An Evaluation of Implementation and Effectiveness of Professional Learning Communities in Minnesota Public Schools

by

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Abstract

In 1985, professional learning community (PLC) pioneers, Shirley Hord, Richard DuFour and Robert Eaker undertook an exploration of the concept of teachers working in small groups or learning communities. Participants in these initial learning communities shared common experiences, ideas, practices, and developed strategies to address issues they faced in their work with students (Hord 1997; DuFour & Eaker 1998). This concept was supported by McLaughlin and Talbert (1993) when they suggested that, given the opportunity for collaborative inquiry, veteran teachers will share the wisdom they have gained through experience in a way that allows improved teaching practices for all involved.

In 2000, Senge, Cambron-McCabe, Lucas, Smith, Dutton and Kleiner, reported that the, "learning organization approach to education" needs to be more than just talking and working in groups. It needs to involve everyone "…in expressing their aspirations, building their awareness and developing their capabilities together" (Senge et al., 2000, p. 5). Over time this learning community concept became known as the professional learning community, or PLC (Hord, 1997). DuFour & Eaker (1998), Lieberman and Pointer-Mace (2009), Darling-Hammond (1996) and Bryk and Schneider (2003), all contended that these professional learning communities have the capacity to transcend reform movements and result in continuous improvement in schools.

Over time, many school districts and their leaders have modified the professional learning community concept. They have done so to such a degree that they may no longer achieve, fully, their originally desired or anticipated results. In July 2011, the Minnesota legislature passed House File No. 26 (HF 26), a revision of the statewide teacher evaluation system. This legislation brought about numerous changes to Minnesota Statute 122A.40, subd. 8. One of these changes was the promotion of PLCs in public schools.

Even though much has been written about PLCs and their intended uses, limited research was found regarding whether or not PLCs are being implemented consistent with best practice, as identified in research, in the public schools of Minnesota. This study will examine the level to which the key characteristics of PLCs, as identified by DuFour, DuFour, Eaker and Many (2010) are being implemented in Minnesota public schools. It also identifies the barriers encountered by public school districts in implementing PLCs. The conceptual framework for this study was derived from the work of DuFour et al. (2010), in their book, *Learning by Doing: A Handbook for Professional Learning Communities at Work (2nd Ed).*

The purpose of the study is to examine professional learning communities in public schools in Minnesota using the characteristics identified by DuFour et al. (2010). While PLCs are now recommended in all public schools by Minnesota State Statute, there are no studies which examine whether or not these PLCs are being implemented effectively based on best practices described in research. This study attempts to determine if PLCs are in fact being implemented effectively, based on best practices described in research, by: describing and contrasting the characteristics of PLCs employed in public school districts in Minnesota, the districts' duration of use of PLCs, and district barriers teachers and administrators have encountered when implementing PLCs.

Acknowledgment

The process of completing a doctoral degree is the most rewarding personal experience I have had as a professional. The cohort model allowed the development of strong professional relationships which led to a level of trust and understanding among the group that encouraged deep discussion around significant topics in education. My experience with the members of Cohort V has made me stronger as leader in education. Of this group, I must recognize Trish Perry, my writing partner. We worked together to keep one another on track toward our goal.

A special thank you to my professors and especially to my committee at St. Cloud State University. Dr. John Eller, Dr. Janine Dahms-Walker, Dr. Kay Worner, and Dr. Roger Worner. Your time, guidance and support are greatly appreciated.

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To my parents, Ken and Mary Ann Johnson, who lived a life that modeled hard work and perseverance. They raised five children in a home that valued education and they taught us that with hard work, all things are possible.

To my four children, Zach, Calab, Kate and Bri, you are truly my inspiration to be a life-long learner.

Finally, I want to thank my wife, Teri. Your support showed in numerous ways, from being the initial editor of my work to providing support when the process became a struggle. Your encouragement and your belief in me were critical in my completion of this process.

Dedication

I dedicate this dissertation to the courageous educators who strive to continually improve their practice in their never ending goal of helping students learn. Ours is a profession where we are never done learning and your willingness to adjust your own practices so others may succeed is an inspiration to us all.

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Chapter I: INTRODUCTION

The Birth of PLCs

Reform has been a part of public education in the United States for decades. *A Nation at Risk: The Imperative for Education Reform,* published in 1983, prompted a series of reform movements. “The history of American education in the second half of the twentieth century is marked by numerous attempts at reform and by increasing public concern” (DuFour & Eaker, 1998, p. 1). Each of these movements has focused on teacher practice and student achievement, with accountability a key factor for those driving the reform effort. According to the research conducted by DuFour and Eaker (1998), Hord (1997), McLaughlin (1993), Talbert (1993) and Marzano (2005), from the Excellence Movement of the 1980’s through to the present, educators have responded by undertaking a more extensive examination of professional practices and the manner in which quality teaching impacts student achievement.

In 1985, professional learning community (PLC) pioneers, Shirley Hord, Richard DuFour and Robert Eaker undertook an exploration of the concept of teachers working in small groups or learning communities. Participants in these initial learning communities shared common experiences, ideas, practices, and developed strategies to address issues they faced in their work with students (Hord 1997; DuFour & Eaker 1998). Fullan (1991) researched the educational workplace and his findings led him to recommend schools, “redesign the workplace so that innovation and improvement are built into the daily life activities of teachers” (p. 353). This concept was supported by McLaughlin and Talbert (1993) when they suggested that, given the opportunity for collaborative inquiry, veteran teachers will share the wisdom they have gained through experience in a way that allows improved teaching practices for all involved.

In 2000, Senge, Cambron-McCabe, Lucas, Smith, Dutton and Kleiner reported that the "learning organization approach to education" needs to be more than just talking and working in groups. It needs to involve everyone, "…in expressing their aspirations, building their awareness and developing their capabilities together" (p. 5). According to Senge et al. (2000), the learning community concept has evolved to be more focused on data. The shift in emphasis was hoped to better evaluate the effect of various teaching strategies (like the impact of teachers working together to modify their instruction) on the increase of student achievement.

Over time this learning community concept became known as the professional learning community, or PLC (Hord, 1997). DuFour and Eaker (1998), Lieberman and Pointer-Mace (2009), Darling-Hammond (1996) and Bryk and Schneider (2003), all contended that these professional learning communities have the capacity to transcend reform movements and result in continuous improvement in schools. In 2000, Morrissey expressed support for PLCs when he stated, "Rather than becoming a reform initiative itself, a professional learning community becomes the supporting structure for schools to continuously transform themselves through their own internal capacity" (p. 10).

In 1998, Richard DuFour and Robert Eaker published *Professional Learning Communities at Work: Best Practices for Enhancing Student Achievement.* In this publication, they shared research that outlines the rationale for professional learning communities, as well as identify critical attributes of a PLC. Their summary of the first chapter emphasized that the model used to operate schools since the late nineteenth century was no longer valid in a post-industrial, knowledge based society. Their research concluded that a new model should be prescribed, and they described it as follows:

> This model requires schools to function as professional learning communities characterized by a shared mission, vision and values; collective inquiry; collaborative

> teams; an orientation toward action and a willingness to experiment; commitment to continuous improvement; and a focus on results. (DuFour & Eaker, 1998, pp. 44-45)

In his book, *The New Meaning of Educational Change*, Michael Fullan (2007) referred to the "promising and practical resources for developing PLCs" (p. 149). Fullan (2012) later acknowledged the growing attention to PLCs: "Since the origins of the terms professional community, learning community, and professional learning community in the 1990's, professional learning communities have spread like wildfire" (p. 127). As the concept has gained popularity there has been additional research conducted on critical attributes and roadblocks to PLC success. The most recent research on the topic will be explored in this study.

Statement of the Problem

Over time, many school districts and their leaders have modified the professional learning community concept. They have done so to such a degree that they may no longer achieve, fully, their originally desired or anticipated results. In 1998, DuFour and Eaker wrote: "The most promising strategy for sustained, substantive school improvement is developing the ability of school personnel to function as professional learning communities" (p. xi). Just eight years later, DuFour (2006) wrote:

> The idea of improving schools by developing professional learning communities is currently in vogue. People use the term to describe every imaginable combination of individuals with an interest in education…In fact, the term has been used so ubiquitously that it is in danger of losing all meaning. (DuFour, 2006, p. 2)

This statement was followed by DuFour's further shared concern that professional learning communities will go the way of numerous other reform initiatives and become, "[A]nother reform movement that has come and gone" (p. 2).

In July 2011, the Minnesota legislature passed House File No. 26 (HF 26), a revision of the statewide teacher evaluation system. This legislation brought about numerous changes to Minnesota Statute 122A.40, subd. 8. One of these changes was the promotion of PLCs in public

schools. This subdivision of the statute is related to the development of teachers and states, "To develop, improve, and support qualified teachers and effective teaching practices and improve student learning and success, the annual evaluation process for teachers may include job-embedded learning opportunities such as professional learning communities" (Minnesota Statute 122A.40 subd 8, 2011)

Even though much has been written about PLCs and their intended uses, limited research was found regarding whether or not PLCs are being implemented with consistent with best practices, as identified in research, in the public schools of Minnesota. This study will examine the level to which the key characteristics of PLCs, as identified by DuFour et al. (2010) are being implemented in Minnesota public schools. It also identifies the barriers encountered by public school districts in implementing PLCs.

Conceptual Framework of the Study

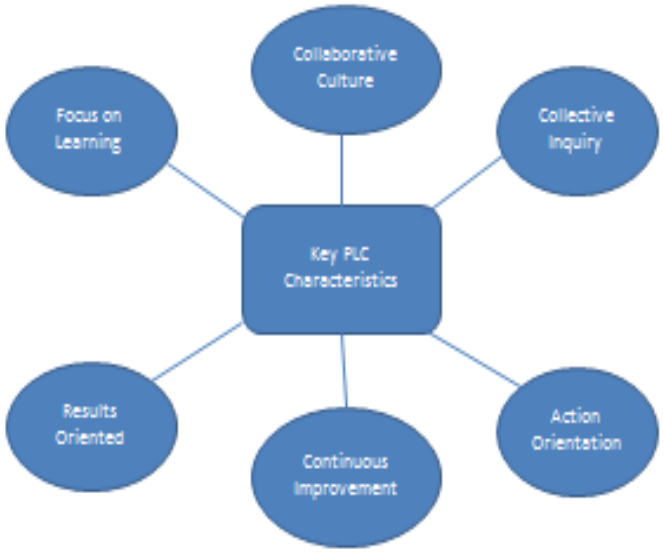
The conceptual framework for this study was derived from the work of DuFour et al. (2010), in their book, *Learning by Doing: A Handbook for Professional Learning Communities at Work (2nd Ed).* In their work, these authors identified six essential characteristics that are required to establish an effective professional learning community (See Figure 1.1). The characteristics are:

- A focus on learning – "The very essence of a learning community is a focus on and a commitment to the learning of each student" (p. 11).
- A collaborative culture with a focus on learning for all – "A PLC is composed of collaborative teams whose members work interdependently to achieve common goals for which members are mutually accountable" (p. 11).

- Collective inquiry into best practice and current reality – “Collective inquiry enables team members to develop new skills and capabilities that in turn lead to new experiences and awareness” (p. 12).
- Action orientation: learning by doing - “Members of PLCs are action oriented: they move quickly to turn aspirations into action and visions into reality” (p. 12).
- A commitment to continuous improvement – “Inherent to a PLC are a persistent disquiet with the status quo and a constant search for a better way to achieve goals and accomplish the purpose of the organization” (p. 13).

  Results oriented – “Members of a PLC realize that all of their efforts must be assessed on the basis of results rather than intentions” (p. 13).

Figure 1. Six Key Characteristics of an Effective PLC



Additional Characteristics of Successful PLCs Identified in Research

In addition to the characteristics of successful PLCs identified by DuFour et al., (2010), three additional characteristics consistent with successful PLCs were found to be prevalent in the literature. These characteristics are:

- A shared leadership between teachers and administration. Morrissey (200), Hord & Sommers (2008), Wells & Keane (2011), and McConnel et al. (2013) all include shared, supportive leadership.
- Teachers have authority to make decisions within their PLC. Vescio, Ross and Adams (2008) define what this statement means, “By teacher authority we mean the ability of teachers to make decisions regarding both the processes of their learning communities and aspects of school government” (p. 85).
- Teachers are encouraged to use reflective practices in evaluating their own teaching. Kruse, Lois and Bryk (1994) and Louis and Marks (1998) strongly encourage the use of reflective dialogue among teachers as critical to PLC success while Schmoker (2006) included such practices in his simplified list of characteristics of a successful PLC.

Purpose of the Study

The purpose of the study was to examine professional learning communities in public schools in Minnesota using the characteristics identified by DuFour et al. (2010). While PLCs were recommended in all public schools by Minnesota State Statute, no studies were found which examine whether or not these PLCs are being implemented effectively based on best practices described in research. This study sought to determine if PLCs are being implemented effectively based on best practices described in research by: describing and contrasting the

characteristics of PLCs employed in public school districts in Minnesota, the districts' duration of use of PLCs, and barriers teachers and administrators have encountered when implementing PLCs.

Research Questions

In their advocacy for professional learning communities, DuFour and Eaker (1998) argued that the factory model used in the operation of public schools in the United States since the late nineteenth century is no longer applicable to a knowledge-based society characteristic of the current era. Research by Hord (1997) and Senge (1990) supported this notion, referring to the professional learning community as a model that will foster significant improvement in teaching and learning and assist teachers in meeting the needs of students now and in the future. Using the work of DuFour et al. (2010) as the conceptual framework for this study, the following research questions were addressed.

1. To what extent have the six characteristics of successful PLCs identified by DuFour et al. (2010) been implemented in practicing PLCs in public school districts in Minnesota?
2. What characteristics of successful PLCs, beyond those identified by DuFour et al. (2010) do public school districts in Minnesota PLCs exhibit?
3. What barriers have public school districts in Minnesota encountered in their attempts to implement PLCs?

Significance of the Study

The multiple reform movements that have occurred in education since the mid 1980s indicate that quality schools and quality instruction are important to the business community, government agencies, educators, parents and students, as well as to the general public. The

research indicates that professional learning communities are considered to be an effective method of professional development which may result in improving the quality of instruction in schools, and therefore lead to increased student achievement when they are implemented consistent with best practices. But, according to research, concerns exist that PLCs are not fully understood and, therefore, not always implemented in a manner that will lead to desired outcomes.

The legislature of the state of Minnesota has promoted the implementation of PLCs in public schools as a means of improving student achievement. There is limited research regarding the implementation of PLCs in public schools in Minnesota and whether or not those PLCs are being implemented consistent with best practices as identified in research. Given the evolution of the PLC definition as found in research, as well as the confusion that may exist regarding the effective characteristics of successful PLCs, this study's findings may provide a better understanding of whether or not PLCs are being implemented using practices consistent with the literature. In addition, the study may also provide guidance to school districts in their implementation of PLCs and in determining methods for eliminating barriers effecting the operation of their PLCs.

Operational Definitions

Action Oriented: Members of PLCs understand that the most powerful learning always occurs in a context of taking action, and they value engagement and reflective experience as the most effective teachers (DuFour et al., 2010).

Action Research: A structured approach to reflecting on and evaluating your own practices (McNiff, 2003).

Collaboration: People throughout the school having conversations with each other, learning from each other, and making minute-by-minute, day-by-day instruction decisions based on the collective knowledge of the group (Graham and Ferriter, 2010, p. 7).

Collective Inquiry: The process of building shared knowledge by clarifying the questions that a group will explore together. Educators engage in collective inquiry into more effective practices by examining both external evidence (such as research) and internal evidence (which teachers are getting the best results) (DuFour et al., 2010).

Community: Where educators work in continuing groups and relationships, and are committed to and have collective responsibility for a common educational purpose (Hargreaves & Fullan, 2012, p. 127).

Consensus Building: The process of overcoming individual or collective dissonance (Erkens & Twadell, 2012).

Continuous Improvement Process: The ongoing cycle of planning, doing, checking, and acting designed to improve results—constantly (DuFour et al., 2010).

First-Order Change: Incremental change, representing the next step on an established path and operating within existing paradigms. The goal is to get better at what is already being done (Marzano, Waters & McNulty, 2005).

Learning: New knowledge that is gained through shared conversations and personal reflection (Graham & Ferriter, 2010).

Mission: The fundamental purpose of an organization. Mission answers the question, “Why does your job and school exist?” (Kanold, 2011).

Professional: Someone with expertise in a specialized field; an individual who has not only pursued advanced training to enter the field, but who is also expected to remain current in its evolving knowledge base (DuFour et al., 2010).

Professional Development: A lifelong, collaborative learning process that nourishes the growth of individuals, teams, and the school through a daily job-embedded, learner-centered, focused approach (National Staff Development Council, 2000).

Professional Learning Community (PLC): An ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to better results for the students they serve. PLCs operate under the assumption that the key to improved learning for students is continuous, job-embedded learning for educators (DuFour et al., 2010).

Results Oriented: A focus on outcomes rather than inputs or intentions. In PLCs, members are committed to achieving desired results and are hungry for evidence that their efforts are producing the intended outcomes (DuFour et al., 2010).

Second-Order Change: Innovation that represents a dramatic departure from the expected and familiar. Second-order change is perceived as a break from the past, is inconsistent with existing paradigms, may seem to be at conflict with prevailing practices and norms, and will require the acquisition of new knowledge and new skills (Marzano et al., 2005).

Team: A group of people working interdependently to achieve a common goal for which members are held mutually accountable. Collaborative teams are the fundamental building blocks of PLCs (DuFour et al., 2010).

Team Norms: A set of ground rules that govern all discourse. In a PLC these are developed by the group (Venables, 2011).

Values: Represent the commitments to action necessary to ensure the vision is realized (Kanold, 2011).

Vision: Vision answers the question, “What do we hope to become at some point in the future?” It describes how good the collective can become, and paints a picture of what it will look like when they get there (Kanold, 2011).

Delimitations of the Study

Delimitations are parameters or limits of the study (Gall and Gall, 1996). The researcher has control of the delimitations of the study. This research study was limited in its scope to the state of Minnesota. Respondents in the study were limited to superintendents of public schools, or their designee, in Minnesota as identified by the Minnesota Department of Education.

Organization of the Study

The study was presented in five chapters. Chapter I contains an introduction to the study, statement of the problem, conceptual framework, purpose of the study, research questions, significance of the study, operational definitions, delimitations of the study, and organization of the study. Chapter II presented a review of the related literature as it pertains to professional learning communities. Chapter III presented the methodology employed in conducting the study, including an overview of methods, research design, setting, participant process, and data collection and analysis. Chapter IV detailed the findings of the study, and Chapter V delineated the summary, conclusions, recommendations, and suggestions for further research.

Chapter II: REVIEW OF RELATED LITERATURE

Introduction

This review of literature spans education reform over the past 30 years. Research suggests a series of tried and abandoned educational reform movements in the United States throughout the selected time period. Each reform movement, while not always successful, has caused professional educators to evaluate their practice in a new light. The numerous works completed on reform since the mid-1980s "has led to the formation of a new construct for effective school practitioner behavior, known variously as the 'professional learning community', 'teacher learning community', and 'community of practice" (Nehring & Fitzimons, 2011, p. 513). Such work proves that the professional learning community (PLC) is viewed as the most promising philosophy to bring about meaningful change in education. Jones, Gardner, Robertson, and Robert (2013) state, "The popular rhetoric for PLCs promotes a model of professional development that appears to be an ideal form of promoting teacher growth" (p. 1758).

This review of related literature chronicles the reform movements of the late 20th and early 21st centuries, which led to the development of PLCs. In addition, it defines a professional learning community, identifies the key characteristics of a PLC, and reviews the existing researched impact of this type of professional development on the practice of teachers and the achievement of students.

History of Educational Reform

The Excellence Movement

The call for reform in public education is not new. It has been a consistent theme since The National Commission on Excellence in Education published *A Nation at Risk: The Imperative for Educational Reform* in April, 1983.

> Our nation is at risk. Our once unchallenged preeminence in commerce, industry, science and technological innovation is being overtaken by competitors throughout the world…. If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have allowed this to happen to ourselves. ... We have, in effect, been committing an act of unthinking, unilateral educational disarmament. (Gardner, 1983, p.5)

Statements like these from the publication sparked the Excellence Movement, the first of many reform movements in public education in the late 20th and early 21st centuries. People quickly reacted to the concerns revealed by the Commission on Excellence in Education in their 1984 report. According to DuFour and Eaker (1998), "Within two years of the report, more than 300 state and national task forces had investigated the condition of public education in America" (p. 3). Nonetheless, research suggests that this movement lacked a clear direction, and by the late 1980s the Excellence Movement had run its course and was defunct. Peterson (2008) stated, "To its credit, the Excellence Movement halted the steady slide in American education then taking place. But reformers did better at identifying what they wanted to achieve than defining a strategy for getting there" (p. 1). The literature reviewed for this study indicates that, ultimately, the movement caused professional educators to begin to take a critical look at their practice and gather data on what practices were effective and which practices needed to be improved.

The Restructuring Movement

In 1989, the concern over education persisted causing President Bush to bring together a coalition of state governors concerned about the ailing state of America's public schools

(DuFour & Eaker, 1998). This group created *Goals 2000,* which established eight national education goals that were to be accomplished by the year 2000. The reform effort related to *Goals 2000* became known as the Restructuring Movement and focused on establishing national goals, encouraging states to adopt rigorous standards, improving the quality of teaching in K-12 schools and placing an emphasis on site-based reform (Earley, 1994, p. 7). Initiatives related to this movement, "altered the way education was organized and governed, devolving authority to schools (particularly teachers) and to parents. Examples include school-based management and school choice" (Adams and Ginsberg, 2007, p. 3). According to DuFour and Eaker (1998), "The Restructuring Movement engendered considerable optimism as it grew to become synonymous with school reform in the early 1990s" (p. 7).

While reform was implemented in schools, the report released by the National Education Goals Panel stated, "The nation has not met any of the eight educational goals set a decade ago by President Bush and the governors of all 50 states" (Cooper, 1999). While many of the authors of the literature reviewed for this study considered *Goals 2000* to be a failure, a number of initiatives that evolved as part of this movement still exist today. For example, this reform created the standards movement, which attempted to develop a consistent set of expectations for what students were to learn. Today this concept is a cornerstone in the educational system with the newest version known as the Common Core. According to the website, corestandards.org (2015), these standards have been adopted by forty-three states, the District of Columbia, four territories, and the Department of Defense Education Activity. The movement also brought about more teacher participation in the decisions affecting their school and students by introducing the concepts of shared planning time for staff and shared responsibility for student learning, both of which are characteristics of PLCs (DuFour & Eaker, 1998; Schmoker, 2006).

In 1999, the federal government passed an appropriations bill that eliminated funding for *Goals 2000,* thus eliminating the program in September, 2000 (National Center for Home Education, 2000).

No Child Left Behind

Post *Goals 2000,* concerns continued regarding the efficacy of education in the United States. The expectations of public schools had increased from multiple stakeholders as evidenced by Darling-Hammond (1996), "Schools are now expected not only to offer education, but to ensure learning" (p. 5). This type of expectation led to the next step in the reform movement, the reauthorization of the Elementary and Secondary Education Act, better known as *No Child Left Behind (NCLB)* which became law in January 2002. According to Frederick Hess (2006) of the *Harvard Education Review*, this legislation focused on accountability and had broad public support:

> The enactment of NCLB reflected several things, including strong public support for the notion of educational accountability. In 1999, 72 percent of the American public said that a lack of adequate standards was a problem for K-12 schooling…More than 90 percent of parents thought students should have to pass a standardized test in order to be promoted, and more than 70 percent favored raising the requisite standards even if it meant 'significantly more' students would be held back. (Johnson & Duffett, 2003, pp. 8-9)

The U.S. Department of Education (2001) identified six key measures (Appendix A) as part of the No Child Left Behind Act. These included:

- **Annual Testing:** Tests, aligned with state standards, in the areas of reading, mathematics and science were a required part of the legislation.
- **Academic Progress:** Schools were required to increase individual student performance to a predetermined "proficient" level on their state test and individual schools had to demonstrate "adequate yearly progress" targets for various

demographic groups. Supports were identified for those schools and districts not meeting their target scores.

- **Report Cards:** States were required to furnish annual report cards showing a range of information, including student-achievement data disaggregated by subgroup and information on the academic performance of individual school districts. Districts were expected to provide similar report cards showing school-by-school data.
- **Teacher Qualifications:** Every teacher in core content areas working in a public school had to be "highly qualified" in each subject he or she taught. Under the law, "highly qualified" generally meant a teacher was certified and demonstrably proficient in his or her subject matter.
- **Reading First:** A new competitive-grant program called Reading First was established to help states and districts set up "scientific, research-based" reading programs for children in grades K-3 (with priority given to high-poverty areas).
- **Funding Changes:** Through an alteration in the Title I funding formula, the provisions of the No Child Left Behind Act were altered to better target resources to school districts with high concentrations of poor children. The law also included provisions intended to give states and districts greater flexibility in how they spent a portion of their federal allotments.

