

THE DEVELOPMENT AND PERPETUATION OF PROFESSIONAL LEARNING
COMMUNITIES IN TWO ELEMENTARY SCHOOLS: THE ROLE OF THE
PRINCIPAL AND IMPACT ON TEACHING AND LEARNING

A dissertation presented to the faculty
of the Graduate School of Western Carolina University
in partial fulfillment of the requirements
for the degree of Doctor of Education.

By

Chad Edward Maynor

Director: Dr. Meagan Karvonen
Associate Professor
Department of Educational Leadership and Foundations

Committee Members:
Dr. David Strahan, Department of Elementary and Middle Grades Education
Dr. Lucian Szlizewski, Department of Educational Leadership and Foundations

March 2010

© 2010 by Chad Edward Maynor

ACKNOWLEDGEMENTS

To my dissertation chair, Dr. Meagan Karvonen, and to the rest of my dissertation committee, Dr. Lucian Szlizewski and Dr. David Strahan: I appreciate each one of you. I cannot thank you enough for the time, guidance, patience, and support each of you have provided me throughout this very demanding process. Your willingness to serve and to help me be successful is very much appreciated.

To the teachers, instructional coaches, principals, Director of Elementary Curriculum, and Superintendent who agreed to participated in this study: Thank you for giving me opportunity to explore your efforts to successfully develop and perpetuate professional learning communities (PLCs) at your schools. Through your efforts to work together and to do Whatever It Takes to meet the needs of your students, you have developed and perpetuated PLCs that are worthy of following. It was an honor and a privilege to have the opportunity to conduct my research in your district. I cannot thank you enough for allowing me to learn from your experiences.

To my mother, Freda Maynor, my wife, Niki Maynor, my mother-in-law, Mary Glenn Kiker, my father-in-law, Dr. James N. Poovey, my uncle, Frank Kiker, my surrogate father and mother figures, Dan and Dell Davis, and all of my extended family members: Thank you so much for the emotional, financial, and intellectual support you have provided me from the time I started my M.A. in School Counseling in the fall of 2000 through the completion of my Ed. D. in Educational Leadership in the spring of 2010. I know it has not always been easy. On many occasions, the demands of my coursework and dissertation have caused me to sacrifice family time. If not for your patience and understanding, I may never have reached the educational goals I have

established for myself over the last ten years. You all have and continue to be more significant than you will ever know. I am blessed to have each of you in my life.

To Ms. Jennifer Hefner and Mrs. Julie Morrow: Thank you for encouraging me to pursue an advanced degree in school administration. You two truly amazing ladies have modeled for me what it means to be an effective school administrator. I have thoroughly enjoyed working with both of you. More importantly, I am thankful for your friendship. It has meant so much to me over the years.

To the wonderful staff at Bethlehem Elementary School in Taylorsville, NC: Thank you for all you have taught me over the years about what it means to be a truly effective educational professional and administrator. Each of you has taught me more than I will ever be able to teach you. While I must admit that I am biased, I strongly believe that there is no finer group of educators anywhere. Thanks for your friendship, patience, support, and understanding. I am lucky to be part of such a great team.

To Mr. Jack Hoke, Superintendent of the Alexander County Schools: Thank you for giving me the chance to be part of the amazing school administration team you have created over the course of your superintendency throughout the district. I am fortunate to work for such a great school leader and in such an amazing school district. Your mentoring and leadership have meant so much to me over the years.

To all those friends and colleagues who have supported me, yet who are not specifically mentioned in the Acknowledgements section: You have impacted my life throughout the pursuit of my dissertation. Unfortunately, the scope of this section will not allow me to list all of you. However, I want you to know that I could not have done it without you. Thank you very much!

DEDICATION

I would like to dedicate this dissertation to the memory of the following three amazing individuals: Dr. Dixie McGinty, Edward Dale “Butch” Maynor, and Cora Maynor.

Prior to losing her courageous battle with cancer in 2009, Dr. Dixie McGinty, my former dissertation chair and professor, provided me with consistent encouragement and support both during my coursework and throughout the defense of my dissertation proposal. During my Ed.S. and Ed.D. coursework, Dr. McGinty took a special interest in my success, as well as the success of many of my classmates. With her support, I was able to make the dream of attaining my doctorate a reality.

Although he passed away with cancer in 2000, I can still recall how proud my dad, Edward Dale “Butch” Maynor, was of me when I shared with him that I had made an “A” in my first graduate course in School Counseling. While he passed away less than a week later, it was that memory that encouraged me to continue to work hard and successfully earn all As and to maintain a 4.0 GPA throughout my M.A. in School Counseling, Ed.S. in Educational Leadership, and Ed.D. in Educational Leadership coursework. As I would check my grades at the end of each semester, it was almost like I could feel him looking down from heaven and smiling once again, and it made me want to try that much harder to keep the streak alive for dad.

While she passed away prior to my senior year of high school in 1989, my grandmother, Cora Maynor, was undoubtedly one of the most amazing women I have ever had the pleasure of knowing. Despite having very little formal education, Granny Maynor was always the first to encourage me to work hard in school. I will never forget

how she would say, "Education is something no one can ever take away from you, Chad. While jobs and other possessions can be lost in a matter of moments, education is something that no one can take away from you." Without a doubt, Granny Maynor's words of encouragement are the reason I graduated from high school and later became the first person on the paternal side of my family to graduate from college. I will never be able to thank her enough for the difference those words of encouragement have made in my life.

TABLE OF CONTENTS

	Page
Acknowledgements	2
Dedication	4
Table of Contents	6
List of Tables	9
List of Figures	10
Abstract	11
Introduction	14
Historical Context	14
Background and Rationale	17
Linking Professional Development to the Needs of Teachers	20
Support for PLCs	22
The Need for Principal Support	24
Research Needs	27
Research Questions	27
Significance of Study	29
Delimitations and Limitations of Study	29
Conceptual Framework	30
Summary	31
Review of the Literature	33
Emergence of PLCs	34
School Improvement Efforts	35
Professional Learning Improvements	36
Emphasis on Student Learning	39
Characteristics of PLCs	41
The Principal's Role in Creating a PLC	45
Systematic Change	46
Supporting Teacher Learning	49
Supporting Teacher Leadership	51
The Impact of PLCs on the Practice of Teaching	52
The Impact of PLCs on Students	55
Research Pertaining to the PLC	58
Development and Perpetuation	58
Principal's Role	60
Impact on Students	63
Conceptual Framework	64
Summary	69
Methodology	71
Qualitative Methodology	72
Data Collection	73
Interview Data	73
Interview Questions	74
Interview Process	78
Direct Observations	78

Document Analysis	79
Pilot Study	79
Settings and Participants	80
Process for Selection of Case Study Schools	80
Initial Site Entry	82
Process for Selection of Participants	82
Role of the Researcher	83
Data Analysis and Procedures	84
Interview Data	84
Direct Observations	85
Documentation	86
Integration of Data Sources	87
Trustworthiness of the Findings	87
Summary	88
Findings	89
Characteristics of Participating Schools	89
School A	91
Setting	91
Participants	91
School B	91
Setting	91
Participants	91
PLC Development and Perpetuation at School A and School B	92
The Principals' Role in the Development of the PLCs	103
Theme One for School A and School B: Decision-Making Opportunities	104
Theme Two for School A: Tone Setting	111
Theme Three for School A: Facilitation	114
Theme Two for School B: Caring/Supportive Environment	115
The Principals' Role in the Perpetuation of the PLCs	118
Theme One for School A and School B: Priority/Non-Negotiable	119
Theme Two for School A and School B: Overcoming Time Barriers	123
Theme Three for School A: Conducting a Professional Development Needs Assessment	132
Theme Three for School B: Active Involvement	134
The Impact of PLCs on Improved Instruction and Student Learning	137
Theme One for School A and School B: Sharing/Collaboration	137
Theme Two for School A and School B: Data-Driven Instruction	142
Theme Three for School A: Focus on Student Success	150
Theme Four for School A: Research-Based Instruction	155
Theme Three for School B: Increased Student Participation	159
Theme Four for School B: Differentiated Instruction	162
Summary of Findings for School A and School B	165
PLC Development	165
Principals' Role in the Development of the PLCs	169
Principals' Role in the Perpetuation of the PLCs	172
The Impact of the PLCs on Improved Instruction and Student Learning	175

Conclusion	180
Conclusions	182
Introduction	182
Discussion of Findings	182
Discussion of Research Question One	182
Discussion of Research Question Two	185
Discussion of Research Question Three	191
Discussion of Research Question Four	195
Significance of the Study	200
Strengths of the Study	205
Delimitations and Limitations of the Study	207
Recommendations for Future Studies	208
Implications for Practice	210
Conclusion	211
References	213
Appendices	223
Appendix A: Interview Questions	223
Appendix B: Consent Form	227
Appendix C: Overall Reading and Math Proficiency Rates for School A, School B, and State	230
Appendix D: Quick Reference Guide for the 9 High-Yield Instructional Strategies	231
Appendix E: Three Big Ideas of Being a PLC/Five Learner-Centered Questions	234
Appendix F: Definition of Themes	235

LIST OF TABLES

Table	Page
1. The Principal's Role in the Dimensions of Professional Learning Communities	66
2. List of Themes for Research Questions 2-4	103

LIST OF FIGURES

Figure	Page
2.1 Conceptual Framework	65

ABSTRACT

THE DEVELOPMENT AND PERPETUATION OF PROFESSIONAL LEARNING
COMMUNITIES IN TWO ELEMENTARY SCHOOLS: THE ROLE OF THE
PRINCIPAL AND IMPACT ON TEACHING AND LEARNING

Chad Edward Maynor, Ed.D.

Western Carolina University (March 2010)

Director: Dr. Meagan Karvonen

Professional learning communities (PLCs) provide schools with a tool to meet the professional development needs of their teachers through ongoing, job-embedded staff development designed to improve instruction and student learning. While research exists on the development of PLCs, there is a gap in the literature concerning the principal's role in the development and perpetuation of PLCs and the perceived impact of PLCs on instruction and student learning. The purpose of this study was to explore the development and perpetuation of PLCs at two elementary schools.

The specific research questions addressed in this study were: (1) How did the professional learning communities in two elementary schools develop and perpetuate? (2) What was the role of the principals in the development of a professional learning community in two elementary schools? (3) How have the principals in these two elementary schools perpetuated the professional learning community? and (4) What, if any, relationship do teachers perceive exists between the development and perpetuation of the professional learning and improved instruction and student learning?

The two elementary schools in this study were purposefully selected based on their histories with PLCs and their dramatic growth in student achievement in recent years. Through an ethnographic case study approach that included face-to-face interviews, on-site observations, and document analysis, I explored how the schools developed and perpetuated PLCs and the principals' role in the PLCs development process. The principals in this study allowed teachers input in various school-based decisions, established a tone of professionalism and high expectations, created a caring/supportive environment where teachers felt appreciated and supported, and facilitated the transition of the PLC from development to perpetuation.

Four themes were significant to the principals' role in the perpetuation of the PLCs at one or both schools. The principals in this study ensured the teachers understood the PLC would take precedence over non-teaching responsibilities, worked diligently to overcome time barriers that would interfere with the PLC, conducted needs assessments to ascertain the professional development needs of their teachers, and actively participated in the PLC.

Since the implementation of the PLCs, the teachers in this study have begun sharing/collaborating more frequently, using data to drive instruction, focusing on student success, working to increase student participation, incorporating research-based practices into instruction, and consistently differentiating instruction to meet the needs of students. With the support of the PLCs, classroom instruction and student learning have improved considerably across all grade levels at both schools.

Several implications for research and practice emerged from the study. Future research may want to explore the role of district versus school decisions to implement

PLCs, examine the role of the instructional coach, determine the impact of the principal's leadership style, and explore other forms of data collection. Principals desiring to develop or perpetuate a PLC in their own school may choose to apply this study's findings in their own schools.

CHAPTER ONE

INTRODUCTION

One of the most rapidly emerging improvement efforts in today's schools is the professional learning community (PLC). Though different definitions exist in the literature, a PLC is generally considered to be an educational organization that is characterized by shared vision and values, collective responsibility, reflective professional inquiry, collaboration, and promotion of both group and individual learning (Blankstein, Houston, & Cole, 2008; DuFour, 2004; DuFour, Eaker, & Karhanek, 2004; Hord, 2004; Hord, 1997; Hord & Sommers, 2008; Louis & Kruse, 1995; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). The primary purpose of this study was to investigate the factors that influenced and perpetuated the development of PLCs in two elementary schools. In order to do so, this study examined how the PLCs in two elementary schools were developed and perpetuated. This study also examined the perceptions of leadership practices of principals that supported the development and perpetuation of the PLCs. Lastly, this study examined perceptions of the relationship between development and perpetuation of the PLC and improvement in instruction and student learning. In order to provide the reader with some insight into some of the reasons underlying the emergence of PLCs, Chapter One will begin with a historical discussion of our nation's previous educational reform efforts.

Historical Context

Since the 1960s there has been a dramatic shift in perceptions of the effectiveness of the public educational system in the United States. The Coleman Report (Coleman, Campbell, Hobson, McPartland, Mood, & Weinfield, et al., 1966), *A Nation at Risk*

(NCEE, 1983), *Effective Schools for the Urban Poor* (Edmonds, 1979), and the *No Child Left Behind Act* (NCLB, 2002) have been instrumental in causing a shift in public opinion to the idea that public schools were not producing students with globally competitive skills. As a result, schools have struggled for more than 50 years to overcome the negative perceptions held by the federal government's education policymakers and the general public. Many of those familiar with the history of US education contend the launching of Sputnik by the Soviet Union in 1957 initiated the first efforts of the US to reclaim its place as the world's leader in technology (Berends, 2004). During the same time period, the Civil Rights Movement caused sociologists to study the social inequalities in the nation's schools, including the high dropout rates of minorities, the academic achievement gap between Whites and minorities, and the educational attainment levels of minorities (Berends, 2004). As a result of these perceived inequities, the U.S. Commissioner of Education formed a commission in 1966 to conduct a survey to investigate the magnitude of the issue and to provide a report, *The Equality of Educational Opportunity*, to the President and Congress (Coleman et al., 1966). After controlling for the students' backgrounds, the commission found that school resources had a minimal impact on student achievement, and these findings resulted in criticism of schools and initiated debate over educational effectiveness for years to come (Coleman et al., 1966).

Later in the 1970s and 1980s, research attempted to examine the differences between high-performing and low-performing schools to determine which organizational features present in the high-performing schools improved student learning (Berends, 2004; Edmonds, 1979). This research found that correlations between the features of high-

performing schools and student achievement included the following: school leadership by principals; teachers who focused instruction time on issues that engaged students' academic performance; continuous staff development and training; a school culture that supported collaborative planning time among the school's teachers; a strong sense of community that promoted the school's missions, goals, and high expectations; parental involvement and support of their children's education; and an orderly, safe learning environment (Berends, 2004; Edmonds, 1979). While the research identified many characteristics of effective schools, it was unable to identify any one specific improvement strategy these schools utilized that allowed them to be effective schools (Berends, 2004).

Some years later, the 1983 National Commission on Excellence in Education (NCEE) released a report entitled *A Nation at Risk*, which reported that the US was falling behind other countries in international business competition and placed the blame on the nation's failing education system (Berends, 2004; NCEE, 1983). According to the report, inadequacies of the US's educational system meant that the nation was losing its place as the leader of world economic, technological and business development, and this loss of position subsequently threatened both national security and economic prosperity (Berends, 2004; NCEE, 1983). As a result of these warnings, the 1980s and 1990s saw an increase in graduation requirements as well as system-level changes to restructure our nation's schools (Berends, 2004).

In 2002, governmental educational reform efforts resulted in the passing of the No Child Left Behind Act (NCLB, 2002), which included accountability provisions requiring states to establish rigorous content standards in reading, math, and science, as

well as to define proficiency in these subject areas (NCLB, 2002; Opuda, 2003). Consequently, states were expected to establish annual goals to ensure that all students, including those from previously under-performing subgroups, would achieve proficiency by 2014 (NCLB, 2002; Opuda, 2003). Schools who continuously failed to meet adequate yearly progress (AYP) goals could be subject to state-mandated school improvement sanctions, be required to explain to parents the reasons for the school's failure to make AYP goals, and be required to explain to parents their alternate school choice options (NCLB, 2002; Opuda, 2003). NCLB required the nation's schools to close the achievement gaps between high- and low-performing students as well as between the various population subgroups within these schools, to demonstrate this effort by improving student performance on state-mandated achievement tests, and to keep the public informed of efforts to make these improvements (NCLB, 2002; Opuda, 2003).

Background and Rationale

The US has long history of reform efforts that have failed to meet the goal of improving the quality of education in the nation's public schools, and in recent years, the passing of the No Child Left Behind Act (NCLB, 2002) places schools under more pressure than ever to have all students performing on grade level. Under the NCLB legislation, educators are held accountable not only for providing opportunities for learning, but also for student learning itself. While schools have always professed a desire for their students to learn and achieve at a level comparable to other students at their respective grade level, schools can no longer make excuses for those students who do not learn or progress at the level expected of their classmates (Opuda, 2003). DuFour et al. (2004) note this dichotomy between standardized achievement levels and student

capability: “Although the United States was the first nation to embrace the idea of free universal public education for all its children, historically those children have been guaranteed only the right to attend school rather than the right to learn” (p. 15). Simply affording students the right to attend school, free of charge, is not enough. Schools are now expected to find new ways to help all students learn and to demonstrate this learning with scores that meet a standardized grade level achievement based on annual statewide summative assessments. Schools failing to make AYP toward this goal are subjected to an array of sanctions for failing to attain the mandated achievement levels.

As a result of the increased pressure placed on schools to ensure that all students are performing at the expected levels, many schools have had to examine the way they operate and to take a new approach to schooling. Schools must adapt by making systematic efforts to develop policies, procedures, and programs that are aligned with the purpose of the new mandates to educate all children to achieve appropriate grade-level achievement (DuFour et al., 2004). O’Donovan (2007) noted this change in focus within education operations: “All students must learn. The variable is no longer student learning- that is the outcome. The variables are resources and time allocated to ensure student learning” (p. 95). Schools are now faced with the choice of how they will use their resources and time to meet the mandate that all students learn at an accepted level. The choice is no longer whether or not students will learn, but how schools will ensure that they are learning.

Factors outside of the difficulties presented by No Child Left Behind continue to make teaching a challenging profession. According to Barth (1990), “Teaching others people’s children has become an extraordinarily difficult occupation, made no easier by

‘other people’ who hold little confidence in what educators do and pare away the resources with which they are expected to do it” (p. 11). According to Barth (1990), the public lacks confidence in public education and, in particular, confidence in its educators. Efforts to obtain public support for education are even more difficult when today’s educational leaders are unprepared to meet the needs of our changing society. Wald (2000) states that “diversity, mobility, and technology have emerged as prime forces shaping our daily lives- forces that were minimal to nonexistent 50 years ago” (p. 4). Today, teachers are expected to prepare children for a future which is very unpredictable in today’s rapidly changing society. Furthermore, teachers are also expected to prepare students to compete against children in other countries and continents for jobs in today’s global marketplace. Teachers face demands that are increasing with the changing times, often with fewer resources at their disposal to meet these new educational goals.

Despite these changes, schools are still operating under the same bureaucratic mode of organization, resulting in an educational system that is slow to move in a world that is consistently changing (Wald, 2000). Wald believed schools of today must have the capacity to adapt and should value lifelong learning for staff and families as well as students. According to Wald, “We now live in a technologically sophisticated information age in which knowledge, not goods, is the prize product; fast-paced change, not stability, is the status quo; and futures are created, not predicted” (p. 19). In order to approach these challenges effectively, Wald felt today’s schools need leaders who are committed to school-wide learning and growing, willing to challenge both students and professionals, and capable of transforming schools into powerful learning communities.

One of the ways many schools have been attempting to change the way they typically have operated is by developing PLCs. According to the National Commission on Teaching (2003):

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 to establish a new foundation for America's schools. (p. 1)

The underlying pressure associated with the passing of NCLB's requirements for student learning has forced many schools to undergo a paradigm shift concerning the role of teaching and learning-- for both adults and students-- that otherwise might not have been possible without the legislation so many have criticized (DuFour et al., 2004). Despite any faults or underlying intentions of NCLB, it has caused educators to examine their professional practices critically and to offer personalized learning opportunities for underachieving children. In order to meet the challenge of educating every child, the school's leader must continually communicate to the staff and its stakeholders that learning is the primary undertaking of an effective school (Hord & Sommers, 2008).

Linking Professional Development to the Needs of Teachers

The failed attempts at school improvement by past educational reforms demonstrate that the fundamental supportive cultures and conditions necessary for achieving significant gains in teaching and learning are missing (Morrisey, 2000). Teachers customarily have worked in isolation, struggling to address the needs of their most challenging students and lacking productive interactions with their colleagues through which they might have gained new insights and understandings about effective

practices (Morrisey, 2000). Traditionally, schools have solicited expertise from those outside their own building, while the requisite knowledge and skills have gone untapped within their own school faculty and staff (Hord & Sommers, 2008). While educators are well aware of the importance of providing teachers with quality professional development opportunities and the subsequent impact on teaching and student learning that this professional development produces, schools across the nation continue to spend an enormous amount of money annually on in-service seminars and other types of professional development that often lack continuity, provide very little intellectual stimulation, and fail to consider the research concerning how teachers learn best (Borko, 2004). According to Borko (2004), this type of superficial professional development does not afford teachers the opportunity to engage in supportive, yet challenging, conversations that sustain the critical examination and improvement of teaching practices.

Job-embedded professional development, however, offers teachers the opportunity to have the types of critical conversations needed to impact teaching and student learning, while providing teachers with the support they need from their colleagues. In several studies, efforts to improve classroom instruction by deepening teachers' knowledge of both their subject matter and student thinking have been shown to produce student achievement gains in the classroom (Borko, 2004).

PLCs are one form of job-embedded professional development. From a historical perspective, PLCs can be traced to Little's 1981 research surrounding collegiality and the organizational setting and to Rosenholtz's 1989 study pertaining to differences between "learning enriched" and "learning impoverished" schools; both of these studies focused

on teachers working together to improve instruction (Fullan, 2008). Senge (1990) described an effective learning organization as a place where individuals have the opportunity to expand their capacity to reach desired results, where new ideas and thinking are encouraged and fostered, and where the group was free to explore their aspirations (Huffman, 2003). Several years later, the term professional learning communities (PLCs) emerged from organizational theory and human relations literature (Huffman, 2003).

