (Ronfeldt, 2015). Within the results driven culture of an effective PLC, positively affecting student achievement enhances collective teacher efficacy as teachers who experience success through the PLC process begin to believe that their collective efforts can make an impact on student outcomes.

Limitations, Delimitations, Assumptions

It is important to consider limitations when interpreting the findings from this study. First, it is possible that the use of self-reporting when participants completed the surveys limited the accuracy and precision of the findings, as participants may not have been the best raters of their own perceptions, beliefs, or attitudes. Second, findings are based on a 54% response rate which may have been impacted by the amount of time required to complete the survey coupled with the level of responsibility required while working in a rural, high poverty school district. It can be assumed that respondents who participated were more motivated to check and respond to emails than those who did not participate. Therefore, responses may have been limited to those who had the time, and or willingness, to reply to emails and complete surveys.

A delimitation was that the study was limited to educators in one school district. Due to the unpredictability of school and participant access during to the ongoing COVID-19 pandemic along with the inundation of related studies and surveys, the researcher decided to focus on one

school district which was also the researcher's place of employment. While increasing accessibility, this convenience sampling approach possibly limited the generalizability of the results as participants were limited to school leaders, teachers, and support staff of one rural school district. As a result, findings may not be as generalizable to other populations or contexts as they may have been with more districts included in the study. It is assumed that responses from respondents were honest and truthful, however there is no way to ensure this.

Implications for Practice

This study contributes to current research related to teacher perceptions of various PLC dimensions, how perceptions of PLCs vary by the educator's role, and how PLCs influence teacher retention as well as collective teacher efficacy. The review of literature supports the need for administrators to assess perceptions of various practices related to PLCs to ensure that they are being implemented with fidelity. The PLCA-R provides school leaders with a tool to assess perceptions of critical PLC dimensions to determine which are being implemented with fidelity, and which are presenting challenges with implementation (Olivier et al., 2010). Findings in this study support previous research that suggests that perceptions of school leaders related to PLCs are higher than those of teachers (Luyten & Bazo, 2019). Based on these findings it could be argued that school leaders should not depend on their own perceptions when attempting to determine whether or not PLCs are being implemented with fidelity but must include the voice of the collective good of the school.

School leaders looking to address challenges related to teacher retention should consider assessing whether or not PLCs are being implemented with fidelity in their schools. Among the schools that were found to be implementing PLCs with fidelity in the study, 73% of respondents felt that PLCs helped improve teacher retention. These findings are consistent with previous

research findings that found significant relationships between the types of shared leadership involved in PLCs and the reduction in teacher burnout (Benoliel & Barth, 2017). Another 13% of respondents in the study indicated that PLCs that fail to create supportive conditions can actually negatively impact teacher retention. For this reason, school leaders should be deliberate in evaluating current PLCs practices to ensure that not only are PLCs taking place, but also that PLCs are undergirded by shared leadership as failure to do so has shown to negatively impact teacher retention (Torres, 2020).

Not only does this study add to current research that shows the relationship between PLCs and teacher retention, it also demonstrates the connection between PLCs and collective efficacy which has been shown to enhance teacher retention (Torres, 2020). Collective teacher efficacy has been linked to increased student achievement (Hattie, 2016). Several studies have cited PLC elements such as autonomy and trust as contributing factors to collective teacher efficacy (Boz & Saylik, 2021; Kılınç et al., 2021) and there have even been direct connections between PLCs and collective teacher efficacy (Lee, 2020). The current study supports such findings as 79% of respondents within a district which was found to be implementing PLCs with fidelity indicated that PLCs help collective teacher efficacy. School leaders seeking to enhance collective teacher efficacy should either consider implementing PLCs or assessing existing PLC practices in order to ensure that PLCs are being implemented with fidelity in order to produce the intended outcomes.

Several themes emerged from the data that have practical implications for district and school-level practices. First, items related to stakeholder collaboration consistently yielded the lowest means among PLC dimensions. These findings were consistent with perceptions that stakeholder involvement has declined since the COVID-19 pandemic. Based on these results the

researcher has recommended that the district evaluate practices used to engage stakeholders such as local school governance teams. Collaboration with experts from the Georgia Charter Schools Association (GCSA) to gain insight into how other charter districts have adapted practices to achieve pre-pandemic level stakeholder engagement and an overall “reboot” for local school governance teams might be beneficial in revitalizing stakeholder involvement for the benefit of improving student achievement.