The U.S. Department of Education called this legislation a “landmark in education reform” (2001). In the ensuing years, as with past reform movements, critics emerged, but the idea of accountability never disappeared. By 2007, the US Chamber of Commerce issued a strong statement about all recent reform efforts,

> It has been nearly a quarter century since the seminal report *A Nation at Risk* was issued in 1983. Since that time, a knowledge-based economy has

> emerged, the Internet has reshaped commerce and communication, exemplars of creative commerce like Microsoft, eBay, and Southwest Airlines have revolutionized the way we live, and the global economy has undergone wrenching change. Throughout that period, education spending has steadily increased and rafts of well-intentioned school reforms have come and gone. But student achievement has remained stagnant, and our K–12 schools have stayed remarkably unchanged—preserving, as if in amber, the routines, culture, and operations of an obsolete 1930s manufacturing plant. (Hess, 2007, p. 1)

With critics of education becoming more mainstream, there were concerns about the reauthorization of NCLB in 2007. “By the time Bush left office in 2008, even the original advocates of NCLB concluded it had failed to improve student achievement” (DuFour & Marzano, 2011, p. 12).

Race to the Top

After several delays, a revised NCLB emerged in 2009 with *Race to the Top (RTTT)* initiated by President Obama. According to McNeil (2011), The Department of Education established a number of criteria that individual states had to meet to apply for RTTT Funds. These requirements have had a major effect on state school reform efforts. To support this thought, McGuinn (2012) identified changes in laws at the state level, setting new evaluation standards for teacher accountability, linking student-achievement data with individual teacher performance, as well as robust state-data systems and the adoption of common academic standards and assessments. This new reform movement embraced the hope for education reform, as had all past movements, and, as McGuinn states, the program “has been heralded for revolutionizing the federal role in education and transforming state reform efforts” (2012, p. 138). But there are those that do not believe *Race to the Top* will be any more successful than previous movements, “RTTT, like past initiatives including NCLB, is likely to provide disappointing and problematic consequences” (Lips, 2010, p. 3). Even McGuinn (2012), a

supporter of RTTT, said, “RTTT will not single-handedly solve the problems of American education, and some of its initial achievements may well be undone over time” (p. 137).

Common Core State Standards Initiative

In addition to *Race to the Top*, another education reform initiative emerged. Due to the variations in standards and proficiency scores among states, as well as the poor scores on international tests, there is a call for national standards from the state, not the federal, level. This has resulted in the Common Core State Standards Initiative (CCSSI). The goal of this initiative is to, “[E]stablish standards for college and career readiness” (Stewart, 2012, p. 125). According to Stewart (2012),

> Although much work remains to be done, it seems that the idea of common high standards for all students, regardless of where they live, has achieved widespread support across the political spectrum as a significant step toward raising student achievement to international levels and reducing the achievement gap. (p. 128)

By 2011, 44 states and the District of Columbia had committed to the common core standards, indicating another example of educational reform in public schools in the United States.

Professional Learning Communities

Reform Movements and PLCs

With the call for educational reform that began in the mid-1980s, research on teacher quality began in earnest; this led to studies on how to improve teaching practice and additional research on effective professional development. Smith and O’Day (1990) stated, “Professional development is considered an essential mechanism for deepening teachers' content knowledge and developing their teaching practices. As a result, professional development could be a cornerstone of systemic reform efforts designed to increase teachers' capacity to teach to high standards” (p. 249).

Even with professional development identified in research as key to educational reform, traditional efforts proved to be unsuccessful. According to Morrissey (2000), “The narrow, piecemeal attempts made in the past to improve schools lacked the fundamental supportive cultures and conditions necessary for achieving significant gains in teaching and learning” (p. 3). Teachers continued to work in isolation and had little support in their efforts to meet the needs of struggling students. With student results not meeting the hopes of the various reform movements, professional development became a key focus of research and changes began to occur (Lieberman & Pointer-Mace, 2009; Lee & Lee, 2013). This deeper look into professional development caused a shift from practices which,

> focused on the teacher professional development emphasizing ‘generic’ pedagogical skills, such as allocating class time, providing clear classroom demonstrations, assessing student comprehension during lectures, maintaining attention and grouping students [to professional development] focused on preparing teachers to promote student reasoning and problem solving skills. (Holland, 2005, p. 1)

This shift was recognized by Darling-Hammond and McLaughlin (1995) when they wrote, “The vision of practice that underlies the nation’s reform agenda requires most teachers to rethink their own practice, to construct new classroom roles and expectations about student outcomes, and to teach in ways that they have never taught before” (p. 597).

Researchers also looked outside of education to the business sector to explore how organizations learn. Peter Senge (1990) in his book, *“The Fifth Discipline”*, describes the idea of a learning organization as a place, “where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together” (p. 3).

By the mid 1990s, researchers such as Block (1993), Galagan (1994), and Whyte (1994) were expanding on Senge's (1990) work and adapting his philosophy to the field of education. This led to an evolution in teacher professional development toward a learning community approach consistent with Senge's work. According to Vescio, Ross and Adams (2008):

> Schools interested in implementing this reform began to shift the organization and structure of their professional development efforts toward integrating teacher learning into communities of practice with the goal of meeting the educational needs of their students through collaboratively examining their day to day practice. (Vescio, Ross, Adams, 2008, p. 81).

In 1997, Shirley Hord's research cited work from the late 1980s, in which Susan Rosenholtz (1989) found, "teachers that felt supported in their own ongoing learning and classroom practice were more committed and effective than those who did not" (p. 3). The same document cites work by McLaughlin and Talbert (1993), which states, "…when experienced teachers had opportunities for collaborative inquiry and its related learning, the result was a body of wisdom about teaching that could be widely shared" (p. 3).

With the work of researchers pointing to a new form of professional development focused on collaborative teacher communities and a goal of increased student achievement, the professional learning community concept emerged. This concept was an effective way for "adopting and implementing powerful programs and practices for students" (Hord, 1997, p. 5). Additional research by individuals such as DuFour and Eaker (1998) led to a formalization of the professional learning community concept with identification of very specific characteristics.

Professional Learning Communities Defined

PLCs are difficult to define because they are not a prescription, a new program, a model, or an innovation to be implemented. Rather, a PLC is an infrastructure, or a way of working

together, that results in continuous school improvement (Hord, 1997). Nonetheless several researchers have attempted to capture the essential meaning.

Hord (1997) in *Professional Learning Communities: Communities of Continuous Inquiry and Improvement* defined PLCs as: "An ongoing process through which teachers and administrators work collaboratively to seek and share learning and to act on their learning, their goal being to enhance their effectiveness as professionals for students' benefit" (p. 2). In 2005, the definition developed by Bolam et al. (2005) that states a PLC is a community, "with the capacity to promote and sustain the learning of all professionals in the school community with the collective purpose of enhancing student learning" (p. 145).

In 2006, Reichstetter stated, "A professional learning community is made up of team members who regularly collaborate toward continued improvement in meeting learner needs through a shared curricular-focused vision" (p. 7). These are only a few of the many PLC definitions in the literature and these multiple definitions may cause some confusion as to what constitutes a professional learning community.

In *A Guide to Professional Learning Communities at Work*, DuFour et al., (2010) state, "The term has become so commonplace and has been used so ambiguously to describe virtually any loose coupling of individuals who share a common interest in education that it is in danger of losing all meaning" (2006, p. 10). Earlier, in 2004, DuFour shared his concerns regarding the diluting of the PLC concept when he published in *Educational Leadership*,

> The idea of improving schools by developing professional learning communities is currently in vogue. People use the term to describe every imaginable combination of individuals with an interest in education – a grade-level teaching team, a high school department, an entire school district, a state department of education, a national professional organization, and so on. In fact, the term has been used so ubiquitously that it is in danger of losing all meaning. (DuFour, 2004, p. 6).

Schmoker (2006) states that, “Professional learning communities have emerged as arguably the best, most agreed-upon means by which to continuously improve instruction and student performance” (p. 106). If this is an accurate statement, the diluting of the PLC concept and the failure to implement PLC practices with integrity may lead to an unrealized promise. Schmoker said it clearly when he wrote, “Whether we call them ‘communities of practice’ or ‘self-managing teams,’ clarity is crucial. If we are sloppy here, failure will follow (2006, p. 106).

The most comprehensive definition, given the literature reviewed, was developed by DuFour and Eaker (1998), which states:

> Each word of the phrase ‘professional learning community’ has been chosen purposefully. A ‘professional’ is someone with expertise in a specialized field, an individual who has not only pursued advanced training to enter the field, but who is also expected to remain current in its evolving knowledge base … ‘Learning’ suggests ongoing action and perpetual curiosity …. The school that operates as a professional *learning* community recognizes that its members must engage in ongoing study and constant practice that characterize an organization committed to continuous improvement …. In a professional learning *community*, educators create an environment that fosters mutual cooperation, emotional support, personal growth as they work together to achieve what they cannot accomplish alone. (pp. xi-xii)

While this definition provided one a general overview of PLCs, successful implementation also requires a firm understanding of the six essential characteristics of successful PLCs as identified by DuFour, DuFour and Eaker (2006), which is described in detail in the next section.

A PLC should not be perceived as a program or a fad. It is a set of practices that creates a philosophy different from the past and a way of working together, which increases student achievement by improving instruction through collaboration.

> A school does not become a PLC by enrolling in a program, renaming existing practice, taking the PLC pledge, or learning the secret PLC handshake. A school becomes a professional learning community only when educators within it align their practices with PLC concepts. (DuFour, 2004, p. 4)

Richard Smith (2012) emphasized this point, “PLCs are not a formula where staff do all separate processes, but rather a mind-set that infuses every aspect of the school’s operation” (p. 18). According to Nehring and Fitzimons (2011):

> [C]onventional schools are dominated by procedural thinking at all levels, short term goals, isolated teacher practice and the absence of a shared vision or shared responsibility. PLCs, in contrast, focus relentlessly on teaching and learning through efforts infused with inquiry, critical thinking, long-term aspirations, and shared vision and responsibility. (p. 526)

Hipp, Huffman, Pankake and Oliver (2008) connect the establishment of a PLC to the very culture of the school when they state, “As schools transform into professional learning communities, the conceptualization of the PLC becomes rooted within the school culture and a structure emerges providing both a foundation and a guide for learning goals, strategies and outcomes” (p. 177).

In 1998, DuFour and Eaker identified a number of reasons past efforts to improve schools have failed. They included, “the complexity of the task, misplaced focus and ineffective strategies, lack of clarity on intended results, failure to persist, and lack of understanding of the change process” (p. 17). PLCs are different from the failed efforts of the past because they address these issues so the improvement efforts can be sustained. “Researchers who have studied schools where educators actually engage in PLC practices consistently cited those practices as our best hope for sustained, substantive school improvement” (DuFour, 2007, p. 6). Teachers are critical to this characteristic of PLCs, as stated by Jenlink and Jenlink (2008), “Teachers contribute to sustaining learning communities when they shape practices and experiences around shared values and beliefs” (p. 315). These shared values and beliefs create a culture focused on the learner over the long term and make the PLC essential to ongoing student success.

Six Core Characteristics of a PLC

Research such as Hord (1997), Bolam et al.(2005), Fullan (2005), and Vescio et al. (2008) have written about PLCs and the characteristics necessary to define a learning organization as a PLC. The most common characteristics in the literature reviewed are identified by DuFour, DuFour, Eaker and Many (2006) in the publication, *Learning by Doing* (pp. 11–23):

- A Focus on Learning
- A Collaborative Culture with a Focus on Learning for All
- Collective Inquiry Into Best Practice and Current Reality
- Action Orientation: Learning by Doing
- A Commitment to Continuous Improvement
- Results Oriented

A Focus on Learning

For a PLC to be successful, the participants must have a shared mission, vision, and values. Central to mission and vision of a PLC, is a group which will focus on student learning. Louis and Kruse (1996) indicated, "A core characteristic of the professional learning community is an undeviating focus on student learning" (p. 9). In 2013, Michelle Van Lare and S. David Brazer wrote, "[W]e know successful communities work to establish group norms and negotiate a shared practice that prioritizes student learning" (p. 385). Nehring and Fitzimons (2011) combine these thoughts together by suggesting that the professional staff will come together with a "shared vision for learning and a shared responsibility for student growth" (p. 515).

According to Lieberman and Pointer Mace (2009), "In his 1975 sociological study of teachers, Dan Lortie concludes that norms of individualism, conservatism and presentation constrain American teachers from changing their practices" (p. 84). PLCs on the other hand,

remove the isolating norms identified by Lortie and create, according to Schunk and Mullen (2011), "A model of school organization designed to foster collaboration and continuous learning among educators to harness school improvement through organizational and cultural change" (p. 186). Additional research reports, "PLCs offer a guiding framework within which district staff learn together and collaborate to improve the achievement of all students" (Myers & Rafferty, 2012, p. 23). Myers and Rafferty (2012) take it beyond a framework to creating a centerpiece for staff, "The PLC fosters improvement that extends beyond the professional learning of staff to the sense of joint responsibility for student growth, giving adults focus and direction" (2012, p. 199). By eliminating the isolation, and working in teams, teachers feel like they can accomplish more. "In other words, teachers view themselves as members of a team working together for a common cause that cannot be accomplished independently" (Semadini, 2009).

In addition to the central mission of focusing on student learning, the vision of successful PLCs focus on values such as internal accountability. Internal accountability allows students and teachers to take responsibility for improved student achievement, creation of a school climate conducive to cutting edge teaching and learning, and formal collaboration among professional staff.

A Collaborative Culture

Focus on learning must take place in a collaborative culture. Prior to the development of PLCs, a teacher worked in what Lortie (1975) refers to as a "cellular structure." Joanne Lieberman and Desiree Pointer-Mace (2009) expand on this notion and state, "…the norms described in Lortie's work still prevail in the profession and often prevent American teachers from learning in their own workplace" (p. 84). This isolated culture has kept teachers from

professional discussion related to best practice, minimized their opportunity to collaboratively improve their own instruction and hindered increased student achievement. Doolittle, Sudeck, and Rattigan (2008) emphasize this point when speaking of the norm of teacher isolation: “Often manifested in an ‘isolating and compartmentalized structure’, such norms limit and discourage meaningful interaction between teachers. As a result, effective teaching practices are seldom shared, and shoddy teaching is rarely identified or confronted” (p. 304). To counter this isolation, collaboration is a second critical characteristic identified by DuFour and his colleagues.

In a 1998 publication, DuFour and Eaker state that school leaders need to, “Build the school around collaborative teams that engage in a constant cycle of reflection, planning, experimentation, analysis of results and adaptation” (p. 517). This idea is further supported by Hunter and Carroll (2003), quoted in the National Commission on Teaching and America’s future in 2003: “Quality teaching requires strong professional learning communities. Collegial interchange, not isolation, must become the norm for teachers” (Hunter & Carroll, p. 17). The research is clear that a culture that encourages and supports collaborative interaction among staff, with expectations that the interactions focus on best instructional practice and improved student outcomes, will bring about the desired results of improved instruction and higher student achievement. This elimination of isolation is key to successfully implementing reform. “To implement reform in schools, however, teachers must break down that isolation. They must reach out, model for others, and help colleagues develop skills and understanding. The way they go about doing so is critical to any reform success” (Parkay, Hass & Anctil, 2009, p. 17).

The idea of a collaborative learning community is not new. As far back as 1916 and 1927, John Dewey referred to the notion of democracy and its relation to education and creating a common purpose. Dewey (1916) explained that individuals “live in a community by virtue of

the things which they have in common; and communication is the way in which they come to possess things in common" (p. 4). By using collaboration to build a set of ideals they have in common, teachers take on, "the challenge of reculturing, of seeing learners and learning as central, of reconceptualizing professional development, of developing social relations, and of democratic collaboration" (Jenlink & Jenlink, 2008, p. 312).

Teachers in learning communities are more likely to innovate; they continually rethink their practice based on how students perform (McLaughlin & Talbert, 2006; Vescio et al., 2008). In order to effectively reflect on new practices, teachers need input from other professional educators, and input is provided in the collaborative culture of a PLC. Teachers participating in a learning community continually reaffirm their colleagues' professional purpose to support all students (McLaughlin & Talbert, 2006; Vescio et al., 2008). This collaborative culture of a PLC allows teachers to avoid the traditional norm of isolation and encourages them to reflect on their practice with the goal of improving student performance. Isolated practice is one of the contributing factors to the gap between what is generally known about good teaching and its actual implementation in the classroom (Bird & Little, 1986). The collaborative nature of a PLC is necessary for teachers to learn from one another.

The collaborative culture of a PLC also helps build an identity among participants, regarding how they meet the needs of all students and how they accomplish that work together.. Lieberman and Pointer-Mace (2009) found, "Participating in a learning community allows teachers to develop or confirm a teacher identity that includes meeting the needs of students and learning from other teachers in order to do so" (p. 85). In the same 2009 publication they state, "By developing strong teacher identities that include norms of openness, collaboration and

critical design, they maintain a sense of professionalism that includes intending to support all students and having the agency to learn how to do so" (p. 96).

Leaders implementing PLCs, as well as PLC participants, must be aware that this collaborative culture, because it challenges the individualism and isolation of the traditional school setting, may cause disagreements; participants must be prepared to constructively address such conflict. According to a study by Achinstein (2002), "an understanding of conflict within community is crucial to practitioners', reformers', and researchers' understanding of how such communities form, cope, and are sustained over time" (p. 422). She goes on to state that this conflict may be necessary for learning to take place: "Conflict can create the context for learning and thus ongoing renewal of communities" (Achinstein, 2002, p. 422).

Fostering of Inquiry

Fullan (2005) identified inquiry and use of research supported instructional techniques as critical for a successful PLC leading to increased student achievement. Successful collaboration in PLCs includes sharing of knowledge and inquiry into quality instruction, "Investing in inquiry oriented practice is at the heart of a democratic community. Engaging in inquiry moves crucial issues of practice into a public space, and vests the responsibility of addressing the issues with the teachers" (Jenlink & Jenlink, 2008, p. 312). Fullan (2005) identified inquiry and use of research supported instructional techniques as critical for a successful PLC leading to increased student achievement. In addition, McConnell, Parker, Eberhardt, Koehler and Lundeberg (2013) found, "[P]rofessional development that engages teachers in instructional inquiry over an extended time through collaborative professional learning communities (PLC's) is effective in improving instruction and student achievement" (p. 267). And they found that "professional development is most effective when teachers engage actively in instructional inquiry in the

context of collaborative professional communities, focused on instructional improvement and student achievement" (p. 268).

The inquiry approach in a successful PLC must recognize and acknowledge what teachers already know.

> The important thing is that the exploration of practice starts with what teachers know first….Starting with teachers' knowledge dignifies the 'wisdom of practice' and helps open teachers' classrooms to inquiry, breaks the isolation that keeps teachers from becoming colleagues and forms the basis for a professional learning community. (Lieberman & Pointer-Mace, 2009, p. 469)

PLCs recognize the wisdom of practice in which teachers, "[O]pen themselves up to the process of inquiry into their own practice; they accept it as a part of teaching and learning for themselves (and others)" (Liberman & Pointer-Mace, 2009, pg. 469). By recognizing the teacher as knowledgeable, a climate is created where educators feel their thoughts and input is valued; they then can effectively contribute to the PLC process by sharing their own experiences. Successful PLC participants also recognize the other members of the group have valuable information from which they can learn. By learning from one another, teachers may change their practice in such a way that leads to increased student achievement (Gusky & Yoon 2002; Hadar & Brody 2010; Wenger 1998).

Research shows PLCs can be successful in assisting teachers learn. A key to successful discussion within a PLC is an understanding of how teachers learn from one another (Burbank & Kauchak 2003; Gusky & Yoon 2002; Kennedy & Smith, 2013; Nadelson et al., 2012). According to Lieberman and Pointer-Mace (2009), "They learn by being learners and teachers; being in groups; reading and discussing research and literature; and slowly developing personal and professional relationships with their peers" (p. 462). This recognition of how adults learn is central to the PLC concept in that, "The professional learning community places 'quality

teaching' at the center of adult learning within schools in order to impact student learning" (Mullen and Schunk, 2010, p. 186). In order for this type of professional interaction to occur, Riley and Stoll (2004) identified two critical factors for success. First, time is important as, "Professional learning communities are most likely to thrive where people and ideas have plenty of opportunities to connect" (Riley & Stoll, 2004, p. 35). Second, trust is necessary as, "Enquiry appears to be a feature of more mature professional learning communities, but this is more likely to occur in a climate of trust….where people feel safe to take risks and subject their own practice to serious scrutiny" (p. 35).

Patrick Lencioni (2002), in his book, *The Five Dysfunctions of a Team*, makes the argument that, "Trust is the foundation of real teamwork….Great teams do not hold back one another. They are unafraid to air their dirty laundry. They admit their mistakes, their weaknesses, and their concerns without fear of reprisal" (pp. 43-44). Given an appropriate amount of time and an environment of trust, PLCs can evolve into opportunities for professional discussion regarding instructional strategies and reflection on personal professional practice. "As PLCs engage in collegial conversations about the results of their explorations, they develop deeper understandings about existing conditions and form frames of reference from which to revisit, reflect on, and perhaps refine their earlier identified instructional beliefs" (Spanneut, 2010, p. 103).

Pete Hall and Alisa Simeral (2015) stress the importance of reflective practice in professional growth when they write:

> In order to be good at anything, you need to be thoughtful, intentional, and reflective in your practice….Self-reflection can bridge the doing-thinking gap, know-doing gap, and any other gap that might otherwise impede your progress. Developing these abilities will enable you to master whatever skills, strategies, approaches, or methods you set your mind to. (p. 21)

With enough time provided, these collegial discussions, in a trusting environment, along with intentional reflection on the part of the teacher, may lead to a deeper understanding of quality instruction based on best practice. This conversation and reflection may lead to changes in practice or in the implementation of new practices (Spanneut, 2010). A study on professional development in a collaborative environment conducted by Hardre et al. (2013) found:

> They (teachers) demonstrated several characteristics of healthy and productive communities, including (a) resource-sharing and interdependence, (b) innovative thinking and reciprocal learning through sharing of complementary skills, and (c) metacognitive awareness resulting in critical practice" (p. 421). This group also found, "Collaborative peer groups promote critical examination of practice and adoption of innovative strategies (p. 411).

In addition, McConnell et al. (2013) found, "[T]eachers valued the PLCs as a supportive learning environment, and that teachers' classroom practice was changed as a result of their participation" (p. 269).

Action Orientation

Quality professional development has the potential to lead to changes in teaching practice. Joellen Killion, Director of Special Projects for the National Staff Development Council stated:

> [T]he ultimate goal of any educational professional development is to improve student achievement, which can be accomplished in three ways: (1) increasing teacher content knowledge, (2) changing teachers' attitudes about their content areas, and (3) expanding the teacher's repertoire of instructional practices. (Killion & Ottem, 2002)

This concept is further supported by the work of Guskey (2002), "If the primary purpose of professional development is to improve learning outcomes of students, then the first goal of any professional development model should be to change the way each teacher actually teaches" (p. 382).

Through collaboration and collective inquiry, teachers engage in active learning by sharing thoughts and reflection with other professionals regarding their own practice in an ongoing attempt to improve student achievement (Guskey &Yoon 2009, Lee & Lee 2013, Mullen & Schunk 2010). In PLCs, teachers work collaboratively to study and learn from each other, hence PLC work is about teaching and learning, one not exclusive of the other (Hord & Sommers, 2008). This idea is further supported in a study by Desimone, Porter, Garet, Yoon and Birman, published in 2002, which identified active learning as a core feature of professional development that improves teaching practice,

> …. The extent to which the activity offers opportunities for active learning-that is, opportunities for teachers to become actively engaged in the meaningful analysis of teaching and learning, for example, by reviewing student work or obtaining feedback on their teaching; the degree to which the activity promotes coherence in teachers' professional development, by incorporating experiences that are consistent with teachers' goals, aligned with state standards and assessments, and encourage continuing professional communication among teachers; and the degree to which the activity has a content focus – that is, the degree to which the activity is focused on improving and deepening teachers' content knowledge in mathematics and science. (Desimone et al., 2002, p. 83).

In the PLC structure the teachers' knowledge and experience is a key to understanding how to help increase student achievement and this has the potential to drive changes in their instructional methods. In a PLC, teachers are viewed as, "authorities in their own right who drive their professional development on an individual basis through the process of engaging in a cyclical pattern: Knowledge is derived from practice and practice is informed by knowledge" (Stanley, 2011, p. 72). This inquiry, reflection and discussion has the potential to bring about great insights and may have long-ranging effects, changing not only general practices but whole school environments, "PLCs have the potential of giving rise to progressive pedagogical orientations, where learning is emergent from teacher engagement in reflective dialogues about their professional role within the school environment" (Lee & Lee, 2013, p. 444). This idea is

also supported by DuFour et al. (2010) when they state, "[T]he very reason that teachers work together in teams and engage in collaborative inquiry is to serve as catalysts for action" (p. 12).

While gaining new knowledge and expanding a teacher's repertoire of instructional practices are action oriented activities, the concept of action must go further and actually allow new ideas to be implemented and reflected upon. Mark O'Shea (2005) in *From Standards to Success* said, "New ideas are not enough. Teachers need opportunities to practice new skills and methods in a sheltered, or coached environment that is similar to, or actually includes their classroom" (pg. 135). Additional research stated, "Professional development support must include giving teachers time to experiment, permission to change the way they do things, and the opportunity to make mistakes along the way" (Sparks, 1998, p. 19). Wenger (1998) made a case for learning by doing as part of the social theory of learning:

> Communities of practice sets out a social theory of learning based on the assumptions that 'we are social beings; knowledge is a matter of competence with respect to valued enterprises . . . knowing is a matter of participating in the pursuit of such enterprises . . . our ability to experience the world and our engagement with it as meaningful – is ultimately what learning is to produce. (p. 4)

This opportunity to implement new strategies in an experimental manner allows the teacher to adapt new concepts in their classrooms. Teachers know their own classroom best and by adapting a teaching strategy to their group of learners teachers have a better chance of improving student achievement. Guskey & Yoon (2009) found that there was a positive relationship between professional development and improved student learning when they, "…involved active learning practices for participants, and provided teachers with the opportunity to adapt the practices to their unique classroom" (p. 496). The National Staff Development Council argued, "[T]he most effective professional development comes not from the

implementation of a particular set of 'best practices,' but from careful adaptation of varied practices to specific content, process, and context elements" (2001).