In their 1996 article, “Putting Teachers at the Center of Reform: Learning Schools and Professional Communities,” Louis, Kruse, and Raywid identified and described the key components of PLCs. Louis et al. initially identified the following five characteristics commonly associated with PLCs: shared norms and values, reflective dialogue, deprivatization of practice, collective focus on student learning, and collaboration, and shared norms and values. The authors further noted that structural conditions surrounding PLCs, such as the time to meet and talk, are often easier to overcome than the cultural conditions, such as openness to improvement, trust, and respect.

Proponents of PLCs argue that teachers cannot be expected to create a community of learners in their classrooms if they do not have a similar community of learners available to nurture their own growth outside the classroom (Borko, 2004). PLCs offer educators the means to take advantage of the underutilized resource of existing knowledge within their own circle of colleagues.

Support for PLCs

PLCs afford teachers the opportunity to step outside the isolation of their classrooms and to engage in meaningful dialogue with their peers concerning the practice

of teaching. As members of a PLC, teachers have the chance to participate in study groups and other professional development opportunities with their colleagues. Since the PLC is based on-site, it can easily be tailored to meet the individual professional development needs of particular schools' teachers. Tapping into the wealth of knowledge within the school gives teachers the opportunity to engage in high-quality professional development facilitated on-site by teaching peers and instructional coaches who are knowledgeable of the day-to-day operations of the school and the needs of its students, and who are easily accessible and readily available to answer follow-up questions and to provide additional support. This network provided by a PLC would eliminate the frustration often experienced by teachers who previously struggled in isolation to decipher how to meet the demands of their students.

In an effort to reach the goal of improved student learning, PLCs focus on enhancing the quality of teaching students receive in the classroom. One means of improving instructional methods is to allow teachers the opportunity to discuss with their colleagues how they might best improve teaching practices and ultimately impact student learning. Without these types of conversations, teachers can often become stagnant in their teaching practices. In order to avoid this type of stagnation, it is imperative that schools develop into centers of inquiry for both adults and children (Joyce, 2004). Professional development efforts must remain cognizant of the need to create a community of learners, which includes both students and teachers. According to Morrisey (2000), "New programs or practices that do not acknowledge and address the underlying issues will merely scratch the surface, and are unlikely to be sustainable over time to benefit learning" (p. 12). PLCs and the collegial conversations that they inspire

lead to an exchange of ideas that ultimately benefit both teachers and students in lasting and meaningful ways.

Considering the cost of funding teacher participation in professional development seminars and workshops, schools are beginning to explore the benefit of the job-embedded, on-site professional development provided through PLCs. Such professional development can effectively focus on improving student achievement, classroom instruction, and student learning, and by using the resources they already have on-site, schools save both money and time. PLCs can also offer a forum for maximizing a school's professional development expenses, allowing teachers who attend off-site professional development the means to train their teaching peers and share new knowledge.

According to Fullan (2008), the current research surrounding PLCs has shifted from examining how PLCs operate to exploring how schools can develop effective PLCs. As the literature surrounding the development of PLCs increases, so will the opportunities to build upon the base of empirical research and to examine the efforts of schools that seek to develop into PLCs (Fullan, 2008).

The Need for Principal Support

As a result of the recent shift in research focus from the operational characteristics to the developmental components of PLCs, additional opportunities exist to explore how school leaders have successfully established and perpetuated PLCs within their respective schools. Stoll et al. (2006) commented on the need for further research, noting that “the paucity of longitudinal research on PLCs means little is yet known about the potential for establishing enduringly effective PLCs” (p. 247). Stoll et al. determined that PLCs are

undoubtedly worth the time and effort required to create and develop them, yet there continues to be much to learn about their sustainability. After reviewing over twenty pieces of literature, which included both articles and books related to leading a PLC, and after examining the research on this topic, Stoll et al. determined that principals do, in fact, play a critical role in establishing the conditions necessary to develop and perpetuate a PLC. These conditions included creating a learning culture, ensuring learning at all levels, promoting inquiry, and distributing leadership opportunities (Stoll et al., 2006). In a study of high schools, McLaughlin and Talbert (2001) determined that:

For better or worse, principals set conditions for teacher community by the ways in which they manage school resources, relate to teachers and students, support or inhibit social interaction and leadership in the faculty, respond to the broader policy context, and bring resources into the schools. (p. 98)

Principals who recognize their role as leaders, then, can work to make effective PLCs a valuable means of improving the educational efforts of their schools.

Hord (2004) determined that the principal's ability to implement the five dimensions of a PLC were essential to the development and sustainability of a PLC within a school. These five dimensions are:

1. shared and supportive leadership,
2. shared vision and values,
3. collective learning and application of learning,
4. supportive conditions, and
5. shared personal practice. (Hord, 2004)

Based on the results of the study, both the principal's actions and the teachers' perceptions of those actions played a critical role in the creation of the PLC.

Additionally, the teachers' perceptions of their principal's efforts impacted the support the principal received from teachers, as well as the potential of the school to develop into a PLC (Hord, 2004).

As the leader of the PLC, principals must balance the basic needs of the organization while making the best use of the organization's resources and time (Morrissey, 2000). Hord (2004) found that principals who were able to develop and sustain the five dimensions of PLCs were able to cultivate collective vision and values, support shared decision-making, promote continuous learning, encourage collaboration, and provide support. According to Capers (2004), although Hord's dimensions of PLCs will develop differently in different schools, shared leadership is typically the first to develop and shared practice is typically the last to develop. For definitional purposes, *shared leadership* involves the sharing of leadership responsibilities and can include such things as the preparation and development of the school's purpose and goals, identification of specific learning needs, and the selection of content and strategies designed to improve teachers' learning and skills (Blankstein et al., 2008). The last characteristic to develop, "shared practice", involves peer support of peers in their improvement efforts. Shared practice can include such things as a teacher's inviting another teacher to observe a specific lesson or teaching activity and to provide feedback and suggestions following the observation. This type of shared practice has the potential to improve the practice of the host and visiting teachers as well as the organization (Blankstein et al., 2008).

Research Needs

A review of literature pointed to significant gaps in empirical research pertaining both to the principal's role in the development and perpetuation of the PLC and to the teachers' perceptions of the impact of PLCs on instruction and student learning. The researcher located only eight dissertations that pertained both to PLCs and to leadership. None of these studies gathered qualitative data from both principals and teachers to determine how elementary school principals influence the development and perpetuation of a PLC and how teachers perceived the impact of the PLC on student learning (Chan-Remka, 2007; Lodico, 2003; McKinney, 2004; Perez, 2007; Richardson, 2003; Stevens, 2007; Stropkaj, 2002). A search of multiple databases yielded few additional research studies closely related to the topic of this study.

As the reader will see in the Chapter Two, while much has been written about the value of PLCs and the characteristics of PLCs, there has been very little empirical research on the development and perpetuation of PLCs, particularly at the elementary school level. While several studies addressed the importance of the principal, the majority of the findings do little more than to support the need for principal involvement. Lastly, none of the research examined teachers' perceptions of the impact of the professional learning on improved instruction and student learning. This study seeks to address the need for additional research in these areas.

Research Questions

In order to add to the existing knowledge pertaining to PLCs, this research study will examine the perceptions of principals, instructional coaches, and teachers pertaining to the role of the principal in the development and perpetuation of PLCs. Additionally,

the research will attempt to determine the perceptions of principals, teachers, and instructional coaches concerning what, if any, relationship exists between the development and perpetuation of the PLC and improved instruction and student learning.

Specifically, the following research questions will be addressed:

1. How did the PLCs in two elementary schools develop and perpetuate?
2. What was the role of the principals in the development of a PLC in two elementary schools?
3. How have the principals in these two elementary schools perpetuated the PLC?
4. What, if any, relationship exists between the development and perpetuation of the PLC and improved instruction and student learning?

For definitional purposes, *development* pertains to the first year of the implementation of the PLC model at both schools and may include ways the principals introduced the PLC at their schools, steps the principals took to implement the PLC within their schools, and a general description of the overall developmental process of the PLC. In this study, *perpetuation* pertains to the second year of the implementation of the PLC model at both schools and may include ways the principals at these schools expanded upon their efforts to improve the PLC model on a school-wide level, steps the principals took to perpetuate the PLC at their schools, and a general description of the overall perpetuation process of the PLC. Through interviews, observations, and examination of various artifacts associated with the PLCs in these two elementary schools, I was able to explore and describe the role of each school's leader in the development and perpetuation of PLCs within their own unique system of practice. The

intent of the study is to add to the knowledge base related to principal leadership practices that support the development and perpetuation of PLCs in elementary schools, as well as to determine the perceptions concerning the relationship between the development and perpetuation of the PLC and improved instruction and student learning.

Significance of the Study

A current shift in research from defining the operational characteristics of PLCs to studying the developmental aspects of sustaining PLCs allows researchers to move beyond determining whether or not a school possesses the characteristics of a PLC to examining how schools establish and perpetuate effective PLCs. Since both of the schools in this study have principals, instructional coaches, and teachers who were present from the inception of the PLC, I was able to examine the efforts of the principal toward the implementation and development of the PLC as well as to ascertain the impact of the PLC on improved instruction and student learning. The qualitative nature of this study provides the reader with rich data pertaining to how each school's PLC developed and perpetuated, the role of each school's principal in the development and perpetuation process, and the perception pertaining to the impact of the PLC on improved instruction and student learning.

Delimitations and Limitations of the Study

While this research study has the potential to be significant, it has its delimitations as well. Since each school has its own distinctive characteristics, simply modeling the successful efforts of one school does not guarantee success at another school. The researcher does not contend that following the practices of either of these schools and their principals would ensure that another school will be able to develop and perpetuate

its own PLC. While both the PLC and the school's principal have the potential to improve instruction and student learning, there are too many other factors to imply causation in this study. Consequently, this research study is not intended to be a how-to guide for struggling schools. If schools hope to improve, it will take the hard work of everyone involved, including parents, students, and community members, to achieve successful school improvement efforts. Although certain models, such as the PLC, have the potential to positively impact both practice and results, there is unfortunately no universally definitive model for improving education. The fact that these schools are both from the same district is also a delimitation as well. As a result, this research provides no assurance that the successful efforts of these two schools will readily transfer to another school setting.

The methodology of this study is also not without its limitations. Since the participants were selected by the principals, I cannot guarantee the opinions of those in this study accurately reflect the opinions of all the schools' teachers. Aside from the impact of convenience, access, and geographic proximity on the two schools selected to participate in this study, the breadth and depth of this research study limited my ability to make regular, on-going, and consistent visits of both sites. These types of observations potentially could have improved and further supported the role of the principals in the development and perpetuation of the PLCs and the subsequent impact on instruction and student learning.

Conceptual Framework

The conceptual framework for this study illustrates the intersection of three phenomena: (1) the development and perpetuation of each school's PLC as understood

through Hord's (1997) five dimensions of a PLC; (2) the role of the principal in the development and perpetuation of a PLC; and (3) the impact of PLCs on improved instruction and student learning. Hord's (1997) five dimensions of a PLC provide the definitional basis to support the existence of a PLC at each of the schools participating in this study. This study examines the principal's role in the development and perpetuation of each school's PLC, as well as the impact of the school's PLC on improved instruction and student learning. In an effort to fully understand the systematic change needed to support each school's PLC from the development to the perpetuation stage, it is important to understand the principals' role in creating a learning environment where teacher leadership and improved teacher learning can translate into improved instruction and student learning. All three of the above-mentioned phenomena are critical for interpreting and fully understanding the findings in this study.

Summary

In summary, PLCs offer administrators the opportunity to address the professional development needs of their teachers as well as impact the achievement of their students. By establishing a community of learners aimed at a common goal, PLCs offer school leaders a viable means of meeting the needs of both teachers and students. In light of the years of failed school reform efforts, PLCs can offer a job-embedded professional development opportunity that will allow school leaders and teachers to critically examine the existing needs of their students, to seek possible solutions to meet these needs, and to continually reflect upon and assess the effectiveness of their efforts to meet the needs of all students by improving the practice of teaching.

Chapter Two will further discuss the relevant literature pertaining to PLCs as well as the literature related to the specifics of this study. Chapter Three will discuss the research methods and data analysis procedures utilized in this study. Then Chapter Four will offer a discussion of the specific findings of this study. Lastly, Chapter Five will present the conclusions of the researcher, offer suggestions for future research studies, and discuss the implications for practice.

CHAPTER TWO

REVIEW OF THE LITERATURE

This chapter explores the literature relevant to the development and perpetuation of professional learning communities (PLCs) as it relates to this study's four research questions. Special attention is given to PLC literature pertaining to the practice of teaching, the impact on students, and the role of the principal. This literature review is divided into the following five sections: (a) The Emergence of PLCs, (b) The Characteristics of PLCs, (c) The Principal's Role in Creating a PLC, (d) The Impact of PLCs on the Practice of Teaching, and (e) The Impact of PLCs on Students. The intent is to provide the reader with a thorough understanding of the topic as well as to support the need for this particular research study.

The Emergence of PLCs

Prior to understanding the characteristics of PLCs, it is important to understand the reason for the emergence of this type of professional community. Blankstein, Houston, and Cole (2008) note that for many years, schools have tried with little to no success to close the achievement gap with quick-fix programs, increased technology, and additional tutoring requirements. Proponents of the PLC argue that this gap exists because not all teachers have the opportunity to develop the skills they need to help all children succeed in schools. By enhancing teachers' knowledge and skills, improving their instructional strategies, and providing them with the ability to apply and deliver instructional strategies appropriately, schools are providing teachers with the tools they need to help all children succeed in school. Blankstein et al. found that such an approach offers "a powerful response to these expectations for increased knowledge and improved

instructional practice” (p. 24). Part of the power of PLCs is that they focus on improving the knowledge and skills of all staff members, not just a few teachers, so that all students, not just a few, have access to high-quality instruction designed to help every student achieve at the highest levels. PLCs provide a staff development and improvement approach that has the potential to produce school-wide advancements in student achievement and in overall effectiveness (Blankstein et al., 2008).

In recent years, PLCs have received support from teachers and teacher organizations, including The National Commission on Teaching (2003). The National Commission on Teaching supported the development of learning communities that encourage teacher input into their professional development needs, build on the existing knowledge and skills of each teacher, and consider the needs of students when making these decisions. School administrators nationwide have also advocated PLCs in our nation’s schools. The National Association of Elementary School Principals (2002) made the following comments concerning the practical applications of PLCs:

If adults don’t learn, then students won’t learn either. No matter how good school goals are they cannot be met if the school isn’t organized to accomplish them. The school operates as a learning community that uses its own experience and knowledge, and that of others, to improve the performance of students and teachers alike... A culture of shared responsibility is established, and everybody learns from one another. (p. 5)

PLCs offer educators the opportunity to improve schools from within by providing teachers with the skills necessary to support student learning at all levels.

School Improvement Efforts

Policymakers have struggled for decades to determine the best means to provide our nation's children with a chance to meet challenging world-class standards. In an effort to meet these challenges, many school systems are beginning to examine their professional development models (Seltzer & Himley, 1995). Now, perhaps more than ever, schools are expected to ensure all students are performing at grade level. As a result, leaders in the field of education have been forced to examine school improvement efforts at the school level. McLaughlin and Talbert's (1993) longitudinal research of sixteen high schools in California and Michigan revealed that "teachers' groups and professional communities offer the most effective unit of intervention and powerful opportunity for reform" (p. 18). Bryk, Deabster, Easton, Luppescu, and Thum (1994) recommended helping schools to develop PLCs to create a learning environment for adults as well as students, which would help schools to achieve the full potential from their reform efforts.

Professional development designed to improve the expertise and capacity of teachers, including opportunities to obtain the necessary prerequisite knowledge and skills needed to instruct and prepare students for the future, is one of the most viable alternatives to meet our nation's systematic school reform efforts (Halverson, 2003; Seltzler & Himley, 1995). Since emerging research suggests that PLCs possess the potential to develop the capacity of individual teachers, by providing motivation, skills, positive learning, organizational conditions and culture, and infrastructure of support, as well as the potential to sustain improvement and capacity of the school, PLCs have become a popular idea in many countries (Stoll, Bolam, McMahon, Wallace, & Thomas,

2006). While increasing capacity and improving the quality of the professional development teachers receive is important, the improved learning must translate into the classroom to be truly effective. As a result, a shift in focus is critical.

Professional Learning Improvements

DuFour (2004) claimed if schools are to improve, teachers and administrators must work together to build a community focused on learning, instead of on teaching, which has been the focus so often in the past. While educators recognized that quality teaching is significant, the goal of teaching is student learning (DuFour, 2004). Buffman and Hinman (2006) asserted that if the ultimate goal of teaching is student learning, PLCs offer the teachers in schools the opportunity to learn together and to develop a systematic plan to meet this goal. Teachers need opportunities for collegial interaction and sharing, where they can learn from one another and can tap into the wealth of knowledge the members of the group possess (Shaughnessy, 1998). Wald and Castleberry (2000) posited that the fragmented, haphazard efforts of the past have failed to offer these opportunities.

Literature showed that the kind of ongoing collaboration referred to as part of a PLC is contrary to the types of professional development teachers have become accustomed to over the years. Traditionally, the so-called “standard issue staff development” has been too short, often faddish, has provided little follow-up, and often has featured “experts” who “deliver” knowledge about teaching rather than organizing teachers for continuing collaboration and practice (Joyce, 2004, p. 80). Drago-Severson (2004) contended that “one size fits all” models of staff development adds to the feeling of isolation often associated with teaching and often does not address the real “needs” of teachers (p. 40).

According to Shaughnessy (1998), “The professional community of learners in a school is a powerful professional development and school change strategy, because the learning of this community focuses on staff learning and this, in turn, produces enhanced student outcomes” (p. 13). Barth (1990) offered an analogy to describe PLCs: “A school as a community of learners is the ‘coat rack’ on which are hung many supporting components and to which all other pieces are fastened” (p. 161). Barth (1990) contended, “A ‘good school’ is a place where everyone is teaching and everyone is learning-simultaneously under the same roof” (p. 162). PLCs generate conditions for teachers to acquire knowledge, to collaborate with others, and to test new ideas concerning the practice of teaching (Halverson, 2003).

As teachers learn with and from one another within the confines of a PLC, a community of practice often develops within in the school. According to Buysse, Sparkman, and Wesley (2003), “A community of practice generally can be defined as a group of professionals and other stakeholders in pursuit of a shared learning enterprise” (p. 266). Other efforts to create a community have focused on the settings or fields where learning takes place, whereas communities of practice focus on the personal and social connections that learners make and the participation patterns that develop as the members of this community pursue similar issues and concerns (Buysee et al., 2003).

Communities of practice often include a group of professionals focused on shared learning experience, usually on a specific topic (Buysee et al., 2003). In communities of practice, researchers and practitioners work together to improve education. According to Buysee et al. (2003),

This perspective extends the previous notions of communities of practice in education which have concentrated primarily on using this approach to promote professional development. It also extends current notions about collaborative inquiry and the role of teacher participation in research aimed at improving educational practices. The idea that practitioners and researchers should work together to co-construct knowledge as part of a common enterprise, rather than through separate endeavors, could have far-reaching consequences for connecting what we know with what we do in education. (p. 275)

In PLCs, the shared learning enterprise involves the pursuit of improved instruction and student learning at the district, school, or classroom level. Teachers in PLCs use the research to improve their professional development. Rather than working as researchers themselves or with the researchers to become experts in the field to conduct active research, teachers in PLCs frequently rely on the experts in the field in order to become experts in the field.

Contrarily, communities of practice go one step further by adopting a scientific inquiry approach that combines research production and research understanding as part of the same process, strengthening the connection between systematic inquiry and learning for the benefit of the larger educational community (Buysee et al., 2003). However, similarities between the two exist. Since the knowledge attained is situated in experience, which is understood through critical reflection with others who share this experience, PLCs foster a community of practice at the district, school, or classroom level as teachers share their experiences with one another and reflect upon what needs to be done to achieve a common goal (Buysee et al., 2003).

Much like communities of practice, PLCs develop over time as part of the shared experience (Buysee et al., 2003). Consequently, the primary difference between “communities of practice” and a PLC appears to be between the roles of the practitioner in the learning process. In PLCs, not only is the focus of the learning designed to improve the professional capacity of teachers, it is also intended to improve the learning opportunities teachers provide for their students in the classroom as well.

Emphasis on Student Learning

While the major objective of a PLC is for the staff to learn together, the focus of this learning must be directed toward meeting the needs of students. According to Blankstein et al. (2008), “The staff learning occurs more deeply and richly in interactions and conversations in which staff members pursue intentional learning, share new knowledge, test ideas, ask questions, gain clarification, debate conclusions, and seek consensus on how to transfer new learning into practice” (p. 27). According to the literature, the following three essential questions have driven the work of the PLC model: (1) What do educators want each student to learn- by grade level, by course, or by unit of instruction?; (2) How will schools know when each student has acquired the necessary knowledge and skills?; and (3) How will schools respond to improve current levels of learning when students experience initial difficulty? (Buffman & Hinman, 2006; DuFour, 2004; DuFour, DuFour, Eaker, & Karhanek, 2004). Buffman and Hinman (2006) believe that while the answers pertaining to what schools want students to learn and how to know when they have learned it are often dictated by the state and federal government and assessed through an array of tests, the process of teacher collaboration in addressing these two questions is the paradigm shift schools need to truly become a PLC. How schools

answer the third question is the “magic” of a true PLC (Buffman & Hinman, 2006). A school’s faculty that desires to be a true PLC must work collaboratively with one another to find their own unique answers to how they will respond when students are not learning (Buffman & Hinman, 2006). The area of concentration is determined after the faculty investigates student performance data and determines where students are doing well and where improvement is needed, which then drives what the faculty needs to learn and how they will learn it (Hord & Sommers, 2008). Consequently, the analysis of student data drives the professional development needs of the school’s faculty. Hord and Sommers (2008) concluded that principals who sustained focus on such faculty learning found that student learning also increased.

During their research into how schools respond when students do not learn, DuFour et al. (2004) determined that a school claiming to be PLC should be able to answer the following questions in the affirmative: “(1) Is our response based upon INTERVENTION rather than remediation? (2) Is our response SYSTEMATIC? (3) Is our response TIMELY? and (4) Is our response DIRECTIVE?” (p. 7-8). In support, O’Donovan (2007) claimed that schools who could honestly answer all of the above-mentioned questions were clearly making an effort to develop a PLC at their respective schools, not merely attaching a catchy title to the same old efforts of the past. True PLCs employed a cyclical process in which teachers adjusted instruction and shared best practices based on student achievement and, conversely, developed interventions when students were not demonstrating achievement (O’Donovan, 2007).