Another recurring theme was the need for stronger communication across the district. Again, it can be asserted that COVID-19 played a role in reducing communication systems, particularly those involving face-to-face methods which also tend to enhance relationships. Virtual meetings and electronic newsletters have become commonplace in many organizations. While both can serve as convenient modes of communication, participants tend to be less attentive in virtual settings and electronic communications are often skimmed or overlooked as educators’ inboxes are bombarded with correspondences. In order to strengthen communication with internal stakeholders the researcher began to implement “fireside chats” which are weekly, face-to-face meetings that occur in an informal setting so that a more conversational feel can be achieved in order to allow staff members to provide input on upcoming events and ask clarifying questions. Additionally, in order to address the flow of information to external stakeholders, the district opted to hire a public relations director who has been charged with overhauling the district website, creating an app for mass communication, and streamlining communications from all schools into consistent channels across social media platforms.

Another theme was that induction level teachers had lower perceptions of several PLC dimensions than those with more years of experience. Because of the importance of teacher retention given current teacher shortages, the researcher recommended an examination of teacher

induction support within the district. In response, support from the local Regional Educational Service Agency (RESA) was provided. Teachers in their first three years of teaching were placed into a cohort through which they will be provided professional learning and follow-up coaching support. The hope is that the community created throughout the cohort will provide relationships and support to help new teachers navigate the challenges they will surely face early in their careers while also providing them with a non-evaluative champion in the form of coaching support.

Recommendations for Future Research

The findings of this study continue to support ongoing research related to leadership actions that support PLCs, differences in perceptions related to PLCs, and the influence that PLCs can have on teacher retention and collective teacher efficacy. School leaders across all P-12 settings should benefit from the findings of this study as the process of assessing PLC perceptions to determine which dimensions are being implemented with fidelity and which dimensions need support is easily replicable. Additionally, understanding that there may be significant differences in how PLCs are perceived among school leaders, teachers, and support staff strengthens the need for school leaders to assess teacher perceptions in order to attain more precise insight into supports that may be needed to ensure that PLCs are being implemented with fidelity.

Future research is needed to determine whether or not findings hold true among suburban and urban schools. Additionally, it would be beneficial to conduct similar research across other geographic regions within the United States in order to increase the generalizability of the findings. While this study supported previous research findings demonstrating a significant difference between perceptions of school leaders, teachers, support staff, it did not explore why

such differences exist. It may be helpful to seek a better understanding of these differences in perceptions in order to guide school leaders' behaviors that might allow them to be more entuned with PLCs implementation. It would also be beneficial to take a closer look at each PLC dimension and their respective impact on teacher retention and collective teacher efficacy. It would be possible to include Likert-type items used to determine the level of agreement with statements about how each individual dimension influence teacher retention and collective teacher efficacy. This would allow school leaders to focus their support on areas that have the greatest impact.

Conclusion

As schools across the country continue to seek answers to complex challenges such as increasing student achievement and teacher shortages, it is more important than ever to consider PLCs as a possible solution. School leaders cannot effectively support the implementation of PLCs without an accurate assessment of the fidelity with which critical PLC dimensions are being implemented. This study provides a framework for such assessment and also supports that idea that when schools implement PLCs with fidelity, teacher retention and collective teacher efficacy are positively impacted. This study adds to the research conducted using the PLCA-R to assess PLC perceptions (Dogan et al., 2017; Hipp & Huffman, 2010; Lippy & Zamora, 2012; Olivier et al., 2010) and that which compares perceptions of school leaders, teachers, and support staff (Dogan et al., 2017; Gillespie, 2016; Luyten & Bazo, 2019) as well as the influence of PLCs on teacher retention (Benoliel & Barth, 2017; Kelly, 2019; Quadach et al., 2020; Torres, 2020) and collective teacher efficacy (Boz & Saylik, 2021; Lee, 2020; Qadach et al., 2020; Zheng et al., 2019). Using survey data obtained by administering the PLCA-R with additional open-ended questions, the researcher determined that respondents participating in the survey

perceived that PLCs were being implemented with fidelity across all contents and grade clusters and that no dimensions were presenting challenges with implementation. Using an analysis of variance among perceptions of those participating in the study, it was determined that teachers perceived multiple PLC dimensions differently than school leaders and support staff whose perceptions were significantly higher than those of teachers. These results support the need for school leaders to assess existing perceptions of PLCs within their districts in order to guard against a false sense of security related to the fidelity with which PLCs are being implemented. By reviewing the results of teacher perceptions, they can attain a more accurate picture of PLC implementation from those who are closest to the collaborative work occurring. With this information school leaders can determine how to best allocate time and resources to support the effective implementation of PLCs. Such support has been linked to high performing schools and increased student achievement (Brown et al., 2017; McGee, 2016; Ratts, 2015; Ronfeldt et al., 2015).