Allowing teachers time to actively engage with one another to share knowledge, discuss instructional methods, review student data, and experiment with various instructional techniques, may achieve the PLC cultural agenda identified by Mullan and Schunk (2010). The agenda is to "transform schools into communities and extend classrooms, pedgogies, and curricula into communities that enhance learning for students and teachers" (p. 196).

A Commitment to Improvement

The concept that PLCs involve a continuous process rather than a program is a key characteristic, which differentiates it from traditional professional development. The PLC concept represents "…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., 2010, p. 11). Hargreaves (2004) said it is, "[A]n ethos that infuses every single aspect of a school's operation" (p. 48). These ongoing practices, which influence every aspect of a school's operation, are never done and educators must be continually looking to improve.

Because of this focus on PLCs as an ongoing process, they are viewed as highly effective in bringing about continuous improvement in instruction. Schmoker (2006), in his book, *Results Now*, claimed, "Professional learning communities have emerged as arguably the best, most agreed-upon means by which to continuously improve instruction and student performance" (p. 106). In, *Transforming Schools – Creating a Culture of Continuous Improvement*, the authors cite many of the key characteristics of PLCs:

> [S]hared vision, articulating what the shared vision looks like when it is put into practice, using data to identify current performance levels, and identifying the gaps between

> current performance and ideal performance are critical to the ultimate success of a continuous improvement effort. (Zmuda, Kuklis & Kline, 2004, p. 122)

"The PLC is a model of school organization designed to foster collaboration and continuous learning among educators to harness school improvement through organizational and cultural change" (Mullan et al. 2010, p. 186). A PLC, when implemented using best practices, ensures a commitment to continuous improvement, by guiding schools through a process in which student achievement is increased and instructional practices are reviewed on an ongoing basis to ensure they meet the needs of their students. This is accomplished by allowing educational institutions to bring their staff together in a collaborative setting to review data, reflect on their practice, explore and implement new and varied instructional strategies with an outcome that may change the very way the school does business (Chambers, 2001; Earl & Fullan, 2003; McLaughlin & Talbert 2006; Smith, 2006).

A key component in the continuous improvement process is formative assessment, which provides teachers with critical feedback on how their teaching is influencing student learning. Venables (2011) said of formative assessments, "Formative assessments, by definition, exist to find out what our students have learned and how well we have succeeded in teaching them (p. 71). He continued to say that "tests can no longer be isolated, final measures of student mastery; instead they must be catalysts for *what happens next* in terms of our instruction" (p. 71). When teachers use formative assessment in the way described by Venables (2011), they are truly meeting the goal of continuous improvement within their own practice; they also strengthen the likelihood that student achievement will increase.

The goal of continuous improvement can be difficult to achieve because staff need to be honest as they review their existing practice through tools, such as formative assessment. Zmuda et al. (2004) stated, "It is impossible to lead a collective continuous improvement effort without

forcing staff to raise questions about existing core beliefs" (p. 10). These same authors also said that once the staff truly begins working toward a goal of continuous improvement, "The collective expertise of staff and the variety of well-founded perspectives are being harnessed in the work of moving toward the collective good" (Zmuda et al., 2004, p. 175).

Results Oriented

One of the main reasons for emphasis on continuous improvement stems from the political nature of reform in public education and the press for accountability. The work of Earl and Fullan (2003) points out, "In the past several decades, a great deal has changed. Accountability has become the watchword in education and data hold a central place in the current wave of large-scale reform" (p. 383). Earl and Fullan (2003) added, "Data has become the vehicle of choice for ensuring accountability" (p. 383). Firestone, Mayrowetz, and Fairman (1998) identify assessment as having become more than a way to evaluate what a student has learned, "[L]arge scale assessment and testing has moved from being an instrument for decision-making about students to being the lever for holding schools accountable for results" (p. 110).

In order for data and assessment to be meaningful for educators, existing achievement data are used to help improve instruction. In other words, a results oriented culture is needed for creating improved instruction and higher student achievement. "A move from accountability as surveillance to accountability for improvement requires a fundamental mind shift" (Earl & Fullan, 2003, p. 393). Schools that make this transition understand that they must continually gather information as a means to make decisions regarding instruction. Fullan (1995) indicated that, "engaging in ongoing inquiry and reflection appears to be one of the key factors separating schools with deep impact from those whose impact is less significant" (p. 27). They also recognized that gathering data and looking at numbers is not enough. It requires the educators to

make the data usable for changing practice. “Using data wisely for decisions in schools is much more than gathering data and turning them into numbers. A process of human interpretation and creating meaning has to happen to change data into information and ultimately into workable knowledge” (Earl & Fullan, 2003, p. 389).

The work of PLCs is meaningless unless their implementation produces results. According to DuFour & Eaker (1998), “Unless initiatives are subject to ongoing assessment on the basis of tangible results, they represent random groping in the dark rather than purposeful improvement” (p. 29). To gather and evaluate these results effectively, educational institutions must have systems in place for collecting and interpreting data regarding student achievement. In *Five Disciplines of PLC Leaders,* Kanold (2011) outlined “The accountability and celebration model for continuous improvement” (pp. 62-70). The model he proposed included the following stages:

1. Set Student Learning Goals – Goals need to be set in order to measure what each student is learning. This creates accountability to student success.
2. Create an Action Plan to Achieve the Goals – The plan requires collaboration on the part of the teachers. They work together to build a plan that focuses on best practice so teaching and learning moves toward the established goal. This creates accountability to the vision and core values.
3. Take Action on What Works and What is Best for Students – By monitoring student progress on an ongoing, timely basis, the professional staff is able to reflect on the plan and identify those things that are working and which are not achieving the desired outcome. This is also a time to ensure that the plan is being followed and

individuals are not deviating from the agreed upon actions. This keeps everyone accountable to taking action and taking appropriate risks.

4. Collect and Analyze Appropriate Data – This step is one level above the previous step in that it also calls for monitoring student progress but this is more formal. This step involves analysis of data at major benchmarks in the process, making sure the relevant data is being collected and that the results are interpreted correctly. This holds educators accountable to the results.
5. Provide Intentional Corrective Feedback – Trust is critical at this stage as the team comes together to review the benchmark data and determine what is working and what needs to be changed. While stage 3 focuses on short term growth, this stage is aimed at the bigger picture and may require larger scale change to the plan. Corrective feedback is a requirement at this stage so progress toward the goal can continue. This stage has accountability with consequences.
6. Provide Intentional Celebration – When things are going well the group needs to celebrate their success. It is the result of focused collaboration that leads to student success, which is the ultimate goal. In this stage the accountability is celebrated and those involved can feel the rewards of their work.

By following such a model, the focus remains on results and the process acts as a reminder that an educator's work toward improved student achievement continues.

Additional Characteristics of a Successful PLC

While this literature review outlined the characteristics of PLCs identified by DuFour et al. (2010), there are also characteristics identified from other research. Morrissey (2000), Hord & Sommers (2008), Wells and Keane (2011) and McConnell et al. (2013) all include supportive

conditions and shared, supportive leadership. These characteristics are part of the collaborative structure and indicate the need for administrative support. Support includes providing time and resources, as well as shared leadership between teachers and administrators, to allow teachers to have some authority in decision-making. These ideas are supported by Vescio et al. (2008), "By teacher authority we mean the ability of teachers to make decisions regarding both the processes of their learning communities and aspects of school government" (p. 85).

Kruse, Louis and Bryk (1994) and Louis and Marks (1998) added reflective dialogue among teachers along with characteristics of PLCs identified by DuFour et al. (2010). Schmoker (2006) in his book, *Results Now,* provided a very simplified list of PLC characteristics which includes, "[T]eachers establishing a common, concise set of essential curricular standards and teach them on a roughly common schedule….teachers must meet regularly…to perform this work teachers must make frequent use of common assessments" (pp. 106-107). As with other research identifying PLC characteristics, Smoker's characteristics were embedded in those identified by DuFour et al. (2010).

The latest research identifying PLC characteristics is based on the work of Hipp, Huffman, Pancake, & Olivier . (2008). These authors developed the Professional Learning Communities Assessment (PLCA) to assess teacher perceptions of practices in their schools related to six dimensions they identified as key to the professional learning community. While similar to DuFour et al. (2010), they included shared and supportive leadership and supportive conditions while putting less importance on a focus on learning and continuous improvement.

Three Big Ideas

DuFour et al. (2010) divided the work of the PLC into three big ideas, in the second edition of their book, *Learning by Doing:*

1. The purpose of our school is to ensure all students learn at high levels;
2. Helping all students learn requires a collaborative and collective effort; and
3. To assess our effectiveness in helping all students learn we must focus on results – evidence of student learning – and use results to inform and improve our professional practice and respond to students who need intervention or enrichment. (DuFour et al., 2010, p. 14)

PLC's Impact on Teaching and Student Achievement

The literature is clear that quality professional development is key to changing teaching practices and improving student achievement. In 2013, Hardre et al. stated, "High quality professional development can change teaching practice and improve student learning" (p. 410). In general, the literature supports the idea that professional learning communities are successful in improving instruction and increasing student achievement.

> [In 2008] The National Commission on Teaching and America's Future recognized that policies related to curriculum, standards, and assessments are only starting points for improvement....To improve teacher quality, professional development activities and resources are increasingly focused on teachers' community of practice, a sociocultural perspective situating teacher learning largely within the school" (Barnes, Crowe, and Schaefer, p. 188). PLCs are identified as a vehicle for effective professional development, "The Professional Learning Community (PLC) is gaining recognition as an effective strategy for promoting long-term professional development for educators. (Linder, Post & Calabrese, 2012, p. 2).

Research shows that a strong PLC is a key ingredient in improving schools (Fullan, 2003; Schmoker, 2006; Little & McLaughlin, 1993; Louis, Kruse & Marks, 1996). Nehring & Fitzimons (2011) "found consistently that, in schools where teachers assumed collective responsibility for student learning, achievement gains were significantly higher" (2011, p. 515). The research of Michael Fullan (2009) found that schools that were successful in their reform movements worked to become learning organizations, where professional development was

valued as an ongoing process and had an explicit focus on changes in instructional practice. Lieberman and Pointer-Mace (2009) make a strong statement regarding PLCs, “PLC’s may be the most significant professional development idea we’ve had in decades” (2009, p. 459).

The PLC model has been gaining momentum as more education organizations have shown success by implementing this process (Schmoker, 2004, p. 106). In 1996, Louis and Marks conducted a study at multiple sites to look at the impact of PLCs and found that “the presence of a PLC in a school contributed to higher levels of support for improved achievement and higher levels of authentic pedagogy” (Louis & Marks, 1996, p. 106). Studies by Supovitz & Christman (2003) in reference to the schools they studied, stated: “[T]here was evidence to suggest that those communities that did engage in structured, sustained, and supported instructional discussions and that investigated the relationships between instructional practices and student work produced significant gains in student learning”(Supovitz & Christman, 2003). The success of PLCs is further supported by Bolam et al. (2005) and Vescio et al. (2008) when, after studies at both the elementary and secondary level, they found there is a link between the strength of PLC characteristics and student achievement that is statistically significant. Because of this success, "Professional learning communities have become one of the most talked about ideas in education today (Thompson, Gregg, & Niska, 2004, p. 1).

Since the mid 1990s, national organizations have endorsed professional learning communities as critical to school reform. In 2003, the National Commission on Teaching and America’s Future identified “Strong Learning Communities” as one of its three key strategies for improving both teaching and schools, and made the following statement to support their identification of this strategy:

> Quality teaching requires strong, professional learning communities. Collegial interchange, not isolation, must become the norm for teachers. Communities of learning can no longer be considered utopian; they must become the building blocks that establish a new foundation for America's schools. (The National Commission on Teaching and America's Future, 2003, p. 17).

This was followed by the National Board of Professional Teaching Standards calling for teachers to be members of learning communities,

> Five Core Propositions form the foundation and frame the rich amalgam of knowledge, skills, dispositions and beliefs that characterize National Board Certified Teachers (NBCTs). The fifth proposition calls upon teachers to be members of learning communities . . . to collaborate with others to improve student learning . . . to work with other professionals on instructional policy, curriculum development and staff development. (National Board of Professional Teaching Standards, 2007)

This support of PLCs has been joined by endorsements from groups such as The Interstate New Teacher Assessment and Support Consortium (INTASC), the National Council for the Teachers of Mathematics (NCTM), The National Science Teachers Association (NSTA), the National Education Association (NEA), and the National Association for Secondary School Principals (NASSP).

Even with the overwhelming amount of literature claiming that the use of PLCs is a successful strategy to improve instructional practice and increase student achievement, there are studies that found they are not as effective as some claim. In 2011, in a study by Burke, Marx and Berry, their research found that while there have been a number of studies completed regarding the effectiveness of PLCs, there are few findings to indicate PLCs actually change teacher practice. Seashore, Anderson and Riedel (2003) found that, while professional learning communities have a role to play in changing classroom practice, the overall effects may not be as great as suggested in some studies. While few in number, these studies suggest that the PLC may not always be as successful as the majority of the research indicates.

Why PLCs Are Successful

As schools have adjusted their professional development practices in response to the call for accountability (which began in the 1980s), PLCs have been recommended as the preferred professional development model. Gusky (2000) and Sparks and Hirsch (1997) have long warned of the limitations of traditional professional development. They have strongly suggested that schools make greater use of job-embedded professional development and should evaluate results by the observable impact on professional practices and student results. Linder et al. (2012) report, "Recent research provides evidence that PLCs can produce positive effects on teachers and their instruction, which in turn can lead to improved student performance" (p. 3). Burke et al. (2011) found, "there is sufficient evidence that professional development practices associated with PLCs are preferable to more traditional, didactic formats" (p. 36). This concept was further supported by Many and Schmidt (2013), "The reason professional learning communities increase student learning is that they produce more good teaching by more teachers more of the time. Put simply, PLCs improve teaching, which improves student results, especially for the least advantaged students" (p. 2).

A number of different critical elements identified in the research indicate why PLCs are more successful than traditional types of professional development. A study by Nehring et al. (2011) found that,

> …conventional schools are dominated by procedural thinking at all levels, short term goals, isolated teacher practice and the absence of a shared vision or shared responsibility. PLC's, in contrast, focus relentlessly on teaching and learning through efforts infused with inquiry, critical thinking, long-term aspirations, and shared vision and responsibility. (Nehring & Fitzsimons, 2011, p. 526).

Guskey (2014) argued that, historically, professional development has lacked focus and a clear notion of the purpose of the activities in which teachers are involved. Before professional

development begins, there should be an effort to "clarify the goals you want to achieve in terms of better educator practice and improved student learning" (Guskey, 2014, p. 13). By their very nature, PLCs address these issues by creating, "a systematic process in which teachers work together interdependently in order to impact their classroom practice in ways that lead to better results for their students, their team, and for their school" (DuFour et al., 2006, p. 3).

John Hattie (2009) in his book *"Visible Learning"*, used the work of Timperley, Wilson, Barrar, and Fung (2007) to identify what works best in professional development. Six of the seven characteristics ascertained in their research are components of professional learning communities:

1. Learning opportunities for teachers occurred over time
2. It is important to engage the teachers during the learning process
3. The process should challenge the teacher's prevailing discourse and conceptions about learning
4. Teachers need to talk to other teachers about teaching
5. School leadership supports opportunity to learn and opportunites are provided to meet and process new information
6. Time is provided and funding is available to support professional engagement

Additionally, research suggested PLCs succeed because they recognize what teachers need in order to learn, what conditions are necessary for teachers to reflect on their own practice, as well as what teachers need in order to change how they teach. "It has become clearer that teachers learn in communities that are long-term and collaborative; and necessitate enabling policies that are shaped by the people who are involved in the routines of school and have an investment in their renewal" (Lieberman & Pointer-Mace. 2009, p. 459). The long term nature of these

collaborative environments is important in that it leads to teachers sharing information, reflecting on their own teaching and eventually trying innovative practices that may lead to higher student achievement. This is supported by the findings of Wells and Feun (2012), “Teachers in learning communities are more likely to innovate; they continually rethink their practice based on how students perform” (p. 84). Goodlad (1994) concurred when he said, “The intellectual and emotional habits of critical reflection and action about one’s calling and daily work are the mark of a professional continuously engaged in self-improvement” (p. 38).

Research suggested that PLCs do create a culture that expects teachers to actively engage in their own learning. “A community of practice views learning as an encompassing process of being active participants in the practices of social communities and constructing identities in relation to these communities” (Liu & Xu, 2013, p. 178). While engaging in their own learning, reflecting on their own practice, and participating in discussions with other professionals, teachers grow in their knowledge of quality instruction. When conducted effectively, this re-creation of their identity can have a significant impact on the culture of their school and their own teaching (Lieberman & Pointer-Mace, 2009). “By developing strong teacher identities that include norms of openness, collaboration and critical design, they maintain a sense of professionalism that includes intending to support all students and having the agency to learn how to do so” (Lieberman & Pointer-Mace, 2009, p. 96).

In a culture of working together on an ongoing basis, educators are able to take on the difficult task of change. Change in isolation, or sporadic initiation of change, is unlikely to take place in traditional settings, but Hipp, Huffman, Pankake and Oliver (2008) found that PLCs address these issues by changing practice, “In practice, change cannot be individual or

fragmented, but collective and embedded in the day-to-day work to address the needs of students" (p. 192).

A final reason for PLC success found in the literature was that they are designed with an understanding that adults learn best when engaged in social activities (Brooks & Brooks, 1993; Burns, Menchaca & Dimock, 2002; Lambert, 2003). "The social nature of learning has been demonstrated by research in psychology, sociology, and organizational development" (Caine & Caine, 2010, p. 21). These same authors continued, "although people vary in how much they like to learn and work together, the brain/mind is social…Learning in the real world has always been a partially social process" (Caine & Caine, 2010, p. 21). Easton (2009) further supported this idea by stating, "Learning is most productive in a social context" (p. 41).

Burke et al. (2011) provided a concise summary of why schools and school districts are implementing PLCs:

> Many districts have adopted a learning community format designed to enable teachers to collaboratively address problems of practice, and understand their work as interdependent with others in their building and district. PLCs are promoted as a progressive, group learning method for empowering professionals to learn from one another through high levels of practitioner reflection that promotes positive change in individual and group behaviors. (Burke et al., 2011, p. 36).

Barriers to PLC Success

While PLCs are considered to be an effective strategy in leading improved student achievement, there are challenges to their implementation and sustainability. There is research to indicate that at times, PLCs fail. According to Wells and Feun (2012), "Despite the considerable volume of discourse on the importance of PLC principles, the transformation is extremely difficult" (p. 235). In their book, *School Leadership that Works,* Marzano, Waters, and McNulty (2005) described the changes required for a successful PLC as "second order changes" which will alter the culture of schools. Marzano et al. (2005) describe second order change as deep

change, which they defined as “altering the system in fundamental ways, offering a dramatic shift in direction and requiring new ways of thinking (p. 66). They also cautioned that, “second order change is so complex it should never be entered into lightly” (Marzano et al., 2005, p. 68). These challenges may be one reason that Alan Blankestein, in his book, *Failure is Not an Option*, stated, “It is more common to find school professionals who say they are part of a “learning community” than it is to actually find professional learning communities in operation” (Blankestein, 2009, p. 51).

In examining research for this literature review, it was found that there are key barriers that lead to the lack of success when implementing PLCs. These barriers include: a culture of teacher autonomy; concerns over who has power; fear of collaboration and lack of trust; lack of time for successful implementation; inability to sustain the effort, and the failure to include all of the critical attributes of PLCs (Lieberman and Miller, 2011; Wells & Feun, 2013; Tolley, 2014) .

Traditional practice in schools allowed teachers to be in charge of all aspects of their classroom; PLCs may embrace a set of norms that are in direct conflict with that concept. “The culture of the school is one of autonomy and privacy, considerable barriers to the collective work of PLCs” (Capers, 2004; Fullan, 2001; Hord & Sommers, 2008). When teachers are unaccustomed to doing the work of PLCs, such as collectively reviewing data, developing common assessments, having professional discourse regarding student achievement, or discussing the level of success of a particular teaching strategy, they may find these activities threatening as they “break the rules of professional privacy” (McLaughlin & Talbert, 2001). When they perceive such a situation, they may feel threatened and may not fully engage, thus leading to an unsuccessful PLC implementation.

Closely related to the privacy of the classroom is teacher autonomy. PLCs, by their very definition, take teachers out of their classroom into a community setting. PLC participants are expected to be "active participants in the practices of social communities" (Liu & Xu, 2013, p. 178). In this new participatory setting, there may be a perceived threat to the power of the individual teacher. "The challenge for learning communities is to guard against the usurpation of the teacher voice and the reduction of the professional learning community to just one more standardized professional development tool" (Lieberman & Miller, 2011, p. 20). If teachers believe they have lost their voice as a result of the PLC process they may revert back to isolating themselves in their classrooms; the effectiveness of the learning community will be minimized considerably (Liu & Xu, 2013). As indicated in the literature, those implementing PLCs need to be aware that issues of power and conflict may arise and be prepared to address them early in the process (Achinstein, 2002; Barton & Tusting, 2005; Fullan, 2007; Lewis, Ensico, & Moje, 2007).

The issues of autonomy and power come about because of the community developed in PLCs. The explicit nature of PLC *community* contributes to the third roadblock identified in the literature: the fear of collaboration combined with lack of trust. Hord (2004) found that while many people understand the importance of collaboration in PLCs, it is difficult to establish. Wells and Feun (2007) reported in their study that, while they felt collaboration could be beneficial, it could be difficult to implement when their colleagues were, "abrasive, negative, threatening, bullies, loud, screamers, angry, and uncooperative" (p. 154). For many teachers, this reluctance comes from a lack of experience in a collaborative environment.

> Aside from the occasional group work activities, few teachers have had previous experiences or mentoring during their teacher preparation to make the transition from an intrapersonal construction of practice to an interpersonal model of professional development. (Burke et al., 2011, p. 36)

There are times when this reluctance to participate is based on a perception that they (teachers) are being forced to participate in PLCs. Liu and Xu (2013) explain it as, "When collegiality is imposed on teachers, the professional communities, which are intended to create generative power for professional learning, can become a tool of enslavement" (p. 179).

The literature indicates another reason teachers have a fear of collaboration is a lack of trust among the participants or with the leadership (Fullan, 2007; Bryk & Schneider, 2003; Hardre et al., 2013). According to Riley & Stoll . (2004), "…trust cannot be assumed. It has to be created. And it has to be earned" (p. 39). Trust is important in a community of learning because "[t]his kind of community is founded on mutual respect, concern, caring, reliability, and commitment to a common, larger cause. In short, it is founded on relational trust" (Blankstein, 2004, p. 58.) Stoll et al. (2006) made a strong statement regarding trust in PLCs when they wrote, "Teachers are unlikely to participate in classroom observation and feedback, mentoring partnerships, discussion about pedagogical issues, curriculum innovation, unless they feel safe" (p. 239). This is further supported by Bryk & Schneider . (2003) when, after a longitudinal study that included 400 elementary schools in Chicago, they said, "Talking honestly with colleagues about what's working and what's not means exposing your own ignorance and making yourself vulnerable. Without trust, genuine conversations of this sort remain unlikely" (p. 43). A final reason teachers may fear collaboration is that it may lead to conflict. In a study by Achinstein (2002) regarding the conflict with learning communities she found,

> ...in practice, when teachers collaborate, they run headlong into enormous conflicts over personal beliefs and practices." In their optimism about caring and supportive communities, advocates often underplay the role of diversity, dissent, and disagreement in community life, leaving practitioners ill-prepared and conceptions of collaboration unexplored. (Achinstein, 2002, p. 421)

Even when PLCs exist where participants have embraced the collaborative culture, where they no longer are concerned about the loss of autonomy, and they trust the group within which they work, the process may still fail. According to the literature, the two additional roadblocks that hinder successful PLCs are time and sustainable participation (Stanley, 2011; Printy, 2008; Graham, 2007). Little and Ford (2007) stressed the importance of allowing sufficient time for PLCs. If sufficient time is provided, participants have the opportunity to engage in honest discussion about critical instructional elements. These discussions may bring about changes in instructional practice, which may lead to increased student achievement. Grossman, Wineburg, and Woolworth (2001) indicated that time is important to, "…navigate the lines of differences in subject matter, approaches to teaching, gender, race, and ideas of privacy" (p. 942). When time is not provided, or when the time given is not spent in a manner teachers feel is productive, participants become frustrated with the process. When this occurs, PLC communication breaks down and the effect of the PLC on teacher practice is too limited to increase student achievement (Wells & Feun, 2007).