While the PLCs offer suggestions, there was no single best response teachers could make when student were not learning. According to Marzano (2007), known for his

work with research-based instructional practices, “No amount of further research will provide an airtight model of instruction. There are simply too many variations, types of content, and types of students encountered across the K-12 continuum” (p. 4). Marzano claimed schools and teachers must determine which strategies to employ with the right students at the right time, making teaching as much an art as a science. By working together in collaborative learning communities, schools are able to increase both their knowledge base and their chance of striking a balance between the art and the science of teaching that works in their schools, with their students, with their staff, and within their community.

In a PLC, educators work together to improve their professional expertise with the intent of positively impacting student learning. While the common goal is to improve student learning, educators must determine how they will respond when students are not learning. A community of learners is created as a result of the collective efforts of the group to work together to achieve a common goal.

Characteristics of PLCs

Beyond the philosophical reasons underlying the emergence of the PLC, it is important to have an understanding of the unique characteristics of PLCs. The review of the literature identified mission, vision, values and goals as the driving forces behind PLCs. While there is not an agreed upon definition of a PLC, specific characteristics and dimensions can be found in the literature.

Hord (1997) identified PLCs as “schools in which the professional staff as a whole consistently operates along five dimensions: (1) supportive and shared leadership, (2) shared values and vision, (3) collective learning and application of learning (formerly

identified as collective creativity), (4) supportive conditions, and (5) shared personal practice” (p. 15). When faculty members learn together, grow together, and work collectively to reach a shared goal, the faculty’s shared purpose of improving student learning outcomes organizes all contexts within a PLC (Morrisey, 2000).

The basic structure of a PLC is a collaborative team whose members work interdependently to achieve a common goal (DuFour et al., 2004). DuFour et al. (2004) proposed that “people who engage in collaborative team learning are able to learn from one another and thus create momentum to fuel continued improvement” (p. 3). Through collective inquiry designed to explore best practices and current student levels of functioning, schools are able to question the status quo, to find new ideas and methods, to test those ideas and methods, and then to reflect on the results. By questioning current practices, exploring new practices, putting these findings into action, and examining the results-- not merely the intentions-- members of the organization are forced to consider the following four essential questions: (1) What is our primary purpose? (2) What do we expect to become? (3) What are our strategies for improving? and (4) By what criterion will we evaluate our improvement efforts? (DuFour et al., 2004). While many schools have professed to have a mission to guide the school’s daily work and a loosely developed plan to achieve their goals, not all schools have a measure to assess their improvement efforts. Despite having commonly identified purposes, outcomes, and strategies, many schools fail to develop an evaluative measure to determine whether or not they are actually meeting the goals of the school’s PLC. Without an effective evaluation tool, these schools are unable to evaluate the success or failures of the school’s

PLC or make the changes needed to develop a successful PLC. As a result, many of these schools are operating as a PLC in name alone.

The literature revealed that PLCs, with their focus on structured teacher collaboration, are one of the practices the educational research community can agree upon (Barlow, 2005; Blankstein et al., 2008; DuFour et al., 2004; Hord, 2004; Hord & Sommers, 2008; Morrissey, 2000; Seltzer & Himley 1995). In an *Education Digest* article, Barlow (2005) stated:

The right kind of continuous, structured teacher collaboration improves the quality of teaching and pays big, often immediate, dividends in student learning and professional morale in virtually any setting. Our experience with schools across the nation bears this out unequivocally. (p. 76)

As Barlow's (2005) comment suggests, providing teachers with structured opportunities to collaborate with one another has been shown to improve the quality of teaching in the classroom and to promote student learning. To create an effective PLC, schools must be willing to change their practices.

In research supported by the Southwest Educational Developmental Laboratory, Morrissey (2000) identified the following four key themes that describe effective PLCs:

1. A professional learning community is not a thing; rather, it is a way of operating.
2. Change requires learning, and learning motivates change.
3. When staff work and learn within professional learning communities, continuous improvement becomes an embedded value.

4. Professional learning communities exist when each of the five dimensions (supportive/shared leadership, shared values/vision, collective learning, supportive conditions, and shared personal practice) are in place and working interdependently together. (p. 23)

Hord and Sommers (2008) contended that “the PLC structure in a school is one of continuous adult learning, strong collaboration, democratic participation, and consensus about the school environment and culture and how to attain that” (p. 10). The key to creating a school where failure is not an option is transforming the school culture (Blankstein, 2004). Over time, a culture of collegiality must develop within the school (Hord & Sommers, 2008). Part of the power of a PLC is not just that the teachers are collaborating, but that the teachers are collaborating about an area of interest the entire community deems to be important, creating an environment where collective learning can take place (Hord & Sommers, 2008). By establishing a culture of collaboration and collective learning, which is aimed at a common goal, schools are able to create a structure conducive to developing and sustaining a PLC. In order to change the culture and structure of the school, the school’s professionals must be willing to change the way they operate and practice.

According to Hord (1997), the requirements necessary for organizational arrangements that produce academically successful PLCs are quite clear in the literature. Such requirements include opportunities to develop a shared vision based on the unwavering commitment of teachers to student learning, which is consistently articulated and reinforced through the teachers’ work. Successful PLCs also encourage collective learning among the school’s teachers and the application of this learning to solutions that

address students' needs; such collaboration can include visitation and review of each teacher's classroom behavior by peers who can provide feedback, support, and a basis for individual and community improvement. Unfortunately, without the support of principals, these PLCs that are designed to improve teaching and student learning often fail to develop and to perpetuate.

The Principal's Role in Creating a PLC

As the instructional leader in the school, the principal is in an ideal position to foster school improvement efforts (Blankstein et al., 2008; DuFour et al., 2004; Engstrom & Danielson, 2006; Hord, 1997; Hord & Sommers, 2008; Huffman & Jacobson, 2003). Hord's (1997) five dimensions purport that the leadership within the school is critical to the success of a PLC. As Morrissey (2000) stated in his review of the five dimensions of a PLC, "the traditional role of the omnipotent principal has been replaced by a shared leadership structure" (p. 5). After studying teachers' perceptions of an on-site staff development model, Engstrom and Danielson (2006) determined that district-level professional development initiatives do not necessarily extend to the school level without the participation of administrators who are willing to coordinate, organize, and participate in the collaborative professional development efforts in their respective schools. While district-level support can be extremely helpful, administrators at the school level needed to be actively involved in the development of a systematic approach to professional development, which includes creating opportunities that encourage teacher-led professional development (Engstrom & Danielson, 2006).

If schools hope to develop into PLCs, the support of the school's principal is critical (Blankstein et al., 2008; DuFour et al., 2004; Engstrom & Danielson, 2006; Hord,

1997; Hord & Sommers, 2008; Huffman & Jacobson, 2003). The collegial and facilitative participation of the principal who shares leadership authority and who encourages staff input in decision making is critical for organizations that desire to develop and perpetuate into PLCs (Hord, 1997). In a PLC, creating ongoing conversations, encouraging participation, and sharing educators' learning must be part of the principal's role (Hord & Sommers, 2008). In many instances, this type of change requires principals who are willing to alter the way the system has traditionally operated, with the understanding that they cannot affect such change on their own. Principals need the support of the school's teachers, including the teacher leaders, and should continuously encourage school-wide collaboration efforts. PLCs offer principals the opportunity to encourage a sharing of the wealth of knowledge available within their own schools and to promote collaboration that will promote increased student learning.

Systematic Change

Simply changing the perceptions of principals concerning the need for systematic change is not enough. Principals must be able to change the perceptions of their staff as well. However, this type of systematic change takes time to develop and to perpetuate. If reforms are to become institutionalized, a systematic change process over time is essential (Huffman & Jacobson, 2003; Ogawa & Bossert, 1995). Historically, one of the factors that have impeded school reform is the limited and narrow focus of the administrative leadership in schools. In order for school reform to be successful, a collaborative approach to leadership is important within the learning communities, and this collaboration needs to include the considerations for all of its stakeholders, including students, teachers, families, and communities. Leaders who foster change do so by

collaboratively guiding their schools to develop and articulate a shared vision, to learn collectively, to share personally and professionally, and to engage in meaningful long-range planning that provides support for teachers and students (Hord, 1997; Huffman & Jacobson, 2003). If administrators are intent on developing PLCs, they need to put teachers in a role that allows them to actively seek information and to construct meaning from their learning experiences and materials (Shaughnessy, 1998).

The job of schooling is too complex for one individual; consequently, principals need to empower teacher leaders to assist in the process. Sharing leadership roles with teachers and practicing distributed leadership allows principals and their schools to benefit from teachers' expertise and knowledge (Blankstein, 2004; Drago-Severson, 2004; Hord & Sommers, 2008). Distributing responsibility among participants in the organization makes leadership a network of relationships, not a role assigned to or acquired by a single person in the organization that uses their power to manipulate the actions of others (Blankstein, 2004). Providing multiple leadership roles also offers challenges, support and opportunities for growth to the individuals who assume such roles.

Research on principal leadership for professional growth and development found that schools function most effectively when teachers have a voice in sharing leadership, shaping the community, and promoting change (Drago-Severson, 2004). In these schools, principals use collegial inquiry to invite teachers to reflect on the school's missions, practices, and proposals for change. By sharing perspectives and listening to one another, adults at the schools worked together to assume shared responsibility in shaping the school community.

Blankstein (2004) claimed the three key words for long-term success are leadership, capacity, and sustainability. When considered together, these three simple words accentuated the importance of constantly developing the human resources of the school community so that success lasts well beyond the initial implementation of school improvement efforts. Blankstein (2004) established that shared or distributed leadership is a vital ingredient to creating a successful learning community. Additionally, Blankstein (2004) contended that in order to sustain educational changes, the following six key and interrelated characteristics need to be present:

- improvement that sustains learning, not merely change that alters schooling
- improvement endures over time
- improvement that can be supported by available or achievable resources
- improvement that is a shared responsibility
- improvement that doesn't impact negatively on the surrounding environment of other schools and systems
- improvement that promotes ecological diversity and capacity throughout the educational and community environment. (p. 202)

Additional research stated that lasting improvements must be the shared responsibility of all those involved and must focus on the collaborative efforts of a community of learners, which includes both administrators and teachers who are committed to improving their schools from within (Blankstein, 2004; Hord, 1997; Hord & Sommers, 2008).

Researchers affirmed that principals who hope to sustain these efforts must be willing to take the time to build a sense of community among the key stakeholders in their schools (DuFour et al., 2004; Hipp, Huffman, Pankake, & Olivier, 2008). Teacher

investment in the improvement process is also critical if changes are to continue. Hord and Sommers (2008) affirmed that of the many elements necessary for the success of a PLC, leadership and collegial support are two of the most critical.

The support and maintenance of central components of teaching and learning that persist over time, that increase complex understanding, and that foster continual learning for everyone, form the foundation of a truly sustainable educational improvement effort (Blankstein, 2004). The school's leader must continually communicate to the staff and its stakeholders that learning is the business, product, and process of an effective school (Hord & Sommers, 2008). The researchers contended that in a PLC, it is the principal's responsibility to focus the school's efforts on teaching and learning, as well as to guard against attempts to jeopardize the time needed for the school to come together as a community of learners (Drago-Severson, 2004; DuFour et al., 2004). Blankstein (2004) asserted that simply continuing practices designed to improve test results or to create easily manageable data are not how schools foster the deepest levels of teaching and learning. Teachers need the support of principals who encourage their learning efforts.

Supporting Teacher Learning

Although collaborative learning is often listed as a value to teach students, teachers in most schools fail to model this practice and rarely, if ever, are engaged in deep and meaningful learning for the sake of their students (Shaughnessy, 1998). Darling-Hammond and Sykes (1999) suggested that while schools spend a great deal of money on professional development, most of the sessions and workshops are intellectually superficial, detached from deep issues of curriculum and learning, disjointed, and non-cumulative. Professional development often has lacked consistency,

coherence, and curriculum because there has not been a coherent infrastructure governing its production (Darling-Hammond & Sykes, 1999).

As instructional leaders, principals are in an ideal position to support teacher learning in schools. By formally or informally assessing the professional development needs of teachers and by forming a professional development advisory committee made of teachers, the principal is in a position to design and shape the professional development plan for the school. State and district personnel often develop professional development directives and requirements, but most schools' schedules do not allow for enough flexibility to implement individual school-wide professional development plans to meet the specific learning needs of the schools' teachers. A principal who develops a school-specific plan can support a clearly defined, job embedded, and learning specific professional development plan to meet the learning needs of teachers.

Shaughnessy (1998) claimed that, "research on the learning process has shown that learning is maximized when we are clear about our targets and provide definitions about the types of skills which are expected from the learner" (p. 5). According to this research on the promotion of lifelong learning, when individuals interacted with a variety of people and had the chance to engage productively with one another, they increased their chances of experiencing deeper learning (Shaughnessy, 1998). An essential element of any serious education is continuous, attentive discussion among learners and teachers because it brings focus to analysis, criticism, and communication of ideas, practices, and values (Darling-Hammond & Sykes, 1999; Shaughnessey, 1998). In schools where these learning-enriched environments exist, Darling-Hammond and Sykes (1999) concluded that by working in the company of other professionals, teachers have been found to

compare their interpretations and decisions with those of others, to confront inherent inconclusiveness and incompleteness of knowledge, and to strive for reasoned and reasonable professional judgment. Other researchers found that it is not uncommon to find shared goals, an increased sense of teacher efficiency, a collaborative culture, and a stronger sense of teacher commitment (Drago-Severson, 2004; Shaughnessy, 1998). Fostering such teacher learning also supports the development of teacher leadership, and with all of the demands placed on schools today, principals need the support of such strong teacher leaders within their schools.

Supporting Teacher Leadership

While strong principals are necessary to initiate PLCs, the word “community” also suggests that these principals must be willing to share leadership responsibilities (Blankstein et al., 2008). This sharing can include identifying, preparing, and selecting the PLC’s purpose, goals, and learning needs; it can also involve developing the strategies needed to improve the knowledge and skills of the PLC’s members (Blankstein et al., 2008). A learning-enriched environment that successfully develops in a school requires the collegial and facilitative participation of principals who are willing to share leadership, seek staff input, and participate in shared decision-making (Hord, 1997; Hord & Sommers, 2008). Engstrom and Danielson (2006) asserted:

Effective professional development models recognize the knowledge that teachers have about their content areas, school environments, and students. These models are centered on the concept of shared leadership or teacher leadership and utilize a collaborative learning process that is authentic and embedded into the teachers’ work day. (p. 170)

In order for this type of leadership framework to occur, principals must be willing to offer teachers opportunities to fill leadership roles, to solicit input from the key stakeholders, in this case teachers, and to allow staff to have a voice in the decision-making process within the school. Principals who are willing to do these things often find their support from staff increases as teachers feel invested in a democratic school process that allows their hears their voices and values their opinions. Through these types of shared and supportive leadership practices, PLCs are able to develop and can further improve the practice of teaching. In order to understand the significance of PLCs, it is important to explore the impact PLCs have on the practice of teaching.

The Impact of PLCs on the Practice of Teaching

Because PLCs foster collaboration and systematic change while supporting teacher learning and teacher leadership, they have the potential to impact the practice of teaching. As Haar (2001) stated, “Learning communities can provide the atmosphere, the tone, and the direction needed to develop and maintain a professional development process from which staff and students can benefit” (p. 4). PLCs allow teachers to consider the impact of educational goals on their classrooms, their students, and their subject area. Teachers belonging to PLCs that encouraged and supported their efforts were able to make effective teaching adaptations for their students (Hord, 1997). PLCs also afford schools the opportunity to implement strategies, such as professional study groups, peer coaching, action research teams, shared development of learning standards, and cooperative assessment of student work, that allow participants specific and continuous occasions to learn together and from one another (Haar, 2001). As a result of

these efforts, teachers' daily work becomes a type of high quality professional development.

Researchers have found that PLCs can have a profound impact on the practice of teaching (DuFour et al., 2004; Haar, 2001; Hord, 1997; Hord & Sommers, 2008; McLaughlin, 1993; McLaughlin & Talbert, 1993). McLaughlin and Talbert (1993) reported that "through the learning community, teachers learn how to translate enhanced curricula and higher standards into teaching and learning for all students" (p. 5). While quality classroom instruction continues to be a necessary prerequisite for school improvement, efforts to ensure student learning should drive the instruction (DuFour et al., 2004). Educators must find new ways to assess what students need to know, to determine when students have obtained the necessary knowledge, and to respond when students do not know what is necessary for success (DuFour et al., 2004). Lee, Smith, and Croninger (1995) found that organizing schools communally promoted a learning environment where staff and students were committed to the school's vision and were willing to work together to achieve that vision.

Based on Hord's (1997) research, organized PLCs resulted in the following improved outcomes for teachers:

- reduced teacher isolation
- increased commitment and vigor to strengthen the school's mission and goals
- collective responsibility for students' success
- new and powerful knowledge concerning the definition of teaching and learning

- increased meaning and understanding of content and their role in student achievement
- professional renewal and desire to inspire students
- higher morale and satisfaction, and lower absenteeism rates
- significant advances in efforts to accommodate students
- commitment to making major and ongoing changes
- higher probability of fundamental, systematic change. (pp. 27-28)

Quellmalz, Shields, and Knapp (1995) in *School-Based Reform: Lessons from a National Study* reported similar outcomes concerning the impact of PLCs on the practice of teaching: (a) a challenging learning environment for all students, and (b) a school climate that fosters staff collaboration and shared decision-making. Numerous researchers claimed that PLCs offer promising implications for improving the practices and profession of teaching (DuFour et al., 2004; Engstrom & Danielson, 2006; Haar, 2001; Hord, 1997; Hord & Sommers, 2008; McLaughlin, 1993; McLaughlin & Talbert, 1993). In order for such improvement in teaching practices is to occur, teachers need the opportunity to review other teachers and to have their own teaching practices and instructional behaviors reviewed by their colleagues; however, of all the dimensions of a PLC, this is often the last one to be developed (Hord & Sommers, 2008). Since this type of peer review is new and can often be uncomfortable to many educators, it often takes the longest to progress and to develop. Moving beyond the isolation so commonly associated with teaching is often difficult for schools desiring to be PLCs. As Hord and Sommers (2008) stated, “Without this whole school professional learning, involvement,

and collaboration, one does not have a professional learning community in the school” (p. 18).

Darling-Hammond and Skykes (1999) claimed that if we hope to offer a new direction for teachers’ professional education, we must organize professional development around the following three basic questions: (1) What would teachers have to know, and know how to do, in order to offer instruction that would support much deeper and more complex learning for their students? (2) What sort of professional education would be most likely to help teachers learn those things? and (3) What do these ideas imply for content, method, and structure of professional development? In order to transfer into student learning in the classroom, professional development should align the needs of the teachers with the needs of their students.

The Impact of PLCs on Students

The research indicates that PLCs offer considerable potential to impact student achievement and to prepare them for the demands of the 21st century (Blankstein et al., 2008; Engstrom & Danielson, 2006; Hord & Sommers, 2008; Riggs & Seratfin, 1998). Lee, Smith, and Croninger (1995) reported that in a study of 820 secondary schools and 11,000 students conducted by the Center on Organization and Restructuring of Schools found that in schools characterized by PLCs, where faculty worked together to change their classroom pedagogy, students achieved greater gains in math, science, history, and reading than students in traditionally organized schools. Lee and Smith (1995) conducted a similar study using data from a previous longitudinal study of 11,794 sophomores in 830 high schools; they found that communally organized schools demonstrated more equitable learning than bureaucratically organized schools. In a review of the case studies

in *The Work of Restructuring Schools*, Darling-Hammond (1995) found that schools that focused their efforts on teaching, learning, and discussing the effectiveness of instructional practices for students showed academic results more quickly than schools that did not. Similarly, Schmoker's (2001) research concerning school practices and procedures that make a difference yielded three key elements:

First, teachers aimed their efforts explicitly at the achievement of measurable learning goals. Second, they worked in teams to reach their goals. Teachers talked to one another about their work, got together regularly to analyze successes and failures, shared materials, and refined their instruction. Third, teachers made regular use of achievement data to identify and address areas of concern. Teacher teams routinely assess student progress to target deficiencies and buttress strengths. (p. 2)

Darling-Hammond (1995) maintained that teachers need chances to share their knowledge with colleagues, to consult with colleagues about problems they are experiencing, and to observe their colleagues teaching; all of these opportunities deepen the teachers' professional understanding, which can lead to improvements in student learning. Newmann and Wehlage (1995) identified four interconnected factors that led to improved student outcomes: (1) student learning, (2) authentic pedagogy, (3) organizational capacity, and (4) external support. According to their research, the following structural conditions enhance the professional community needed to promote learning of high intellectual quality: shared governance, independent work structures, staff development, deregulation, small school size, and parental involvement (Newmann & Wehlage, 1995).

Hord (1997) determined that organized PLCs resulted in the following positive outcomes for students:

- lower “class cutting” and dropout rates
- fewer incidents of absenteeism
- more equitable learning in smaller high schools
- larger achievement gains in math, science, history, and reading than traditional schools
- smaller achievement gaps between different subgroups. (pp. 27-28)

Engstrom and Danielson (2006) claimed the collaborative learning efforts of teachers should focus on improving student performance. According to Riggs and Seratfin (1998), the best way to prepare students for the demands of the 21st century is through a “sustained, coherent, structured, and evolving program of professional development experiences for the teachers” (p. 79). According to the research of Lee et al. (1995), schools that are communally organized around PLCs and whose staff and students are committed to the common mission of the school have students who drop out of school less frequently, cut fewer classes, post lower absenteeism rates, and make greater academic gains across a variety of subject areas than students in more traditionally organized school settings. Based on the studies that have been conducted thus far, PLCs offer some clear advantages for students (Bryk, et al., 1994; Darling-Hammond, 1995; Hord, 1997; Lee et al., 1995; McLaughlin & Talbert, 1993; Newmann & Wehlage, 1995). PLCs enhance instruction and student learning in a variety of settings, including low income and high minority schools (Blankstein et al. 2008). While the magnitude may

vary from student to student, the potential impact on student achievement and learning is clearly very promising (Blankstein et al., 2008).

Research Pertaining to the PLC

Several studies have gathered empirical data on the development and perpetuation of PLCs in schools, the role of the principal and the impact on students (Chan-Remka, 2007; Coleman, 2005; Lodico, 2003; McKinney, 2004; Perez, 2007; Richardson, 2003; Stevens, 2007; Stropkaj, 2002). However, no studies have gathered qualitative data from principals, teachers, and instructional coaches to determine how an elementary school principal influences the development and perpetuation of a PLC and the teacher's perception of the impact of the PLC on learning.