Through a thematic analysis of open-ended items designed to elicit responses related to them influence of PLCs on teacher retention, this research study found that an overwhelming majority of respondents indicated that PLCs, when implemented with fidelity, help teacher retention. These findings are important for school leaders as nationwide teacher shortages are becoming increasingly difficult to navigate. Given the results of this study along with other previous findings (Benoliel & Barth, 2017; Kelly, 2019; Quadach, 2019; Torres, 2020) demonstrating the positive impact of PLCs on teacher retention, it would behoove school leaders to not only facilitate the implementation of PLCs, but to also focus on ensuring that the critical elements of PLCs described in the PLC dimensions of the PLCA-R are present as findings also

indicated that PLCs characterized by ineffective practices can actually have a negative impact on teacher retention.

In addition to the findings related to teacher retention, open-ended responses were also used to assess the influence of PLCs on collective teacher efficacy. This research study found that among PLCs that are perceived to be implemented with fidelity, respondents indicated feelings that PLCs help increase collective teacher efficacy which is consistent with previous research (Boz & Saylik, 2021; Lee, 2020; Qadach et al., 2020; Zheng et al., 2019). These findings are significant for school leaders who are seeking to increase student achievement as collective teacher efficacy has been strongly correlated with student achievement and is said to have the greatest effect size on student learning (Hattie, 2016).

Impact Statement

With evidence to support the impacts of PLCs on student achievement through increased collaboration and supportive conditions as well as their positive impact on collective teacher efficacy, which has been directly linked to student learning, school leaders can focus on strengthening dimensions that characterize effective PLCs through the use of the PLCA-R. Future researchers can easily replicate the processes and analyses used in this study to assess their respective PLCs or to determine whether or not study results are supported within different geographical contexts. Armed with this knowledge, educational leaders across the United States, and even the world, can take steps toward supporting the type of transformation that is needed in order to solve the challenges currently facing our education system.

References

- Adams, A. (2016). Principal professional learning community behavior in low wealth high schools with higher and lower student achievement as measured by mastery scores on the New York state eleventh grade ELA Regents exam. *Journal for Leadership and Instruction, 15*(2), 13–21.
- Akiba, M., & Liang, G. (2016). Effects of teacher professional learning activities on student achievement growth. *Journal of Educational Research, 109*(1), 99–110.
<https://doi.org/10.1080/00220671.2014.924470>
- Akinyemi, A. F., Rembe, S., & Nkonki, V. (2020). Trust and positive working relationships among teachers in communities of practice as an avenue for professional development. *Education Sciences, 136*(10), 1-15.
- Babbie, E. (2015). *The practice of social research* (14th ed.). Wadsworth/Thomson.
- Bass, B., & Avolio, B. (1994). *Improving organizational effectiveness through transformational leadership*. Sage Publications.
- Benoiel, Pascale. (2017). The implications of the school's cultural attributes in the relationships between participative leadership and teacher job satisfaction and burnout. *Journal of Educational Administration, 55*(6), 640-656.
- Berson, Y., Da'as, R., & Waldman, D. A. (2015). How do leaders and their teams bring about organizational learning and outcomes? *Personnel Psychology, 68*(1), 79–108.
<https://doi.org/10.1111/peps.12071>
- Boz, A., & Saylik, A. (2021). The impact of enabling school structure on academic optimism: Mediating role of altruistic behaviors. *International Journal of Educational Methodology, 7*(1), 137–154.

- Brodie, K. (2014). Learning about learner errors in professional learning communities. *Educational Studies in Mathematics*, 85(2), 221-239. <https://doi.org/10.1007/s10649-013-9507-1>
- Brown III, G., Bynum, Y., & Beziat, T. (2017). Leading for low income students: Results from a study on school leaders in low income elementary schools. *Education*, 138(1), 68-74.
- Burns, J. (1978). *Leadership* (1st ed., Cass Canfield book). Harper & Row.
- Cerit, Y. (2017). The mediating effect of LMX in the relationship between school bureaucratic structure and teachers' proactive behavior. *Leadership & Organization Development Journal*, 38(6), 780–793. <https://doi.org/10.1108/LODJ-01-2016-0005>
- Chauraya, M. & Brodie, K. (2018). Conversations in a professional learning community: An analysis of teacher learning opportunities in mathematics. *Pythagoras*, 39(1). <https://search-ebshostcom.libez.lib.georgiasouthern.edu/login.aspx?direct=true&db=eric&AN=EJ1209131>
- Chen, Y., & Mitchell, C. (2015). Interactions between professional learning communities and the educational culture where they are employed: Comparative research across Beijing and Ontario schools. *International Studies in Educational Administration*, 43(2), 39-52.
- Cobanoglu, N. (2020). Investigation of shared leadership and organizational commitment in primary and secondary schools: Malatya case. *International Journal of Educational Methodology*, 6(3), 613–629. <https://doi.org/10.12973/ijem.6.3.613>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