Educators face continuous challenges and changes in the current era of pressure to reform or improve. PLCs are intended to become part of the ongoing culture of a school so they can support educators "…in the face of rapidly changing demands on teachers, teaching, and learning" (Lieberman & Miller, 2011, pg. 20). According to Liu and Xu (2013), "A sustainable community of practice should provide teachers with opportunities of participation, but more importantly, there should be a transparent and fair system to recognize individuals' participation and contribution" (p. 191). When individual teachers do not feel they have an equal opportunity within a PLC, when they are not given a voice as a school responds to reform efforts, or when they do not feel valued as part of the overall community, they stop contributing and the PLC

fails. When the PLC fails, the likelihood of improving teacher practice diminishes and increased student achievement becomes less likely (Lieberman & Miller, 2011).

In addition to these reasons why PLCs may fail, there is literature to indicate that, as successful as PLCs appear to be, they are not used as often as many may believe. In a 2007 study regarding the effectiveness of professional development in schools, it was found, "Most of these studies cite the continued prominence of on-time, short duration workshops and presentations mandated by school leaders for all teachers, which have been shown to be inadequate strategies for bringing about change in teacher practices" (McConnell et al., 2013, p. 267).

It is important for educators to keep these challenges in mind as they create an ongoing learning culture using professional learning communities. As stated in the research, "Professional learning communities make sense. As a structure, the premise of these communities promised a lot to the profession. However, some communities have proven disappointing, and the concept as a whole in danger of fading like many initially exciting structures for change, such as small schools and block scheduling" (Easton, 2012, p. 49). In many cases, even those that believe in the PLC concept (as defined by DeFour et al, 1998) fail because, as found by Schmoker (2006), "Failed attempts to establish professional learning communities can usually be traced back to a lack of fidelity to the fundamental concepts" (p. 107).

With the challenges that exist, many school districts have chosen to rely on more traditional approaches to professional development. In *Reframing Teacher Leadership to Improve Your School,* Reeves reports,

> In many school systems, professional development strategies continue to rely on a combination of outside experts' inspirational speeches and administrators' stern follow-

> up memos. Too rarely are educators asking the fundamental question in educational reseach: is it working? (Reeves, 2008, p. 4)

Summary

This literature review briefly outlined the history of educational reform in the United States since the early 1980s. It also provided examples of how these reform efforts led to research resulting in new instructional practices and different professional development structures. It then focused on the characteristics of a professional learning community (PLC) as well as those components necessary for such communities to be successful. Finally, this review provided examples of barriers, which can lead to the failure of the PLC.

As can be ascertained from this literature review, there is a tie between the evolution of the reform movements outlined and the development of the PLC as a tool to improve instructional practice and therefore student achievement. As with many strategies implemented to meet the desires identified by reform advocates, the PLC has been diluted by some and may not be implemented with the fidelity identified by those who claim its effectiveness. This diluted version of a PLC does not include one or more of the key components research indicates as necessary for successful implementation, and may actually lead to barriers that hamper effective practice within practicing PLCs. When best practices are lacking, the PLC may not bring about the desired results, and the potential student success indicated in research goes unrealized and the promise of the PLC is lost.

An understanding of the culture and components of a successful professional learning community, as well as being able to identify barriers to success, are important in providing a foundation for this study. Chapter III, Methodology, provides a detailed description of the critical aspects of the study such as the research design, an overview of the survey tool and other

key aspects related to how the research questions will be summarized. Details about how the data will be gathered and analyzed are also included.

Chapter III: METHODOLOGY

Introduction

The purpose of the study is to determine whether or not professional learning communities (PLCs) are being implemented in public schools in Minnesota using characteristics identified in research by DuFour et al. (2010); this body of research will be referred to interchangeably as the "DuFour group" throughout this chapter. The data collected may be used by public school administrators to evaluate the implementation of PLCs in their districts and determine areas of concern they may wish to address to increase the potential for successful PLC practice in their districts. The data will also assist in identifying common roadblocks to successful implementation.

Since the early 1980s, numerous educational reform movements have been attempted in the United States with the goal of improving instructional practices and increasing student achievement (DuFour & Eaker, 1998). In response to these various calls for reform, such education professionals such as Rosenholz (1989), Fullan (1991), Hord (1997) and DuFour & Eaker, (1998) studied those systems, which were necessary to meet the goals outlined in these movements. Their work led to the development of PLCs.

PLCs have been in place in education in various forms since the early 1990s, (McLaughlin & Talbert, 1993; Hord, 1997; DuFour and Eaker, 1998). In the late 1990s and early 2000s, PLCs were popularized by Rick DuFour (and his colleagues) in a number of books and articles. Throughout the first 15 years of implementation, many education experts recognized that PLCs had a positive effect on teachers and students:

> If schools want to enhance their organizational capacity to boost student learning, they should work on building a professional community that is characterized by shared purpose, collaborative activity, and collective responsibility among staff. (Newmann & Wehlage, 1995, p. 37).

PLCs are viewed as a central element for school reform and for creating supportive cultures in our schools that will lead to significant gains in teaching and learning (Louis et al., 1996; Morrissey, 2000; Reeves, 2004). Schmoker (2005) touted PLCs as the, "unprecedented hope for schools and the improvement of teaching" (pp. 137-138).

Professional education organizations have also expressed their support of PLCs. In 2003, the National Commission on Teaching and America's Future identified the creation of strong learning communities as one of their three core strategies for improving teaching and schools. In 2004, the Annenberg Institute for School Reform endorsed PLCs as, "a central element for effective professional development and a comprehensive reform initiative. In our experience, PLCs have the potential to enhance professional culture within a school district" (p. 3). The National Staff Development Council (2007) concurred with this thinking in their recommendation for effective professional development. "Effective staff development that improves the learning of all students organizes adults into learning communities whose goals are aligned with those of the school and district" (National Staff Development Council, paragraph 14, 2007).

With the popularity of PLCs in professional literature, the concept was promoted as a method for making a profound impact our schools. "[T]he use of professional learning communities is the best, least expensive, most professionally rewarding way to improve schools" (Schmoker, 2005, p.138). Many schools implemented what they called PLCs without understanding the concept or the critical practices that made PLCs successful. DuFour and Eaker (2005) expressed this concern when they wrote,

> The professional learning community model has now reached a critical juncture, one well known to those who have witnessed the fate of other well-intentioned school reform efforts. In the all-too-familiar cycle, initial enthusiasm gives way to confusion about the fundamental concepts driving the initiative, followed by inevitable implementation

> problems, the conclusion that the reform has failed to bring about the desired results, abandonment of the reform, and the launch of a search for the next promising initiative. (DuFour & Eaker, 2004, pp. 31-32).

The promise of PLC success promted the state of Minnesota to promote the use of this practice in public schools, statewide, by referencing them in teacher evaluation legislation passed in 2011 (Minn. Stat. 122A.40, subd. 8, 2011). Yet, based on DuFour group concerns, an examination of the PLC is necessary to determine the likelihood of whether or not the desired results of this practice are realized.

Research Questions

The study addresses the following three research questions:

- To what extent have the six characteristics of successful PLCs identified by DuFour et al. (2010) been implemented in practicing PLCs in public school districts in Minnesota?
- What characteristics of successful PLCs, beyond those identified by DuFour et al. (2010) do public school districts in Minnesota PLCs exhibit?
- What barriers have public school districts in Minnesota encountered in their attempts to implement PLCs?

Research Design

Respondents in the study were superintendents or their designees in public schools in the state of Minnesota, who completed a questionnaire administered through an electronic survey tool. By definition, this quantitative inquiry is classified as a descriptive study. This method was chosen because, “when used in quantitative research, it measures the characteristics of a population on prespecified variables” (Gall & Gall 2007, p. 638).

Data were collected in order to ascertain the frequency of essential characteristics, identified in research, implemented within professional learning communities. Data collected

also identified the duration of PLC use in districts, and barriers encountered by public school district leaders while using PLCs in their schools. An analysis of the data allowed the researcher to report the frequency of effective PLC practice/s being implemented at the time of the study. A survey, developed by the researcher, was used to collect the data. The survey instrument was developed by the researcher due to the lack of an existing tool to measure professional learning practices in Minnesota.

Instrumentation

The instrument used for this study was the Survey Monkey online survey tool (Appendix B). The instrument developed by the researcher was based on information from *Professional Learning Communities at Work Plan Book*, written by DuFour et al. (2010), as well as information obtained from the Prairie South School District located in Moose Jaw, Saskatchewan, who also used *Professional Learning Communities at Work Plan Book*. Efforts were made to reduce measurement error by writing quality items and practicing sound statistical methodologies, including selecting a sample that would have sufficient knowledge of the topic and aligning the survey items to the research questions. The survey was piloted with two different groups of current doctoral students from various backgrounds in the field of education who had some level of understanding regarding professional learning communities. Following the pilot process, the survey was adjusted to make the survey questions clearer to the actual study participants.

The survey instrument consisted of nine sections. Section one collected information on district demographics. Demographic information was limited to determining the size of the participating school districts, whether or not the districts participated in Q-Comp, whether or not the districts had implemented PLCs, and, if so, the length of time the school districts had

employed this practice. Sections two through seven requested participants respond to three to five items in each section, all related to PLC practices in their districts. There are a total of 31 items in these sections. Each of the individual instrument sections is based on one of the six essential characteristics identified by DuFour et al. (2010) as necessary for PLC success.

Participants were asked to indicate the level of implementation of PLCs in their districts using a five choice Likert scale. The Likert scale choices are as follows: (1) they have not yet begun to address this issue, (2) We are talking about this, but have taken no significant action to make it a reality, (3) We have begun implementation, but at this stage of the process, many staff approach the task with a sense of compliance rather than commitment, (4) We have moved beyond initial implementation and continue to work through the process. Support and enthusiasm for the process are growing, (5) This practice is deeply embedded in our culture. Most staff is committed to doing this work and feel it is an important factor in the collective effort to improve schools.

Section eight requested participants respond to three items identified by researchers other than the DuFour group as key characteristics of PLCs. They used the same Likert scale choices as found in sections two through seven of the data collection instrument. Section nine requested participants respond to five items identified in research as barriers to successful PLC implementation using a Likert scale. The Likert scale choices for this section included: (1) the barrier is non-existent, (2) the barrier is evident from time to time, (3) the barrier is prevalent in the district.

Study Respondents

The Minnesota Department of Education reported that there are 328 independent public school districts in the state (2015). For descriptive research, it is common to sample 10% to 20%

of the population (Gay & Airasian, 2000). In this study, 100% of Minnesota public school superintendents were invited to participate. Superintendents could designate another individual in their district to complete the survey (whose position was identified in the survey) with more knowledge of PLC implementation in the district. Due to the recent legislative recommendation to implement PLCs in public schools in Minnesota, the researcher chose to survey 100% of the state superintendents or designees in order to ascertain the level of implementation on a statewide scale.

Respondents of this study included 328 superintendents in public schools in Minnesota who were members (at the time of the study) of the Minnesota Association of School Administrators (MASA), or their designee. For the purpose of this study, those individuals identified by the MASA as superintendents in a public school district in Minnesota were considered potential respondents. Contact information for these superintendents was obtained from MASA. Sampling error was not be a factor in the study, as all superintendents in public school districts in Minnesota were invited to participate.

Data Collection Procedures

In the study, data was collected using a mixed-mode methodology. In a mixed-mode methodology, "respondents are offered the option of responding online or with a paper survey" (de Bernardo & Curtis, 2012, p. 220). Primarily, data collection was completed through a web-based survey (Survey Monkey), though respondents were given the option of requesting and completing a paper copy. Benefits of an online survey include financial efficiency, fewer time limitations, more accurate data collection, easier access to large populations, increased anonymity for study participants and improved response rates of survey respondents (Ward, Clark, Zabriskie & Morris, 2014, p. 85).

Two emails were used to contact potential respondents to the study survey. The first email included an explanatory letter from the researcher (Appendix C), which included a link to the survey document. This email was included as part of the participation emails from MASA sent to the respondents on August 6, 2015. The initial email also included a link to an electronic survey and contained information on contacting the researcher if a paper survey was requested. The first email was followed by a second email on August 24, 2015, with an alternative message to encourage participation. Each email contained the following information in varying forms:

- Professional sender information
- Informative subject
- Appeal for help
- Selection criteria
- Importance of the respondent
- Usefulness of the survey
- Access the survey
- Confidential and voluntary
- Contact information
- Thank you

Data Analysis

Data collected from the survey respondents were analyzed by the researcher to examine and report on each of the research questions. Data were collected in order to discover and report the frequency of the level of implementation of essential characteristics of professional learning communities, as identified in research. The frequency was reported in the form of a percentage.

In addition, the researcher analyzed and reported the frequency of encountered barriers by public school districts with practicing PLCs. The frequency was reported in the form of a percentage.

Limitations of the Study

Roberts defines limitations as, “particular features of your study that you know may negatively affect the results or your ability to generalize” (Roberts, 2010, p. 165). Limitations in this research study were two-fold: (1) the study was voluntary and therefore limited to the number of surveys completed; (2) the study assumed respondents’ honesty in answering survey questions.

Chapter IV: RESULTS

Introduction

In the mid-1980s, professional learning community (PLC) pioneers, Shirley Hord, Richard DuFour and Robert Eaker undertook an exploration of the concept of teachers working in small groups or learning communities. Participants in these initial learning communities shared common experiences, ideas, practices, and developed strategies to address issues they faced in their work with students (Hord 1997; DuFour & Eaker 1998). Research by DuFour and Eaker (1998) concluded that the model used to operate schools since the late nineteenth century was no longer valid and a new model should be prescribed,

> This model requires schools to function as professional learning communities characterized by a shared mission, vision and values; collective inquiry; collaborative teams; an orientation toward action and a willingness to experiment; commitment to continuous improvement; and a focus on results. (DuFour & Eaker, 1998, pp. 44-45)

The concept continued to develop and, by the late 1990s, the learning community concept had evolved to be more focused on data than when initially implemented. The shift in emphasis was designed to better evaluate the effect of various teaching strategies (like the impact of teachers working together to modify their instruction) on the increase of student achievement (Senge et al., 2000).

Over time, many school districts and their leaders have modified the professional learning community concept and have done so to such a degree that they may no longer achieve, fully, their originally desired or anticipated results (DuFour, 2006). Because of the adaption of PLCs, DuFour further shared his concern that professional learning communities will go the way of numerous other reform initiatives and become, “[A]nother reform movement that has come and gone” (p. 2).

Study Purpose

The purpose of the study was to examine the practices of professional learning communities (PLCs) in public schools in Minnesota using the characteristics identified by DuFour et al., (2010). The PLC characteristics examined for this study were:

- A focus on learning.
- A collaborative culture with a focus on learning for all.
- Collective inquiry into best practice and current reality.
- Action orientation: learning by doing.
- A commitment to continuous improvement; and
- Results oriented.

The study also examined the implementation characteristics identified in literature as components of PLCs by authors other than DuFour, DuFour, Eaker and Many (2010). Those characteristics were investigated because of their prevalence in the literature. The characteristics included in this portion of the study were:

- Shared leadership between teachers and administration.
- Teachers have authority to make decisions within their PLC; and
- Teachers are encouraged to use reflective practices in evaluating their own teaching.

Finally, the study examined the barriers encountered by public school districts in Minnesota implementing PLCs. The barriers examined were:

- Teachers not wanting to collaborate with other teachers.
- Conflict within the learning community regarding power.
- Lack of trust among members of the learning community.
- Lack of consistent time provided for collaboration; and

- Lack of commitment on the part of the district to sustain learning communities.

Research Design

As noted by Huff (2009), "there isn't a perfect method but thoughtful choice can support judgments that a contribution is interesting, significant and trustworthy" (p. 186). Therefore, the first step in the design process was to determine which research methodology to use. The researcher examined three research methodologies: quantitative, qualitative, and mixed methods. A quantitative inquiry, classified as a descriptive study, was determined to be the best choice based on the nature of this study.

In quantitative research, a descriptive study is defined as, "a type of investigation that measures the characteristics of a sample or population on prespecified variables (Gall and Gall, 2006, p. 638). The researcher determined this method was the best approach to gather data regarding the level of implementation of specific PLC practices identified in research questions one and two, as well as identify the barriers to PLC implementation which were encountered as stated in research question three. The survey, based on information derived from *Professional Learning Communities at Work*, written by DuFour et al. (2010), was developed by the researcher to address the purpose of the study, the statement of the problem and the research questions.

Research Questions

This chapter reports the findings of the study, which was guided by a set of research questions that were developed by the researcher and based on the literature. These research questions were developed to examine the actual implementation of PLC characteristics—as identified by DuFour et al. (2010)—in Minnesota public school districts, as well as other

characteristics that are prevalent in the literature. The data were analyzed and findings organized according to each of the following research questions:

1. To what extent have the six characteristics of successful PLCs identified by DuFour et al. (2010) been implemented in practicing PLCs in public school districts in Minnesota?
2. What characteristics of successful PLCs, beyond those identified by DuFour et al. (2010) do public school districts in Minnesota PLCs exhibit?
3. What barriers have public school districts in Minnesota encountered in their attempts to implement PLCs?

Analysis of data was completed at the St. Cloud State University Office of Statistical Analysis using the Statistical Package for the Social Sciences (SPSS). Using the SPSS, Cronbach's Alpha was computed to be .979 for the total scale. An alpha above .9 indicates the sample has high internal consistency and reliability.

Description of the Sample

The sample group for this study was the 328 superintendents of public schools in Minnesota. This group was contacted by email. Minnesota Association of School Administrators (MASA) provided a list of Minnesota superintendent email addresses. Due to changes in eight superintendent positions during the implementation of the survey, the researcher was unable to secure information from eight districts. The superintendents contacted were invited to participate in the study or to designate a person with knowledge of PLC practices in their district as a participant in the study. If the superintendent chose to designate another individual to participate in the survey, he or she was instructed to forward the original request to that person.

The study's electronic survey was available through a secure internet link and consisted of nine sections (Appendix B). The first section collected information on district demographics, whether or not the district used PLCs and, if so, the length of time the district had used this practice, and whether or not the district participates in Q-Comp. Sections two through seven gathered data specific to PLC practices within the district; these were aligned with the six essential PLC characteristics identified by DuFour et al. (2010) as necessary for PLC success. Survey questions in section eight related to key characteristics identified in literature by individuals or groups other than the DuFour group. Section nine related to the five key barriers to PLC success as identified in the research.

The number of superintendents of public schools in Minnesota or their designees who responded to the survey totaled 143 (n=143) for a 45.4% response rate. Of these, 121 (n=121), or 36.8% were considered valid responses. Surveys with all of the questions answered were determined as valid.

The reported history of PLC use within the district is presented in tables 1 – 4, and the demographics of the respondents are found in tables 5 and 6. Table 1 describes whether or not the reporting district had implemented PLCs.

Table 1

District reported use of professional learning communities (n=121)

Y/N	Frequency	Percent
Yes	116	96%
No	5	4%
Total	121	100%

Of the 328 public school districts in Minnesota invited to participate in this survey, 121 responded. Those school districts that indicated they used professional learning communities (PLCs) in their district numbered 116, while five indicated they did not. For those respondents that indicated their district did not use PLCs in their school districts the survey was closed and they could not participate in the remainder of the survey.

Table 2 reports the number of years school districts using PLCs had been engaged in the practice.

Table 2

Reported number of years of PLC implementation (n=116)

Years	Frequency	Percent
0 to 2	24	21%
3 to 5	51	44%
6 to 10	31	27%
More than 10	10	8%
Total	116	100%

Fifty-one participating school districts or 44% reported they have been using PLCs for three to five years. Thirty-one districts or 27% reported using PLCs for six to ten years while 24 districts or 21% reported using PLCs for 0-2 years and ten districts or 8% reported using PLCs for more than ten years.

The next aspect explored in the study examined the number of districts currently implementing PLCs and whether they participated in the Q-comp program. Table 3 describes the frequency districts using PLCs were also participating in Q-Comp.

Table 3

Reported participation in the State Q-Comp (n=116)

Y/N	Frequency	Percent
Yes	37	31.9
No	79	68.1
Total	116	100%

Of the 116 public school districts in Minnesota responding to the study that indicated they used PLCs, 79 districts or 68.1% responded that they did not participate in Q-Comp while 37 districts or 31.9% indicated they did participate in Q-Comp.

The next question on the survey examined in the study explored the number of years school districts participating in Q-Comp had been involved in the program. Table 4 reported the number of years responding districts participating in Q-Comp had been engaged in the program.

Table 4

Length of Q-Comp Participation (n=37)

Years	Frequency	Percent
0 to 2	6	16%
3 to 5	9	24%
6 to 10	19	51%
More than 10	3	8%
Total	37	100%

Of the 37 districts reporting participation in Q-Comp, 19 districts or 51% had been participating in the program for six to ten years. Nine districts or 24% reported they had participated in Q-Comp for three to five years while six districts or 16% reported they had

participated in the program for two years or less, and three districts had participated for more than ten years.

Another aspect examined in the study was the positions held by the study participants. The frequency distribution of the positions of study respondents is represented in Table 5.

Table 5

Position of Study Respondents (n=116)

Position	Frequency	Percent
Superintendent	78	67%
Director of C/I, T/L, Staff Dev.	14	12%
Principal/Asst. Principal	11	10%
Q-Comp Adv./Tchr/ Other	7	6%
Asst. Supt./ Assoc. Supt.	6	5%
Total	116	100%

The majority of study respondents (n=78, 67%) reported they held the position of superintendent of schools. Fourteen respondents or 12% identified themselves as director of curriculum and instruction, director of teaching and learning and/or staff development coordinator. Eleven respondents or 10% identified themselves as principal, assistant principal or associate principal. Seven study respondents or 6% indicated they served as Q-Comp coordinator, teacher or other position while the remaining six study participants or 5% identified themselves as assistant superintendent or associate superintendent.

The next question on the survey asked participants to report their school district's student enrollment. The enrollments (K-12) of school districts participating in the study are illustrated in Table 6.

Table 6

Reported District Student Enrollment (n=116)

Enrollment	Frequency	Percent
0 to 500	14	12.1%
501 to 1000	28	24.1%
1001 to 2500	35	30.2%
2501 to 5000	25	21.6%
5001 to 10,000	9	7.8%
Greater than 10,000	5	4.3%
Total	116	100%

The largest number and percentage of study respondents reported they were located in school districts with K-12 enrollments of 1001-2500 students. Twenty-eight respondents (n=28, 24.1%) indicated they worked in districts with a K-12 enrollment of 501-1000 students. Twenty-five respondents (n=25, 21.6%) indicated they served in districts with K-12 enrollments of 2501-5000 students. Fourteen respondents (n=14, 12.1%) indicated they were employed in districts with K-12 enrollments of 0-500 students. Nine respondents (n=9, 7.8%) indicated they worked in districts with K-12 enrollments of 5001-10,000, and five respondents (n=5, 4.3%) served in districts with K-12 enrollments greater than 10,000 students.

Tables 1-6 provide an overview of the sample for this study. The data indicated 116 of the respondents were in school districts that used professional learning communities. The majority of respondents reported their school districts had been using PLCs for three to ten years and 37 respondents worked in school districts which participated in Q-Comp. The majority of respondents were superintendents. The majority of respondents were from school districts with student enrollments between 501 – 5000 students.

The remaining tables provide detailed data regarding the three research questions developed by the researcher for this study. The first research question guiding this study examined the extent to which the six essential characteristics of successful PLCs as identified by DuFour et al. (2010) had been implemented in practicing PLCs in public school districts in Minnesota. For each characteristic, there were a number of practices that were identified in the research as being indicators as to whether or not the characteristic was being used. The survey questions were related to the various practices for each characteristic.

The first research question was intended to examine the implementation of the six essential characteristics related to PLC operation as identified by DuFour et al. (2010).

Research Question One

To what extent have the six essential characteristics of successful PLCs identified by DuFour et al. (2010) been implemented in practicing PLCs in public schools in Minnesota?

In addressing research question one, the researcher analyzed responses to questions seven through thirteen on the survey to identify the extent to which participating districts were practicing the six characteristics of successful PLCs identified by DuFour et al. (2010). Participants were asked to indicate their district's level of implementation of multiple practices for each the six PLC characteristic using a five choice Likert scale. The Likert scale choices were as follows: (1) we have not yet begun to address this issue, (2) we are talking about this, but have taken no significant action to make it a reality, (3) we have begun implementation, but at this stage of the process, many staff approach the task with a sense of compliance rather than commitment, (4) we have moved beyond initial implementation and continue to work through the process. Support and enthusiasm for the process are growing, (5) this practice is deeply

embedded in our culture. Most staff is committed to doing this work and feel it is an important factor in the collective effort to improve schools.

The results for the level of implementation for the various practices associated with the six PLC characteristics identified by DuFour et al. (2010) is provided in the next section.

Characteristic One: Focus on Learning

DuFour et al. (2010) wrote that a PLC with a focus on learning has, "educators within the organization embrace high levels of learning for all students as both the reason the organization exists and the fundamental responsibility for those who work within it" (p. 11). DuFour et al. (2010) identified six practices that would be evident in PLCs with a focus on learning. Question seven of the survey for this study asked respondents to report their level of implementation for each of these six practices. Tables 7 – 12 indicate the frequency of each level of implementation for each of DuFour et al.'s (2010) six practices indicative of a PLC with a focus on learning.

The first practice identified as evidence of a learning focused PLC was teacher belief that all students can learn. The frequency findings for this practice are found in table 7.

Table 7

Respondents Reporting on the PLC Practice A Teacher Believes that All Students Can Learn

(n=116)

Response	Frequency	Percent
Not Yet Begun	1	0.9%
Talking	9	7.8%
Begun Implementation	30	25.9%
Beyond Initial Implementation	56	48.3%
Embedded in Culture	20	17.2%
Total	116	100%

Fifty-six respondents or 48.5% indicated their district is beyond initial implementation with the practice of teachers believing all students can learn, while only one respondent or .9% indicated the district had not yet begun this practice. Thirty districts' respondents or 25.9% indicted their district had begun implementation, and twenty respondents or 17.2% identified that this practice was embedded in their district's culture.