This review of literature explores the research specifically relevant to the PLC. First, this review will explore studies of the development and perpetuation of PLCs, followed by an examination of research surrounding the principal's role in the effective PLCs. The final section examines research studies on the PLC's impact on students.

Development and Perpetuation

At Western Carolina University, Lodico (2003) conducted one of the early dissertations on PLCs. In the study, Lodico examined the traits of PLCs in two North Carolina high schools identified as most improved by the N.C. Department of Instruction's annual testing data. Lodico conducted qualitative interviews based on Hord's (1997) five dimensions of PLCs. While neither of the schools possessed all of the dimensions and there was no indication of major school-wide restructuring to develop a PLC, the findings supported the importance of the principal leadership in the development of a set of shared values concerning academic performance criteria. In the

case of the two high schools studied, Lodico (2003) determined the need existed for increased principal support of the collaboration efforts of teachers.

Another study conducted by Chan-Remka (2007) attempted to explore the key factors that contribute to the creation, implementation, and sustainability of a PLC. Using a mixed-method case study approach and the five dimensions of a PLC, Chan-Remka examined perceptions at one school. In this school, the lack of supportive leadership negatively impacted the perception of the school as a PLC. Without the support of the principal, the study determined a PLC cannot come into existence (Chan-Remka).

In 2003, Stoll et al. at the University of Bristol and Bath conducted a study using a longitudinal mixed methodological research design to explore the different stages of PLCs. The study identified the following most frequently mentioned factors for creating and sustaining a PLC: sufficient funding, useful learning opportunities, supportive culture, adequate time, supportive leadership, developing a vision or purpose, staff commitment, and collaboration. The role of school leaders in creating and sustaining these conditions is critical. Aside from the factors for creating and sustaining PLCs, the research also identified the following barriers to creating a PLC: financial barriers, insufficient time, stress and general work overload, resistance, trust issues, and a lack of shared vision or purpose. Schools desiring to create and sustain PLCs must be able and willing to address these barriers (Stoll et al., 2003).

In a more recent research qualitative case study, Hipp et al. (2008) examined how two schools, one elementary school and one middle school, became sustainable PLCs. The researchers found that change that impacts learning must focus on instructional practice. Additionally, the study found that faculty members' attitudes and beliefs are

more apt to change when they saw the changes in practice begin to impact student learning. Schools that encourage teacher leadership, define shared vision and values based on student learning, and allow teachers and administrators to learn together are more apt to develop into learning organizations that address the learning needs of their students and ensure student learning occurs. Hipp et al. were unable to identify specific steps or stages of the PLC development process. After an extensive examination of both schools, the researchers determined the development process was so complex that identifying steps or stages is unlikely. However, the researchers were able to determine that a need for additional research exists concerning the development process of PLCs, if schools are to provide all children with a high quality learning environment.

Principal's Role

Perez (2007) conducted a study focusing on the principals' efforts to support the characteristics of PLCs. The qualitative research study of three elementary schools determined that the principals' efforts were instrumental in the facilitation of shared norms and values, improvement, and collaboration. As a result of their position and efforts, Perez determined that principals are in an ideal position to support the development of PLCs.

A related dissertation conducted by Coleman (2005) examined teachers' perceptions of administrative leadership styles in shaping teachers' perceptions of their schools as PLCs. After examining empirical evidence from 81 schools, Coleman determined that distinctions between transactional and transformational modes of leadership are not easily understood within the framework of PLCs without considering the interaction of the principal and assistant principal leadership roles. Coleman

recommended that principals who hope to develop PLCs need to possess both leadership and management skills. While the data suggested principals alone need not be responsible for both, principals who possess qualities of both transactional leadership and transformational leadership abilities are ideal (Coleman, 2005).

Richardson (2003) conducted a study that examined which of the three leadership styles, Initiator, Manager, or Responder, had the most significant impact on development and sustainability of PLCs. The intent of the study was to bridge the gap between the value of PLCs and the principals' role in creating the conditions to develop and sustain a PLC. Using a mixed-methods research design, Richardson examined the leadership factors that fostered the systematic change necessary to accomplish the task of developing and sustaining a PLC. Richardson determined principals with a Manager Leadership style had the most significant impact on the maturity of schools as PLCs.

McKinney's (2004) study also utilized a mixed-methods approach to list specific key actions by the principal for developing a PLC at three schools within the Chicago Public School System. McKinney determined that principals who developed PLCs shared authority and decision-making opportunities with teachers; maintained a clear vision focused on improving student achievement; allowed teachers the opportunity to participate in the development of the school's vision; utilized in-house, ongoing, teacher-led staff development; encouraged staff to rely on their teaching peers to foster their own professional growth; and supported teachers and school-wide efforts to develop a professional learning organization. All three of the schools in this study showed an increase in state scores after the development of their PLCs (McKinney, 2004).

After interviewing nine experienced elementary principals to determine how they developed and sustained their respective PLCs, Stevens (2007) identified the following themes related to the development process: (1) Time, (2) Right People-Right Places, (3) There Will Be Struggles, and (4) Must Be Able to See the Gifts. Based on the findings, Stevens determined that PLCs take time to develop. Principals desiring to develop PLCs must be able to identify the right people to fill leadership roles and should realize the development process is not without its struggles. Once the principals observed their students achieving at higher levels, the principals saw the benefits of a PLC's working together to achieve a common goal. Stevens identified the following themes concerning the sustainability of the PLC: (1) Utilize Outside Support, (2) Lead from the Back, and (3) Sustain the Feeling of Community. The study identified the elements principals found to be important in establishing PLCs, including utilizing outside support, such as universities and other support networks, in order to sustain the PLC; identifying teacher leaders and allowing them to lead; and continuously striving to sustain a sense of community. No teachers were interviewed in this study (Stevens).

Stropkaj (2002) conducted a similar study to determine how three principals from the elementary, middle, and high school levels created and sustained a PLC in their respective schools; this study differed slightly in that it also included the perceptions of teachers. The researcher conducted semi-structured interviews with the principals, grade level teachers, team leaders, and department heads and found that time and the proximity of teachers to one another were the two most significant structural conditions principals believed enhanced the relationships within the PLC (Stropkaj, 2002).

In order to examine the teaching and learning process in schools, teachers need strong leadership from the principal. According to Thompson, Gregg, and Niska (2004), middle schools must practice the five disciplines of a learning organization, which include system thinking, personal mastery, mental models, shared vision, and team learning. Based on the research conducted at six middle schools, Thompson et al. found that leadership plays a significant role in a school's becoming a true PLC. The principals and teachers interviewed in this study felt that having a learning organization was critical for students to reach their full potential (Thompson et al., 2004).

Impact on Students

Marks & Louis (1997) examined the impact of teacher empowerment on student achievement at the elementary, middle, and high school levels. Studying schools with a minimum of four years of decentralized or site-based management, Marks & Louis found teacher empowerment to be an important factor in changing teachers' instructional practices. When teachers were empowered to support instructional changes and to share information with colleagues concerning effective teaching practices, student achievement improved. The findings suggested that while teacher empowerment supports student achievement, teachers must believe the potential for improving student achievement exists and must have the necessary conditions in place to support these changes. While the research did not specifically name this type of teacher empowerment as a PLC, as this term was not commonly accepted until Hord's work in 1997, the findings certainly point to the potential of collaborative communities to provide the necessary conditions to support teacher empowerment, improved instruction, and student achievement.

Bezzina (2006) conducted one empirical research study of PLCs in schools. This study determined that schools that are able to successfully develop into PLCs facilitate learning for both their teachers and their students. Teachers must have a strong grasp of the subject matter and pedagogical skills if students are to learn well (Bezzina, 2006).

Based on the review of the research in the field, very little published empirical research, aside from dissertations, exists on the role of the principal in the development and perpetuation of PLCs and the perception of teachers concerning the impact of PLCs and improved instruction and student learning. From a research perspective, a gap clearly exists, particularly at the elementary school level, concerning the operations and characteristics of PLCs in relation to the principal's role in the development and perpetuation of PLCs, as well as the impact of PLCs on improved instruction and student learning.

Additionally, the research of Stoll et al. (2006) demonstrates that an additional gap exists concerning the sustainability of PLCs. By taking a qualitative case study approach, this research study will add to the existing research, as well as ascertain what, if any, relationship exists between the development and perpetuation of the PLC and improved instruction and student learning.

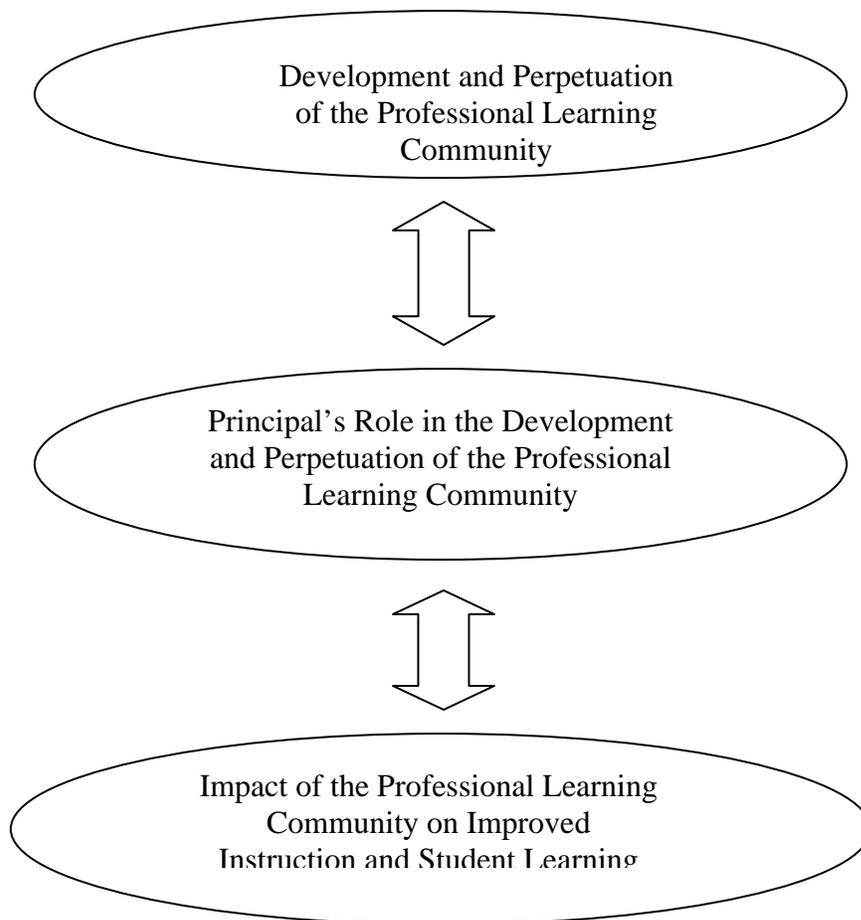
Conceptual Framework

The conceptual framework of this study illustrates the intersection of three phenomena: (1) the development and perpetuation of each school's PLC as understood through Hord's (1997) five dimensions of a PLC; (2) the role of the principal in the development and perpetuation of a PLC; and (3) the impact of the PLC on improved instruction and student learning. While Hord provides the definitional basis to support the

existence of a PLC at the schools selected to participate in this study, the principal’s role in the development and perpetuation of the PLC and the impact of the PLC on improved instruction and student learning are significant to understanding this phenomena as well. In order to understand the systematic change needed to support the PLC from the development to the perpetuation stage, it is important to understand the principals’ role in creating a learning organization where teacher leadership and improved teacher learning can translate into improved instruction and student learning. Consequently, these two phenomena will also be used to interpret and understand the findings from the study.

Figure 2.1

Conceptual Framework



After an extensive review of the literature, Hord (1997) identified the following five dimensions of a PLC: (1) shared and supportive leadership, (2) shared vision and values, (3) collective learning and application of learning, (4) supportive conditions, and (5) shared personal practice. As with any school reform effort, change does not happen in isolation. It takes the hard work of many individuals at all levels within the organization, including the principal. Table 1 identifies conditions that must be present in the principal's role if all five dimensions of Hord's (1997) framework are to be met.

Table 1

The Principal's Role in the Dimensions of Professional Learning Communities

Dimensions of a Professional Learning Community	Principal's Role in Each Dimension (Hord, 1997; Huffman, 2003)
(1) Shared and supportive leadership	The principal creates a democratic process where teachers are allowed to participate in the decision-making process and assume leadership roles within the school. Teachers are encouraged to fill leadership roles and are given a voice in various decision-making opportunities.
(2) Shared vision and values	The principal, in conjunction with the staff members, work to develop a vision for school improvement that focuses on student learning, which is driven by values that are shared by the group, can be easily referenced, and serves as a guide for the group's work with students. As the leader, the principal works with the teachers and others to brainstorm a vision for the school which is aligned with the values of the school's stakeholders and that can be mutually agreed upon by the group. Often, the principal's leadership style determines the exact level of involvement in the development process.
(3) Collective learning and application of learning	The principal promotes the development of a climate where staff members can learn together and apply their learning to create an intellectually stimulating environment for staff and that can be applied to meet

the learning needs of students. The principal encourages and provides the resources necessary for the teachers to learn with and from one another within the confines of a caring and supportive environment, which is based upon mutual trust.

- (4) Supportive conditions The principal supports the development of conditions and the capacity of staff members as they develop into an organization focused on meeting the learning needs of all teaching professionals. The principal interacts with teachers in a caring manner and provides the professional support and resources the teachers need to improve as teaching professionals.
- (5) Shared personal practice The principal provides the support necessary for teachers to feel comfortable reviewing the work of their peers, as well as giving and receiving feedback, with the intent of improving the capacity of individuals and the organization. The principal ensures teachers have the support (i.e., classroom coverage, planning time, etc.) necessary to allow them the opportunity to meet with their colleagues, to observe and to be observed by their peers, and to participate in various professional learning opportunities with their teaching peers.
-

Simply changing the perceptions of principals is not enough. Principals must be able to change the perceptions of their faculty as well, and this type of change occurs over time.

The development and success of learning-enriched environments in schools depends on the collegial and facilitative participation of principals who are willing to share leadership, seek staff input, and participate in shared decision-making (Hord, 1997; Hord & Sommers, 2008). In order for these environments to develop, principals must allow teachers to fill leadership roles, gather input from teachers, and allow the school's faculty to participate in various components of the decision-making process within the school. When principals are willing to do these things, they often find their support from

staff increases as teachers feel connected to a democratic school process where their voices are heard and their opinions are valued. As a result of these types of shared and supportive leadership practices, schools are able to collectively develop a vision and values aligned with the needs of the school's faculty and students. When this occurs, schools are also able to further develop and perpetuate a PLC intended to improve the practice of teaching.

A culture conducive to learning and sharing creates a unit of learners that routinely share personal practice and utilize constructive feedback. This type of sharing increases both individual and organizational capacity. Once these prerequisites are accomplished, PLCs that exemplify the five dimensions identified by Hord (1997) are able to perpetuate and to meet their ultimate goal of improving instruction and student learning in the classroom. For change to impact learning, it must focus on instructional practice (Hipp et al., 2008). Once teachers see changes in practice begin to impact student learning, their attitudes and beliefs begin to change as well. When schools encourage teacher leadership, establish vision and values based on student learning, and support collaborative learning, the likelihood of creating a learning organization where the needs of students are addressed and student learning occurs increases considerably.

According to Marks and Louis (1997), as well as Bezzina (2006), empowering teachers to support instructional changes and improving teachers' grasp of both subject matter and pedagogical skills has been shown to improve student achievement. Based on the research, schools characterized by PLCs who work together to change pedagogy have seen greater student gains in math, science, history, and reading than traditionally organized schools (Lee et al., 1995). Aside from the academic gains, schools organized as

PLCs have lower dropout rates, lower absenteeism, and their students cut class less frequently than other schools (Lee et al., 1995). Based on the literature and research, PLCs offer the potential to change practice and to impact and to increase student learning.

Summary

In a PLC, faculty members have access to a wide array of student performance data to assess the productivity of teaching, as well as to indicate the needs of students (Blankstein et al., 2008). As members of the PLC, teachers are given the opportunity to reflect upon the effectiveness of their practices and current programs in relation to student outcomes, to determine how well students are being served, and to identify student achievement areas in need of improvement (Blankstein et al., 2008). Since it is not feasible to address multiple student needs simultaneously, teachers must work together to identify specific target areas, to engage in research concerning the adoption of new practices or programs, to accept that the acquisition of new knowledge and skills will necessitate staff learning, to determine how they plan to engage in their professional learning, to plan collectively concerning the implementation of new learning, to analyze their efforts to determine the success of their students, and, if necessary, to revise or adjust professional learning as appropriate to meet their desired objectives (Blankstein et al., 2008). Through the collaborative efforts of its members, the PLC model offers opportunities to address both the professional development needs of teachers and the learning needs of students.

Chapter Two has explored the literature on the emergence of PLCs, the characteristics of PLCs, the role of principal in creating PLCs, and the impact of PLCs on

teaching and students. Based on the literature review, principals play a significant role in the development of PLCs and PLCs possess the potential to improve teacher instruction and student learning. The chapters that follow will describe the research design, findings, and conclusions from this study.

CHAPTER THREE

METHODOLOGY

This study examines how the professional learning communities (PLCs) in two elementary schools developed and perpetuated, the role of the principals in the development and perpetuation of the PLCs at both schools, and the relationship between the development and perpetuation of the PLCs and improved instruction and student learning. Using a descriptive, qualitative approach in an ethnographic case study format to explore the topic, I collected the following types of data: (a) documentation, (b) interviews, and (c) direct observation. The following research questions served as a guide for data collection and analysis:

1. How did the professional learning communities in two elementary schools develop and perpetuate?
2. What was the role of the principals in the development of a professional learning community in two elementary schools?
3. How have the principals in these two elementary schools perpetuated the professional learning community?
4. What, if any, relationship exists between the development and perpetuation of the professional learning and improved instruction and student learning?

This chapter, will begin with a discussion of the qualitative methodology used in this case study, then proceed to a discussion of the data collection procedures which included interview data, direct observations, and document analysis; this section also discusses the use of pilot study questions to develop the interview process for this study. The next section will include information concerning the setting for this research study,

the process for selecting participants, and my role as the researcher. This chapter concludes by discussing the data analysis procedures, including how I integrated all three sources of data for Chapter Four.

Qualitative Methodology

Since the intent was not to generalize to a particular population, but to thoroughly explore the development and perpetuation of the PLCs at two elementary schools, this study uses qualitative inquiry (Creswell, 2005; Merriam, 1988; Yin, 1994). A case study approach for the fieldwork at the selected schools lent an understanding of this complex topic (Merriam, 1988; Patton, 2002; Yin, 1994). After purposefully and intentionally designing a process for selecting both the sites and the participants, I explored the phenomenon and recorded the findings in order to interpret them (Creswell, 2005). Qualitative findings allow individuals to gain an increased understanding of a central phenomenon, as well as providing a “voice” to the schools’ teachers, instructional coaches, and the principals who might have otherwise gone unheard (Creswell, 2005).

Using an ethnographic case study approach allows a researcher to thoroughly explore the topic, which includes data from documentation (i.e., administrative documents, agendas, bulletins), interviews (i.e., open-ended interview questions), and formal observations (i.e., classrooms, PLC study groups), and informal observations (i.e., during participant interviews) (Merriam, 1988; Patton, 2003; Yin, 1994). Researchers conduct ethnographic research when they wish to gain an understanding of a larger issue in the context of studying a culture-sharing group that has been together for a time long enough to develop “shared values, beliefs, and language” (Creswell, 2005, p. 436). Since the mutual understanding of the school’s values, mission, vision, and goals drives PLCs,

the members of a PLC meet the criteria of a culture-sharing group (Creswell, 2005; DuFour et al., 2004).

While they differ slightly from pure ethnography, case studies are an important type of ethnography. Creswell (2005) notes, “In case studies, researchers focus their attention on the activities, events, or individual purposes, which may not necessarily involve the group per se” (p. 439). However, when case study research involves a group, researchers have the flexibility to describe the activities of the group without identifying shared patterns of behavior displayed by the group (Creswell, 2005). This study focuses particular interest on the individual activities, events, or purposes of the principals to develop and perpetuate the PLCs in their schools. Combining ethnographic and case study methods allowed collection of data that described the activities of the groups, as well as identification of shared patterns of behavior displayed by the groups.

Data Collection

Interview Data

While one-on-one interviews are the most time consuming and costly approach to qualitative research, they continue to be an effective way to conduct educational research and are well suited for individuals who are not hesitant to speak, are articulate, and are comfortable sharing their ideas (Creswell, 2005). Over the course of the interview process, my intent was to gain a grasp of the schools’ day-to-day operations, instructional philosophies, professional learning opportunities, climates, and cultures. Although using a set of predetermined questions, I exercised the right, when appropriate, to ask follow-up questions in order to have the participants clarify or expand on specific responses. Interviews at both schools included the principals, four teachers, and the instructional

coaches, for a total of six educators per school. All interviews were individual, and each participant was interviewed only once. The average interview lasted approximately 45 minutes. The open-ended nature of the questions encouraged participants to freely share their ideas, providing an opportunity to explore the central phenomenon of interest for recurring themes, without limiting the responses of the respondents.

Interview Questions. The interview questions were developed following a review of the available literature. The interview questions correspond to the five subsections that define the characteristics of PLCs (Hord, 1997; Hord and Sommers, 2008). While the interview questions are unique to this research study, they correspond to a similar format Lodico (2003) used to subdivide his interview questions to align with Hord's (1997) five characteristics of PLCs. Dividing the research questions into subsections simplified the process of validating that each of the elementary schools did in fact meet the criteria commonly associated with PLCs. The subsections also aided in determining whether any of the commonly defined characteristics of PLCs would emerge again in future questions concerning the principals' role in the development or the perpetuation process, and further supported the accuracy of the study's findings. All of the participants, including the instructional coaches, principals, and teachers, responded to the following five subsections of questions:

1. *Shared and supportive leadership:*

- How would you describe the principal's leadership style?
- What, if any, opportunities exist for teachers to fill leadership roles in the school?
- Please expand on the principal's role in this process.

2. *Shared vision and values:*

- How would you describe the common vision of the school?
- What, if any, values are commonly shared by the school?
- How was the school's vision determined?
- Discuss the principal's role in this development of the school's vision and values.
- Describe the teacher's role in the development of the school's vision and values.
- What impact have the school's vision and values had on the mission and goals for the school?