- Damjanovic, V., Blank, J. (2018). Building a professional learning community: Teachers' documentation of and reflections on preschoolers' work. *Early Childhood Education Journal, 46*, 567–575. <https://doi.org/10.1007/s10643-017-0888-0>
- Darling-Hammond, L., Chung Wei, R., Andree, A., Richardson, A., & Orphanos, S. (2009). *Professional learning in the learning profession: A status report on teacher development in the United States and abroad*. National Staff Development Council.
- Dogan, S., Tatik, R. Ş., & Yurtseven, N. (2017). Professional learning communities assessment: Adaptation, internal validity, and multidimensional model testing in Turkish context. *Educational Sciences: Theory & Practice, 17*(4), 1203-1229. <https://doi.org/10.12738/estp.2017.4.0479>
- DuFour, R., & Eaker, R. (1998). *Professional learning communities at work*. Solution Tree.
- Dufour, R., Dufour, R., Eaker, R., Many, T., & Mattos, M. (2016). *Learning by doing: A handbook for professional learning communities at work* (3rd ed.). Solution Tree Press.
- Fincham, J. E. (2008). Response rates and responsiveness for surveys, standards, and the journal. *American Journal of Pharmaceutical Education, 72*(2), 43. <https://doi.org/10.5688/aj720243>
- Fresko, B., & Nasser-Abu Alhija, F. (2015). Induction seminars as professional learning communities for beginning teachers. *Asia-Pacific Journal of Teacher Education, 43*(1), 36-48. <https://doi.org/10.1080/1359866X.2014.928267>
- GaPSC (2017) Professional learning guidelines. <https://www.gapsc.com/ProfessionalLearning/downloads/GlinesforRenewalReqs-Revised.pdf>

- Gardiner, W., & Robinson, K. S. (2011). Peer field placements with preservice teachers: Negotiating the challenges of professional collaboration. *Professional Educator, 35*(2), 1-11.
- Ghosh, A. (2020). Team coaches' experiences of coaching to develop conditions for shared leadership. *International Journal of Evidence Based Coaching & Mentoring, 18*, 19–31. <https://doi.org/10.24384/9sm9-3976>
- Gillespie, R. (2016). *Elementary-level implementation and perceived effectiveness of the Rapid City area school professional learning community model* (Order No. 10249659). Available from ProQuest Dissertations & Theses A&I.
- GovTrack.us. (2021). S. 1177 — 114th Congress: Every Student Succeeds Act. <https://www.govtrack.us/congress/bills/114/s1177>
- Gray, J., Kruse, S., & Tarter, C. J. (2016). Enabling school structures, collegial trust and academic emphasis. *Educational Management Administration & Leadership, 44*(6), 875-891.
- Hattie, J. (2016). *Visible learning for teachers: Maximizing impact on learning*. Corwin.
- Hallam, P. R., Smith, H. R., Hite, J. M., Hite, S. J., & Wilcox, B. R. (2015). Trust and collaboration in PLC teams: teacher relationships, principal support, and collaborative benefits. *NASSP Bulletin, 99*(3), 193.
- Hipp, K. K., & Huffman, J. B. (2010). *Demystifying professional learning communities: School leadership at its best*. Rowman & Littlefield Education.
- Hord, S. (1996). *School professional staff as learning community*. Southwest Educational Development Laboratory.

- Huang, C., He, C., & Zhai, X. (2020). The approach of hierarchical linear model to exploring individual and team creativity: A perspective of cultural intelligence and team trust. *Mathematical Problems in Engineering*, 1–10. <https://doi.org/10.1155/2020/2025140>
- Huffman, J. B., & Hipp, K. A. (2000, April). *Creating communities of learners: The interaction of shared leadership, shared vision, and supportive conditions*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA. ERIC database (ED452582).
- Hurley, N., Seifert, T., & Sheppard, B. (2018). An investigation of the relationship between professional learning community practices and student achievement in an eastern Canadian school board. *Canadian Journal of Educational Administration and Policy*, (185), 4–18.
- Kalkan, F. (2016). Relationship between professional learning community, bureaucratic structure and organisational trust in primary education schools. *Educational Sciences: Theory and Practice*, 16(5), 1619–1637.
- Kelly, N., Cespedes, M., Clarà, M., & Danaher, P. A. (2019). Early career teachers' intentions to leave the profession : The complex relationships among preservice education, early career support, and job satisfaction. *Australian Journal of Teacher Education*, 44(3). <https://doi.org/10.14221/ajte.2018v44n3.6>
- Kılınç A.C., Bellibaş M.S., & Bektaş F. (2021). Antecedents and outcomes of teacher leadership: the role of teacher trust, teacher self-efficacy and instructional practice. *International Journal of Educational Management*, 35(7), 1556–1571.