The second PLC practice examined in the study as part of learning focused PLCs was the attribute: teachers had a clear focus on improving student learning. The frequency findings for this practice are indicated in table 8.

Table 8

Respondents Reporting on the PLC Practice Teachers Have A Clear Focus on Improving Learning (n=116)

Response	Frequency	Percent
Not Yet Begun	0	0%
Talking	10	8.6%
Begun Implementation	29	25%
Beyond Initial Implementation	59	50.9%
Embedded in Culture	18	15.5%
Total	116	100%

All 116 respondents who indicated that their districts currently use PLCs, reported their districts have engaged at some level on the characteristic of having a clear focus on improving learning within their PLCs. The majority of respondents (n= 59, 50.9%) indicated their districts were beyond the initial implementation stage with this practice. Twenty-nine respondents (n=29, 25%) indicted that their districts had begun implementation and eighteen respondents (n=18,

15.5%) identified that this practice was embedded in their district's culture. Only ten respondents (n=10, 8.6%) indicated their districts were only at the stage of talking about this practice.

The third practice examined in the study as evidence of a learner focused PLC is that teachers have written specific learner outcomes for their courses. The frequency findings for this practice are reported in table 9.

Table 9

Respondents Reporting that Teachers Have Written Specific Learner Outcomes for Their Courses (n=116)

Response	Frequency	Percent
Not Yet Begun	2	1.7%
Talking	6	5.2%
Begun Implementation	37	31.9%
Beyond Initial Implementation	49	42.2%
Embedded in Culture	22	19%
Total	116	100%

The most prevalent number of respondents (n=49, 42.2%) indicated their districts were beyond the initial implementation stage with the practice of teachers writing specific learner outcomes for their courses, while only two districts' respondents (n=2, 1.7%) indicated their districts had not yet begun this practice. Thirty-seven respondents or 31.9% indicated that they had begun implementation, and twenty respondents or 19% identified that this practice was embedded in their district culture.

Teachers agreeing upon and listing the clear learning targets/criteria that explain what the student work looks like, what students know and do in each grade, subject/course and unit was

the fourth practice surveyed as evidence of learning focused PLCs. The frequency findings for this practice are reported in table 10.

Table 10

Respondents Reporting on the Attribute of Teachers Agree and List the Clear Learning Targets/Criteria that Explain What the Student Work Looks Like, What Students Know and Do in Each Grade, Subject/Course and Unit (n=116)

Response	Frequency	Percent
Not Yet Begun	1	.9%
Talking	17	14.7%
Begun Implementation	43	37.1%
Beyond Initial Implementation	46	39.7%
Embedded in Culture	9	7.8%
Total	116	100%

Of the 116 respondents to this survey question, 91.1% identified the practice of teachers agreeing to and listing clear learning targets/criteria that explain what student work looked like, what students know and do in each grade, subject, course and unit was present in their school districts' PLCs. Eighty-nine or 79.8% of respondents indicated their school district has begun implementation or is beyond the initial implementation stage with this practice. Seventeen school districts or 14.7% indicated they were talking about this practice, and nine districts identified that this practice is embedded in their culture. Only one district or .9% of school districts had not yet begun this practice regarding learning targets/criteria.

The survey for this study asked the level to which teachers had identified evidence/indicators they use to measure student outcomes for their course; this is a practice

associated with learning focused PLCs. The frequency findings for this practice are reported in table 11.

Table 11

Respondents Reporting Teachers Have Identified Evidence/Indicators They Use to Measure Student Outcomes for their Course (n=116)

Response	Frequency	Percent
Not Yet Begun	1	.9%
Talking	21	18.1%
Begun Implementation	36	31%
Beyond Initial Implementation	47	40.5%
Embedded in Culture	11	9.5%
Total	116	100%

The most prevalent number of respondents (n=47, 40.5%) indicated their school districts were beyond the initial implementation stage of teachers identifying evidence/indicators they use to measure student outcomes for their course while thirty-six respondents or 31% have begun implementation of this practice. Twenty-one respondents (n=21, 18.1%) indicated they were talking about this practice in their school districts, and eleven respondents (n=11, 9.5%) identified that this practice was embedded in their culture. Only one respondent (n=1, .9%) indicated their school district had not yet begun this practice.

Having a systemic process in place to provide additional and required time and support for students who experience difficulty is the final practice associated with learning focused PLCs. The frequency findings, which were reported as part of question 7 of the survey for this study, are reported in table 12.

Table 12

Respondents Reporting There is a Systemic Intervention Process in Place to Provide Additional and Required Time and Support for Students Who Experience Difficulty (n=116)

Response	Frequency	Percent
Not Yet Begun	1	.9%
Talking	17	14.7%
Begun Implementation	31	26.7%
Beyond Initial Implementation	51	44%
Embedded in Culture	16	13.8%
Total	116	100%

The majority of respondents (n=82, 70.7%) indicated their school districts have begun implementation or are beyond the initial implementation stage with the practice of having a systemic intervention process in place to provide additional and required time and support for students who experience difficulty. Seventeen respondents or 14.7% indicated their school districts were talking about this practice while sixteen respondents or 13.8% identified that this practice was embedded in their school district's culture. Only one (n=1, .9%) respondent indicated their school district had not yet begun this practice.

Tables 7-12 provide data regarding the specific practices related to a focus on learning, the first characteristic of successful PLCs identified by DuFour et al. (2010). The next section will provide data regarding the second characteristic: collaborative culture.

Characteristic Two: Collaborative Culture

A second aspect of successful PLCs examined in the study was related to their impact on collaborative culture. DuFour et al. (2010) identify a collaborative culture PLC as one which is, "composed of collaborative teams whose members work interdependently to achieve common goals for which members are mutually accountable (p. 11). DuFour et al. (2010) identified six

practices that would be evident in PLCs that had a collaborative culture. Question 8 of the survey for this study asked respondents to report their level of implementation for each of these six practices. Tables 13 – 18 indicate the frequency of each level of implementation for each of DuFour's six practices indicative of a PLC with a collaborative culture.

Having a systemic process in place in which teachers work together to analyze and improve their instruction is the first practice associated with PLCs which have a collaborative culture. The frequency findings for this practice are reported in table 13.

Table 13

Respondents Reporting There is a Systemic Process Where Teachers Work Together to Analyze and Improve Their Instruction (n=116)

Response	Frequency	Percent
Not Yet Begun	0	0%
Talking	9	7.8%
Begun Implementation	39	33.6%
Beyond Initial Implementation	44	37.9%
Embedded in Culture	24	20.7%
Total	116	100%

All 116 respondents reported their school district had a systemic process in place in which teachers work together to analyze and improve their instruction or were talking about the practice. The largest number and percentage of respondents indicated their school districts were beyond the initial implementation stage with this practice. Thirty-nine (n=39, 33.6%) respondents indicated their school districts have begun implementation, while twenty-four respondents (n=24, 20.7%) identified this practice as embedded in their school district's culture. Nine (n=9, 7.8%) school districts were talking about this practice.

Teachers engaging in discussion to promote teacher learning which leads to higher student achievement is the second practice associated with PLCs that have a collaborative culture. The frequency findings of this practice are indicated in table 14.

Table 14

Respondents Reporting that Teachers Engage in Discussion to Promote Teacher Learning Which Leads to Higher Student Achievement (n=116)

Response	Frequency	Percent
Not Yet Begun	1	.9%
Talking	11	9.5%
Begun Implementation	32	27.6%
Beyond Initial Implementation	52	44.8%
Embedded in Culture	22	17.2%
Total	116	100%

The level to which teachers were engaging in discussion to promote teacher learning which leads to higher student achievement was the second practice respondents identified as part of question 8 of the study survey. Fifty-two respondents or 44.8% reported their school districts were beyond the initial implementation stage with this practice. Thirty-two (n=32, 27.6%) respondents reported their school districts had begun implementation while twenty-two respondents (n=22, 17.2%) identified that this practice was embedded in their culture. Eleven respondents (n=11, 17.2%) noted their school districts are talking about this practice. Only one (n=1, .9%) respondent indicated their school district had not yet begun to address this practice.

Consistent time is provided for learning communities to meet is the third practice associated with PLCs that have a collaborative culture. The frequency findings for this practice are indicated in table 15.

Table 15

Respondents Reporting that Consistent Time is Provided for Learning Communities to Meet (n=116)

Response	Frequency	Percent
Not Yet Begun	0	0%
Talking	6	5.2%
Begun Implementation	21	18.1%
Beyond Initial Implementation	24	20.7%
Embedded in Culture	65	56%
Total	116	100%

All 116 respondents report their teachers have some level of engagement with the practice of having consistent time provided for learning communities to meet. Over half of respondents, 56%, indicated their school districts had this practice embedded in their culture. Forty-five respondents or 38.9% reported that their school districts had begun implementation or were beyond initial implementation, while six respondents (n=6, 5.2%) indicated their districts were talking about this practice.

The learning communities focus on learning for all students is the fourth practice associated with PLCs that have a collaborative culture. The frequency findings for this practice are indicated in table 16.

Table 16

Respondents Reporting Their Learning Communities Focus on Learning for All Students (n=116)

Response	Frequency	Percent
Not Yet Begun	1	.9%
Talking	11	9.5%
Begun Implementation	27	23.3%
Beyond Initial Implementation	49	42.2%
Embedded in Culture	28	24.1%
Total	116	100%

Forty-nine respondents (n=49, 42.2%) indicated their school districts were beyond the initial implementation stage of operating learning communities, which focus on learning for all students. Twenty-eight respondents (n=28, 24.1%) reported their school district had begun implementation of the practice, while twenty-two respondents (n=28, 17.2%) indicated this practice was embedded in their school district's culture. Eleven (n=11, 17.2%) respondents reported their school district was talking about this practice. Only one (n=1, .9%) respondent indicated their district had not yet begun to address this practice.

Teachers using common assessments that measure student outcomes was the fifth practice associated with PLCs that have a collaborative culture. The frequency findings for this practice are found in table 17.

Table 17

Respondents Reporting Teachers Use Common Assessments that Measure Student Outcomes (n=116)

Response	Frequency	Percent
Not Yet Begun	4	3.4%
Talking	17	14.7%
Begun Implementation	41	35.3%
Beyond Initial Implementation	40	34.5%
Embedded in Culture	14	12.1%
Total	116	100%

Nearly seventy percent of the respondents (n=82, 69.8%) reported their school districts had begun implementation or were beyond initial implementation of teachers using common assessments that measure student outcomes. Seventeen respondents (n=17, 14.3%) reported their school districts were talking about this practice, while fourteen respondents (n=14, .12.1%) indicated this practice was embedded in their school district's culture.

Teachers have created common grading and reporting procedures is the sixth practice associated with PLCs that have a collaborative culture. The frequency findings for this practice are furnished in table 18.

Table 18

Respondents Reporting Teachers Have Created Common Grading and Reporting Procedures (n=116)

Response	Frequency	Percent
Not Yet Begun	9	7.8%
Talking	24	20.7%
Begun Implementation	41	35.3%
Beyond Initial Implementation	33	28.4%
Embedded in Culture	9	7.8%
Total	116	100%

Forty-one respondents or 35.3% reported their school districts had begun implementation of teachers creating common grading and reporting procedures while thirty-three respondents (n=33, 28.4%) served in districts that had moved beyond initial implementation. Twenty-four respondents (n=24, 20.7%) were located in school districts that were talking about this practice.

Tables 13-18 provide data regarding the specific practices related to collaborative cultures, the second characteristic of successful PLCs identified by DuFour et al. (2010). The next section will provide data regarding the third characteristic: collective inquiry.

Characteristic Three: Collective Inquiry

PLC use and its impact on a district's collective inquiry was the next area addressed in this study. DuFour et al. (2010) state that, "collective inquiry enables team members to develop new skills and capabilities that in turn lead to new experiences and awareness (p. 12). DuFour et al. (2010) identified six practices that would be evident in PLCs that had a collective inquiry. Question nine of the survey for this study asked respondents to report their level of implementation for each of these six practices. Tables 19 – 24 indicate the frequency of each

level of implementation of each of DuFour's six practices indicative of a PLC practicing collective inquiry.

Learning communities that study together to learn is the first practice associated with PLCs that engage in collective inquiry. The frequency findings of this practice are reported in table 19.

Table 19

Respondents Reporting that Learning Communities Study and Learn Together (n=116)

Response	Frequency	Percent
Not Yet Begun	3	2.6%
Talking	13	11.2%
Begun Implementation	42	36.2%
Beyond Initial Implementation	41	35.3%
Embedded in Culture	17	14.7%
Total	116	100%

Eighty-three respondents (n=83, 71.5%) indicated their school districts had begun implementation of learning communities studying and learning together or had moved beyond initial implementation. Seventeen (n=17, 20.7%) respondents reported this practice was embedded in their school district's culture.

Teachers' engaging in discussion about current practices is the second practice associated with PLCs that engage in collective inquiry. The frequency of this practice is detailed in table 20.

Table 20

Respondents Reporting Teachers Engage in Discussion About Their Current Practices (n=116)

Response	Frequency	Percent
Not Yet Begun	1	.9%
Talking	8	6.9%
Begun Implementation	34	29.3%
Beyond Initial Implementation	46	39.7%
Embedded in Culture	27	23.3%
Total	116	100%

Eighty or 69.3% of respondents indicated their school districts had begun implementation of the practice of teachers engaging in discussion about their current practices or had moved beyond initial implementation of this practice. Twenty-seven respondents (n=27, 23.3%) were located in districts which had this practice embedded in their school district's culture, while eight respondents or 6.9% indicated their districts were talking about this practice. Only one (n=1, .9%) respondent indicated their school district had not yet begun this practice.

Teachers working together to develop new skills and understanding which change practice, attitudes and beliefs is the third practice associated with PLCs that engage in collective inquiry. The frequency findings of this practice are delineated in table 21.

Table 21

Respondents Reporting Teachers Work Together to Develop New Skills and Understanding Which Change Practice, Attitudes and Beliefs (n=116)

Response	Frequency	Percent
Not Yet Begun	3	2.6%
Talking	14	12.1%
Begun Implementation	43	37.1%
Beyond Initial Implementation	40	34.5%
Embedded in Culture	16	13.8%
Total	116	100%

Eighty-three respondents (n=83, 71.6%) indicated their school districts had begun implementation of the practice of teachers working together to develop new skills and understanding which changes practice, attitudes or beliefs or had moved beyond initial implementation this practice. Sixteen respondents noted this practice was embedded in their culture, while three respondents (n=3, 2.9%) served in school districts that had not begun to use this practice.

Learning communities identifying and using proven strategies and research that enhances learning is the fourth practice associated with PLCs that engage in collective inquiry. The frequency findings of this practice are cited in table 22.

Table 22

Respondents Reporting Learning Communities Identify and Use Proven Strategies and Research that Enhances Learning (n=116)

Response	Frequency	Percent
Not Yet Begun	2	1.7%
Talking	17	14.7%
Begun Implementation	39	33.6%
Beyond Initial Implementation	43	37.1%
Embedded in Culture	15	12.9%
Total	116	100%

Forty-three respondents or 37.1% indicated the school districts in which they served had moved beyond initial implementation of the practice of learning communities identifying and using proven strategies and research that enhances learning while thirty-nine respondents (n=39, 33.6%) reported their school districts had begun implementation. Seventeen respondents (n=17, 14.7%) reported their school districts were talking about the practice, and fifteen respondents (n=15, 12.9%) stated this practice was embedded in their school district's culture. Two (n=2, 1.7%) respondents indicated their school districts had not yet begun to use this practice.

The fifth practice associated with effective PLCs which engage in collective inquiry examined in this study was teachers use data and relevant information to make decisions regarding their instruction. The frequency findings of this practice are delineated in table 23.

Table 23

Respondents Reporting Teachers Use Data and Relevant Information to Make Decisions Regarding Their Instruction (n=116)

Response	Frequency	Percent
Not Yet Begun	1	.9%
Talking	12	10.3%
Begun Implementation	37	31.9%
Beyond Initial Implementation	50	43.1%
Embedded in Culture	16	13.8%
Total	116	100%

Forty-three percent of respondents indicated their school districts had moved beyond initial implementation of the practice of teachers using data and relevant information to make decisions regarding their instruction, while thirty-seven respondents (n=37, 31.9%) served in school districts that had begun implementation. Sixteen (n=16, 13.8%) respondents reported this practice was embedded in their school district's culture. Only one (n=1, .9%) respondent indicated his or her school district had not yet begun this practice.

The sixth practice associated with PLCs that engage in collective inquiry is a determination of whether or not there is a system in place for sharing data. The frequency findings of this practice are furnished in table 24.

Table 24

Respondents Reporting There is a System in Place for Sharing Data (n=116)

Response	Frequency	Percent
Not Yet Begun	2	1.7%
Talking	19	16.4%
Begun Implementation	45	33.6%
Beyond Initial Implementation	50	38.8%
Embedded in Culture	21	18.1%
Total	116	100%

Ninety-five or 72.4% of the respondents reported the districts in which they served had begun implementation or had moved beyond initial implementation of the practice of having a system in place for sharing data, while twenty-one respondents (n=21, 18.1%) stated this practice was embedded in their school district's culture. Nineteen (n=19, 7.8%) respondents indicated their district was talking about this practice.

Tables 19 – 24 provide data regarding the specific practices related to collective inquiry, the third characteristic of successful PLCs identified by DuFour et al. (2010). The next section will provide data regarding the fourth characteristic: action orientation.

Characteristic Four: Action Orientation

A fourth aspect of successful PLCs examined in the study was related to action-oriented practices. DuFour et al. (2010) state that action-oriented PLCs are those where, "members move quickly to turn aspirations into action and visions into reality (p. 12). DuFour et al. (2010) identified five practices that would be evident in action-oriented PLCs. Question 10 of the survey for this study asked respondents to report their level of implementation for each of these five action-oriented practices. Tables 25 – 29 reports the frequency of the level of implementation of each of DuFour's five action-oriented practices indicative of PLCs.

Teachers using what they learn in their learning community to change their classroom practice is the first practice associated with action-oriented PLCs. The frequency findings of this practice are documented in table 25.

Table 25

Respondents Reporting Teachers Use What They Learn in Their Learning Community to Change Their Classroom Practice (n=116)

Response	Frequency	Percent
Not Yet Begun	1	.9%
Talking	12	10.3%
Begun Implementation	46	39.7%
Beyond Initial Implementation	44	37.9%
Embedded in Culture	13	11.2%
Total	116	100%

Ninety of the respondents (n=90, 77.6%) indicated their school districts had begun implementation or had moved beyond initial implementation of the practice of teachers using what they learn in their learning community to change their classroom practice. Thirteen respondents (n=13, 11.2%) reported this practice was embedded in their school district's culture, while twelve (n=12, 10.3%) respondents served in school districts that were talking about the practice. Only one (n=1, .9%) respondent indicated his or her school district had not yet begun this practice.

Teachers understanding they must teach differently to get different results is the second practice associated with action-oriented PLCs. The frequency findings of this practice are indicated in table 26.

Table 26

Respondents Reporting Teachers Understand They Must Teach Differently to Get Different Results (n=116)

Response	Frequency	Percent
Not Yet Begun	0	0%
Talking	32	27.6%
Begun Implementation	26	22.4%
Beyond Initial Implementation	45	38.8%
Embedded in Culture	13	11.2%
Total	116	100%

All 116 respondents indicated their districts were engaged at some level with the practice of teachers understanding they must teach differently to get different results. Forty-five or 38.8% of respondents stated their school districts had moved beyond initial implementation. Thirty-two respondents (n=32, 27.6%) served in school districts that were talking about the practice, while twenty-six respondents (n=26, 22.4%) were employed in school districts which had begun implementation. Thirteen respondents (n=13, 11.2%) reported this practice was embedded in their school district's culture.

The third practice associated with action-oriented PLCs examined in this study was teachers providing feedback at the time of learning that is descriptive, corrective and directive is. The frequency of this practice is detailed in table 27.

Table 27

Respondents Reporting Teachers Provide Feedback at the Time of Learning that is Descriptive, Corrective and Directive (n=116)

Response	Frequency	Percent
Not Yet Begun	2	1.7%
Talking	25	21.6%
Begun Implementation	46	39.7%
Beyond Initial Implementation	36	31%
Embedded in Culture	7	6%
Total	116	100%

Forty-six or 39.7% of the respondents indicated they served in school districts which have begun implementation of the practice of teachers providing feedback at the time of learning that is descriptive, corrective and directive. Thirty-six study participants (n=36, 31%) served in school districts that have moved beyond initial implementation. Twenty-five respondents (n=25, 21.6%) identified that their school districts were talking about the practice. Seven respondents (n=7, 6%) stated they had this practice embedded in their school district's culture.

The fourth practice associated with action-oriented PLCs is that teachers base their actions on research and document effective practice. The frequency findings of this practice are delineated in table 28.

Table 28

Respondents Reporting Teachers Base Their Actions on Research and Documented Effective Practice (n=116)

Response	Frequency	Percent
Not Yet Begun	3	2.6%
Talking	23	19.8%
Begun Implementation	46	39.7%
Beyond Initial Implementation	37	31.9%
Embedded in Culture	7	6%
Total	116	100%

Forty-six or 39.7% of respondents indicated their school districts had begun implementation of the practice of teachers basing their actions on research and documented effective practice while thirty-seven respondents (n=37, 31.9%) related their districts had moved beyond initial implementation. Twenty-three respondents (n=23, 19.8%) reported their districts were talking about the practice. Seven respondents (n=7, 6%) related this practice was embedded in their school district's culture.

The fifth practice associated with action-oriented PLCs is that teachers are encouraged to try new practices in their classroom. The frequency findings of this practice are cited in table 29.

Table 29

Respondents Reporting Teachers are Encouraged to Try New Practices in Their Classroom (n=116)

Response	Frequency	Percent
Not Yet Begun	0	0%
Talking	4	3.4%
Begun Implementation	26	22.4%
Beyond Initial Implementation	54	46.6%
Embedded in Culture	32	27.6%
Total	116	100%

Data revealed that all responding districts are engaged in the practice of teachers being encouraged to try new practices in their classroom at some level. Fifty-four respondents (n=54, 46.6%) indicated their school districts had moved beyond initial implementation, while thirty-two respondents (n=32, 27.6%) identified that this practice was embedded in their school district's culture. Twenty-six respondents (n=26, 22.4%) reported that their school districts had begun implementation of the practice.

Tables 25 – 29 provide data regarding specific practices related to action-oriented PLCs, the fourth characteristic of successful PLCs identified by DuFour et al. (2010). The next section will provide data regarding the fifth characteristic: continuous improvement.

Characteristic Five: Continuous Improvement

The fifth aspect of successful PLCs examined in the study was continuous improvement. DuFour et al. (2010) state that, "Inherent to a PLC are a persistent disquiet with the status quo and a constant search for a better way to achieve goals and accomplish the purpose of the organization" (p. 13). DuFour et al. (2010) identified five practices that would be evident in PLCs that strive for continuous improvement. Question 11 of the survey for this study asked

respondents to report their level of implementation for each of these five practices. Tables 30 – 34 indicate the frequency of each level of implementation for each of DuFour's five practices indicative of a PLC with a commitment to continuous improvement.

The first practice associated with PLCs with a commitment to continuous improvement is their working to improve instruction and learning that is viewed as a part of each day's work and not episodic or one event initiatives. The frequency findings of this practice are indicated in table 30.

Table 30

Respondents Reporting Working to Improve Instruction and Learning is Viewed as a Part of Each Day's Work and Not Episodic or One Event Initiatives (n=116)

Response	Frequency	Percent
Not Yet Begun	3	2.6%
Talking	11	9.5%
Begun Implementation	41	35.3%
Beyond Initial Implementation	44	37.9%
Embedded in Culture	17	14.7%
Total	116	100%

Eighty-five respondents or 73.2% indicated the school districts they serve had begun implementation or moved beyond initial implementation of the practice of working to improve instruction as well as learning being viewed as a part of each day's work and not an episodic or one event initiative. Seventeen respondents (n=17, 14.7%) reported their districts have this practice embedded in their culture. Eleven respondents (n=11, 9.5%) report their school districts were talking about this practice, while three respondents (n=3, 2.6%) reported they had not yet begun any work in this area.

Learning communities working on focused initiatives is the second practice associated with PLCs that strive for continuous improvement. The frequency findings of this practice are reported in table 31.

Table 31

Respondents Reporting Learning Communities Work on Focused Initiatives (n=116)

Response	Frequency	Percent
Not Yet Begun	2	1.7%
Talking	10	8.6%
Begun Implementation	36	31%
Beyond Initial Implementation	45	38.8%
Embedded in Culture	23	19.8%
Total	116	100%

Forty-five respondents or 38.8% indicated their school districts had moved beyond initial implementation of learning communities working on focused initiatives, while twenty-three respondents (n=23, 19.8%) reported this practice was embedded in their school district culture. Thirty-six respondents (n=36, 31%) indicate the school districts they serve had begun implementation, and ten respondents (n=10, 8.6%) reported their school districts were talking about this practice.

The third practice associated with PLCs that strive for continuous improvement is teachers use of student evidence of learning to measure continuous progress. The frequency findings of this practice are cited in table 32.