3. *Collective learning and application of learning:*

- How does the faculty as a whole assess and address the instructional needs of students?
- What opportunities exist for teachers to collaborate with one another in doing this?
- How are the learning needs of professionals addressed within the school?
- What opportunities do these professionals have to share their knowledge with others in the school?

4. *Supportive conditions:*

- What, if any, opportunities do teachers have to collaborate with one another in your school?

- Do you feel the collaboration efforts of the school's teachers are encouraged? If so, how are these collaboration efforts encouraged? What, if any, role does the principal play in fostering and sustaining these efforts?
- Are there any barriers to collaboration in your school? If so, how would you describe them?
- What, if anything, is done to overcome these barriers? What, if any, role does the principal play in overcoming these time barriers?

5. *Shared personal practice:*

- It is not uncommon for teachers to express feelings of isolation associated with the teaching profession. Have you ever experienced or can you relate to these feelings of isolation expressed by others in the teaching profession? If so, how has the school addressed the feeling of isolation so often associated with the teaching profession?
- What, if any, opportunities do teachers have to share their professional expertise with other teachers?
- Based on your opinion, what else could be done to allow teachers additional opportunities to share professional expertise with one another?

In order to explore the participants' perception of how the principals developed and perpetuated the schools' PLCs, as well as the perceived relationship between the development and perpetuation of the PLCs and improved instruction and student

learning, the following three additional interview questions were asked of all the participants:

6. *Perceptions of the principal's role in the development of the PLC:*

- In your opinion, what, if any, role did your school's principal play in the implementation of a professional learning community at your school?

7. *Perceptions of principal's role in the perpetuation of the PLC:*

- Based on your school's efforts to implement a professional learning community and the nomination of your school's superintendent, it is clear that your school's efforts to meet the needs of your students have obviously been successful. In your opinion, what, if any, role has your school's principal played in the perpetuation of a professional learning community in your school?

8. *Perceptions of the development and perpetuation of the PLC on instruction and student learning:*

- In your opinion and based on your experience, what, if any, relationship exists between the development and perpetuation of the professional learning community and improved instruction and student learning?
- In what, if any, way has the development and perpetuation of the professional learning community changed your teaching practices?
- If your teaching practices have changed as a result of the development and perpetuation of the professional learning community, how do you

feel these changes have impacted instruction? How have these changes impacted student learning?

- Is there any documentation and/or data available (i.e., observations, student testing data, etc.) that would support these perceived changes?

While the last three sets of questions are directed and worded to ascertain the teachers' and the instructional coaches' perceptions, the questions were reworded slightly to allow the principals to reflect on their role in the development and perpetuation of the PLCs, as well as the impact of the PLCs on improved instruction and student learning. All of the interview questions are included in Appendix A.

Interview Process. This research study protected the interviewees' confidentiality throughout the interview and publication process. The interviewees retained the right to refuse to participate or to answer specific questions, and, if deemed necessary, to stop the interview at any time they did not feel comfortable proceeding further. Interviewees signed a Consent Form before being interviewed to ensure they understood their rights. A copy of the Consent Form is included in Appendix B. At the conclusion of each interview, all of the participants also received a copy of the signed Consent Form should they have had questions following their interviews. In an effort to protect confidentiality, this study identifies the schools in this case study as either "School A" or "School B" and the school district as simply "the school district."

Direct Observations

My site visits at both schools included opportunities to observe the weekly PLC professional study groups at each grade level, from kindergarten to 5th grade. As Yin (1994) suggests, observations can range from formal to casual data collection activities.

This study included formal observations of the weekly 45-minute PLC study groups at each school for each of the grades K-5; the schools' instructional coaches facilitated all of these PLC groups. Informal observations at each site included the collection of other evidence, such as the condition of the building, student instruction and classroom organization, samples of student data notebooks, grade level and classroom data displays, and lunchroom interactions and coverage arrangements. I specifically observed items or topics of interest that emerged previously during the one-on-one interviews or during the observations of PLC study groups. Following my informal observations at each site, I documented what I observed during breaks between grade-level PLC study groups.

Document Analysis

Data collection for this study included examining documents and other items relevant to the central phenomenon. These documents included such items as mission or vision statements, PLC study group agendas, PLC study group handouts and notes, school improvement plans, quarterly grade level testing data, SMART (Specific, Measurable, Aligned and Attainable, Results Focused, and Time Framed) goals, school bulletins, and aggregated end-of-year testing results. As Yin (1994) suggested, the primary purpose of documents is to corroborate and supplement evidence from other sources. In the event these documents had produced contradictory evidence, I would have been able to determine whether there was a need to investigate the topic further before making inferences (Yin, 1994).

Pilot Study

After gaining permission from the Institutional Review Board (IRB) at Western Carolina University to conduct the study, I conducted a small pilot study. According to

Yin (1994), the pilot site serves as a laboratory for the researcher. One elementary school served to pilot the proposed interview questions. Since this site was solely to refine the data collection content and procedures, I selected the pilot site based primarily on the factors of convenience, access, and geographic proximity (Yin, 1994). In this case, the pilot study involved three teachers and the principal from one pilot school. Using a focus group format, I conducted pilot interviews to ensure all the interview questions were clear and well written and would provide the data necessary to answer the proposed research questions. Following these interviews and after consulting with the dissertation chair and the other committee members, it was necessary to make only minor changes to the content and format of the interview questions to improve the reliability and content validity of the proposed research study.

Settings and Participants

Participants in this study were principals, teachers and instructional coaches at two elementary schools. The process for selection of the case study schools, for the initial site entry, and for selection of study participants are important for an understanding of how the two elementary schools in this study were chosen and how the PLC development and perpetuation process operates at both schools.

Process for Selection of Case Study Schools

The following criteria determined the selection of a participating study site: (1) convenience, access, and geographic proximity; (2) access to two elementary schools within the same school district where the principals have served in their current position for a minimum of two years; (3) either a recommendation from someone who is knowledgeable about PLCs or proof of recent academic success that could potentially be

attributed to either the development or the perpetuation of a PLC; and (4) the ability to interview a minimum of four teachers knowledgeable about the development and perpetuation of the school's PLC.

After determining appropriate site criteria, I contacted a superintendent in a small, neighboring school district. This particular superintendent is very well-respected among his colleagues and is knowledgeable about PLCs. This superintendent's school district was concluding its second year of the PLC implementation process. Additionally, the district's three elementary principals all had a minimum of two years experience and all of the principals were appointed to their current positions prior to the decision to implement PLCs district-wide.

Aside from the aforementioned factors, the fact that the principals at the two schools selected had previously served as assistant principals at their respective schools also served as a determining factor in the site selection process. Since the principal at the district's other elementary school was new to the school and entered the district prior to the decision to implement PLCs, I felt this could potentially limit the principal's background knowledge of the school. Consequently, this school was not selected to participate in the study. Since this school district met all of the above-mentioned criteria, I contacted the superintendent and received permission to conduct this research study.

Upon obtaining permission from the school district's superintendent to conduct the study, I communicated via email and telephone with the district's Director of Elementary Curriculum and the principals of both schools to discuss the intent of the research study, potential teacher participants, and to schedule a time to begin gathering data. Both principals voluntarily agreed to participate in the research study after being

given the opportunity to decline. In an effort to improve the “richness” of the data collected and at the request of my dissertation committee, the principals at both schools received a copy of the interview questions to review in advance and to share with the participating teachers and instructional coaches.

Initial Site Entry

Before attempting to gather qualitative data, the first priority was to gain the acceptance and trust of the participants. In order to try to fully understand the each school’s PLC, I spent one day at each school conducting interviews, gathering documents, and touring the school. The second visit to each school was several weeks later, and during this visit, I observed all of the PLC study groups at each school, gathered additional documents, spent time observing in two or three classrooms, and took advantage of the opportunity to talk with and ask some questions of several other staff members to gather informal background information.

Process for Selection of Participants

For this study, the participants included principals, instructional coaches, and teachers in two elementary schools within a single school district whom their superintendent identified as engaged in efforts to develop and perpetuate PLCs in their respective schools. At each site, the principal selected four teachers on the basis of their active participation and their knowledge of the development and perpetuation of the PLC, and this sample represented a cross-section of teacher leaders, veteran teachers, and new teachers.

At School A, the participating teachers were from Kindergarten, 2nd grade, 3rd grade, and 5th grade. All of the teachers had been at School A for a minimum of 2 years,

with some having been employed at School A for over 20 years. The instructional coach at School A was new to both the school and the school system in 2007-2008. Prior to beginning as the principal in 2007-2008, the current principal was an assistant principal for 2 years at School A, and before that was an elementary teacher in a neighboring school district.

At School B, the four participating teachers taught 1st-2nd grade combination, 3rd grade, 4th grade, and speech. All of the teachers had been at School B for a minimum of 1 year, with some having taught at School B for over 6 years. Prior to accepting the instructional coach position at School B 2 years ago, the instructional coach had been a teacher at School B for 9 years. Before beginning as principal in 2007-2008, the current principal was an assistant principal for 2 years at School B and had been a teacher for 9 years at School B as well.

Role of the Researcher

Because of the qualitative nature of this study, I assumed an integral role in the research process. Before beginning the interview process, I made an initial contact with each school's participants explaining the intent of the research and the specific areas of focus for this study. The participants also had the opportunity to ask questions about the purpose and methods of the study before they agreed to proceed with the interview process.

I made every effort to report the findings without bias. However, having worked both as a school counselor and an assistant principal in a school where the principal had successfully developed and perpetuated a PLC over the last four years, I began the research with previous knowledge about participating in and perpetuating a PLC.

Data Analysis Procedures

Once all of the data had been collected, the data analysis process began. As Yin (1994) suggests, the manipulation of the data must be done carefully to avoid biasing the results. Ultimately, the goal was to treat the evidence fairly, to construct convincing analytic conclusions, and to rule out alternative interpretations (Yin, 1994).

Interview Data

I recorded all of the interviews with two digital voice recorders, following the prepared questions to guide the discussion and to redirect when the interviewees became sidetracked. Field notes taken during the interviews provided additional data in the form of Observer Comments (OC) about themes, ideas, and areas of further interest. Recording these notes in a Fieldnote Memo section directly on each interview questionnaire provided clear organization for later analysis (Bogdan & Biklen, 1992).

Each interview's voice recording was downloaded onto a laptop computer, checked for audio clarity, and transcribed. Since the teachers and instructional coaches do not work during the summer, the time of this research, it was not possible for them to review their own transcripts. I reviewed the transcripts for accuracy to the audio recordings prior to coding the transcripts.

The constant comparative method was used to analyze the interview data. According to Ary, Jacobs, and Razavieh (2002), the constant comparative method allows the researcher to examine new units of meaning (i.e., concepts, ideas, topics, or themes) to determine the unique features of each new unit, as well as to compare and group similar categories. The continual comparison, contrasting, and redefining of categories cause existing categories to change, new categories to develop, and improved

understanding of the data to emerge (Ary, et al., 2002). In the event a unit of meaning did not fit into a pre-existing category, I created a new category for that unit.

Coding the data allows the researcher to both organize and reduce the data (Ary, et al., 2002). Coding categories allows the researcher to classify similar ideas, concepts, and themes (Ary, et al., 2002). According to Bogdan and Biklen (1992), the following coding families provide a framework to develop coding categories that can be adjusted to meet the specific needs of the researcher: Setting/Context Codes, Situation Codes, Perspectives Held by Subjects, Subjects' Way of Thinking about People and Objects, Process Codes, Activity Codes, Event Codes, Strategy Codes, and Relationship and Social Structure Codes. A variation of each of these codes was used, except for Strategy Codes. Once the coding categories were selected, I assigned abbreviations to denote particular "units of data," such as paragraphs, sentences, or sequences of paragraphs (Bogdan & Biklen). After assigning the initial coding categories, I continued to revisit the assigned coding categories, making changes to the codes or categories as appropriate, as well as assigning "major codes" to the more general, sweeping data and "subcodes" to smaller sub-categories of the "major codes" (Bogdan & Biklen). Subcodes provided support to incorporate into the discussion of the study's findings. I used atlas.ti (Version 5.2) software to assist in the data coding, management, and manipulation process.

Direct Observations

Observational evidence is often extremely helpful and provides additional information about the topic being studied (Yin, 1994). The research for this study afforded access to the PLC study groups at each school for grades K-5 and offered the opportunity to perceive reality through the eyes of the participants in the case study. It is

this opportunity that Yin (1994) believed was invaluable in producing a precise depiction of the case study phenomenon. Direct observations corroborated and complemented evidence from other sources. Keeping direct observation notes separate from other data sources allowed me to review and analyze this information separately. These observation notes provided support for the themes that emerged from the interview data.

Documentation

Documents play an important role in the data collection process when conducting a case study (Yin, 1994). The systematic search for pertinent documents is a critical component of any data collection plan. Before beginning one-on-one interviews, I obtained permission to access the pertinent documents from the principals at each school, as well as from the superintendent. Working closely with each site's principal, instructional coach, and teachers, I scheduled the retrieval of such documents independent of other data collection activities (Yin, 1994). Depending on the nature of the documents and the feasibility of copying them, documents were analyzed on-site or copied and saved into separate data folders for each site. Other documents were also retrieved via the Department of Public Instruction's website, the district's website, and the schools' websites. The district's Director of Elementary Curriculum also emailed me several additional documents, including a Power Point presentation highlighting the transition from year one to year two of the district's PLC initiative, a summary of the district's PLC focus for 2009-2010, a list of the roles and responsibilities of the Instructional Coach, a handout highlighting the characteristics of highly functioning teams, a list of the Five Learning Centered Questions, a description of SMART goals, and a quick reference sheet for the 9 High-Yield Instructional Strategies covered during

2008-2009. The above-mentioned documents provided clarification as well as support for the accuracy data interpretation

Integration of Data Sources

While interview data was the primary source of data in this case study, I also incorporated information concerning direct observations and documents as well in Chapter Four. After determining the initial themes to emerge from my interviews, I reflected on each theme and attempted to determine whether or not I had observed similar findings during school visits or had documents to support the identified theme. Whenever possible, I would reference specific observations or documents relevant to specific themes.

Trustworthiness of the Findings

In order to improve the reliability of the results, I employed a case study protocol by forming what Yin (1994) called a “case study team” to ensure both that an appropriate case study protocol was selected and followed and that any potential problems with the case study plan were uncovered beforehand. The case study protocol included an overview of the case study project (i.e., project objectives, topic, etc.), field procedures (e.g., site selection procedures), case study questions, and the specific guidelines for the case study report (Yin, 1994). I also developed a case study database, which included an evidentiary base (e.g., case study notes, case study documents, tabular materials, narratives), as well as the final report- or dissertation in this case (Yin, 1994). Following the case study protocol and developing the case study database increases the reliability of the results and forms a chain of evidence that allows the reader to easily follow the origin of evidence from the initial research question to the case study’s

conclusions (Yin, 1994). Furthermore, the case study protocol and database triangulates the data (i.e., documentation, interviews, and direct observations) and improves the construct validity of the case study.

Every possible effort was made to ensure the trustworthiness and credibility of the research. Portions of the findings were sent to both principals to ensure the accurate interpretation of the data concerning the district's protocol. Aside from the case study protocol, reviewing the interview audio recordings by both me and by peer reviewers provided for substantiation of the data.

Summary

This chapter describes the qualitative methodology used in this case study, the data collection procedures, and the data analysis methods. The use of an ethnographic case study provides a means of understanding how the participating principals successfully developed and perpetuated PLCs, as well as how the participating teachers' perceive the impact of the PLCs on improved instruction and student learning. By collecting interview data, making direct observations, and analyzing various documents of interest, I was able to gather "rich data" and to meet these objectives.

Chapter Four contains a description of the characteristics, settings, and participants at both schools, as well as a collective analysis and discussion of the findings for all four research questions. The discussion concludes with a summarization of the findings for both schools.

CHAPTER FOUR

FINDINGS

This chapter presents an analysis of the data collected pertaining to the following research questions:

1. How did the PLCs in two elementary schools develop and perpetuate?
2. What was the role of the principals in the development of a PLC in two elementary schools?
3. How have the principals in these two elementary schools perpetuated the PLC?
4. What, if any, relationship exists between the development and perpetuation of the PLC and improved instruction and student learning?

The qualitative methodologies in this study included structured interviews, direct observations, and document analysis. The chapter begins with a description of the characteristics, setting, and the participants at each of the elementary schools, School A and School B, selected to participate in this research study. The next section includes a collective analysis and a discussion of the findings for the four research questions. In those cases where the same theme emerges at both schools, the findings are reported and discussed collectively for School A and School B. When a specific theme emerges at only one school, that theme is reported and discussed separately. Chapter Four will conclude with a summary of findings for both schools.

Characteristics of Participating Schools

Both School A and School B are located in the same district. The school district serves a diverse population of students, including rural, suburban, and urban populations.

In 2008-2009, the district's population was 1% American Indian, 17% African American, 5% Asian, 54% Caucasian, 18% Hispanic, and 5% Multi-Racial. The district's gender distribution was 51% male and 49% female. The district served approximately 120 pre-K students and 1,262 elementary students in grades K-5. All three of the district's elementary schools are accredited by the Southern Association of Colleges and Schools (SACS).

School A was constructed in 1973. Five additional classrooms were built in 1994 to accommodate increased student enrollment. School B was constructed in 1951, and a new section was added in 1989 due to increased student enrollment. From the outside, both schools were very attractive and well kept. The interior of both buildings was very bright, clean, and inviting. Visitors were required to sign in using a computerized Ident-A-Kid sign-in system at both schools, which took each visitor's picture for security purposes. As I walked through the hallways of both of the schools, the walls and bulletin boards were filled with student work and art. The halls were very orderly and quiet when classes were in session. Overall, both schools provided an aesthetically pleasing learning environment.

In order to be eligible to participate in the research study, all of the teachers had to have been employed at the school for a minimum of two years, a time period consistent with the development and perpetuation of the school's PLC model. The school's principal nominated each of the participating teachers based on their experience and knowledge of the PLC. The participating instructional coaches and principals had been employed in their current positions for a minimum of two years as well. All of the interviews were

conducted in either the assistant principal's or the principal's office, located just outside of the school's main office.

School A

Setting. During the 2008-2009 school year, School A served approximately 500 students in grades pre-K through 5. Of those students, 52% qualified for free or reduced lunch. As a result, School A received assistance under Title I services. The school's population was 9% African American, 6% Asian, 52% Caucasian, 25% Hispanic, and 8% Multi-Racial. The average class size was 24 students per classroom teacher. There were a total of 37 certified staff members teaching in various assignment areas, including 25 general education classroom teachers.

Participants. During the structured interviews at School A, I interviewed four classroom teachers, the instructional coach, and the principal. Of the four classroom teachers interviewed, one taught kindergarten, one taught 2nd grade, one taught 3rd grade, and one taught 5th grade.

School B

Setting. School B served approximately 460 students in grades pre-K through 5 during the 2008-2009 school year. Since 70% of their students qualified and received free or reduced lunch, school B received Title I services. School B served a diverse population of 13% African American, 6% Asian, 41% Caucasian, 31% Hispanic, and 9% Multi-Racial. On average, there were a total of 21 students per classroom teacher. There were a total of 35 certified staff members teaching in various assignment areas, including 22 general education classroom teachers.

Participants. While at School B, I interviewed four classroom teachers, the instructional coach, and the principal. The four teachers interviewed at School B taught 3rd grade, 4th grade, speech, and 1st-2nd grade combination.

PLC Development and Perpetuation at School A and School B

The first research question provides a conceptual understanding of the reasons underlying the development and perpetuation of the PLC at each of the two elementary schools in this case study. In order to fully understand the development and perpetuation process at School A and School B, this discussion provides some additional insight concerning the conditions that influenced the decision to develop the PLC model as a district-wide initiative, the individuals who influenced this decision, and the key stakeholders who turned the district's vision into a course of action.

My interviews, as well as statewide testing results data, indicated that prior to the implementation of PLCs the district as a whole was struggling to meet educational expectations. The district was identified as low-performing, with declining student performance for the previous 4 consecutive years. The district's programs and processes across the curriculum were disconnected, and no shared understanding of best practices or common formative assessments existed. The district's curriculum and instruction was being inconsistently delivered at the school level, and there was little to no data analysis or accountability at the classroom level. Each school used a variety of different materials for instructional purposes, the schools' teachers often worked in isolation, and there was a lack of alignment between district, school, and classroom goals.

During the summer of 2007, the district's superintendent hired a new Director of Elementary Curriculum. The new director had previously been a principal in a

neighboring district and had been using PLCs effectively. Upon being hired, the district's superintendent asked the director to systematically deploy PLCs in all three of the district's elementary schools. The superintendent felt PLCs could be the change the district's elementary schools needed to be successful. In order to accomplish this request, the director sought the support of the superintendent to hire instructional coaches for each of the elementary schools. Since the new director had used the instructional coach model in the school where he previously served as principal, the director had experience with this PLC model. Following the hiring of the instructional coaches, it was the director's responsibility to train the instructional coaches each week. In turn, the instructional coaches would deploy and facilitate the PLCs during grade-level planning each week at the individual schools. According to the Director of Elementary Curriculum, each of the schools' principals was supportive of these efforts at the district level.

With the support the superintendent, the district adopted a "Whatever It Takes" vision, which is consistent with the work of DuFour et al. (2004), entitled *Whatever It Takes: How Professional Learning Communities Respond When Kids Don't Learn*. During the first year of PLC development, each school conducted weekly PLCs; developed common formative assessments; started analyzing data across the district, schools, and classrooms; and commenced the process of changing the district's focus, instruction, and goals. Beginning in year two, the first year of the perpetuation stage, the district offered PLC study groups for teacher assistants, focused on high-yield instructional strategies, implemented Teachscape and book studies, provided professional development designed to meet the needs of their English-Language Learners (ELL), and conducted pilot studies of several instructional programs.

School A and School B first implemented their school-wide PLC models in 2007-2008 along with the other elementary school in the district. Prior to implementation of the PLC model at the school level, every principal in the district, as well as the instructional coach at each elementary school, attended a training conducted by Richard DuFour, a renowned leader in the field of PLCs, to learn how to develop a PLC in their respective schools. Although the implementation of PLCs was a district-wide initiative, the principals were responsible for developing a PLC at their respective schools and for explaining the new PLC model to their staff. While the principals of School A and School B had been assistant principals for the preceding two school years (2005-2007), the 2007-2008 school year was both principals' first year in this role at their respective schools. Both the principal and the instructional coach at School A were previously employed as classroom teachers in neighboring school districts. In contrast, the principal at School B had been a teacher at School B from 1996-2005, and the instructional coach at School B had been at the school for nine years prior to accepting the instructional coach position in 2007-2008.