- Koeslag-Kreunen, M., Van den Bossche, P., Van der Klink, M. R., & Gijsselaers, W. H. (2021). Vertical or shared? When leadership supports team learning for educational change. *Higher Education*, 82(1), 19–37. <https://doi.org/10.1007/s10734-020-00620-4>
- Lee, S. Y. (2020). Analysis of the effect of school organizational culture and professional learning communities on teacher efficacy. *Integration of Education*, 24(2), 206–217. <https://doi.org/10.15507/1991-9468.099.024.202002.206-217>
- Leithwood, K., & Jantzi, D. (2000). The effects of transformational leadership on organizational conditions and student engagement with school. *Journal of Educational Administration*, 38(2), 112-129. <https://doi.org/10.1108/09578230010320064>
- Linder, R. A., Post, G., & Calabrese, K. (2012). Professional learning communities: Practices for successful implementation. *Delta Kappa Gamma Bulletin*, 78(3), 13-22.
- Lingam, G. I., & Lingam, N. (2015). Are they fit for leading? Teachers' perceptions of leadership practices of Niuean school principals. *International Studies in Educational Administration (Commonwealth Council for Educational Administration & Management (CCEAM))*, 43(1), 35–47.
- Lippy, D., & Zamora, E. (2012). Implementing effective professional learning communities with consistency at the middle school level. *National Forum of Educational Administration & Supervision Journal*, 29(3), 51-72.
- Little, M. E. (2020). Collaboration and connections among middle school teachers of mathematics: Enhancing efficacy through professional learning communities. *SRA Journal*, 29(1), 1–8. <https://eric.ed.gov/?id=EJ1243775>

- Liu, P. (2019). Building collective teacher efficacy through distributed leadership in Chinese primary schools. *International Studies in Educational Administration (Commonwealth Council for Educational Administration & Management (CCEAM))*, 47 (3), 70-87.
- Lochmiller, C. R., & Lester, J. N. (2017). *An introduction to educational research : connecting methods to practice*. SAGE.
- Lujan, N., & Day, B. (2009). Professional learning communities: Overcoming the roadblocks. *Delta Kappa Gamma Bulletin*, 76(2), 10-17.
- Lumby, J. (2013) Distributed Leadership. *Educational Management Administration & Leadership*, 41(5): 581–597.
- Luyten, H., & Bazo, M. (2019). Transformational leadership, professional learning communities, teacher learning and learner centered teaching practices; Evidence on their interrelations in Mozambican primary education. *Studies in Educational Evaluation*, 60, 14–31.
<https://doi.org/10.1016/j.stueduc.2018.11.002>
- Lyndon, S., Pandey, A., & Navare, A. (2020). Shared leadership and team creativity: Investigating the role of cognitive trust and team learning through mixed method approach. *Personnel Review*, 49(9), 1805-1822. <https://doi-org/10.1108/PR-05-2019-0262>
- Masuda, A., Ebersole, M., & Barrett, D. (2013). A qualitative inquiry: Teachers' attitudes and willingness to engage in professional development experiences at different career stages. *Delta Kappa Gamma Bulletin*, 79(2), 6-14. <https://www.proquest.com/scholarly-journals/qualitative-inquiry-teachers-attitudes/docview/1265612480/se-2?accountid=11225>

- McGee, S. (2016). The relative influence of formal learning opportunities versus indicators of professional community on changes in science teaching in urban schools. *Journal of Urban Learning, Teaching, and Research*, 12, 150–162.
<https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1119145>
- Mintzes, J. J., Marcum, B. B., Messerschmidt-Yates, C. C., & Mark, A. A. (2013). Enhancing self-efficacy in elementary science teaching with professional learning communities. *Journal of Science Teacher Education*, 24(7), 1201-1218.
- Mitchell, R.M., Mendiola, B.J., Schumacker, R., & Lowery, X. (2016). Creating a school context of success : The role of enabling school structure & academic optimism in an urban elementary & middle school setting. *Journal of Educational Administration*, 54(6), 626–646. <https://doi.org/10.1108/JEA-02-2015-0018>
- No Child Left Behind Act of 2001, P.L. 107-110, 20 U.S.C. (2002)
- Mombourquette, C. (2017). The role of vision in effective school leadership. *International Studies in Educational Administration (Commonwealth Council for Educational Administration & Management (CCEAM))*, 45(1), 19–36.
- Oldac, Y. I., & Kondakci, Y. (2020). Multilevel analysis of the relationship between school-level variables and student achievement. *Educational Management Administration & Leadership*, 48(4), 762–780.
- Olivier, D. F., Hipp, K. K., & Huffman, J. B. (2010). Assessing and analyzing schools. In K. K. Hipp & J. B. Huffman (Eds.). *Demystifying professional learning communities: School leadership at its best*. Rowman & Littlefield.