Table 32

Respondents Reporting Teachers Use Student Evidence of Learning to Measure Continuous Growth (n=116)

Response	Frequency	Percent
Not Yet Begun	3	2.6%
Talking	12	10.3%
Begun Implementation	42	36.2%
Beyond Initial Implementation	47	40.5%
Embedded in Culture	12	10.3%
Total	116	100%

Forty-seven respondents (n=47, 40.5%) indicated the school districts they served were beyond the initial implementation of teachers using student evidence of learning to measure continuous growth, while forty-two respondents (n=42, 36.2%) stated their school districts had begun implementation of this practice. Twelve respondents (n=12, 10.3%) reported that this practice was embedded in their school district's culture and three respondents (n=3, 2.6%) stated their districts had not yet begun this practice.

The fourth practice associated with PLCs that strive for continuous improvement is that teachers have discussions regarding ways to improve student achievement. The frequency findings of this practice are reported in table 33.

Table 33

Respondents Reporting Teachers Have Discussions Regarding Ways to Improve Student Achievement (n=116)

Response	Frequency	Percent
Not Yet Begun	2	1.7%
Talking	6	5.2%
Begun Implementation	30	25.9%
Beyond Initial Implementation	49	42.2%
Embedded in Culture	29	25%
Total	116	100%

Forty-nine respondents or 42.2% indicated their school districts were beyond initial implementation of the practice of teachers having discussions regarding ways to improve student achievement while thirty respondents (n=30, 25.9%) revealed their school district had begun implementation. Twenty-nine respondents (n=29, 25%) reported this practice was embedded in their school district culture.

The fifth practice associated with PLCs that strive for continuous improvement is that teachers regularly reflect on the effectiveness of their classroom practice using student achievement data. The frequency findings of this practice are delineated in table 34.

Table 34

Respondents Reporting Teachers Regularly Reflect on the Effectiveness of Their Classroom Practice Using Student Data Achievement (n=116)

Response	Frequency	Percent
Not Yet Begun	2	1.7%
Talking	18	15.5%
Begun Implementation	36	31%
Beyond Initial Implementation	45	38.8%
Embedded in Culture	15	12.9%
Total	116	100%

Forty-five respondents (n=45, 38.8%) indicated the school districts they served were beyond the initial implementation of the practice of teachers regularly reflecting on the effectiveness of their classroom practice using student achievement data, while thirty-six (n=36, 31%) respondents indicated their school districts had begun implementation. Eighteen respondents (n=18, 15.5%) reported that their school districts were talking about the practice and, according to respondents, fifteen districts (n=15, 12.9%) have this practice embedded in their culture.

Tables 30 – 34 provide data regarding the specific practices related to PLCs committed to continuous improvement, the fifth characteristic identified by DuFour et al. (2010). The next section will provide data regarding the final characteristic, which is being results-oriented.

Characteristic Six: Results-Oriented

When referring to results-oriented PLCs, DuFour et al. (2010) state, “Members of a PLC realize that all of their efforts must be assessed on the basis of results rather than intentions” (p. 13). The characteristics that make up results-oriented PLCs include three practices, according to DuFour et al. (2010). Question 12 of the survey for this study asked respondents to report their

level of implementation for each of the three practices. Tables 35 – 37 indicate the frequency of each level of implementation for each of DuFour's three practices indicative of a PLC that is results-oriented.

The first practice associated with results-oriented PLCs is teachers measure their effectiveness based on student results. The frequency findings of this practice are examined in table 35.

Table 35

Respondents Reporting Teachers Measure Their Effectiveness Based on Student Results (n=116)

Response	Frequency	Percent
Not Yet Begun	7	6%
Talking	17	14.7%
Begun Implementation	37	31.9%
Beyond Initial Implementation	46	39.7%
Embedded in Culture	9	7.8%
Total	116	100%

Forty-six respondents or 39.7% indicate their school districts were beyond the initial implementation of the practice of teachers measuring their effectiveness based on student results, while thirty respondents (n=37, 31.9%) cited that their school districts had begun implementation. Seventeen respondents (n=17, 14.7%) reported the school districts in which they served were talking about this practice, and nine (n=9, 7.8%) districts were reported to have this practice embedded in their culture. Seven respondents (n=7, 6%) worked in districts that had not yet begun this practice.

The second practice associated with results-oriented PLCs is that teachers have identified the evidence needed to show student understanding. The frequency findings of this practice are stated in table 36.

Table 36

Respondents Reporting Teachers Have Identified the Evidence Needed to Show Student Understanding (n=116)

Response	Frequency	Percent
Not Yet Begun	7	6%
Talking	17	14.7%
Begun Implementation	38	32.8%
Beyond Initial Implementation	47	40.5%
Embedded in Culture	7	6%
Total	116	100%

Forty-seven respondents (n=47, 40.5%) indicated their school districts were beyond the initial implementation of the practice of having teachers identify the evidence needed to show student understanding, while thirty respondents (n=38, 32.8%) reported their districts had begun implementation. Respondents reported seventeen (n=17, 14.7%) school districts were talking about this practice. Seven respondents (n=7, 6%) indicated they had this practice embedded in their school district culture, and seven study participants (n=7, 6%) revealed that their school districts had not yet begun this practice.

The final practice associated with results-oriented PLCs is that teachers use common assessments to inform their own practice. The frequency findings of this practice are provided in table 37.

Table 37

Respondents Reporting Teachers Use Common Assessments to Inform Their Own Practice

(n=116)

Response	Frequency	Percent
Not Yet Begun	6	5.2%
Talking	17	14.7%
Begun Implementation	43	37.1%
Beyond Initial Implementation	44	37.9%
Embedded in Culture	6	5.2%
Total	116	100%

Forty-four or 37.9% of respondents indicated their school districts were beyond the initial implementation of the practice of teachers using common assessments to inform their own practice, while forty-three respondents (n=43, 37.1%) reported their school districts had begun implementation. Respondents reported that seventeen (n=17, 14.7%) school districts were talking about this practice. Six study participants (n=6, 5.2%) reported this practice was embedded in their school district culture while six respondents (n=6, 5.2%) reported their school districts had not yet begun this practice.

Significant Findings Related to Research Question One

Research question one explored the extent to which the six essential characteristics of successful PLCs, as identified by DuFour et al. (2010) had been implemented in practicing PLCs in public school districts in Minnesota. An initial analysis of the data indicated there were no significant findings regarding the level of implementation of the six characteristics based on the frequency reported by study respondents as a whole.

The research question was further analyzed using a series of one-way ANOVAs to determine whether or not there were significant differences in responses among demographic

groups. A one-way ANOVA is the analysis of the variance of values in comparing one group to another group. For this research question, an ANOVA was computed for each PLC practice by demographic group including the position of the respondent, the number of years the school district employed PLCs, whether or not the school district was involved in Q-comp, and the school district enrollment. In examining these demographic factors, interesting findings emerged related to certain characteristics identified by DuFour et al (2010). The findings found to be significant ($p < .05$) were based on the number of years a school district had been using a PLC.

The ANOVA results for Learner Focused PLCs identified by DuFour et al. (2010), based on the number of years the school districts had been using a PLC, are reported in table 38.

Table 38

ANOVA: District's Reported Level of Implementation of Learner Focused PLC Practices by Years the School District Has Been Using PLCs

	Sum of Squares	*df*	Mean Square	*F*	*p*
Between Groups	402.75	3	134.25	8.69	.000
Within Groups	1730.21	112	15.45		
Total	2132.966	115			

Note. $P<.05$

Due to the significance found based on the number of years a respondent's school district had been using PLCs in the indicator "learner focused PLCs", it was important to determine which range of years were significant. The ranges analyzed were 0-2, 3-5, 6-10 and more than 10 years of experience with PLCs. To determine which levels were significantly different, post hoc tests were run. The specific post hoc test ran was the Tukey's HSD. The results are reported in Table 39.

Table 39

Mean Level of Implementation of Learning Focused PLC Practices by Years the School District has been using PLCs

Years	*N*	*M*	*SD*	*3-5 Yrs*	*6-10 Yrs*	*>10 Yrs*
0-2	24	17.96	3.95	.000	.000	.001
3-5	51	22.17	4.38	-	.986	.678
6-10	31	22.48	3.49	.986	-	.830
> than 10	10	23.7	2.31	.678	.830	-

Note. $P<.05$

It was determined that there was a statistically significant difference between public school districts in Minnesota which had been using PLCs for 0-2 years and public school districts in Minnesota using PLCs for 3-5, 6-10 and more than 10 years on the indicator “learner focused PLCs”. Public school districts in Minnesota that had been using PLCs for 0-2 years were less likely to be using learning focused practices within their PLCs than public school districts in Minnesota with more years of experience using PLCs.

The ANOVA results for PLCs with a collaborative culture, identified by DuFour et al. (2010), based on the number of years the school districts had been using a PLC are reported in tables 40.

Table 40

ANOVA: District's Reported Level of Implementation PLCs with Collaborative Culture by Years the School District Has Been Using PLCs

	Sum of Squares	*df*	Mean Square	*F*	*p*
Between Groups	376.50	3	125.50	7.40	.000
Within Groups	1898.64	112	16.95		
Total	2132.966	115			

Note. *P<.05*

Due to the significance found based on the number of years a respondent's school district had been using PLCs in the area of "collaborative culture within the PLC", it was important to determine which range of years were significant. The ranges analyzed were 0-2, 3-5, 6-10 and more than 10 years of experience with PLCs. To determine which ranges were significant for this practice, different post hoc tests were run. The specific post hoc test ran was the Tukey's HSD The results are reported in Table 41.

Table 41

Mean Level of Implementation PLCs with a Collaborative Culture by Years the School District has been using PLCs

Years	*N*	*M*	*SD*	*3-5 Yrs*	*6-10 Yrs*	*>10 Yrs*
0-2	24	18.7	4.88	.008	.000	.002
3-5	51	22.03	4.21	-	.479	.351
6-10	31	23.38	3.74	.479	-	.906
> than 10	10	24.4	2.27	.351	.906	-

Note.*P*<.05

It was determined that there was a statistically significant difference between public school districts in Minnesota which had been using PLCs for 0-2 years and public school districts in Minnesota using PLCs for 3-5, 6-10 and more than 10 years on the indicator "collaborative cultures with the PLC". Public school districts in Minnesota that had been using PLCs for 0-2 years were less likely to have PLCs with a collaborative culture than school districts with more years of experience using PLCs.

The ANOVA results for PLCs which practice collective inquiry identified by DuFour et al. (2010) based on the number of years the school districts had been using a PLC are reported in tables 42.

Table 42

ANOVA: District's Reported Level of Implementation of the PLC Practice Collective Inquiry by Years the School District Has Been Using PLCs

	Sum of Squares	*df*	Mean Square	*F*	*p*
Between Groups	449.04	3	149.68	7.69	.000
Within Groups	2180.267	112	19.47		
Total	2629.31	115			

Note. *P<.05*

Due to the significance found based on the number of years a respondent's school district had been using PLCs in the indicator "PLCs which practice collective inquiry", it was important to determine which ranges were significant. The ranges analyzed were 0-2, 3-6, 6-10 and more than 10 years of experience using PLCs. To determine which ranges were significant different post hoc tests were run. The specific post hoc test ran was the Tukey's HSD. The results are reported in Table 43.

Table 43

Mean Level of Implementation of PLCs Which Practice Collective Inquiry by Years the School District has been using PLCs

Years	*N*	*M*	*SD*	*3-5 Yrs*	*6-10 Yrs*	*>10 Yrs*
0-2	24	17.75	5.19	.003	.000	.022
3-5	51	21.69	4.34	-	.385	.932
6-10	31	23.29	4.18	.385	-	.973
> than 10	10	22.6	3.53	.932	.973	-

Note. *P*<.05

It was determined that there was a statistically significant difference between public school districts in Minnesota which had been using PLCs for 0-2 years and public school districts in Minnesota using PLCs for 3-5, 6-10 and more than 10 years on the indicator "PLCs which practice collective inquiry". School districts that had been using PLCs for 0-2 years were less likely to have PLCs using collective inquiry than school districts with more years of experience using PLCs.

The ANOVA results for action-oriented PLCs identified by DuFour et al. (2010), based on the number of years the school districts had been using a PLC are reported in tables 44.

Table 44

ANOVA: District's Reported Level of Implementation of Action Oriented PLCs by Years the School District Has Been Using PLCs

	Sum of Squares	*df*	Mean Square	*F*	*p*
Between Groups	216.991	3	72.33	5.49	.001
Within Groups	1473.561	112	19.48		
Total	1690.552	115			

Note. *P<.05*

Due to the significance found based on the number of years a respondent's school district had been using PLCs in the area of "action-oriented PLCs", it was important to determine which ranges were significant. The ranges analyzed were 0-2, 3-5, 6-10 and more than 10 years of experience with PLCs. To determine which ranges were significant for this practice, different post hoc tests were run. The specific post hoc test ran was the Tukey's HSD. The results are reported in Table 45

Table 45

Mean Level of Implementation of Action Oriented PLCs by Years the School District has been using PLCs

Years	*N*	*M*	*SD*	*3-5 Yrs*	*6-10 Yrs*	*>10 Yrs*
0-2	24	14.67	4.29	.013	.005	.007
3-5	51	17.45	3.8	-	.910	.506
6-10	31	18	3.17	.910	-	.800
> than 10	10	19.2	1.75	.506	.800	-

Note. *P<.05*

It was determined that there was a statistically significant difference between public school districts in Minnesota which had been using PLCs for 0-2 years and those public school districts in Minnesota using PLCs for 3-5, 6-10 and more than 10 years on the indicator "action-oriented PLCs". Public school districts in Minnesota that had been using PLCs for 0-2 years were less likely to have PLCs using action-oriented practices than public school districts in Minnesota with more years of experience using PLCs.

The ANOVA results for PLCs focused on continuous improvement identified by DuFour et al. (2010) based on the number of years the school districts had been using a PLC are reported in tables 46.

Table 46

ANOVA: District's Reported Level of Implementation PLCs Focused on Continuous Improvement by Years the School District Has Been Using PLCs

	Sum of Squares	*df*	Mean Square	*F*	*p*
Between Groups	293.019	3	97.67	6.444	.000
Within Groups	1697.559	112	15.16		
Total	1990.578	115			

Note. *P<.05*

Due to the significance found based on the number of years a respondent's school district had been using PLCs in the area of "PLCs focused on continuous improvement", it was important to determine which ranges were significant. The ranges analyzed were 0-2, 3-5, 6-10 and more than 10 years of experience with PLCs. To determine which ranges were significant for this practice, different post hoc tests were run. The specific post hoc test ran was the Tukey's HSD. The results are reported in Table 47.

Table 47

Mean Level of Implementation of PLCs Focused on Continuous Improvement by Years the School District has been using PLCs

Years	*N*	*M*	*SD*	*3-5 Yrs*	*6-10 Yrs*	*>10 Yrs*
0-2	24	15	4.55	.007	.001	.009
3-5	51	18.2	3.86	-	.652	.680
6-10	31	19.23	3.73	.652	-	.987
> than 10	10	19.7	2.58	.680	.987	-

Note.*P<.05*

It was determined that there was a statistically significant difference between public school districts in Minnesota which had been using PLCs for 0-2 years and public school districts in Minnesota using PLCs for 3-5, 6-10 and more than 10 years on the indicator "PLCs focused on continuous improvement". Public school districts in Minnesota that had been using PLCs for 0-2 years were less likely to have PLCs using practices associated with continuous improvement than public school districts in Minnesota with more years of experience using PLCs.

The ANOVA findings for results-oriented PLCs identified by DuFour et al. (2010) based on the number of years the school districts had been using a PLC are reported in tables 48.

Table 48

ANOVA: District's Reported Level of Implementation of Results-Oriented PLCs by Years the School District Has Been Using PLCs

	Sum of Squares	*df*	Mean Square	*F*	*p*
Between Groups	120.075	3	40.03	4.46	.000
Within Groups	694.097	112	6.197		
Total	814.172	115			

Note. *P<.05*

Due to the significance found based on the number of years a respondent's school district had been using PLCs in the area of "results-oriented PLCs", it was important to determine which ranges were significant. The ranges analyzed were 0-2, 3-5, 6-10 and more than 10 years of experience with PLCs. To determine which ranges were significant for this practice, different post hoc tests were run. The specific post hoc test ran was the Tukey's HSD. The results are reported in Table 49.

Table 49

Mean Level of Implementation of Results-Oriented PLCs by Years the School District has been using PLCs

Years	*N*	*M*	*SD*	*3-5 Yrs*	*6-10 Yrs*	*>10 Yrs*
0-2	24	7.92	2.73	.008	.001	.005
3-5	51	9.92	2.59	-	.687	.522
6-10	31	10.55	2.39	.687	-	.929
> than 10	10	11.1	1.29	.522	.929	-

Note. *P<.05*

It was determined that there was a statistically significant difference between public school districts in Minnesota which had been using PLCs for 0-2 years and public school districts in Minnesota using PLCs for 3-5, 6-10 and more than 10 years on the indicator "results-oriented PLCs". Public school districts in Minnesota that had been using PLCs for 0-2 years were less likely to have PLCs using results-oriented practices than public school districts in Minnesota with more years of experience using PLCs.

Summary of Findings for Research Question One

An initial analysis of the data analyzed regarding research question one indicated there were no significant findings regarding the level of implementation of the six characteristics of

successful PLCs based on the frequency reported by study respondents as a whole. Further analysis of the data provided interesting findings related to the extent of implementation of the PLC practices identified by DuFour et al., (2010) in relation to the number of years the study respondents indicated their school districts had been using professional learning communities. These included practices related to PLCs being learner focused, having a collaborative culture, engaging in collective inquiry, being action oriented, focusing on continuous improvement and being results oriented.

In addition to the six characteristics of successful PLCs identified the DuFour group, the researcher found three additional PLC characteristics prevalent in the literature as critical for PLC success. The results for these characteristics is provided in the next section.

Research Question Two

What characteristics of successful PLCs, beyond those identified by DuFour et al. (2010) do public school districts in Minnesota exhibit?

In addressing research question two the researcher analyzed question thirteen to identify the extent to which public schools in Minnesota were using characteristics of successful PLCs, beyond those identified by DuFour et al. (2010). Participants were asked to indicate their district's levels of implementation regarding three characteristics identified in literature different from those cited by the DuFour group using a five choice Likert scale. The Likert scale choices are as follows: (1) they have not yet begun to address this issue, (2) we are talking about this, but have taken no significant action to make it a reality, (3) we have begun implementation, but at this stage of the process, many staff approach the task with a sense of compliance rather than commitment, (4) we have moved beyond initial implementation and continue to work through the process. Support and enthusiasm for the process are growing, (5) this practice is deeply

embedded in our culture. Most staff is committed to doing this work and feel it is an important factor in the collective effort to improve schools.

The first characteristic identified in literature which is part of question 13 of the survey for this study asserted that there is shared leadership between teachers and administration in successful PLCs. The frequency findings for this practice are shown in table 50.

Table 50

Respondents Reported Shared Leadership Between Teachers and Administration (n=116)

Response	Frequency	Percent
Not Yet Begun	5	4.3%
Talking	3	2.6%
Begun Implementation	24	20.7%
Beyond Initial Implementation	56	48.3%
Embedded in Culture	28	24.1%
Total	116	100%

The largest group of respondents (n=56, 48.3%) indicated their school districts are beyond the initial implementation stage with the practice of shared leadership between teachers and administration, while twenty-eight respondents (n=28, 24.1%) reported this practice is embedded in their school cultures. Twenty-four or 20.7% of respondents indicated that they had begun implementation while five participants (n=5, 4.3%) identified that their school districts had not yet begun this practice.

The second characteristic identified in literature under research question two indicated that teachers have authority to make decisions within their PLCs. The level of implementation of this characteristic was recorded in the study survey as a part of question 13. The frequency findings for this practice are reported in table 51.

Table 51

Respondents Reporting Teachers Have Authority to Make Decisions Within Their PLC (n=116)

Response	Frequency	Percent
Not Yet Begun	1	.9%
Talking	5	4.3%
Begun Implementation	22	19%
Beyond Initial Implementation	46	39.7%
Embedded in Culture	42	36.2%
Total	116	100%

Forty-six respondents (n=46, 39.7%) indicated their school districts were beyond the initial implementation stage with the practice of teachers having authority to make decisions within their PLC, while forty-two respondents (n=42, 36.2%) reported this practice was embedded in their school district culture. Twenty-two respondents (n=22, 19%) cited the school districts in which they served had begun implementation and respondents in five districts (n=5, 4.3%) indicated they were talking about this practice.

The third characteristic identified in literature under the research question stated that teachers are encouraged to use reflective practices in evaluating their own teaching. The level of implementation of this characteristic was recorded in the study survey as part of question 13. The frequency findings for this practice are reported in table 52.

Table 52

Respondents Reporting Teachers Are Encouraged to Use Reflective Practices in Evaluating Their Own Teaching (n=116)

Response	Frequency	Percent
Not Yet Begun	0	.0%
Talking	6	5.2%
Begun Implementation	23	19.8%
Beyond Initial Implementation	52	44.8%
Embedded in Culture	35	30.2%
Total	116	100%

All responding districts are engaged with the practice of teachers being encouraged to use reflective practices in evaluating their own teaching at some level. For this characteristic fifty-two respondents or 44.8% indicated their district was beyond the initial implementation stage with this practice while thirty-five respondents (n=35, 30.2%) reported this practice was embedded in their school district's culture. Twenty-three respondents (n=23, 19.8%) stated their school districts had begun implementation, and six respondents (n=6, 5.2%) indicated their school districts were talking about this practice.

Significant Findings Regarding Research Question Two

Research question two explored the extent to which the three characteristics of successful PLCs which are prevalent in the literature, other than those identified by DuFour et al. (2010), had been implemented in practicing PLCs in public school districts in Minnesota. An initial analysis of the data indicated there were no significant findings regarding the level of implementation of the three characteristics based on the frequency reported by study respondents as a whole.

The research question was further analyzed using a series of one-way ANOVAs to determine whether or not there were significant statistical differences in responses among demographic groups. For this research question, the ANOVA was analyzed for each PLC practice by demographic group, including: position of respondent, the number of years the school district had used PLCs, whether or not the school district used Q-comp, and school district enrollment. In a similar manner to research question one, in examining these demographic factors, interesting findings emerged related to certain characteristics identified in the research regarding PLC practices other than those identified by DuFour et al. (2010). The findings found to be significant ($p< .05$) were based on the number of years a school district had been using professional learning communities.

The ANOVA results of successful PLC characteristics, other than those identified by DuFour et al. (2010), based on the number of years the school districts had been using a PLC are reported in table 53.

Table 53

ANOVA District's Reported Level of Characteristics of Successful PLCs Other Than Those Identified by the DuFour Group by Years the School District Has Been Using PLCs

	Sum of Squares	*df*	Mean Square	*F*	*p*
Between Groups	65.385	3	21.795	3.98	.010
Within Groups	694.097	112	6.197		
Total	814.172	115			

Note. *P<.05*

Since there was significance found on the basis of the number of years a respondent's school district had been using PLCs in the indicator "PLC characteristics other than those identified by the DuFour group", it was important to determine which levels were significant.

The levels analyzed were 0-2, 3-5, 6-10 and more than 10 years of experience using PLCs. To determine which levels were significantly different for this practice, a Tukey's HSD post hoc test was completed. These results are reported in Table 54.

Table 54

Mean Level of District's Reported Level of Characteristics of Successful PLCs Other Than Those Identified by the DuFour Group by Years the School District Has Been Using PLCs

Years	*N*	*M*	*SD*	*3-5 Yrs*	*6-10 Yrs*	*>10 Yrs*
0-2	24	10.67	2.2	.183	.011	.060
3-5	51	11.84	2.75	-	.403	.561
6-10	31	12.68	1.81	.403	-	.994
> than 10	10	12.9	1.66	.561	.994	-

Note. *P<.05*

It was determined that there was a statistically significant difference between school districts which had been using PLCs for 0-2 years and those school districts using PLCs for 6-10 years. School districts that had been using PLCs for 0-2 years were less likely to use the PLC practices (identified in literature that were not included in the framework developed by DuFour et al. (2010)) than those school districts which had been using PLCs for 6-10 years.

Summary of Findings for Research Question Two

An initial analysis of the data analyzed regarding research question two indicated there were no significant findings regarding the level of implementation of the three characteristics of successful PLCs, other than those identified by DuFour et al. (2010), based on the frequency reported by study respondents as a whole. Further analysis of the data provided interesting findings related to the extent of implementation of PLC practices other than those identified by DuFour et al. (2010) in relation to the number of years the study respondents indicated their school districts had been using professional learning communities. Specifically, it was found that

respondents in school districts which had been operating PLCs for 0-2 years were less likely to use reflective practices, have the authority to make decisions within their PLC and share leadership within their PLC that school districts which had been operating PLCs for 6-10 years.

In addition to examining the level of implementation of PLC characteristics, the study also explored the extent to which public school districts in Minnesota were encountering barriers to PLC success. The results are presented in the next section.

Research Question Three

What barriers have been encountered by public school districts in Minnesota in their attempts to implement PLCs*?*

Question fifteen on the survey asked participants to identify the extent to which barriers to PLC success were being encountered in public schools in Minnesota. Participants were asked to indicate the level at which their districts were encountering the five barriers to PLC success identified in research using a three choice Likert scale. The Likert scale choices were as follows: (1) nonexistent, (2) occurs from time to time, and (3) prevalent. The barriers examined were teachers not wanting to collaborate with other teachers, conflict within the learning community regarding power, lack of trust among members of the learning community, lack of consistent time provided for collaboration, and lack of commitment on the part of the district to sustain learning communities.