During the 2006-2007 school year, which preceded the development of the PLC model, the overall reading and math proficiency rates in grades 3-5 at School A and School B were both below the state average (see Appendix C). After reviewing the 2006-2007 test scores, many of the schools' teachers realized that their students were not making acceptable growth academically. As a result, the implementation of the PLC model came at a time when many of the schools' teachers realized changes needed to be made in order for their school to avoid the possibility of sanctions for failure to make Adequate Year Progress (AYP) under the federal *No Child Left Behind Act* (NCLB).

Despite their previous efforts, School A met only 18 out of 21 of their target goals, School B met only 14 out of 17 of their target goals, and both schools failed to meet expected growth for 2006-2007. According to the principals, while the implementation of the PLC model was not negotiable, the majority of the teachers were receptive to the new initiative, particularly considering the academic struggles of the 2006-2007 school year. In those cases where certain teachers were adamantly opposed to participating in the PLC, the principal of School A met with those teachers individually and explained that the PLC model was part of a district-wide initiative to do “Whatever It Takes” to ensure that all students made acceptable rates of academic progress, and as a result, all staff members were expected to participate in the PLC. While the instances were rare, there were a few teachers at School A that actually decided to seek teaching positions elsewhere rather than to participate in the PLC. However, once the majority of teachers began participating in the school’s PLC and saw the impact it had on student achievement, the school’s principals noticed the support for the PLC began to grow.

Throughout the first year of the PLC development phase, the teachers at School A and School B met as a grade level every Thursday with their school’s instructional coach to discuss various topics. According to the principals, while the schools’ teachers had opportunities to meet as a grade level each week during the previous school year, these grade level meetings often lacked the focus and structure needed to significantly impact instruction. Under this new model and in an effort to be consistent across schools, the district’s Director of Elementary Curriculum was responsible for determining the topic to be covered during each week’s PLC. The Director of Elementary Curriculum met with all three elementary instructional coaches at the central office early each week to discuss the

topic and agenda items for the week. Following the meeting at the district level, the instructional coaches at School A and School B would meet with their principals to discuss the topic for the week and to determine the need for additional school-specific items of interest to be included in that week's PLC study group agenda.

After the PLC model was introduced at the school level during the 2007-2008 school year, School A's Leadership Team, which was chaired by the principal, met during the 2008 summer retreat to brainstorm and to discuss the mission, vision, values, and goals for the school. The School Improvement Team at School B had similar discussions to brainstorm and to discuss the mission, vision, values, and goals for their school. Following the development of a rough draft by the members of the Leadership Team at School A, the first staff meeting of the 2008-2009 school year was devoted to reaching a school-wide consensus on the mission, vision, values, and goals for the school. Aside from consulting the School Improvement Team (SIT) representatives, there was no indication School B's mission statement and vision statements were ever presented to the entire faculty in an open forum for input or approval.

While the two schools' approval processes differed slightly, each school's mission statement and vision statement served as the overarching guide for the work of the PLC during the transition period from the development stage to the perpetuation stage. The discussion at School A resulted in the following mission statement: "At School A, we are here to reach and teach all students. We are inspiring young minds to be prepared and successful in the 21st Century." Aside from the mission statement, School A developed the following vision statement: "Every Child can learn- Teachers make the difference!"

In terms of practice, procedures, relationships, results, and climate, School A established the following goals, as posted on the school's website:

- High expectations for all!
- Strong school-home partnerships!
- Colorful, welcoming, and inviting building!
- Child-friendly technology that is readily available!
- Strong, solid decision-making processes!
- Continuously high teacher and student morale!
- Everyone aware of where we are headed and what steps are in place to reach that goal!
- Everyone on board with the same goal of success!
- 100% staff buy-in to school initiatives!
- No competition or jealousy between grade levels!
- Stronger connection between K-2 and 3-5!
- Close, supportive family attitude!

School A's mission statement established some clearly defined goals and reflects a commitment to work with students, parents, and the community to ensure the students reach the high expectations that have been established school-wide.

As a result of the discussions at School B, the following mission statement was developed for the school: "School B will provide an intellectually and emotionally supportive environment that guides each child to his or her potential." School B also developed the following vision statement, as posted on the school's website: "Shaping the world –one student at a time!"

Following the first year of the PLC's development, district and school-wide support continued to grow. The district was recognized by the Department of Public Instruction as the number one system in the state in 2007-2008 for meeting Adequate Yearly Progress (AYP) goals. At the school level, the overall reading and math proficiency rates at School A in grades 3-5 were both above the state average; the math proficiency rates were 6.2 percentage points above the state average and the reading proficiency rates were 1.1 percentage points above the state average (see Appendix C). At School B, the overall math proficiency rates in grades 3-5 increased 9.3 percentage points (see Appendix C). While School B's 2007-2008 math proficiency rates did fall below the state average for grades 3-5, the discrepancy was only -5.8 percentage points, as opposed to -11.6 percentage points during the 2006-2007 school year. As a result of their growth over the course of the 2007-2008 school year, both School A and School B were recognized for making High Growth. School A met 16 out of 17 target goals, and School B met 13 out of 13 target goals needed to make Adequate Yearly Progress (AYP) under the federal *No Child Left Behind Act*. It is important to note that the Department of Public Instruction revised the reading assessment for grades 3-5 during the 2007-2008 school year. As a result of the revised reading assessment, the reading proficiency rates dropped across the state and at both schools during the 2007-2008 school year when compared to the same reading proficiency rates from the 2006-2007 school year. Consequently, at first glance, it could appear to the reader that the reading proficiency rates dropped considerably following year one of the PLCs at both School A and School B, which is in fact not the case (see Appendix C).

Due to the schools' academic progress, the transition from the PLC development stage in 2007-2008 to the perpetuation stage during the 2008-2009 school year was characterized by more supportive and less resistant conditions. , All of the teachers interviewed at School A felt that the PLC model was certainly worth continuing even if all their students were performing either at our above their respective grade levels.

According to a teacher at School A:

We can collaborate. We share ideas. I think that it would be beneficial even if we were making 100% to keep the process going because it is working. We are making the gains that we need to make, and I think PLCs are one of the reasons.

All of the teachers interviewed at school B felt that the PLC model was certainly worth continuing as well. As one teacher at School B stated:

I think that it would be good to continue them . . . There are always things that you can learn as a teacher, and you are always growing . . . The more that you can learn, the better you can help your students to learn. I know that we have really taken the items that we are learning and working on in PLCs to help us be better teachers . . . You should always be learning as a teacher because you're never perfect . . . You can always do better, and I think that PLCs help us to be better.

Based on the responses of those interviewed, the teachers at School A and School B clearly see the value of continuing the PLC model.

Since the PLC schedule adopted during the 2007-2008 school year appeared to be successful, the district decided to continue the same schedule during the 2008-2009 school year. At both the district and school levels, the focus in 2008-2009 was on research-based, high-yield instructional strategies. In addition to developing improved

instructional strategies, the teachers worked on improving their familiarity with analyzing data at the district, school, and classroom levels to determine their instructional strengths and weaknesses.

Within the confines of the PLC, the teachers at School A and School B were afforded the opportunity to seek the assistance and support of the instructional coach and teaching peers to build upon strengths, to address weaknesses, and to improve the instructional opportunities for students. Several of the teachers interviewed at School A credited the instructional coach's knowledge, skills, and willingness to provide support and necessary materials, as well as the instructional coach's ability to make the weekly PLC meetings fun, as reasons for the success of the PLC. As one of the teachers stated:

I think the principal hired the perfect person for the instructional coach position. I think who the instructional coach is could be a big issue...If the instructional coach was not as approachable and nice, did not make the meetings as fun, and did not teach the strategies as well, I don't know that I would be as into it as I am.

While the opportunity to solicit the support of their teaching peers existed prior to the schools' implementation of PLCs, the addition of the instructional coaches and the PLC model afforded teachers at School A and School B the opportunity to step outside of their comfort zone to discuss their instructional practices, to identify and learn new strategies to meet the needs of their students, and to feel more comfortable asking others for help within the confines of a safe, non-judgmental environment. By scheduling bi-yearly vertical planning meetings, teachers also are afforded the opportunity to meet with their peer teachers in the grade level above and the grade level below to discuss ways to build

upon each specific grade level's strengths and to identify instructional areas in need of improvement.

The PLCs at School A and School B began as a district-wide initiative, supported by the school district's superintendent. After receiving training concerning the PLC model from Richard DuFour, the principals at both schools were responsible for implementing the PLC model at their respective schools. As part of this PLC model, the instructional coaches at School A and School B met weekly with each grade level for the last two years and created an instructionally-focused, structured, and non-judgmental environment that afforded teachers the opportunity to focus on improving instruction and student learning. Aside from grade-level planning and weekly PLC meetings, School A and School B also instituted vertical planning opportunities for teachers to share with other grade levels and incorporated opportunities for teachers to share their successful efforts with the entire faculty during monthly staff meetings. These additional opportunities to collaborate, to share, and to learn from and with one another created an increased sense of community among the staff members, supporting the belief that everyone was a team that would do "Whatever It Takes" to meet the needs of their students.

With regard to the testing results, there appears to be evidence that the efforts of School A and School B to develop and perpetuate a PLC resulted in continued improved in student achievement levels. Based on the testing results at School A for the 2008-2009 school year, the second year of the schools' incorporation of PLCs, 68.4% of the students were proficient in reading and 91% were proficient in Math. This represents an 11.7 percentage point increase in the reading proficiency rate and a 14.9 percentage point

increase in the math proficiency rate over the 2007-2008 school year (see Appendix C). School A also met 21 of its 21 target goals needed to make Adequate Yearly Progress (AYP). The testing results at School B for 2008-2009 indicated that 60.7% of their students were proficient in reading and 78.6% were proficient in math. The proficiency rates at School B represent a 14.3 percentage point increase in the reading proficiency rate and a 14.5 percentage point increase in the math proficiency rate over the 2007-2008 school year (see Appendix C). School B was also able to meet 13 out of 13 target goals needed to make Adequate Yearly Progress (AYP). These results are even more significant considering the fact the district had previously experienced four consecutive years of declining test scores.

These marked improvements in reading and math proficiency encouraged both schools to continue implementing the PLC model in 2009-2010. According to the principal at School A, the theme for next year will be “[School A] Big Top”, which equates with “Big Expectations, Top Results.” The staff meetings at both schools will begin to take a PLC format during the 2009-2010 school year as well. At School A, the entire faculty will begin a school-wide book study designed to encourage rigor. In an effort to continue encouraging staff to work together and focus on the necessary curricular issues, PLCs at both schools will continue to meet weekly. According to the principals and the Director of Elementary Curriculum, all school-based PLCs in the district will focus on the note booking of student data, the revision of common formative assessments, the use of Science note booking, the Three Big Ideas of Being a PLC (Focus on Learning, Collaborative Culture, and Focus on Results), and the Five Learning-

Centered Questions. Based on all indications, the PLCs at both schools have developed and perpetuated to the point of sustainability.

Table 2

List of Themes for Research Questions 2-4

Research Question	School A	School B
Question 2 (Development)	<ol style="list-style-type: none"> 1. Decision-Making Opportunities 2. Tone Setting 3. Facilitation 	<ol style="list-style-type: none"> 1. Decision-Making Opportunities 2. Caring/Supportive Environment
Research Question 3 (Perpetuation)	<ol style="list-style-type: none"> 1. Priority/Non-Negotiable 2. Overcoming Time Barriers 3. Conducting a Professional Development Needs Assessment 	<ol style="list-style-type: none"> 1. Priority/Non-Negotiable 2. Overcoming Time Barriers 3. Active Involvement
Question 4 (Improved Instruction and Student Learning)	<ol style="list-style-type: none"> 1. Sharing/Collaboration 2. Data-Driven Instruction 3. Focus on Student Success 4. Research-Based Instruction 	<ol style="list-style-type: none"> 1. Sharing/Collaboration 2. Data-Driven Instruction 3. Increased Student Participation 4. Differentiated Instruction

The Principals' Role in the Development of PLCs

The second research question explores the principals' role in the development of each school's PLC. For the definitional purposes of this study, the *development stage* is consistent with the first year of the implementation of the PLC model at both schools. During the development process, both schools created their respective missions, visions,

values, and goals and began their efforts to implement the PLC model on a school-wide level with preliminary weekly PLC study groups. The first five interview questions pertained to PLCs in the context of Hord's (1997) five dimensions of a PLC. The sixth interview question was intentionally designed to determine the principals' role in the development of the PLC at School A and School B. The following findings for Research Question Two depict what I feel are an accurate representation of the opinions of those interviewed at School A and School B. My on-site observations of School A and School B, as well as my review of the various artifacts pertaining to the principals' role in the development of the PLCs at School A and School B, provide additional support for the findings. For this research question, one theme emerged for both schools, two themes were unique to School A, and one theme was unique to School B. The narrative is labeled accordingly where findings were unique to a particular school.

Theme One for School A and School B: Decision-Making Opportunities

Using the theoretical framework of Hord's (1997) five dimensions of a professional learning community, the first theme to emerge was Decision-Making Opportunities. For definitional purposes, *Decision-Making Opportunities* refers to the principals' willingness to support the development of shared leadership practices and to allow staff members the opportunity to participate in the decision-making process, including the ability to serve on several site-based, strategic committees aligned with the North Carolina 21st Century Strategic Plan. Since the decision to implement PLCs in the schools had already been made, this theme is specifically related to the site-based decision-making opportunities surrounding the development phase of the professional learning communities at School A and School B, including the creation of the school's

vision and mission statements, not whether or not the schools would actually implement a school-wide PLC model. The interview participants consistently referenced the principals' willingness to allow staff members to have a voice in the decision-making process, particularly in the development of their school's mission, vision, values, and goals.

By giving the staff members a chance to participate in the schools' site-based decision-making process during the development of the PLCs, the principals at School A and School B exhibited those characteristics commonly associated with Hord's (1997) dimension of a PLC, Shared and Supportive Leadership. As one teacher at School A commented when asked about the principal's leadership style, "[The principal] believes in the whole concept of site-based decision-making. . . . [The principal] wants us all to have input. [The principal] listens to the faculty." When asked what opportunities exist for teachers to fill leadership roles at School A, the instructional coach confirmed the principal's incorporation of teacher input:

It is not [the principal] making all of the decisions. [The principal] will bring it to the teachers and say, "This is an issue. . . . We have this group of students that are low performing. What can we do? What do you guys want to do for them?" Then, as a group of teachers, they decide . . . well you know . . . I think we could implement this.

By allowing teachers to participate in the decision-making process, the teachers interviewed at School A felt empowered and valued.

Another area where the principals solicited the input of their staff was during the development of their schools' vision. When describing the development of the school's

vision at School B, one teacher replied, “[The principal] had suggestions and ideas, but it was not a dictatorship. [The principal] let us take ownership of things like that and expects us to take ownership of it.” According to several teachers at School B, the previous principals had always made the major decisions in the building, but the current principal at School B is just the opposite. Much like school A, teachers at School B are encouraged to fill leadership roles.

In an effort to learn more about these leadership roles, the principals and the teachers at both schools were asked what opportunities exist for teachers to fill leadership roles. When asked about shared or distributed leadership opportunities, the principal at School A noted that the school’s site-based strategic committees aligned with the North Carolina 21st Century Strategic Standards. According to the principal of School A, these are teacher-led committees. Aside from offering ideas concerning what each committee needs to cover, the principal reportedly sits back and listens. At School B, the principal has created similar committees, which are referred to as Goal Teams. Much like School A, the Goal Teams at School B are aligned with the North Carolina 21st Century Strategic Standards. These teacher-led teams cover such topics as safe and orderly schools and staff morale. According to the instructional coach at School B, the Goal Teams allow all of the teachers to have input, not just those teachers who are on the School Improvement Team (SIT). Previously, those teachers not on the SIT often felt that their opinions were not valued. However, with the creation of the Goal Teams, all the school’s teachers have a voice in the school’s site-based decision-making opportunities. Since these Goal Teams report directly to the SIT at School B, the teams focus on many of the same issues. The

primary difference is the Goal Teams focus on specific issues, whereas the SIT focuses on all of the general issues the Goal Teams address within their sub-committees.

As far as Hord's (1997) second dimension of a PLC, Shared Vision and Values, the principals at School A and School B allowed the School Improvement Teams (SIT) to lead the discussion to determine the schools' vision and values. One teacher at School A described how the school's vision was determined:

The SIT team met, and we were asked, "What is our vision for the school? How do we see our school? What would our school look like if we could do it?" And so everybody brainstormed. . . . Then we came up with our vision to present to the faculty at the staff meeting for their input . . . We put our ideas up, showed the faculty what the SIT team had come up with, and we tweaked it to make sure that everyone had input into the school's vision and our mission statement. Once we had our school's vision and mission statement, everyone went back to their classrooms and created mission statements for their classrooms.

When asked to expand on the principal's role during the faculty meeting in comparison to his/her role at the SIT retreat, this teacher commented, "It was the same thing . . . [the principal] stood back and let the staff talk and discuss. The principal really made it feel like it was ours . . . not something put on us." Allowing the teachers to take the leadership roles was important to the success of the principal's efforts.

Much like School A, the principal at School B allowed the teachers to take ownership of the school's vision and values. When asked about the development of School B's vision, the instructional coach commented:

The School Improvement Team discussed it. We talked about how we wanted to make the vision statement. We discussed as a group how it would look, and what were our priorities or what elements we felt like we needed to address with the vision. We agreed on, "Shaping the world, one student at a time," which is directly related to those 21st century skills.

According to several of the teachers on this committee at School B, the SIT wanted to develop a vision statement that was short enough for the school's students to remember. The SIT felt that it was important for the school's students to be able to recite the school's vision. As one teacher commented:

The kids stand up and say it. I think it helps them to take ownership of the school. They realize it is not just the teachers' school, it is not just the principal's school, but it is their school, too. So, it helps them to understand why they are here. Also, we each have classroom vision and mission statements that we have created in the classroom.

When asked to expand on the principal's role during this process, one of the teachers commented, "[The principal] helped us brainstorm and that kind of thing... [The principal] had some input, but most of it was from our SIT at the time. Then it spread out to the staff." By taking the lead in the development of the schools' vision at School A and School B, the schools' teachers created a vision they could be proud of, that was unique to their respective schools.

By providing the staff members with a voice in the various decision-making phases of the development of the PLC at School A and School B, the principals improved teacher "buy-in" for the schools' PLCs. According to the instructional coach at School A,

“[The principal] doesn’t dictate anything. [The principal] will bring it to the teachers and say, ‘What do you guys think we should do?’ That’s where the buy-in comes from.”

Teachers need to feel that others are willing to listen to their opinions. When individuals feel that their opinions are going unheard, their level of commitment often declines, they are less supportive of the organization as a whole, and they are more apt to blame others for their problems or struggles (Chan-Remka, 2007; Drago-Severson, 2004; Hord, 1997). As one teacher commented when asked to expand on the principal’s effort to incorporate teacher input, “Everybody feels like they have input and a voice, and that their voice is important when they have something to share. The teachers do not feel belittled.” Since the principal listened to the opinions of the teachers at School A, those teachers interviewed appeared to be very committed to the school’s PLC; shared their support for the principal, the school, and the district; and expressed a sincere commitment to do their very best to meet the academic needs of all their students. As one teacher who expressed her support for PLCs commented,

I think the PLC has just been awesome because it is district wide. The instructional coaches meet earlier in the week, and they try to get us all on the same page. That is a time when we can share ideas. We get such good ideas from each other in those PLC meetings because it is such a . . . it is just a great meeting. You know I look forward to my grade level meetings and PLCs. I think that if you were in another school setting, you might begrudge having to spend 45 minutes with the same people, but I don’t. I don’t think that other people do either.

Based on these comments, the teachers at school A appeared to enjoy the opportunity to meet and collaborate with their teaching peers.

Much like the instructional coach at School A, the instructional coach at School B noted that the principal's willingness to allow teachers to participate in the decision-making process resulted in teachers' support of the PLC:

I think the staff understood that we were going to have to change something and that something was going to have to be different. I think at first they were thinking, "How is this going to work?" "What are going to be the benefits of this?" When we grew almost 10% in test scores last year because of PLCs, they got buy-in and they saw.

Once the teachers saw what they could accomplish by working together and participating in a decision-making process aimed at a common goal, the level of commitment to the schools' PLCs improved tremendously, which fostered the continued development of the schools' PLCs. Allowing teachers the opportunity to participate in the creation of the school's vision increased teacher investment in the ideals of the vision. The teachers appeared to be very committed to the schools' PLCs, expressed their support of the principals, and shared a sincere commitment to do their very best to meet the academic needs of all their students. As one teacher at School B who expressed her support for PLCs commented,

We were actually getting ready to be under state watch for test scores, so it was pretty much this is it. We are going to try something, and we are going to see if it works. When it was given to us, we were thinking, "Oh, it's an extra Thursday that I have got something to do. So, you are basically telling me that every day, except maybe two, I have got something to do." . . . But it is not a chore . . . We go in and do what we are supposed to do. It's not anything that brings me down. I

don't leave like, "Oh, gosh!" The timing of it was definitely necessary and needed. I think that it has helped us. Last year, I think we did really good considering what we had been through the year before.

As the teachers' comments indicate, allowing teachers opportunities to participate in the decision-making process greatly increased the level of support for PLCs at both School A and School B.

Theme Two for School A: Tone Setting

The second theme to emerge from the analysis of the interviews and my on-site observations was the ability of the principals to establish a collaborative environment. In the case of School A, this effort emerged as a theme of Tone Setting, which refers to the principal's ability to establish an atmosphere of professionalism and high expectations among the staff members, to foster a climate conducive to collaboration, and to conduct performance checks to make sure teachers are working together as grade-level teams to improve instruction and student learning. Due to the principal's efforts to set the tone and to foster an environment conducive to collaboration, sharing, and learning, Hord's (1997) fourth dimension of a professional learning community, Supportive Conditions, is evident at School A. The principal sets the tone for high expectations, while also providing the supportive conditions necessary for teachers to work collaboratively. The school's climate that is conducive to learning allows teachers to freely share their ideas, and in doing so, teachers feel comfortable stepping outside of the confines of their classrooms. One teacher described the tone at her school this way:

I think it kind of goes back to the tone that has been set in the building that we are a very professional school. If you're more of a quiet person and you see so many

other teachers are sharing their ideas, whether it is at staff meetings or just on a day-to-day basis, you see those teachers in and out of each other's room. If someone found a new web site, they are more than willing to shout out or send an e-mail out saying, "I found this great web site." It is just understood that happens here. Since that is the tone that is set here, I think teachers are going to come out of their shell.