- Parks, T. R. (2014). *A study of teacher perceptions of professional learning communities in a cross-section of public elementary schools* (Order No. 3626111). Available from ProQuest Dissertations & Theses A&I.
- Peddell, L., Lynch, D., Waters, R., Boyd, W., & Willis, R. (2020). How do principals of high performing schools achieve sustained improvement results? *IAFOR Journal of Education*, 8(4), 133–149.
- Poynton, T. A., DeFouw, E. R., & Morizio, L. J. (2019). A systematic review of online response rates in four counseling journals. *Journal of Counseling & Development*, 97(1), 33-42.
- Qadach, M., Schechter, C., & Da'as, R. (2020). Instructional leadership and teachers' intent to leave: The mediating role of collective teacher efficacy and shared vision. *Educational Management Administration & Leadership*, 48(4), 617–634.
<https://doi.org/10.1177/1741143219836683>
- Ratts, R. F. (2015). *The influence of professional learning communities in elementary schools as measured by student achievement on the Georgia Criterion-Referenced Competency Tests*. [https://search.ebscohost-com.libez.lib.georgiasouthern.edu/login.aspx?direct=true&db=ir00501a&AN=gkr.valdos ta.2014](https://search.ebscohost.com.libez.lib.georgiasouthern.edu/login.aspx?direct=true&db=ir00501a&AN=gkr.valdos ta.2014)
- Ronfeldt, M., Farmer, S. O., McQueen, K., & Grissom, J. A. (2015). Teacher collaboration in instructional teams and student achievement. *American Educational Research Journal*, 52(3), 475–514.
<https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1063553> accessed at https://www.jstor.org/stable/24546739?read-now=1&seq=1#page_scan_tab_contents

- Sahin, F., & Yenel K. (2021). Relationship between enabling school structure, teachers' social network intentions and professional learning community. *Istraživanja u Pedagogiji*, *11*(1), 17–30. <https://doi.org/10.5937/IstrPed2101017S>
- Schildkamp, K., Smit, M., & Blossing, U. (2019). Professional development in the use of data: From data to knowledge in data teams. *Scandinavian Journal of Educational Research*, *63*(3), 393. <https://doi.org/10.1080/00313831.2017.1376350>
- Sigurðardóttir, A. K. (2010). Professional learning community in relation to school effectiveness. *Scandinavian Journal of Educational Research*, *54*(5), 395-412. <https://doi.org/10.1080/00313831.2010.508904>
- Sims, R. L., & Penny, G. R. (2015). Examination of a failed professional learning community. *Journal of Education and Training Studies*, *3*(1), 39–45. <https://search-ebshost-com.libez.lib.georgiasouthern.edu/login.aspx?direct=true&db=eric&AN=EJ1054892>
- Sinnema, C., Sewell, A., & Milligan, A. (2011). Evidence-informed collaborative inquiry for improving teaching and learning. *Asia-Pacific Journal of Teacher Education*, *39*(3), 247-261. <https://doi.org/10.1080/1359866X.2011.597050>
- Stamper, J. C. (2015). *A study of teacher and principal perceptions of professional learning communities*. (Doctoral dissertation). http://uknowledge.uky.edu/edl_etds/11
- Sue, V. & Ritter, L. (2012). *Conducting Online Surveys*. SAGE Publications, Inc. <https://doi.org/10.4135/9781506335186>
- Tian, M., Risku M., & Collin K. (2016) A meta-analysis of distributed leadership from 2002 to 2013. *Educational Management Administration & Leadership*, *44*(1): 146–164.

- Thessin, R. A. (2015). Learning from one urban school district: Planning to provide essential supports for teachers' work in professional learning communities. *Educational Planning*, 22(1), 15–27.
<https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1208550>
- Thornton, K., & Cherrington, S. (2014). Leadership in professional learning communities. *Australasian Journal of Early Childhood*, 39(3), 94-102.
- Torres, A. Chris. (2020). Shared leadership for learning in Denver's portfolio management model. *Educational Administration Quarterly : EAQ*, 56(5), 819-855.
- Trust, T., Krutka, D. G., & Carpenter, J. P. (2016). “Together we are better”: Professional learning networks for teachers. *Computers & Education*, 102, 15-34.
<https://doi.org/10.1016/j.compedu.2016.06.007>
- Vanblaere, B., & Devos, G. (2016). Relating school leadership to perceived professional learning community characteristics: A multilevel analysis. *Teaching and Teacher Education*, 57, 26–38. <https://doi-org.libez.lib.georgiasouthern.edu/10.1016/j.tate.2016.03.003>
- Ward, S., & Graham-Brown C. (2018). Shared leadership on a career and technical education campus. *School Leadership Review*, 13(1), 38–47
- Webb, R., Vulliamy, G., Sarja, A., Hamalainen, S., & Poikonen, P. (2009). Professional learning communities and teacher well-being? A comparative analysis of primary schools in England and Finland. *Oxford Review of Education*, 35(3), 405-422.
<https://doi.org/10.1080/03054980902935008>
- Wilson, A. (2016). From professional practice to practical leader: Teacher leadership in professional learning communities. *International Journal of Teacher Leadership*, 7(2), 45–62.