In table 55 below, that data related to teachers not wanting to collaborate with other teachers is reported.

Table 55

Respondents Reporting Teachers Not Wanting to Collaborate with Other Teachers (n=116)

Response	Frequency	Percent
Nonexistent	24	20.7%
Occurs from time to time	83	71.6%
Prevalent	9	7.8%
Total	116	100%

In table 55, the data shows eighty-three or 71.6% of respondents indicated that teachers not wanting to collaborate with other teachers occurred from time to time in their school districts. Twenty-four participants (n=24, 20.7%) responded that this barrier was nonexistent, while nine respondents (n=9, 7.8%) indicated it was prevalent.

The second of the five barriers to PLC success identified in literature wasconflict within the community regarding power. For the purpose of this study, the research of Lieberman and Miller (2011) was used to refer to issues of power as being about the control teachers had over the PLC agenda and decisions made within the PLC setting. The frequency findings for this barrier are shown in table 56.

Table 56

Respondents Reporting Conflict Within the Learning Community Regarding Power (n=116)

Response	Frequency	Percent
Nonexistent	39	33.6%
Occurs from time to time	71	61.2%
Prevalent	6	5.2%
Total	116	100%

For this barrier seventy-one or 61.2% of respondents indicated there was conflict within the learning community regarding power from time to time in their school districts. Thirty-nine study participants (n=39, 33.6%) responded that this barrier was nonexistent, while six respondents (n=9, 5.2%) indicated it was prevalent in their school districts.

The third barrier to PLC success identified in literature is a lack of trust among members of a learning community. The frequency findings for this barrier are shown in table 57.

Table 57

Respondents Reporting Lack of Trust Among Members of the Learning Community (n=116)

Response	Frequency	Percent
Nonexistent	30	25.9%
Occurs from time to time	81	69.8%
Prevalent	5	4.3%
Total	116	100%

For this barrier, eighty-one respondents (n=81, 69.8%) indicated that a lack of trust among members of the learning community occurred from time to time in their school districts. Thirty study participants (n=30, 25.9%) reported that this barrier was nonexistent in their school districts, while five respondents (n=5, 4.3%) indicated it was prevalent.

The fourth barrier to PLC success identified in literature is lack of consistent time provided for collaboration. The frequency findings for this barrier are shown in table 58.

Table 58

Respondents Reported Lack of Consistent Time Provided for Collaboration (n=116)

Response	Frequency	Percent
Nonexistent	64	55.2%
Occurs from time to time	32	27.6%
Prevalent	20	17.2%
Total	116	100%

Sixty-four or 55.2% of respondents indicated that the barrier lack of consistent time provided for collaboration was non-existent in their school districts. Thirty-two study participants (n=32, 27.6%) reported that this barrier occurred from time to time while twenty respondents (n=20, 17.2%) indicated it was prevalent in their school districts.

The fifth barrier to PLC success identified in literature is a lack of commitment on the part of the school district to sustain learning communities. The frequency findings for this barrier are shown in table 59.

Table 59

Respondents Reported Lack of Commitment on the Part of the District to Sustain Learning Communities (n=116)

Response	Frequency	Percent
Nonexistent	89	76.7%
Occurs from time to time	24	20.7%
Prevalent	3	2.6%
Total	116	100%

Eighty-nine or 76.7% of respondents indicated the barrier lack of commitment on the part of the district to sustain learning communities was non-existent in their school districts. Twenty-

four respondents (n=24, 20.7%) reported that this barrier occurs from time to time in the district in which they served, while three respondents (n=3, 2.6%) indicated this barrier was prevalent.

Significant Findings Regarding Research Question Three

In this study, five barriers to PLC success previously identified in the literature were used to gather data related to leaders' perceptions of these barriers. The leaders reported them as being as nonexistent, occurring from time to time or prevalent in their school districts. An analysis of the data indicates that all of the barriers to PLC implementation identified in research are encountered by some of the study's participating school districts.

The data related to the research question was further analyzed using a series of one-way ANOVAs to determine whether there were significant statistical differences in responses among demographic groups. For this research question, the ANOVA was analyzed for each barrier to PLC success by demographic group, including: position of respondent, the number of years the school district had used PLCs, whether or not the school district used Q-comp, and school district enrollment. In examining these demographic factors, interesting findings emerged related to certain barriers. The findings found to be significant ($p < .05$) were based on the enrollment of the school district and only for two of the five barriers identified in the research. These findings are reported in tables 60 – 64.

The ANOVA results of conflict within the learning community regarding power—based on the enrollment of the school districts—are reported in tables 60.

Table 60

ANOVA: Reported Level of Conflict within the Learning Community Regarding Power by the Enrollment of the School District

	Sum of Squares	*df*	Mean Square	*F*	*p*
Between Groups	3.857	5	.771	2.672	.026
Within Groups	31.756	110	.289		
Total	35.612	115			

Note. *P<.05*

As a result of the high level of significance found on the basis of a respondent's school district enrollment in the barrier "conflict within the learning community regarding power", it was important to determine which ranges were significant. The ranges analyzed were school districts with enrollments of 0-500, 501-1000, 1001-2500, 2501-5000, 5001-10,000 and more than 10,000 students. To determine which ranges were significantly different for this practice a Tukey's HSD post hoc test was performed. The results are reported in Table 61.

Table 61

Mean Level of Reported Level of Conflict within the Learning Community Regarding Power by School District Enrollment

District Enrollment	*N*	*M*	*SD*	*0-500*	*501-1000*	*1001-2500*	*2501-5000*	*5001-10,000*	*>10,000*
0-500	14	1.43	.514	-	.827	.547	.310	.651	.009
501-1000	28	1.64	.559	.827	-	.995	.895	.986	.050
1001-2500	35	1.71	.572	.547	.995	-	.990	1.0	.090
2501-5000	25	1.8	.408	.310	.895	.990	-	1.0	.211
5001-10,000	9	1.78	.667	.651	.986	1.0	1.0	-	.307
>10,000	5	2.4	.548	.009	.050	.090	.211	.307	-

Note. *P<.05*

It was determined that there was a statistically significant difference between school districts with enrollments of 0-500 students and those school districts with enrollments of over 10,000 students in relation to conflict within the learning community regarding power. The findings indicate that level of conflict was significantly less in school districts with enrollments of 0-500 students than in school districts with enrollments over 10,000 students.

The ANOVA results related to lack of trust among members of a learning community—based on school district enrollment—are reported in tables 62.

Table 62

ANOVA: Reported Level of Lack of Trust Among Members Within the PLC by School District Enrollment

	Sum of Squares	*df*	Mean Square	*F*	*p*
Between Groups	3.665	5	.731	3.097	.012
Within Groups	25.957	110	.236		
Total	29.612	115			

Note. *P<.05*

Since there was significance found on the basis of a respondent's school district enrollment in the barrier "lack of trust among members of a learning community", it was important to determine which ranges were significant. The levels analyzed were school districts with enrollments of 0-500, 501-1000, 1001-2500, 2501-5000, 5001-10,000 and more than 10,000 students. To determine which ranges were significantly different for this practice, a Tukey's HSD post hoc test was performed. The results are reported in Table 63.

Table 63

Mean Level of Reported Level of Lack of Trust Among Members of the Learning Community by School District Enrollment

District Enrollment	*N*	*M*	*SD*	*0-500*	*501-1000*	*1001-2500*	*2501-5000*	*5001-10,000*	*>10,000*
0-500	14	1.57	..646	-	.998	.783	.270	.646	.017
501-1000	28	1.64	..488	.998	-	.902	.309	.772	.021
1001-2500	35	1.77	.490	.783	.902	-	.851	.987	.082
2501-5000	25	1.92	.400	.270	.309	851	-	1.0	.340
5001-10,000	9	1.88	.333	.646	.772	.987	1.0	-	.416
>10,000	5	2.4	.548	.017	.021	.082	.340	.416	-

Note. *P<.05*

It was determined that there was a statistically significant difference between school districts with enrollments less than 1000 students and those with enrollments of over 10,000 students in relation to a lack of trust among members of the learning community. The findings indicate there was a greater lack of trust in school districts with enrollments of 0-1000 students than in school districts with enrollments over 10,000 students.

An analysis of the data was conducted to determine whether or not there was a correlation between the five barriers to PLC implementation. The alpha level used to test the significance of the relationship was p<.001. The r coefficient (Pearson Correlation) of +.7 to 1.0 indicates a strong positive relationship, an r coefficient (Pearson Correlation) of .35 to .69 indicates a moderate positive relationship and an r coefficient (Pearson Correlation) of < .35 indicates a weak relationship or none at all. The correlations are reported in Table 64.

Table 64

Respondents Reports of the Level to which Public School Districts in Minnesota are Encountering Barriers when Implementing PLCs (n=116)

Variables	1	2	3	4	5
1. Teachers not wanting to collaborate	-				
2. Conflict regarding power	.383**	-			
3.Lack of trust among members	.421**	.520**	-		
4. Lack of consistent time for collaboration	.051	.173	.236	-	
5. Lack of commitment from the District	.131	.175	.327	.628**	-

**p<0.01

The data indicated there was a moderate strong positive correlation in the following areas:

- Between teachers not wanting to collaborate and conflict regarding power within the PLC (r=.383, p<.01).
- Between teachers not wanting to collaborate and lack of trust among members of the PLC (r=.421, p<.01).
- Between conflict regarding power within the PLC and lack of trust among members of the PLC (r=.520, p<.01).
- Between lack of consistent time for collaboration and lack of commitment from the District (r=.628, p<.01).

In each case indicated above, the r coefficient (Pearson Correlation) is between .35 and .69, indicating a moderately strong positive relationship. Also, for each case indicated above, the Sig. (2-tailed) is .000, which indicated the relationship, can be reported with 99% confidence.

Summary of Findings for Research Question Three

An initial analysis of the data analyzed regarding research question three indicated all five barriers were encountered by some school districts based on the frequency reported by study respondents as a whole. Further analysis of the data provided interesting findings related to the level to which the barriers were encountered by school districts based on the student enrollment of the school districts. Specifically, conflict within the PLC regarding power was statistically less significant in school district with enrollments of 0-500 students compared to school districts with enrollments over 10,000 students. District enrollment was also found to be a determining factor when PLCs encountered issues related to trust among members. Districts with enrollments of 0-500 and 501-1000 students encountered this barrier less often than districts with an enrollment over 10,000 students.

Summary

In this chapter, survey data from respondents representing 116 public school districts in Minnesota were presented. The three research questions guiding this study were used as the organizational structure for reporting study data. For each question, tables and a brief description of the data from each table were presented.

In chapter five, an analysis of the results is presented along with major trends or generalizations from the study. Finally, recommendations from the study and recommendations for further study are presented. Data and related research will be used to generalize these recommendations.

Chapter V: SUMMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

Chapter five presents a summary of the study and conclusions formulated from the data presented in chapter four. The researcher will discuss an examination of the findings and present an analysis of the data related to the research questions. Finally, recommendations for professional practice and future research will be presented.

Research Purpose

The purpose of the study was to examine the practices of professional learning communities (PLCs) in public schools in Minnesota using the framework created by DuFour, DuFour, Eaker and Many (2010). The PLC framework characteristics examined (Appendix E) were as follows:

- A focus on learning.
- A collaborative culture with a focus on learning for all.
- Collective inquiry into best practice and current reality.
- Action orientation: learning by doing.
- A commitment to continuous improvement. And
- Results-oriented.

The study also examined the implementation characteristics identified in literature as components of PLCs by authors other than DuFour, DuFour, Eaker and Many. Those characteristics were investigated because of their prevalence in the literature.

Finally, the study examined barriers encountered by public school districts in Minnesota when attempting to implement PLCs.

The purpose of the study was accomplished by surveying superintendents, or superintendent designees, of public schools in Minnesota regarding their school districts' levels of implementation of PLC practices, as well as the prevalence of five barriers to PLC implementation.

Research Questions

The following research questions guided this study:

1. To what extent have the six characteristics of successful PLCs identified by DuFour et al. (2010) been implemented in practicing PLCs in public school districts in Minnesota?
2. What characteristics of successful PLCs, beyond those identified by DuFour et al. (2010) do public school districts in Minnesota PLCs exhibit?
3. What barriers have public school districts in Minnesota encountered in their attempts to implement PLCs?

Research Design

The researcher used a quantitative research design for this study. Quantitative research allows the researcher to examine a large number of subjects and possibly generalize the findings to a larger population (Slavin, 2006).

The researcher used an electronic survey tool, Survey Monkey, to gather data from superintendents, or superintendents' designees, of public schools in Minnesota regarding professional learning community practices in their school districts. The survey consisted of nine sections. The first section collected information on school district demographics, whether or not the school district used PLCs, the length of time the school district had used this practice, and whether or not the district participated in Q-Comp. Sections two through seven related to specific

PLC practices within their district that aligned with the six essential PLC characteristics (DuFour et al., 2010) identified as necessary for PLC success. Survey questions in section eight related to key characteristics identified in literature by individuals or groups other than the DuFour group. Section nine related to the five key barriers to PLC success as identified in the research.

Study Method

Superintendents of public schools in Minnesota were contacted by email and asked to participate in this study. A list of the email addresses of Minnesota superintendents was provided by the Minnesota Association of School Administrators (MASA). Due to changes in eight superintendent positions during the implementation of the survey, the researcher was unable to secure information from eight districts. The superintendents contacted were invited to participate in the study or to designate a person with knowledge of PLC practices in their district to participate in the study. If the superintendent chose to designate another individual to participate in the survey, the superintendent forwarded the original request to that person. The responses to question five of the survey indicate that 38 superintendents designated another individual within their school district to complete the survey. The delegation of the survey to another individual with knowledge of PLC practices within the district should result in a more accurate representation of the level of implementation of those practices and the level to which barriers are being encountered.

The superintendents were sent an email asking them to participate in the study. This email included an informational letter and a link to the survey. After the first invitation 86 participants had responded to the survey. A second reminder invitation was sent out three weeks later. When the survey was closed there were 143 (n=143) responses. The initial results were

analyzed for validity, and it was determined that 121 (n=121) responses were valid. Surveys with all of the questions answered were determined as valid.

The data were analyzed using the Statistical Package for the Social Sciences (SPSS). The data for each question were described using frequency distributions based on a five point Likert scale for research questions one and two, and a three point Likert scale for research question three. These data were organized by research question and presented in chapter four. The summary and analysis are presented in this chapter.

Limitations of the Study

Roberts defines limitations as, “particular features of your study that you know may negatively affect the results or your ability to generalize” (Roberts, 2010, p. 165).

During the study the following limitations occurred:

- The study was voluntary and limited by the number of surveys completed.
- The accuracy of the data gathered was dependent upon the honesty of the respondents in answering survey questions.
- Since this study was only conducted with superintendents or superintendent designees from public schools in Minnesota, it may be difficult to generalize the results to private schools in Minnesota, public charter schools in Minnesota or school districts in other states. The results can only be generalized to public schools in Minnesota.

Conclusions

Research Question One

Research question one is focused on the extent to which the six characteristics of successful PLCs, as identified by DuFour et al. (2010) have been implemented in practicing PLCs in public schools in Minnesota.

To what extent have the six essential characteristics of successful PLCs identified by DuFour et al. (2010) been implemented in practicing PLCs in public schools in Minnesota?

Respondents were asked to rate their district's level of implementation of specific practices related to each of the six characteristics using a five choice Likert Scale. Based on those responses, all of the respondents' districts were using some or all of the six characteristics of PLCs identified by DuFour et al. (2010).

The Impact of PLCs' Years of Experience on the Level of Implementation of Certain Practices

For all six characteristics identified by DuFour et al. (2010) the research results indicated a significant difference ($p < .05$) in the level of implementation based on the number of years the respondents reported their school districts had been using PLCs. Districts using PLCs for 0-2 years were implementing the characteristics at a significantly lesser level than those using PLCs for three years or more. These findings were consistent with the literature. Rust and Freidus (2001) commented that a substantial amount of commitment and work is necessary to develop the process into a meaningful instructional improvement strategy. Once established, it becomes a standard way for a district and schools to operate, providing job embedded, ongoing professional development in a collaborative, trusting environment. Bolam et al. (2005) refer to the three stages of development for a PLC: starter, developer and mature. Their research goes on to state

that it takes time to move from stage to stage, and the more advanced a PLC is in the development process, the greater the impact on professional development and student achievement (Bolam et al., 2005).

Taking time to build the foundation of a PLC is critical to success. Time is necessary because a PLC is not a program, it is a culture which drives the daily work of the organization. Rick DuFour, in his book, *In Praise of American Educators,* stated the following regarding PLCs, “The assumptions, beliefs, expectations, and commitment of people in any organization shape the culture of that organization. The primary challenge in the PLC process is changing, and not merely tweaking, the existing culture” (DuFour, 2015, p. 100).

There were no significant findings when comparing school districts which had been using PLCs for 3-5 years, 6-10 years or more than 10 years. The researcher identified 24 of the 116, or 21%, of participating respondents as having used PLCs for only 0-2 years. Research suggests that this group of respondents may not have been implementing the identified characteristics as fully as research would indicate is necessary for PLC success. They simply have not had the time to move through the three stages of PLC development: starter, developer and mature. School districts implementing PLC practices should be mindful that it takes time to fully implement the stages of PLC development, understanding that building these practices into the culture of the organization takes commitment and perseverance on the part of the stakeholders. Having a firm understanding of the stages of PLC development and the time necessary to fully implement PLC practices will prepare participants for the challenges that come with becoming PLCs functioning at the mature stage of development.

Eight PLC Practices Used By Fewer Districts

Within each of the six PLC characteristics identified by DuFour et al. (2010), there were a total of 36 (n=36) specific practices which were rated using the five choice Likert Scale. Of these 36 practices, eight (n=8, 22%) were identified as not yet begun or talking about the practice by 20% or more of the respondents. Thus, 20% or more of respondents' districts were not implementing these practices within their PLCs. The practices identified as not being used were:

- Teachers have identified evidence/indicators they use to measure student outcomes for their course.
- Teachers have created common grading and reporting procedures.
- Teachers understand they must teach differently to get different results.
- Teachers provide feedback at the time of learning that is descriptive, corrective and directive.
- Teachers base their actions on research and documented effective practice.
- Teachers measure their effectiveness based on student results.
- Teachers have identified the evidence needed to show student understanding.
- Teachers use common assessments to inform their own practice.

Based on the research regarding barriers to PLC success, the absences of these eight practices in 20% of respondent districts is not remarkable because most are related key barriers for districts when they are attempting to implement PLCs.

A significant finding in the study was that two practices identified by 20% or more of the respondents as items their districts were talking about or had not yet begun were creating common grading and reporting procedures and using common assessments to inform their own practices. These are PLC practices which require teachers to collaborate and work together. The

level of collaborative practice required to create common grading procedures and use common assessments to inform their own practices necessitates individual teachers giving up their autonomy in regards to content, assessment and student progress reporting. McLaughlin and Talbert (2001) contend that when teachers are unaccustomed to performing the work of PLCs, such as collectively reviewing data, developing common assessments, engaging in professional discourse regarding student achievement, or discussing the level of success of a particular teaching strategy, they may find these activities threatening as they "break the rules of professional privacy". When they perceive such a situation, they may feel threatened and not fully engage, thus leading to an unsuccessful PLC implementation. Fullan (2001) supports this assertion, "The culture of the school is one of autonomy and privacy, considerable barriers to the collective work of PLCs." Because two of the common barriers to PLC success identified in literature are teachers not wanting to collaborate with other teachers and a lack of trust among members of a learning community, it is not surprising that these practices, which require collaboration and trust, are among those identified in this study as being implemented at a lesser extent than other practices. Administration and PLC leaders must recognize time is necessary to build a trusting culture. By providing time to meet teachers will learn to work together. Trust will develop and the advanced PLC practices such as creating common grading procedures and common assessments will develop.

The practices of teachers creating common grading and reporting procedures and teachers using common assessments to inform their own practice are also related to the barrier of a lack of consistent time to collaborate. The collaboration required for developing common assessments and common grading and reporting practices can be time consuming yet they are necessary for PLCs to operate effectively. Riley and Stoll (2004) indicated that time is essential when they

stated, “Professional learning communities are most likely to thrive where people and ideas have plenty of opportunities to connect” (p. 35). In 1990, Phil Schlechty wrote, “The one commodity that teachers and administrators say they do not have enough of, even more than money, is time; time to teach, time to converse, time to think, time to plan, time to talk, time to go to the restroom or have a cup of coffee. Time is indeed precious in schools” (p. 73). Fullan identified time as one of five critical factors that causes some PLCs to succeed and some to fail (2001). While the findings in this study did not indicate time to collaborate as a significant issue, the literature does identify lack of time as a significant barrier to PLC success and something PLC leaders need to address as it could contribute to a failure to implement the practices of creating common grading and reporting procedures and teachers using common assessments to inform their own practice. While the findings of this study do not indicate that more time is needed, the time staff is provided for PLC work may need to be reallocated to more advanced PLC practices such as creating common grading and reporting procedures and teachers using common assessments to inform their own practice.

The remaining six practices were also identified by 20% or more of the respondents as items their school districts were talking about or had not yet begun. These practices rest on a firm belief that all students can learn, a required understanding for PLCs. If PLC participants do not believe all students can learn they will limit their reflection on their own practice as a means to help all students succeed. The teacher will instead place the cause of the students’ inability to learn on areas outside the control of the teacher such as socioeconomic status of the students, a perceived lack of family support for school or a number of other reasons which have been given for student failure over time.

First and foremost, for PLCs to succeed there must be a learning focused culture. “A learning focused culture understands that the school was not built so that teachers have a place to teach – it was built so that children of the community have a place to learn” (DuFour, 2015, p. 104). With this basic premise in mind, “PLCs offer a guiding framework within which staff learn together and collaborate to improve the achievement of all students (Lieberman, 2009, p. 95).

Once educators in the PLC agree upon the basic premise that all students can learn their professional reflection can focus on those practices, which will allow students to succeed in their classrooms. DuFour et al. (2006) state that within PLCs “structures are created to ensure staff members engage in job-embedded learning as part of their routine work practices” (p. 11). Teachers begin by identifying evidence and indicators they use to measure student outcomes for their course, outcomes that demonstrate student understanding. They move on to include practices of adapting instruction to meet the needs of their students to get different results and providing timely feedback that is descriptive, corrective and directive with the belief it will help students learn. All of their group actions are based on research and documented effective practice. At this point, PLCs become a true community of learners which focus on student learning as opposed to teaching, have an extensive and effective use of formative assessment to improve achievement, work together to bring about a school climate conducive to cutting edge teaching and learning, and an increased use of assessments to ensure mastery (Nehring & Fitzsimons, 2011). DuFour (2015) states that all other characteristics of a PLC flow directly from the assumption that all students can learn. When this key assumption is missing you find

For the districts which are only talking about these practices or have not yet begun these practices, research supports that they need to go back to the very beginning of their PLC creation, revisit their basic PLC norms and develop a systemic cultural belief that all students can

learn. Without this core belief in place, they will continue to struggle with the eight practices identified. The absence of these practices will become a barrier hindering them from moving on to the next stage of PLC development.

The more advanced practices of PLCs will take time to develop. Time spent at the beginning of PLC development doing the right work, such as agreeing on shared norms and values will lead to greater trust. Once trust is established the PLC can evolve into higher level skills such as collaboration on common assessments and common grading practices. These will then lead to conversations and reflection regarding teaching practices. When the basic foundation for PLCs is not established, power struggles may arise, and teachers choose not to participate and return to the isolation of their classrooms.

Research Question Two

Research question two is focused on the extent to which characteristics of successful PLCs, beyond those identified by DuFour et al. (2010), are exhibited in public schools in Minnesota.

What characteristics of successful PLCs, beyond those identified by DuFour et al. (2010), do public school districts in Minnesota exhibit?

Additional PLC Characteristics Identified by Respondents

Research question two was focused on the extent to which characteristics of successful PLCs, beyond those identified by DuFour et al. (2010), are exhibited in public schools in Minnesota. Respondents were asked to rate their districts' level of implementation of three specific characteristics of successful PLCs identified in literature by researchers (other than DuFour, DuFour, Eaker and Many) using a five choice Likert Scale. The three characteristics

were selected due to their prevalence in the literature by researchers including Linda Darling-Hammond, Shirley Hord, Michael Fullan, and Peter Senge. The characteristics chosen were:

- There is shared leadership between teachers and administration;
- Teachers have authority to make decisions within their PLC; and
- Teachers are encouraged to use reflective practices in evaluating their own teaching.

According to the data gathered, all of the respondents' districts were using the characteristics of successful PLCs beyond those identified by DuFour et al. (2010). For those characteristics identified by researchers other than the DuFour group, the results reveal a significant difference ($p < .05$) in the level of implementation based on the number of years the respondents reported their school districts had been using PLCs. Districts using PLCs for 0-2 years were implementing the characteristics at a significantly lesser level than those using PLCs for three years or more. As stated in research question one, these findings are consistent with the literature, which indicates it takes time to effectively implement the various practices and characteristics of successful PLCs.

There were no significant findings obtained in examining school districts which had been using PLCs for 3-5 years, 6-10 years or more than 10 years. Thus, having a firm understanding of the stages of PLC development and the time necessary to fully implement PLC practices will prepare participants for the challenges which come with becoming PLCs that function at the mature level.