As far as School A is concerned, the information the teachers shared during my interviews is further supported by direct observations of engaged collaboration, including exchanges during lunchtime and vigorous engagement during weekly PLC meetings. When asked about the vision for the school, another teacher commented, "because of [the principal's] expectations and the tone that is set...it all evolves with [the principal's] leadership. By setting the tone of expecting the best and knowing what the expectations are for us, we set that tone in our classroom." The teachers at School A have carried the attitude of high expectations established by the principal into their classrooms and have established the same tone of high expectations for their students.

The principal at School A has worked to establish, foster, and maintain an environment conducive to collaboration. As one teacher interviewed replied, "Well, it is just that we are all team players. We are here for the kids. If it works, share it with other people. It is just a real giving atmosphere. You want to help others." Not only does the principal of School A encourage staff, the principal models that behavior as well. When asked about the efforts to encourage collaboration, the principal stated, "I think with that, a lot of it is, it's in the instructional coach and [me] . . . We model it a lot. They see us collaborating all the time . . . we are constantly meeting." The principal and the

instructional coach of School A model the same behavior they are expecting the teachers to practice with their peers.

Based on my analysis of the interviews and observations, the principal at School A has created a climate where teachers understand that it is their professional obligation to collaborate, to share ideas, and to continuously strive to improve their own teaching practices so that they might better serve their students. In order to make sure teachers were doing what is expected of them, the principal frequently attends both PLC study groups and grade-level meetings. Each grade level is also expected to submit their weekly grade-level meeting minutes for the principal to review. An understanding exists at School A that these teacher-led grade-level meetings are to be used to discuss the curriculum and instructionally related topics, not to gossip, or to discuss personal issues far removed from classroom instruction. Teachers are expected to keep the focus of this meeting time on topics that impact instruction.

Aside from PLC study groups and grade-level planning sessions, teachers at School A are also expected to share best practices at staff meetings. During the principal's regular classroom visits, it is not at all uncommon for the principal to ask a teacher to share an instructional strategy believed to be beneficial or helpful with the school's other teachers at the next staff meeting. Aside from serving as a means for the principal to conduct regular performance checks, this practice also allows the teachers to share proven instructional practices with other staff members. In addition to sharing the teacher's own instructional practices, there is an understanding at School A that teachers who are allowed to attend conferences or workshops are expected to share what they learn with the entire faculty at the next staff meeting. The principal's role in setting the

tone that collaboration and sharing of ideas are expected has contributed to the development of the school's PLC.

Theme Three for School A: Facilitation

An additional theme to emerge pertaining to the principal's role in the development of the professional learning community at School A was Facilitation. In this case, Facilitation refers to principal's ability to carefully plan, to assist, and to move the PLC developmental process forward. Almost every teacher interviewed described the leadership style of the principal as that of a facilitator. When asked to expand on this description, the teachers and instructional coach consistently referred to the principal's role in facilitating the various stages of developing the school's PLC. During the development of the school's vision, several of the teachers described how the principal stepped back at the School Improvement Team (SIT) retreat and allowed the grade-level representatives to lead the conversation. As one teacher reflected, "[The principal] wanted to make sure that we did not feel like [the principal] was making us believe this and that we were pulling in what we actually do believe." In response to the principal's role in the development of the school's vision and values, one teacher replied,

[The principal] is usually just the facilitator. [The principal] will throw the idea out, and then we all brainstorm or come up with ideas. It is not a dictatorship. It is not [the principal's] way or the highway. It is very open. I think that that is why everybody is more, you know, happy here.

In the words of the principal, "One thing that I did was to make teachers feel like this was their school. I let them know that this is your school. This is not my school. This is our

school.” By sharing ownership of the school with the teachers, the principal was ultimately facilitating the teachers' ownership of the school's PLC as well.

Although this discussion of faculty comments may seem to indicate that the principal was primarily a silent observer who would throw out ideas periodically during the development process, after asking for clarification from several of those interviewed, that was not the case. As one teacher commented, “[The principal] facilitates us, but manipulates us in a specific direction.” When asked to expand to on the meaning of "manipulation" reference in their comment, the same teacher replied:

[The principal] does a good job of knowing what direction the school needs to go in. I think [the principal] does a really good job of allowing teachers to be leaders, while guiding them in the direction the school needs to go. "Facillo-manipulator;" that is what we call it.

This principal described the leadership style in more direct terms: “I am one of those...I have the plan in my head. I know what I want, but I put it to committees or the staff.”

Although the faculty members and the principal at School A had varying perspectives on the principal's leadership style, the principal's ability to work collectively with the school's teachers to facilitate the successful development of the PLC at School A was a major factor in the development process.

Theme Two for School B: Caring/Supportive Environment.

In the case of School B, the establishment of a collaborative atmosphere emerged as the theme of a Caring/Supportive Environment, which refers to the principal's efforts to create and maintain an environment where the staff members feel appreciated, encouraged, empowered, supported, and valued. Based on my analysis of the interviews

and my on-site visits, the principal has created a family atmosphere among the faculty at School B. The caring and supportive nature of the environment established by principal B differed significantly from the professional nature of the atmosphere created by principal A. While both principals established a culture conducive to collaboration, during the development process the principal at School B created an environment that was clearly more nurturing than methodical.

During my interviews, the teachers consistently referred to the ways that the principal supported their efforts during the development of the school's PLC, as well as genuinely cared about them as individuals. According to the teachers, the principal has an open-door policy. In the event teachers need to discuss an issue or a concern, the principal is available and willing to listen to them. For a PLC to be successful, the participants must be willing to share. After reflecting on the experience during the developmental stages of the school's PLC, one teacher stated,

Initially, I was not willing to share what I did in PLCs because I was not confident in it. The principal has really supported me the last couple of years to help me feel like I could be that leader. [The principal] is very supportive and pushes us. [The principal] pushes us like we push our kids. But it is always done in a manner where we know that if we fall, [the principal] will be there to catch us.

By providing support during the development of the school's PLC, the principal was able to earn the trust of the teachers.

When asked about the efforts to develop School B's PLC, the principal commented,

What you have to do is get their trust. It took us a long time. At first, they felt like we were just giving them something else to do. They had to find meaning behind what they were doing. We had to start slow with certain groups of them and allow them to take more of a leadership role during PLCs.

Before the principal was able to gain their trust, the teachers had to know the principal cared about them. According to one of the teachers, “[The principal] is very supportive, caring and understanding. You feel like [the principal] actually cares about you as a person, as well as a teacher. It is not like you’re just another person.” The principal at School B has ensured that the school’s teachers know they are valued and important.

During the initial development of School B’s PLC, the principal worked hard to let the school’s teachers know how much their efforts were appreciated. According to the instructional coach, the principal consistently tried to empower the teachers by letting them know their efforts were not going unnoticed. If the school’s data showed that teachers’ students had done well in a particular area on the quarterly testing data, the principal made a point to find them, to recognize their accomplishments, and to let them know that their efforts were appreciated.

Throughout the development stages of the school’s PLC, the principal worked hard to maintain a positive school climate. As one teacher stated, “[The principal] is very good about making sure that our staff morale is high.” During my visit to School B, I could not help but notice the bulletin board outside of the school’s office. The bulletin board had pictures of the school’s teachers on it with comments beside their pictures. According to the principal, they do what they call “Encoura-grams” on the bulletin board. These “Encoura-grams” offer the staff an opportunity to give and to receive words of

encouragement from their peers. Aside from the bulletin board, the principal sends what “Shout-Out” e-mails to recognize those who have done particularly well. The principal has also begun focusing on the positive efforts of one grade level per week on the school’s staff bulletin. During my visit to the school, I had the opportunity to see one of these bulletins for myself, which highlighted the efforts of the fourth grade team.

As a result of these efforts to provide a caring and supportive environment, the school’s PLC has developed successfully. One of the teachers reflected, “Now, at first, I was like why are we doing this? . . . another time in my day...but now, we have all changed . . . I think it is good for us . . . we need to keep it.” During the development process, the school’s principal provided the staff with the caring and supportive environment they needed to be successful.

The Principal’s Role in the Perpetuation of PLCs

The third research question explores the principals’ role in the perpetuation of each school’s PLC. For the definitional purposes of this study, the *perpetuation stage* is consistent with the second year of the implementation of the PLC model at both schools. During the perpetuation stage, both schools expanded upon their efforts to improve the PLC model on a school-wide level, which included a more instructionally focused and data-driven approach to their weekly PLC study groups. The seventh interview question was intentionally designed to determine the principals’ role in the perpetuation of the PLCs at School A and School B. The findings represent what I feel is an accurate depiction of the opinions of those interviewed at School A and School B pertaining to Research Question Three. The on-site observations I made during my visits to School A and School B and the review of various artifacts provide further support for my findings.

Theme One for School A and School B: Priority/Non-Negotiable

While the decision to develop PLCs at both schools was made at the district level, the principals were responsible for the perpetuation of the PLCs at their respective schools. Based on an analysis of the interviews, one of the primary emerging themes identified was Priority/Non-Negotiable. This theme pertains to the principals' efforts to consistently convey to the schools' faculty members that attendance and participation in the schools' PLC was an expectation, that it was important to the principal, and that the schools' PLC would take precedence over all other non-teaching related responsibilities. All of those interviewed consistently referred to the principals' efforts to convey the importance of the PLC to the staff members at the school. Unless the instructional coach was gone, PLCs were rarely cancelled. Teachers were not permitted to plan parent meetings or other conferences during their regularly scheduled PLC study group time. As a teacher at school A commented,

[The principal] keeps PLCs our priority. PLCs meet during our special time, and if one of those special teachers is absent, it knocks us out of PLCs. [The principal] always tries to find a sub, a volunteer, or somebody to cover our classes so we can meet for our PLCs. It is a priority with [the principal]. [The principal] wants us to have that planning with the instructional coach. Since it is a priority with [the principal], it is with us too.

When asked, one of the teachers at School B commented that, "every Thursday we have it regardless. No field trips. . . . [The principal] wants to make sure you are always there for it. It is an important piece . . . you get important information about things that are going on." The principals at School A and School B have clearly communicated

their high expectations to their teachers and have made PLCs a priority over all other non-teaching related duties at their schools.

From the very beginning of the developmental process of the PLCs at School A and School B, the principals at both schools made it clear to everyone that participation was not negotiable. According to the teachers at both schools, both the principals communicated at the opening staff meeting that Thursdays would be the day PLCs were held. Prior to clarifying the PLC instructional coach's role, many of the schools' teachers initially viewed the instructional coach as another teacher assistant. When asked whether there were ever any negotiations concerning the development of the PLC, the instructional coach at School A commented, "I think as far as PLCs, you know, it is kind of like Thursdays are sacred." When asked whether there were ever any negotiations concerning the development of the PLC, the instructional coach at School B commented,

[The principal] really let the staff know that PLCs were an important part of what we were going to start doing, that it was non-negotiable, and that there were certain things that were expected by coming to PLCs. [The principal] kind of laid that foundation of the importance of it.

Both of the principals were clearly committed to importance of PLCs. As the principal of School A stated,

Thursday is PLC day and the teachers know that it is sacred. They know nothing is to be planned on Thursdays. As a school, we do not plan anything on Thursdays because that is when we are getting the meat of our PLC time. That is when they are talking with the instructional coach, they are getting the strategies, and we are

coming up with different grade level plans if they are having trouble in an area.

So, nothing [else] happens on Thursdays!

When asked about the development of PLCs at School B, the principal replied:

I have to make sure that they cannot miss PLCs. It is not allowed. On Thursdays, they know that they can't schedule field trips. They know if they come to me and ask to schedule a field trip, I am going to say, "No," because PLCs are valuable. It is valuable information. You need to be there and it is a team. You can't be a part of the team if you are not there.

As these comments indicate, there was no room for negotiations about attendance at the PLC meetings.

In an effort to confirm the accuracy of the above-mentioned responses, I returned to School A and School B to observe the schools' weekly PLC study groups. During my visits, I silently observed all six (K-5) of the weekly grade-level PLC study groups at both schools. I observed that all of the group members arrived on time and brought their PLC notebooks with them to the meeting. Each group had a good rapport, none of the members were absent, and each of the members were actively engaged and participated in the group's discussion.

Throughout my interview analysis and my on-site observations, the message that PLCs were important to the principals continuously emerged from my findings. Teachers clearly understood that PLCs would take precedence over all other items on their professional agendas. At both schools, the support staff (i.e., music teacher, media specialist, P.E. teacher) covered the teachers' classes, when and if necessary, to ensure that the schools' classroom teachers were afforded the opportunity to participate, without

interruption, in the weekly PLC study groups. In those cases when support staff was unavailable, the principals at School A and School B would brainstorm alternative coverage options to keep teachers from missing PLC study groups.

Without a clear communication that PLCs were a priority both schools, those who were not initially in support of PLCs could have taken advantage of the situation to avoid participating in the schools' PLC study groups; this would have jeopardized the perpetuation process. In those cases at School A where a teacher was not in support of the school's PLC, the principal had what was referred to as "critical conversations" with those teachers. Based on the principal's own account, in extreme cases this could involve a discussion as to whether or not School A was the best personal and professional match for the teacher. However, as a result of the principal's efforts to make PLCs a priority, as well as the principal's unwillingness to negotiate the attendance or participation requirements, the efforts to perpetuate the school's PLC were not jeopardized by those who were initially resistant at School A.

At both schools, the message that PLCs were important to the principals continuously emerged from my findings. When asked specifically what the principal at School B did to perpetuate the PLC, one of the teachers stated,

I feel like [the principal] will fight for whatever [the principal] believes in, and I know that [the principal] believes in PLCs. As a result of the recent budget cuts, we've recently had two teachers that are retiring or are going to have to be let go. I know that [the principal] personally fought for them. I feel like if that was ever the case with the PLC instructional coach position, [the principal] would fight to

keep that person in it and to keep it. PLCs have done a lot for us, and I feel like it is very important to [the principal]. I know it is important to us.

Since the principals of School A and School B believed in the value of PLCs, both principals worked hard to ensure the successful perpetuation of these communities.

Both the analysis of the interviews and the on-site observations of the PLC study groups indicate that the principals' efforts to make the PLCs at School A and School B a non-negotiable priority played a significant role in the perpetuation of the PLCs at both schools. The principals' efforts to communicate the expectations clearly to the teachers, which included explaining the reasons for implementing the PLC, the goals of the PLC, and the role of the instructional coach, supported the perpetuation of the PLC at School A and School B. Since the teachers clearly understood why they were participating in the schools' PLCs, the clarity of the principals' message left no room for misunderstandings. The principals' effort to make the PLC a priority encouraged the schools' teachers to make the PLC a priority as well, further supporting the perpetuation efforts.

Theme Two for School A and School B: Overcoming Time Barriers

The second theme to emerge pertaining to the principals' role in the perpetuation of the PLCs at School A and School B was Overcoming Time Barriers. For definitional purposes, *Overcoming Time Barriers* refers to the principals' efforts to effectively and efficiently manage the various time constraints through scheduling creatively, soliciting the assistance of support personnel and volunteers, and working diligently to guarantee that teachers' instructional time, grade-level planning, and PLC study groups were protected and embedded into the school day and not after school hours. Despite increased demands on teachers to cover the constantly expanding curriculum objectives in the core

subject areas, state mandates determine the length of school day. As a result, schools are faced with the challenge of meeting these demands in less time and with fewer personnel.

As one teacher at School A commented when asked about barriers to collaboration:

Time . . . I guess you could always ask for more time, but you know sometimes . . . you have more time and you just use up more time. I think to myself . . . the more time you give me . . . I don't know if I am going to be more efficient with that time. We have 45 minutes for our PLCs, and this has to be done by the time we leave. So, it has to get done.

When asked the same question about barriers to collaboration, a teacher at School B commented:

Time . . . I would love to be able to get into all the different classrooms to see what is going on in there. However, with the time demands already, I do not want to be here spending the night every night. You know it is hard for us in the upper grades because we have the EOGs. Trying to get out and see different things is hard for us, since you do not want to leave your kids.

These teachers' comments reflect the struggle so many teachers face when asked to meet the time demands of the teaching profession and the needs of their students. In an attempt to help teachers to meet these demands, the efforts of the principals at School A and School B to explore creative alternatives for overcoming time barriers was beneficial in the schools' efforts to perpetuate their respective PLCs.

Based on an analysis of the interviews, direct observations at School A and School B, and a review of the schools' master schedules, the principals' efforts to overcome time barriers to collaboration was significant in the perpetuation of the PLCs at

both schools. When asked about the principal's efforts at School A to overcome time barriers, one of the teachers commented:

As far as our committees, we meet during the day instead of it being after school. I think that is a biggie for teachers. It is not one more thing after school that you have to attend. [The principal] has scheduled our committee meetings during lunch, which has been nice. You get to order out lunch. It just makes it something you want to go to, instead of being after school when you do not want to stay.

Similarly, when asked about the principal's efforts at School B toward overcoming time barriers, one of the teachers commented:

I would have to say one of the positive collaborating things is that PLCs are during the day. We do not have to work so late. With meetings everyday after work and with everything [the principal] is encouraging concerning collaboration, making the PLCs during the school day makes it a fun thing. It is not just another meeting after school sort of thing. I think the principal's encouragement of collaboration, allowing it to occur during the day, and having that specific meeting day is a positive thing.

The principals at both schools have protected the teachers' personal time from additional demands, while still managing not to lose any instructional time with students. While teachers at School A and School B continue to have various obligations after school hours, such as staff meetings and tutoring, PLC study groups are not one of those obligations.

In an effort to meet the professional development needs of the teachers, as well as to overcome time barriers, the principal at School A allowed the assistant principal to

serve as a professional development liaison for teachers. At School B, the principal has adopted a similar practice but has chosen to utilize the instructional coach in this capacity. Rather than sending a classroom teacher or an entire grade level to off-site conferences or workshops, the principal at School A sends the assistant principal, and the principal at School B sends the instructional coach to these trainings. Upon their return, it is understood that these professional development liaisons will do a “turnaround training” with each grade level. These “turnaround trainings” are conducted in a very similar manner to the PLC study groups. While teachers at School A and School B are still, on occasion, allowed to attend conferences, these requests are carefully evaluated by the principals. Except in rare cases, the assistant principal or the instructional coach goes instead. Based on my interviews, the schools’ teachers really appreciate the fact that they get the benefits of attending the conference without missing any instructional time with their students.

In School A, having the assistant principal serve as the professional development liaison allows the instructional coach to facilitate the school’s PLCs and to support on-site classroom instructional practices. Additionally, teachers are able to focus their efforts in the classroom instead of outside the classroom. At School B, the instructional coach was chosen to fill the role of professional development liaison instead. The principal commented on the reasons for this practice at School B:

The model is supposed to be that the PLC instructional coaches are intended to be that person for in-house staff development. The Director of Elementary Curriculum will tell you that is what we are supposed to use them for. If we’ve got something as a school we need to learn, like DIBELS for example, we sent the

PLC instructional coach out to learn about DIBELS. Then they came back and helped the teachers with DIBELS. Now, the instructional coach does all the helping with DIBELS because they know more about it.

While slightly different at each school, having professional development liaisons makes sense on a number of levels. Instructionally, this practice makes sense because School A's and School B's students are still being taught by their regular, certified classroom teacher, as opposed to being taught by non-certified substitute. Financially, this practice makes sense because the schools only have to pay for one person to attend the conference or workshop. Since the assistant principal and the PLC instructional coach do not require a substitute in their absence, the school saves the money they would have traditionally spent on a substitute. Professionally, this practice makes sense because this assistant principal and PLC instructional coach are providing the schools' teachers with quality, on-site professional development. By sharing their knowledge with others, a community of learners is further perpetuated.

Aside from scheduling the weekly PLC study groups on Thursdays and ensuring the school's teachers have a common planning time with their grade level on a daily basis, the principal of School A has developed a lunch schedule that allows teachers the opportunity to interact with other grade levels. Scheduling for support personnel and teacher assistants to cover classes during weekly PLC meeting times allows teachers to focus on their work during PLCs and without having to worry about classroom coverage. Additionally, since the principal allows teachers to sit together during cafeteria duty, teachers are able both to collaborate with one another as they eat lunch and still to meet their responsibility for supervising their students. During my visits to School A, I had the

opportunity to witness this collegial interchange among the teachers in the cafeteria.

According to the teachers, the principal's efforts to schedule lunches in this manner have encouraged collaboration among the different grade levels. When asked specifically about the principal's efforts to overcome barriers to collaboration, one teacher commented, "I think that through scheduling . . . The way [the principal] schedules lunches ensures that we see different teachers from different grade levels . . . and that helps, too." The teachers at school A seemed to appreciate and enjoy the opportunity to collaborate with their non-grade level peers.

Rather than using lunch time as an opportunity for teachers to collaborate with other grade levels, the principal of School B has developed a lunch schedule that allows teachers to have a duty-free lunch five days each week, creating an additional two and one-half hours of planning time for the teachers to work with their grade level colleagues. According to the principal, the Teacher Working Conditions Survey, a survey completed annually by teachers across the state, indicated that this school's teachers felt like they needed additional planning time. . The results of this anonymous survey are shared with the principal at each school, as well as with the district's superintendent. In an effort to meet this need for additional planning time, the School B's principal worked to develop a schedule to accommodate this request. While several different coverage plans have been explored, the principal, assistant principal, and the instructional coach provide the majority of the lunch coverage each week. During my visits to School B, I saw both the principal and the assistant principal covering during the school's lunch period. The teachers would simply drop off their students in the cafeteria and return 30 minutes later to pick them up. According to the teachers, the principal's effort to provide an additional

30 minutes of time during lunch has encouraged even more collaboration within the grade level. When asked specifically about the principal's efforts to overcome barriers to collaboration, one teacher commented, "Well, our principal has done a really good job about making sure we have duty-free lunch each day where we can get together to plan and to talk and that kind of thing." The teachers at School B appreciated the principal's willingness to take the time to afford the schools' teachers this additional opportunity to collaborate with their teaching peers.