Williams, D. J. (2013). Urban education and professional learning communities.

The Delta Kappa Gamma Bulletin, 31-39.

Wong, L.-S., Coburn, C. E., & Kamel, A. (2020). How central office leaders influence school leaders' decision-making: Unpacking power dynamics in two school-based decision-making systems. *Peabody Journal of Education*, 95(4), 392–407.

<https://doi.org/10.1080/0161956X.2020.1800175>

Zheng, X., Yin, H., & Li, Z. (2019). Exploring the relationships among instructional leadership, professional learning communities and teacher self-efficacy in China. *Educational Management and Leadership*, 47(6), 843–859.

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APPENDICES

Appendix A

Professional Learning Communities Assessment Revised (PLCA-R)

Olivier, D. F., Hipp, K. K., & Huffman, J. B. (2010). Assessing and analyzing schools. In K. K. Hipp & J. B. Huffman (Eds.). *Demystifying professional learning communities: School leadership at its Best*. Rowman & Littlefield.

Directions:

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

Key Terms:

- School leader = Principal and/or Assistant Principal
- Teachers = All adult staff directly associated with curriculum, instruction, and assessment of students
- Support Staff = Instructional Coaches, Media Specialists, Counselors, etc. who participate in PLC, but are not directly associated with the curriculum, instruction, and assessment of students

Scale: 1 = Strongly Disagree (SD)

2 = Disagree (D)

3 = Agree (A)

4 = Strongly Agree (SA)

STATEMENTS		SCALE			
	Shared and Supportive Leadership	SD	D	A	SA
1.	Staff members are consistently involved in discussing and making decisions about most school issues.	0	0	0	0
2.	The principal incorporates advice from staff members to make decisions.	0	0	0	0
3.	Staff members have accessibility to key information.	0	0	0	0
4.	The principal is proactive and addresses areas where support is needed.	0	0	0	0
5.	Opportunities are provided for staff members to initiate change.	0	0	0	0
6.	The principal shares responsibility and rewards for innovative actions.	0	0	0	0
7.	The principal participates democratically with staff sharing power and				

	authority.	0	0	0	0
8.	Leadership is promoted and nurtured among staff members.	0	0	0	0
9.	Decision-making takes place through committees and communication across grade and subject areas.	0	0	0	0
10.	Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority.	0	0	0	0
11.	Staff members use multiple sources of data to make decisions about teaching and learning.	0	0	0	0

COMMENTS:

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

21.	Staff members work together to seek knowledge, skills and strategies and apply this new learning to their work.	0	0	0	0
22.	Collegial relationships exist among staff members that reflect commitment to school improvement efforts.	0	0	0	0
23.	Staff members plan and work together to search for solutions to address diverse student needs.	0	0	0	0
24.	A variety of opportunities and structures exist for collective learning through open dialogue.	0	0	0	0
25.	Staff members engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry.	0	0	0	0
26.	Professional development focuses on teaching and learning.	0	0	0	0
27.	School staff members and stakeholders learn together and apply new knowledge to solve problems.	0	0	0	0
28.	School staff members are committed to programs that enhance learning.	0	0	0	0
29.	Staff members collaboratively analyze multiple sources of data to assess the effectiveness of instructional practices.	0	0	0	0
30.	Staff members collaboratively analyze student work to improve teaching and learning.	0	0	0	0

COMMENTS:

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

	results of their practices.				
37.	Staff members regularly share student work to guide overall school improvement.	0	0	0	0
COMMENTS:					
	Supportive Conditions - Relationships	SD	D	A	SA
38.	Caring relationships exist among staff and students that are built on trust and respect.	0	0	0	0
39.	A culture of trust and respect exists for taking risks.	0	0	0	0
40.	Outstanding achievement is recognized and celebrated regularly in our school.	0	0	0	0
41.	School staff and stakeholders exhibit a sustained and unified effort to embed change into the culture of the school.	0	0	0	0
42.	Relationships among staff members support honest and respectful examination of data to enhance teaching and learning.	0	0	0	0
COMMENTS:					
	Supportive Conditions - Structures	SD	D	A	SA
43.	Time is provided to facilitate collaborative work.	0	0	0	0
44.	The school schedule promotes collective learning and shared practice.	0	0	0	0
45.	Fiscal resources are available for professional development.	0	0	0	0
46.	Appropriate technology and instructional materials are available to staff.	0	0	0	0
	STATEMENTS	SCALE			
		SD	D	A	SA
47.	Resource people provide expertise and support for continuous learning.	0	0	0	0
48.	The school facility is clean, attractive and inviting.	0	0	0	0
49.	The proximity of grade level and department personnel allows for ease in collaborating with colleagues.	0	0	0	0
50.	Communication systems promote a flow of information among staff	0	0	0	0

	members.				
51.	Communication systems promote a flow of information across the entire school community including: central office personnel, parents, and community members.	0	0	0	0
52.	Data are organized and made available to provide easy access to staff members.	0	0	0	0
COMMENTS:					

Open-ended Questions:

- 3) How do the elements (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, or supportive conditions-structures) of a PLC influence teacher retention at your school?
- 4) How do the elements of a PLC (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) contribute to collective teacher efficacy at your school?

Appendix B

Informed Consent and Interview Questions



COLLEGE OF EDUCATION

DEPARTMENT OF EDUCATIONAL LEADERSHIP

Informed Consent for Assessing the Fidelity of School-level PLC Implementation

1. My name is Will Thigpen and I am a doctoral candidate at Georgia Southern University completing this study as part of my program requirements.
2. Purpose of the Study: The purpose of this research is to determine which dimensions of PLCs (shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures) are being implemented with fidelity.
3. Procedures to be followed: Participation in this research will include answering open-ended questions related to your perceptions of how school leaders support the PLC process.
4. Discomforts and Risks:

Precautions will be taken in accordance with current Georgia Southern policies to reduce the risk of the spread of communicable diseases (including COVID-19). However, consenting to participate in this research indicates your acknowledgement of the risk of disease transmission. You also acknowledge your requirement to notify the researchers if you are symptomatic prior to or at the time of participation. Contact information and appointment information may be held by the researcher and provided to health officials for the purpose of contact tracing in the event the research team is notified of a positive exposure to COVID-19. We encourage participants to wear a mask or face covering while participating in the research. For those participating in research in a group setting, please keep in mind that we cannot guarantee the vaccination status of other participants. The CDC has provided a [COVID Data Tracker](#) that records COVID cases and can provide a current transmission risk assessment by state and county.
5. Benefits:
 - a. The benefits to you as a participant include the opportunity to reflect on leadership support for PLCs within your school.
 - b. The benefits to society include the opportunity to contribute to our overall understanding of how leaders can support the effective implementation of PLCs.
6. Duration/Time required from the participant: 30- 60 minutes
7. Statement of Confidentiality and future use: "Deidentified or coded data from this study may be placed in a publicly available repository for study validation and further research. You will not be identified by name in the data set or any reports using information obtained from this study, and your confidentiality as a participant in this study will remain secure. Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions."

8. Right to Ask Questions: Participants have the right to ask questions and have those questions answered. If you have questions about this study, please contact the researcher named above or the researcher's faculty advisor, whose contact information is located at the end of the informed consent. For questions concerning your rights as a research participant, contact Georgia Southern University Institutional Review Board at 912-478-5465 or irb@georgiasouthern.edu.
9. Compensation: Participation in the study will not cost anything to the participant nor will any compensation be provided for participation.
10. Voluntary Participation: Participation in this research is voluntary. You do not have to participate and may end your participation at any time by telling the researcher. You may also choose not to answer any items that you wish.
11. Penalty: There will be no penalty for choosing not to participate in the study.
12. Mandatory reporting: All information will be treated confidentially. There is one exception to confidentiality that we need to make you aware of. In certain research studies, it is our ethical responsibility to report situations of child or elder abuse, child or elder neglect, or any life-threatening situation to appropriate authorities. However, we are not seeking this type of information in our study nor will you be asked questions about these issues.
13. You must be 18 years of age or older to consent to participate in this research study.

You will be given a copy of this consent form to keep for your records. This project has been reviewed and approved by the GS Institutional Review Board under tracking number H 23093

Title of Project: Assessing the Fidelity of School-level PLC Implementation

Principal Investigator: (Will Thigpen, (912) 245-4523, wt00124@georgiasouthern.edu)

Research Advisor: (Dr. Juliann McBrayer, 912-478-5302, jmcbrayer@georgiasouthern.edu)

This consent is being provided electronically. The researcher(s) will ask you to verbally consent before completing the interview. Participating in the interview indicates your willingness to participate in this research.