The three characteristics examined in this research question are more common with advanced PLCs. These characteristics are developed over time and require greater trust among members. Once time is given for trust to develop it becomes easier to share leadership, for

administration to allow teachers more decision making authority, and for teachers to become reflective of their own teaching in order to improve their instructional practice.

Research Question Three

Research question three is focused on the extent to which barriers were encountered by public schools in Minnesota in their attempts to implement PLCs.

What barriers have been encountered by public school districts in Minnesota in their attempts to implement PLCs?

Respondents were asked to rate the extent to which their school districts were encountering each of the five barriers to PLC success identified in the literature. A three choice Likert Scale was used by the researcher. The Likert Scale choices were as follows: (1) nonexistent, (2) occurs from time to time, and (3) prevalent.

Barriers Encountered Most Often When Implementing PLCs

For three of the five barriers to PLC success, the majority of respondents indicated they encountered barriers from time to time. The barriers identified as being encountered from time to time by a majority of respondents were:

- Teachers not wanting to collaborate with other teachers – 71.6%;
- Conflict within the learning community regarding power – 61.2%;
- Lack of trust among members of the learning community – 69.8%.

These barriers were consistent with findings in research question one. Research question one identified eight practices in which 20% or more of the respondents indicated their districts had not yet begun the practice or were only talking about the practice. These eight practices all require collaboration among teachers and would not be easy to implement if there were power conflicts within the PLC. They also all require trust among members of the learning community.

All of these are closely related to teachers' fears of losing their autonomy. According to Wells and Feun (2013), PLCs deprivatize the teaching practice, which some may find threatening, and, therefore they become unwilling participants in the PLC process. Liu and Xu (2013) expanded this line of thought when they wrote, "when collegiality is imposed on teachers, the professional communities, which are intended to create generative power for professional learning, can become a tool of enslavement" (p. 179). While the researcher cannot definitively link the lack of implementing these practices to the barriers listed, this possible correlation may merit further research.

Encountering Barriers Based on District Size

Based on study data, it appeared there was a significant difference ($p<.05$) in the prevalence of barriers to PLC success based on the size of the school district. For the barrier identified as "conflict within the learning community regarding power", the level of significance between districts with enrollments of 0-500 students and those districts with enrollments larger than 10,000 students was .009. Districts with enrollments of 0-500 students encountered this barrier less often with the data indicating a mean of 1.43, while districts with enrollments larger than 10,000 students indicated a mean of 2.40.

Due to the small number of districts in each enrollment category, the researcher was unable to generalize this finding to a larger population and there was no literature found regarding size of district and conflict within the learning community. Even so, there are possible reasons for the difference regarding this barrier. In smaller districts faculty may be more familiar with one another, creating a more trusting environment where ideas may be shared in a more open, collegial manner and when issues do arise, they are able to deal with them earlier in the process before conflict occurs. Due to the familiarity between members of the PLC there may be

fewer concerns regarding power, and therefore the issue does not arise as often. In smaller districts, PLCs may have fewer members and therefore there is less of a chance of power becoming an issue.

For the barrier identified as lack of trust among members within the PLC, the level of significance between districts with enrollments of 0-500 students and those districts with over 10,000 students was .017, while the level of significance for districts with enrollments of 501-1000 students and those districts with enrollments larger than 10,000 students was .021. The districts with enrollment of less than 1000 students were found to be encountering this barrier less often. A mean value of 1.57 was obtained for districts with enrollments of 0-500 students and a mean value of 1.64 was secured for districts with enrollments of 501-1000 students. Districts with enrollments of greater than 10,000 students obtained a mean value of 2.4.

Due to the small number of districts in this study with enrollments of greater than 10,000 students, the researcher was unable to generalize this finding to a larger population and the researcher did not find any literature to support this finding. However, the smaller PLC groups that may exist in smaller districts could have caused this discrepancy. In districts of fewer than 1000 students it is also more likely that staff is more familiar with one another and therefore trust is not as much of an issue. For example: individuals familiar with one another may deal with the issue of trust more directly and address issues early on in the process before it becomes a major factor. In contrast, larger districts, and therefore larger PLCs, could be made up of individuals from many different buildings and these individuals have not had the time to work together and build trust with one another.

The researcher found no evidence in the literature to confirm school district size was a contributing factor for school districts encountering barriers when they attempted to implement PLCs.

Correlations Between Barriers

The data revealed a moderately strong positive correlation in regards to the following barriers:

- Between teachers not wanting to collaborate and conflict regarding power within the PLC ($r=.383$, $p<.01$).
- Between teachers not wanting to collaborate and lack of trust among members of the PLC ($r=.421$, $p<.01$).
- Between conflict regarding power within the PLC and lack of trust among members of the PLC ($r=.520$, $p<.01$).
- Between lack of consistent time for collaboration and lack of commitment from the district ($r=.628$, $p<.01$).

The correlation between teachers not wanting to collaborate and conflict regarding power with the PLC was supported by research conducted by DuFour and Eaker (1998), Fullan (1995), Hipp, Huffman, Pankake and Oliver (2008), and Hord (2004). When there is conflict within the group, teachers do not want to participate—critical communication does not occur and the collegial environment required for PLC success is non-existent. This often occurs when norms and rules for the PLC are not strongly established. When the basic foundation for PLCs is not established, power struggles may arise, and teachers choose not to participate and return to the isolation of their classrooms. According to Smoker (2006), “Failed attempts to establish

professional learning communities can usually be traced back to a lack of fidelity to the fundamental concepts related to establishing PLCs" (p. 107).

The same can be said for the correlation between teachers not wanting to collaborate and lack of trust among members of the PLC. As indicated in the research, trust is a critical component to PLC success. According to Lencioni (2007), a lack of trust "occurs when team members are reluctant to be vulnerable with one another and are unwilling to admit their mistakes, weaknesses, or needs for help. Without a certain comfort level among team members, a foundation of trust is impossible." If, as Lencioni related, trust is necessary for individuals to feel comfortable working together, in the absence of trust there will be reduced collaboration and diminished sharing of ideas. Without trust teachers will return to the "norms of individualism, conservatism and presentation which constrain teachers from changing their practice" (Lieberman, 2009, p. 84).

The relationship between conflict regarding power and lack of trust within the PLC may be due to several factors. One factor prevalent in the literature is the absence of clear operating norms. "By developing strong teacher identities that include norms of openness, collaboration, trust and critical design, they maintain a sense of professionalism that includes intending to support all students and having the agency to learn how to do so" (Lieberman, 2009, p. 95).

A second factor found in literature that may contribute to issues regarding power and lack of trust is the traditional culture of schools, which has promoted individualism, conservatism and presentation. PLCs take teachers out of their isolated classrooms and it is not surprising that conflict occurs (Lee & Lee, 2013). Additional research will need to be conducted to identify the exact cause of this conflict.

Lack of time is identified in the literature as a barrier to PLC success. The findings of this study did not find it to be an issue with the respondents. However, there was a correlation between districts indicating they did not have enough time for PLCs and those districts stating there was a lack of commitment from the district for PLCs. Because the allotment of time is most often controlled by the district, the relationship between lack of time and a lack of district commitment is clear. When a sufficient amount of time is not allowed for PLCs, it suggests the district does not view PLCs as a priority because committed time is necessary to permit PLCs to function properly. Time is essential for "professional development that engages teachers in instructional inquiry over an extended time through collaborative professional learning communities (PLCs) which are effective in improving instruction and student achievement" (McConnell et al., 2013, p. 267). When districts provide time for their PLCs to function properly, they send the message that teacher collaboration and student learning are viewed as priorities in the school (DuFour et al., 2010).

In this study, there was a correlation between barriers related to collaboration, power, and lack of trust. These issues may be impacting the implementation of PLCs examined in this study.

Recommendations for the Field

Based on the review of the literature and the findings of the study, school district leaders are encouraged to consider the following recommendations for the successful implementation of professional learning communities: time, groundwork, anticipation of barriers and commitment.

- The successful implementation of the PLC process will require several years. Districts are encouraged to keep this in mind as they think about the implementation of the various components of the PLC process.

- Before true implementation of PLCs can be initiated, districts are recommended to ensure that the groundwork has been completed to create a proper foundation on which PLCs can succeed. This foundation includes the creation of a strong mission and vision for the organization, a collective commitment to the values of the organization and a system that assures that goals are set which are measureable thus allowing the PLC to mark their progress.
- District leaders should anticipate there will be issues with the implementation of a PLC culture and they will encounter barriers.
- District leaders are encouraged to make the commitment to follow-through on the practices they control that are essential for PLC success.

Recommendations for Future Research

The following recommendations for future research are offered based on the research and conclusions from this study:

- Future research should be undertaken with teachers who are members of PLCs to gain their perceptions of the levels of implementation of key PLC characteristics, their perceptions of the barriers they are encountering in implementing PLCs, and other factors.
- Qualitative case studies focusing on small groups of school districts should be conducted to gather more specific information about the implementation of PLC characteristics and barriers encountered when implementing PLCs.
- The study should be replicated in other states to examine PLC operations and challenges that leaders are experiencing elsewhere.

- A case study should be conducted with a small group of school districts that are beginning the implementation of PLCs: track their progress over a three to five year time span and document their stages of development.
- A study should be conducted to explore whether or not school or district enrollment size has an impact on the implementation of PLCs.
- It would add to the literature if a study were conducted involving a small group of school districts which had attempted implementation of PLCs and then discontinued use of the practice.

Summary

In the study, the implementation of essential PLC characteristics were examined, as well as issues related to the barriers of implementing PLCs. Many researchers have advocated the use of PLCs as a methodology to reform education. DuFour and Fullan, in their book, *Cultures Built to Last: Systemic PLCs at Work*, affirms, "PLCs can play a central role in dramatically improving the overall performance of schools, the engagement of students, and the sense of efficacy and job satisfaction" (2013, p. 4). "The PLC process provides the best environment for powerful professional development, and the best professional development builds staff capacity to function as members of a high-performing PLC" (DuFour, 2014, p. 31).

Many school districts have read about the promises of PLCs and claim to have implemented PLC practices, yet questions remain as to whether or not they have been implemented in a qualitative manner. The research indicates the very culture and belief system of a school district must change in order to meet the enticing outcomes PLCs promise. "This level of change is difficult – very difficult. In the end, many schools struggle because too many adults

in the building are unwilling to accept the level of temporary disequilibrium and discomfort required to significantly change what they do all day" (DuFour, 2015, p. 220).

The literature clearly establishes the promise of PLCs for professional growth and, to some extent, for student achievement. "Professional development that engages teachers in instructional inquiry over an extended time through collaborative professional learning communities (PLCs) is effective in improving instruction and student achievement" (McConnell et al., 2013, p. 267). With these promises in mind, education leaders must commit themselves to staying true to the PLC process through the challenge of changing the culture because, "If the PLC process proves beneficial to students, provides resistant staff with a positive experience, and leads to better results, changes in beliefs and higher levels of commitment are likely to follow" (DuFour, 2015, p. 240).

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Appendices

Appendix A: Six Key Measure of the No Child Left Behind Act

- **Annual Testing:** By the 2005-06 school year, states were mandated to begin annual testing of students in grades 3-8 in reading and mathematics. By 2007-08, states were required to test students in science at least once in elementary, middle, and high school. The tests had to be aligned with state academic standards. A sample of 4th and 8th grade students in each state also had to participate in the National Assessment of Educational Progress testing program in reading and math every other year to provide a point of comparison for state test results.
- **Academic Progress:** States were required to bring all students up to the "proficient" level on state tests by the 2013-14 school year. Individual schools had to meet state "adequate yearly progress" targets toward this goal (based on a formula spelled out in the law) for both their student populations as a whole and for certain demographic subgroups. If a school receiving federal Title I funding failed to meet the target two years in a row, it would be provided technical assistance in order to promote programming and teaching strategies to improve student achievement and students must be offered a choice of other public schools to attend. Students in schools failing to make adequate progress three years in a row were offered supplemental educational services, including private tutoring. For continued failures, a school would be subject to outside corrective measures, including possible governance changes.
- **Report Cards:** Starting with the 2002-03 school year, states were required to furnish annual report cards showing a range of information, including student-achievement data disaggregated by subgroup and information on the academic performance of individual

school districts. Districts were expected to provide similar report cards showing school-by-school data.

- **Teacher Qualifications:** By the end of the 2005-06 school year, every teacher in core content areas working in a public school had to be "highly qualified" in each subject he or she taught. Under the law, "highly qualified" generally meant a teacher was certified and demonstrably proficient in his or her subject matter. Beginning with the 2002-03 school year, all new teachers hired with federal Title I money had to be "highly qualified." By the end of the 2005-06 school year, all school paraprofessionals hired with Title I money must have completed at least two years of college, obtained an associate's degree or higher, or passed an evaluation to demonstrate knowledge and teaching ability.
- **Reading First:** The act created a new competitive-grant program called Reading First, funded at $1.02 billion in 2004, to help states and districts set up "scientific, research-based" reading programs for children in grades K-3 (with priority given to high-poverty areas). A smaller early-reading program sought to help states better prepare 3- to 5-year-olds in disadvantaged areas to read. The program's funding was later cut drastically by Congress amid budget compromises.
- **Funding Changes:** Through an alteration in the Title I funding formula, the provisions of the No Child Left Behind Act were altered to better target resources to school districts with high concentrations of poor children. The law also included provisions intended to give states and districts greater flexibility in how they spent a portion of their federal allotments.

Appendix B: Study Survey via Survey Monkey

Professional Learning Community

Professional Learning Community

Thank you for participating in this survey regarding professional learning communities(PLC). The objective is to determine the level to which school districts have engaged in research-based practices of PLCs and to identify any barriers that exist in implementing these practices. The results of this study will shed light on the progress of effective PLC implementation in the state of Minnesota and may be used to plan PLC implementation in Minnesota school districts. All data provided will be kept confidential and no birth dates, social security numbers, or names will be required. The demographic information you are being asked to provide will assist the investigator in determining variations that may exist with PLC implementation. The time required to complete the approximately 45-item questionnaire is approximately 15-20 minutes.

For the purpose of this survey, a PLC is defined as, "An ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to better results for the students they serve. PLCs operate under the assumption that the key to improved learning for students is continuous, job-embedded learning for educators." (DuFour, DuFour, Eaker, & Many, 2010)

Professional Learning Community

Implementation of Professional Learning Communities in Minnesota Public Sch...

You are invited to participate in a research study on the implementation of professional learning communities (PLCs) in Minnesota. You were selected as a possible participant because you are currently a superintendent in the state of Minnesota. This research project is being conducted by Jim Johnson to satisfy the requirements of a Doctoral Degree in Educational Administration and Leadership at St. Cloud State University.

The objective of this study is to determine the level to which public school districts in Minnesota have engaged in critical practices, as identified by research, when implementing PLCs and to identify barriers that exist when attempting to implement these practices. Participates will be asked to complete an anonymous survey using the tool, Survey Monkey, regarding implementation of PLCs in their district. Your survey information will be analyzed as an aggregate group and no information that could identify an individual will be reported. The results of this survey will be published to better plan and sustain successful PLCs in public schools in Minnesota.

If you would like a copy of the study results, please contact the researcher. If you have any additional questions, you may contact the researcher, Jim Johnson, at joja1302@stcloudstate.edu or the advisor, Dr. John Eller, at jfeller@stcloudstate.edu.

Your participation in this study is voluntary. Please remember this information is anonymous and confidential and is designed to help create successful co-teaching partnerships. If you decide to participate, you are free to withdraw at any time without penalty. Your completion of this survey indicates your consent to participate.

Professional Learning Community

Demographic Information

***1. Does your district use professional learning communities (PLCs)?**

◯ Yes ◯ No

Professional Learning Community

***2. Which best describes your position? (Choose all that apply)**

- ☐ Teacher
- ☐ Principal
- ☐ Assistant/Associate Principal
- ☐ Superintendent
- ☐ Assistant/Associate Superintendent
- ☐ Director of Curriculum and Instruction/Teaching and Learning
- ☐ Staff Development Coordinator
- ☐ Q-Comp Advisor/Leader
- ☐ Other

***3. How many years has your district been using PLCs?**

- ◯ 0-2
- ◯ 3-5
- ◯ 6-10
- ◯ More than 10

Professional Learning Community

Demographic Information

***4. Does your district participate in Q-Comp?**

◯ Yes ◯ No

Professional Learning Community

***5. How many years has your district participated in Q-Comp?**

- ◯ 0-2
- ◯ 3-5
- ◯ 6-10
- ◯ More than 10

***6. How many students (K-12) are enrolled in your school district?**

- ◯ 0 – 500
- ◯ 501 – 1000
- ◯ 1001 – 2500
- ◯ 2501 – 5000
- ◯ 5001 – 10,000
- ◯ Greater than 10,000

Professional Learning Community

In each of the sections below, you will be presented with several statements regarding PLC practices as identified by DuFour, DuFour and Eaker. Based on your own observations and perceptions, how would you characterize your district on each statement using the following scale? Key words for each number of the scale have been underlined.

1. We have not yet begun to address this issue.
2. We are talking about this, but have taken no significant action to make it a reality.
3. We have begun implementation, but at this stage of the process, many staff approach the task with a sense of compliance rather than commitment.
4. We have moved beyond initial implementation and continue to work through the process.
5. This practice is deeply embedded in our culture. Most staff members are committed to doing this and feel it is an important factor in the collective effort to improve our schools.

Professional Learning Community

7. Focus on Learning

	Not yet begun	Talking	Begun implementation	Beyond initial implementation	Embedded in culture
Teachers believe all students can learn.	◯	◯	◯	◯	◯
Teachers have a clear focus on improving student learning.	◯	◯	◯	◯	◯
Teachers have written specific learner outcomes for their course.	◯	◯	◯	◯	◯
Teachers agree and list the clear learning targets/criteria that explain what the student work looks like, what students know and do in each grade, subject/course and unit.	◯	◯	◯	◯	◯
Teachers have identified evidence/indicators they use to measure student outcomes for their course.	◯	◯	◯	◯	◯
There is a systematic intervention process in place to provide additional and required time and support for students who experience difficulty.	◯	◯	◯	◯	◯

Professional Learning Community

8. Collaborative Culture

	Not yet begun	Talking	Begun implementation	Beyond initial implementation	Embedded in culture
There is a systematic process where teachers work together to analyze and improve their instruction.	◯	◯	◯	◯	◯
Teachers engage in discussion to promote teacher learning which leads to higher student achievement.	◯	◯	◯	◯	◯
Consistent time is provided for learning communities to meet.	◯	◯	◯	◯	◯
The learning communities focus on learning for all students.	◯	◯	◯	◯	◯
Teachers use common assessments that measure student outcomes.	◯	◯	◯	◯	◯
Teachers have created common grading and rporting pœdures.	◯	◯	◯	◯	◯

Professional Learning Community

9. Collective Inquiry

	Not yet begun	Talking	Begun implementation	Beyond initial implementation	Embedded in culture
The learning communities study together to learn.	◯	◯	◯	◯	◯
Teachers engage in discussion about their current practices.	◯	◯	◯	◯	◯
Teachers work together to develop new skills and understanding which change practice, attitudes and beliefs.	◯	◯	◯	◯	◯
Learning communities identify and use proven strategies and research that enhances learning.	◯	◯	◯	◯	◯
Teachers use data and relevant information to make decisions regarding their instruction.	◯	◯	◯	◯	◯
There is a system in place for sharing data.	◯	◯	◯	◯	◯

Professional Learning Community

10. Action Orientation

	Not yet begun	Talking	Begun implementation	Beyond initial implementation	Embedded in culture
Teachers use what they learn in their learning community to change their classroom practice.	◯	◯	◯	◯	◯
Teachers understand they must teach differently to get different results.	◯	◯	◯	◯	◯
Teachers provide feedback at the time of learning that is descriptive, corrective and directive.	◯	◯	◯	◯	◯
Teachers base their actions on research and documented effective practice.	◯	◯	◯	◯	◯
Teachers are encouraged to try new practices in their classroom.	◯	◯	◯	◯	◯

Professional Learning Community

11. Continuous Improvement

	Not yet begun	Talking	Begun implementation	Beyond initial implementation	Embedded in culture
Working to improve instruction and learning is [illegible] not episodic or one event initiatives.	◯	◯	◯	◯	◯
Learning communities work on focused initiatives.	◯	◯	◯	◯	◯
Teachers use student evidence of learning to measure continuous progress.	◯	◯	◯	◯	◯
Teachers have discussions regarding ways to improve student achievement.	◯	◯	◯	◯	◯
Teachers regularly reflect on the effectiveness of their classroom practice using student data.	◯	◯	◯	◯	◯

Professional Learning Community

12. Results Oriented

	Not yet begun	Talking	Begun implementation	Beyond initial implementation	Embedded in culture
Teachers measure their effectiveness based on student results.	◯	◯	◯	◯	◯
Teachers have identified the evidence needed to show student understanding.	◯	◯	◯	◯	◯
Teachers use common assessments to inform their own practice.	◯	◯	◯	◯	◯

Professional Learning Community

13. Other PLC Characteristics

	Not yet begun	Talking	Begun implementation	Beyond initial implementation	Embedded in culture
There is shared leadership between teachers and administration.	◯	◯	◯	◯	◯
Teachers have authority to make decisions within their PLC.	◯	◯	◯	◯	◯
Teachers are encouraged to use reflective practices in evaluating their own teaching.	◯	◯	◯	◯	◯

Professional Learning Community

Barriers to PLC Success

In the section below, on a scale of 1 to 3, identify the prevalence of this barrier in your district as:
(1) nonexistent in your district,
(2) occurs from time to time in your district, or
(3) this barrier is prevalent in your district. Rate each statement as it relates to your in the district's attempt to implement professional learning communities.

14. Which of the following barriers has your district encountered in implementing PLCs?

	Nonexistent	Occurs from time to time	Prevalent
Teachers not wanting to collaborate with other teachers.	◯	◯	◯
Conflict within the learning community regarding power.	◯	◯	◯
Lack of trust among members of a learning community.	◯	◯	◯
Lack of consistent time provided for collaboration.	◯	◯	◯
Lack of commitment on the part of the district to sustain learning communities.	◯	◯	◯

Appendix C: Study Survey Solicitation

As part of the requirements for my Doctoral Degree at St. Cloud State University I am conducting a research project on the implementation of professional learning communities (PLCs) in Minnesota. The objective of the study is to determine the level to which public school districts in Minnesota have engaged in critical practices, as identified in research, when implementing PLCs and to identify barriers that exist when attempting to implement these practices.

The purpose of this email is to request the participation of your district in this study. If you are willing to have your district participate, please complete the survey or forward this email and Survey Monkey link to the person or persons in your district with the best knowledge regarding PLC implementation. The link to the survey is: https://www.surveymonkey.com/r/YSR3YSS .

The survey is anonymous and confidential but you may request a copy of the study results by contacting me at jim.johnson@monticello.k12.mn.us orjoja1302@stcloudstate.edu .

Thank you for considering this request.

Sincerely,

Jim Johnson

Jim Johnson, Superintendent
Monticello Public Schools
302 Washington St.
Monticello, MN 55362

Appendix D: Follow-up Survey Solicitation

A few weeks ago I sent the following request regarding my study of professional learning communities in public schools in Minnesota. If you have not yet completed the study, please consider doing so. Superintendents should feel free to forward this to the person or persons in your district with the best knowledge of PLC implementation.

As part of the requirements for my Doctoral Degree at St. Cloud State University I am conducting a research project on the implementation of professional learning communities (PLCs) in Minnesota. The objective of the study is to determine the level to which public school districts in Minnesota have engaged in critical practices, as identified in research, when implementing PLCs and to identify barriers that exist when attempting to implement these practices.

The purpose of this email is to request the participation of your district in this study. If you are willing to have your district participate, please complete the survey or forward this email and Survey Monkey link to the person or persons in your district with the best knowledge regarding PLC implementation. The link to the survey is: https://www.surveymonkey.com/r/YSR3YSS .

The survey is anonymous and confidential but you may request a copy of the study results by contacting me at jim.johnson@monticello.k12.mn.us or joja1302@stcloudstate.edu .

Thank you for considering this request.

Sincerely,

Jim Johnson

Jim Johnson, Superintendent
Monticello Public Schools
302 Washington St.
Monticello, MN 55362

Appendix E: Conceptual Framework

The conceptual framework for this study was derived from the work of DuFour et al. (2010), in their book, *Learning by Doing: A Handbook for Professional Learning Communities at Work (2nd Ed).* In their work, these authors identified six essential characteristics that are required to establish an effective professional learning community. The characteristics are:

- A focus on learning – "The very essence of a learning community is a focus on and a commitment to the learning of each student" (p. 11).
- A collaborative culture with a focus on learning for all – "A PLC is composed of collaborative teams whose members work interdependently to achieve common goals for which members are mutually accountable" (p. 11).
- Collective inquiry into best practice and current reality – "Collective inquiry enables team members to develop new skills and capabilities that in turn lead to new experiences and awareness" (p. 12).
- Action orientation: learning by doing - "Members of PLCs are action oriented: they move quickly to turn aspirations into action and visions into reality" (p. 12).
- A commitment to continuous improvement – "Inherent to a PLC are a persistent disquiet with the status quo and a constant search for a better way to achieve goals and accomplish the purpose of the organization" (p. 13).
- Results oriented – "Members of a PLC realize that all of their efforts must be assessed on the basis of results rather than intentions" (p. 13).