Aside from providing the teacher with additional time during lunch, the principal at School B has allowed teachers not to have duties before school as well. Previously, the teachers often had morning duty from 7:30 a.m. to 8:00 a.m. Volunteers or support personnel now perform this duty. As a result of the principal's efforts to relieve the teachers of this responsibility, the school's teacher now have additional time from 7:30 a.m. to 8:00 a.m. to talk with different colleagues about what is going on in their classrooms.

In addition to having the opportunity to interact with other grade levels during their lunchtime at School A, or additional planning time with their grade level colleagues at School B, the principals at both schools schedule two vertical planning meetings each year. This allows every grade level the opportunity to interact with the grade level above them a minimum of once each year and the grade level below them a minimum of once each year. According to the teachers at both schools, this practice has been beneficial as well, and is another example of the principals' efforts to support collaboration among the entire teaching faculty. When asked about vertical planning, a teacher at School A replied:

[The principal] has done a good job as far as . . . I think every year for the last two years the principal has instituted vertical planning where we can plan with the people above us . . . They can say, "Okay, this is what we are seeing that the incoming students are not as strong at . . . we were hoping they would be stronger at [a certain subject] . . . these are their strengths . . . this is working really well." It's the same thing for us . . . with the grade level below us . . . PLCs definitely gives us the time. It makes it feel like you are not only collaborating with your team . . . you are collaborating with everyone.

When asked about the practice of vertical planning at School B, one of the teachers commented:

[The principal] provides that extra coverage for us to get together and meet for those vertical planning meetings because it is really important for us to meet with other grades. While you are covering your curriculum, when they get to third grade and you look at that curriculum, you are sitting there going, "Well, where is this step in between?" You don't realize that until you actually sit down with the curriculum and with those grade levels and say, "So, where is that in between step?" There are some things that there is a like a big jump between them, and you are sitting there looking at it going, "How are they supposed to get from here to here, unless we cover it?" But, we don't know that we need to cover it until we look at their curriculum and we talk.

By providing increased opportunities for vertical planning, teachers at both schools are able to offer and receive advice from their teaching peers regarding how they can build on their instructional strengths, how they can improve their weaknesses, and how they

can work together to better meet the needs of their students. Vertical planning would be an example of Hord's (1997) fifth dimension of a PLC, Shared Personal Practice.

Aside from providing opportunities for working closely with the instructional coaches to utilize and incorporate the knowledge gained from these vertical planning meetings during PLCs, the principals have also scheduled times for those teachers who are particularly strong in an area to share their expertise with others who might be weak in that same area. This practice provides yet another opportunity for the schools' teachers to share their personal practice with one another.

While time is a limited resource, the principals of School A and School B have worked diligently to overcome time barriers impacting the schools' efforts to successfully perpetuate the schools' PLCs. Whether soliciting the assistance of a parent volunteer to cover a class for a teacher to attend their PLC study group or asking a teacher who is particularly strong in an area to assist a colleague, the principals at both schools are willing to do whatever is needed to ensure time constraints do not interfere with the goals of the PLC. The principals' efforts have increased the number of job-embedded collegial opportunities in the various grade levels. Since the majority of these collegial interchanges (i.e., PLC study groups, grade level meetings, vertical planning, committee meetings) occur during the school day, the principals have been able to use the additional time saved to solicit the help of interested teachers to offer weekly After-School Tutoring and Saturday Academy every other week to target at-risk students who are in need of additional academic support. The efforts of both principals to overcome time barriers are a significant factor in the perpetuation of the PLCs at both schools.

Theme Three for School A: Conducting a Professional Development Needs Assessment

The third theme to emerge pertaining to the principal's role in perpetuating the PLC at School A was Conducting a Professional Development Needs Assessment. For definitional purposes, *Conducting a Professional Development Needs Assessment* refers to the principal's annual efforts to survey the professional development needs of the school's teachers and to tailor a school-wide plan aligned with the needs of the school's teaching professionals. During my interviews, several teachers referred to the principal's efforts to align the professional development of the school's teachers with the needs of the school's students. Due to these alignment efforts, the principal was able to target those needs identified as significant. For example, additional technology training was a need several of the teachers identified on last year's needs assessment. As a result of this needs assessment, the principal, with the support of the school district's technology department, provided additional professional development opportunities designed to improve the school's efforts to incorporate technology and 21st century instruction into the classroom. The school's PLC was also able to meet the needs of those teachers by providing them with support during their efforts to incorporate the new technology into their classroom. Teachers who needed additional support were able to turn to their more technologically advanced teaching peers and to seek additional support from technology specialists at the district level.

In an effort to ascertain the teachers' professional development needs, the principal asked a series of simple questions to identify where the teachers needed additional support. One of School A's teachers described how the learning needs of professionals within the school were addressed: "We were asked at the beginning of this

year...Where do you feel you are as a professional? What professional help do you feel that you need? Where is an area where you feel that you are lacking?" In response to the teachers' perceived needs, the principal and the instructional coach worked together to address these needs. According to the instructional coach, "At the beginning of the year, [the principal] asked teachers to write down anything they felt they needed...Part of my job is to attend workshops and come back and provide teachers with in-service training. That happens a lot in PLCs." One benefit behind the needs assessment is that it is based on school-level needs. While high-yield instructional strategies were the district-wide focus of PLCs, the school's needs assessment allowed the principal to provide additional, specific, and tailored professional development support aligned with the needs of the teachers. As one of the teachers stated:

If we feel like it is a need, we try to attack those needs. It's just like our SIOP [Sheltered Instruction Observation Protocol] training. We are doing SIOP training right now because one of our AYP needs was our Hispanic population. So, [the principal] put in staff development to help us with that population and to try to give us more strategies to help those kids achieve.

Since the Hispanic population was the only subgroup who failed to make Adequate Yearly Progress (AYP) in 2007-2008, School A's principal implemented a professional development plan to meet this specific need. By aligning the professional development needs of teachers with the school's professional development plan, the principal was able to address the needs of the school's Hispanic population, as well as further perpetuate the school's PLC.

At School A, the principal's efforts to meet the professional development needs of the school's teachers ultimately impacted the quality of instruction in the classroom. In order for the PLC to continue to be successful and to perpetuate, it must continually assess and attempt to address the needs of the professionals it serves. Theme three, Conducting a Professional Development Needs Assessment, is a necessary pre-requisite of Hord's (1997) third dimension of a professional learning community, the Collective Learning and Application of Learning. Since collective learning, as described by Blankstein et al. (2008), begins with the community's identification and specification of what they must learn and how they will go about learning it, followed by the application of learning, the principal's efforts to conduct an annual professional development needs assessments provided the foundation for the school to identify what their teachers must learn and to develop a plan for their learning to be successful. Once the principal was able to determine what the teachers needed to learn, such as technology or SIOP, the principal was able to work closely with the instructional coach to development a plan for how they would go about learning it. After the teachers' learning needs were met, the teachers were able to apply what they learned in their classrooms. The principal's effort to support the collective learning of its teachers was clearly significant in the perpetuation process of the PLC at School A.

Theme Three for School B: Active Involvement.

The third theme to emerge from my analysis of the interview transcripts and on-site observations at School B was Active Involvement. For definitional purposes, *Active Involvement* refers to the principal's efforts to consistently participate in the school's PLC, which includes attending and participating in weekly PLC study groups and grade

level meetings as well as engaging in frequent collaborative dialogue with the school's PLC instructional coach for the purpose of improving the instructional practices of teachers and impacting student learning.

The principal consistently attends, monitors, and participates in School B's PLC study groups, as well in grade level meetings. Teachers whom the principal observes performing especially well in a particular area are encouraged to share their expertise with others during the school's faculty meetings or PLC study groups. One of School B's teachers remarked, "[The principal] attends meetings. If [the principal] sees we need to work on something, we discuss that as a group. [The principal] really encourages us to use PLC time to learn as much as we can from the instructional coach." Another teacher commented:

I think it is good [the principal] sits in periodically on the PLC meetings. It is not just something [the principal] delegated to instructional coach or says you take care of it. [The principal] has a role in developing the data charts that we review on a regular basis. [The principal] also sits in on some of the PLC meetings to go over the data, or to hear what we have to say. Considering [the principal's] busy schedule, [the principal] still finds the time to be a part of PLCs.

According to the instructional coach, the principal will, on occasion, spend the whole day in the PLC study groups. By remaining involved in the process of perpetuating the PLC, School B's principal actively participates in improving instructional practices and student learning at the school.

Aside from being actively involved in PLC study groups and grade level meetings, the principal frequently collaborates with the instructional coach. Every

Tuesday, the PLC instructional coach attends a meeting at the district's central office with the other instructional coaches and the Director of Elementary Curriculum. After the district-level meeting, the instructional coach shares the information discussed at the meeting with the principal. Following the weekly PLC study groups on Thursday, the principal and the instructional coach meet again to discuss any issues that have arisen in the PLC study groups. They also look at the school's issue bin, which is where teachers write down any concerns they may have school-wide, and develop a plan to address those issues. According to School B's principal:

It's important that the PLCs stay focused on the goal of making sure our students are growing- period, plain and simple. No matter what that means, we've got to get it done in PLCs. . . . The instructional coach knows that she has my support, and I am going to support her in anything that she is doing. The instructional coach and I do everything together. I guess that that is the big piece you've got to remember. The instructional coach and I meet weekly. The instructional coach and I talk about everything. . . . In case I am not in [the PLC meeting], we kind of have all the issues worked out in advance. If there is anything that I need to have input on, then the instructional coach [handles] it.

According to the teachers, School B's principal sits in on PLCs to see how the teachers interact. As one teacher put it, "[The principal] doesn't dictate to the instructional coach what goes on. . . . They talk about it. There is a lot of collaboration going on between them." These collaboration conversations are critical to address the needs of the schools' teachers. This type of active involvement on the principal's part further supports the perpetuation of the PLC at School B.

The Impact of PLCs on Improved Instruction and Student Learning

The fourth research question examined the perceptions of the relationship between the development and perpetuation of the PLCs and improved instruction and student learning. The eighth interview question was intentionally designed to determine the relationship between the development and perpetuation of the schools' PLCs and improved instruction and student learning. The following findings depict the opinions of those interviewed at School A and School B. The on-site observations I conducted at both schools and my review of the various artifacts pertaining to the teachers' perception of the relationship between the development and perpetuation of the PLCs and improved instruction and student learning further support my findings. Since the development and perpetuation of the PLC at School A and School B, both schools' test results have improved in all grade levels. As a result of this increase in student achievement, the schools are no longer in imminent danger of additional state-mandated censures for failure to provide appropriate instructional services for their students.

Theme One for School A and School B: Sharing/Collaboration

The first theme to emerge regarding the teachers' perception of the relationship between the development and perpetuation of the PLC at School A and School B and improved instruction and student learning was Sharing/Collaboration. For definitional purposes, *Sharing/Collaboration* refers to the efforts of the schools' teachers to work together in a collaborative manner, to learn from and with one another, to share knowledge, to brainstorm new ideas, and to apply what they have learned to improve instruction and impact student learning. This theme is based on my analysis of the teacher interviews and my on-site observations while at School A and School B. All of the

teachers interviewed consistently referred to the impact the schools' PLCs have had on the level of sharing and collaboration, as well as to the impact the increased levels of sharing and collaboration have had on instructional practices and on student learning.

When asked how the faculty as a whole assesses and addresses the instructional needs of students at School A, one teacher commented:

If we are doing well, we share. We share best practices in staff meetings every month. We have to sign up and share something that we have done that has been successful in our classroom. If we have been to conferences, we come back and we share what we learned at the conference. If we received any materials at the conference, we share them with whoever wants them. We do a lot of working with each other as far as our grade level. Then, the instructional coach shares the information we share with the other teachers. So, we all work together to try to help our students become more successful.

While teachers at School A occasionally attend conferences, the assistant principal at School A is often the one who attends conferences and shares with the faculty. In those cases where teachers are granted permission to attend, the teachers are expected to share what they learned with the faculty as well.

Similarly, when asked about how the faculty as a whole assesses and addresses the instructional needs of students at School B, one teacher replied:

One thing about our school, if we need help, we are very good about going and asking other people, "How did you work with this kid?" We also have an Instructional Consultation Team, which I am a part of, where we look at the teacher's instruction, not just the students.

The above-mentioned Instructional Consultation Team is comprised of a cross-section of teacher representatives who provide formal suggestions and support for teachers who are struggling to meet the educational needs of specific students. When asked about an example of the collaboration that goes on at School B, the same teacher commented:

We are getting to the place where we are starting to collaborate more. Like before, it was like giving information and that kind of thing. There was some collaboration, but now it is starting to actually be a learning community where we are all giving our ideas and that kind of thing.

During my visit to School B, I could not help but notice what this teacher described. As I observed the PLC study groups, I noted how each of those in attendance was actively participating and involved in the process. All of the teachers were actively involved in the PLC study group, not just a select few. While eating lunch in the cafeteria at School A, I observed similar levels of collaboration as teachers discussed and shared with one another what they had been doing in their classrooms earlier in the day.

At School A and School B, the sharing and collaboration does not end once the PLC study group, grade level meeting, or staff meeting concludes. As a teacher at School A commented,

Aside from the formal grade level planning on Mondays and PLC study groups on Thursdays, there is a lot of informal popping into each other's room[s]. There is just a lot of talking and dialog that goes on here. We really do not have any issues as far as not communicating with each other.

At both schools, sharing and collaboration occur on a daily basis in a variety of ways.

When asked to provide a specific example, a teacher at School B replied:

Even if you have read a book and you get an idea from it, people are really good about sharing around here. Nobody tries to keep anything to themselves. It's not like, "Ha-Ha, I have this idea." It is not like that around here. It could be in some places, but it is not like that here. The instructional coach is like, "Hey, I have this really good idea," and everyone is like, "Okay, let's try that and see how that works."

Because of participation in PLCs, teachers at School B are more than willing to share and try ideas related to improved instruction that will benefit student learning.

Upon being asked how things had changed since she had been at School A, one teacher reflected on how teachers used to stay in their rooms and would not share. According to her recollections, there was no common planning. In the words of the teacher, "It is wonderful this way. This is the way a school setting should be...open, sharing, approachable, and safe. I mean...when you go home crying in the afternoon, that is not a good career to be in."

Since the creation of PLCs at School A, the teachers are no longer required to operate in isolation. Teachers now feel comfortable turning to their colleagues for support.

When asked about the collaborative efforts between schools, a teacher at School B reflected on how teachers in their school district are now visiting the other schools, including School A. According to the teacher, this has not always been the case. In the words of the teacher, "We've had some teachers come visit us from other schools, and we have [gone] to the other schools, and just kind of looked. If it is not working, then you know we are not above going and seeing what somebody else is doing." Over the years,

the collaborative atmosphere at both School A and School B has improved, creating a workplace conducive to sharing and collaboration.

One of the primary reasons for the increased levels of collaboration at School A and School B appears to be a result of the creation of the schools' PLCs. Sharing through collaboration has become the rule, rather than the exception. As the instructional coach at School B commented:

I am doing a book study right now in PLCs. As part of that, we look at the strengths that some teachers have or areas they may have or are working on their master's degree in. We give them the opportunity to share what they have learned during PLCs and to discuss how they may have used different things. We look for those strengths, so they can become leaders in our PLC.

Since teachers have been given the opportunity to share within the safe and supportive environment the instructional coach has established during PLC study groups, the schools' teachers are becoming more comfortable sharing outside the confines of the PLC study groups. Based on my observations of the weekly PLC study groups at School A and School B, part of the reason staff feel so much more comfortable sharing is that the instructional coaches model sharing for them during PLC study groups. The instructional coaches at both schools consistently share the ideas of others, regardless of the grade level, with all the teachers through weekly PLC notes. Following my visit to observe the PLC study group at School A, the instructional coach planned to share the list that had been developed that day during the PLC's study group with the school's teachers of creative ideas to keep children engaged following the EOG tests in grades 3-5 and the K-

2 assessments. The instructional coaches at School A and School B provide a model of sharing and collaboration for others to follow.

Based on my analysis of the interviews and my visits to School A and School B, the findings suggest that a relationship exists between the development and perpetuation of the PLCs with increased sharing, collaboration, improved instruction, and student learning. As one of the support teachers at School B commented:

I find that my students are reaching their goals faster because the teachers and I are collaborating on their goals. As a result, my goals are similar to classroom goals and we are using the same techniques. The whole part of collaboration is being successful. It's not me just me going into the classroom and teaching. It has been very successful for my students.

Teachers are no longer working in isolation. They are now comfortable stepping outside of the classroom, collaborating with other teachers, and sharing ideas that will impact instruction and student learning. The teachers at School A and School B understand the demands of the teaching profession require teachers to work together as a team of educators to meet the needs of children. The teachers are consistently sharing, and they benefit from knowing what others in the school are doing as well.

Theme Two for School A and School B: Data-Driven Instruction

The second theme to emerge was Data-Driven Instruction. For definitional purposes, *Data-Driven Instruction* refers to the teachers' efforts to consistently use the data obtained from a variety of formal, informal, formative, and summative assessments to determine the instructional needs of students and to drive instructional practices. This

theme emerged from my analysis of the interviews and my observations while visiting School A and School B.

As a result of the implementation of the PLCs at School A and School B, teachers have begun to use data consistently to drive instructional practices. As one of the teachers at School A commented:

We are data driven here. In our PLC groups, we look at the data. We look at how we are comparing with the other classrooms, as far as our grade level. We ask ourselves, we have discussions, and we determine our weaknesses. If my students have fallen off in math, or if my students are dropping in reading, I ask others, "What are you doing in math or reading that I might not be doing?" We ask ourselves, "How can I be better at doing what I am doing?" . . . During PLCs, our instructional coach will give us strategies to use and take back into our classrooms that we are expected to use. After we try them, we come back and report on how we used them. We share what we used, we put it up on the board, and then the instructional coach shares it all throughout the day with the whole staff. We all have our different ideas of how to use the strategies, so we can take others ideas back to our classroom.

When asked how data was used in the upper grades, a teacher at School B replied:

I am in 3rd grade, so data is big for us. Even in K-2, they use the data from their assessments to drive instruction. We look at that data, and we address it through our PLCs. We look at our data, break down the data, and see where we need to go from here.

The instructional coaches at School A and School B consistently share quarterly benchmark data gathered from K-2 and 3-5 formative assessments with the schools' teachers. Following the analysis of the data, the instructional coaches, with the help of the teachers, identify specific strategies that might help teachers address their instructional strengths and weaknesses. In my observations of School A and School B, I saw student data lining the walls of the instructional coaches' offices. When asked about the data on the walls of School B, the instructional coach explained:

On my wall, I have these reports posted. I have this data here, and what it shows is whether the students grew or regressed. Green of course is growing and red is not. I have K - 2 reports that specifically show how each class performed. The teacher's name is not on there, but the letter is. I have a data bulletin board with all of that on there, so the data is there to support [specific needs and strengths]. . . . For instance, we had a grade level during PLCs the last time that did not do well at all on their running records. In PLCs, we said, "Okay, we are going to have to do something." As a result of that conversation, they came up with a plan and they switched their red and their green completely.

The data the instructional coach discussed pertains to local benchmark assessments conducted across the district's elementary schools each quarter. Classrooms with green bar graphs made suitable progress on specific objectives, whereas classrooms with red bar graphs were not making suitable progress on specific objectives on that quarter's benchmark assessment. In the PLC, the teachers created a plan to address the issue, which the teachers then implemented in their classrooms. According to the instructional coach at School B, this particular grade level was able to develop a successful plan to

address the issue. Consequently, during the next review of their data more students had begun to achieve positive results than negative results. While there were still some areas in red that needed improvement, those areas had progressed considerably.

Aside from sharing with other teachers or the instructional coaches, the teachers at School A and School B consistently share data with their students. The teachers consistently review their data as a grade level and reflect on what they can do better. After asking themselves, they show the data to their students and ask for input on how they can do better as teachers. During the perpetuation phase of each school's PLC, the schools began making the shift between group benchmarks to individual student progress. The teachers at School A and School B consistently refer to the data to determine which objectives they are doing well and which ones they are struggling to improve. As I walked around School A and looked into the classrooms, I noticed data posted in almost every one of the classrooms. When asked about the data posted in the classrooms, one of the teachers at School A explained:

We talk about quarterly data in PLCs. We also put our data graphs up in our classrooms. The kids are becoming more reflective on what they are doing with their own learning as well. Since we have the data for the students to see, we can look back as a class to see where we are at, determine where we need to be, and discuss the things we are going to do to get us from point A to point B. This has had a huge impact on learning. It also keeps us focused, so we are not getting distracted on anything.

While several teachers mentioned using other data in their classroom, such as the Dynamic Indicators of Basic Early Literacy (DIBELS), no mention was made of non-

academic data. However, several of the teachers mentioned using data obtained from both formal quarterly assessments and informal classroom assessments during student conferences. Aside from whole class data, students had the opportunity to view their individual results.

Recently, the teachers at School B have begun using data notebooks. According to one of the teachers at School B:

The students write all this down. You really should ask to see some notebooks because they are really great! The students have their notebook and we have things like their AR test scores, which is reading, and their accelerated math. We chart spelling. We chart our Minute Math, which is their multiplication, or adding or subtracting in the lower grades. It is really a great thing because we can use it K-5. It is to fit our kids' needs, and they take ownership. They know this is how I did, and this is what I need to do. This is how I can get where I need to be.

As a result of the data notebooks, the teachers feel their students are beginning to take ownership of their own learning. The teachers consistently review these data notebooks with the students. As one teacher replied, "Since more is expected of me, my expectations [of the students] are a lot higher than they used to be." The high expectations established at School B have spread from the teachers to the students.

During my visits to School B, I looked at a 1st grade teacher's data notebooks. The data notebooks contained a variety of reading, math, and spelling assessments. According to this teacher, while the data notebooks were initially challenging, they are really working well. In this case, the challenges were related to getting the students to understand the new concept and what was being asked of them, as well improving the

teachers' understanding of how to implement data notebooks into the classroom. Aside from the data notebooks, as I walked around School B and looked into the classrooms I could not help but notice quarterly assessment data posted on the walls in almost every one of the classrooms. When asked about the data posted in the classrooms at School B, the speech teacher replied,

I have a goal wall now. Every IEP goal the child has is written out on a pencil and on a piece of paper. I have increments of ten on the paper. I do their data at the end of every therapy session. Let's say today, one kid got a 66. His pencil for Rs at the end of words goes on the 60s paper, so that he knows that he can track his progress. Scores of 80, 90, and 100 are green, everything else is red. If they are in the red, that means they have to work on it. If they are in the green, they have almost mastered that goal. In the past, I was exiting my students, but they did not know why. They often wondered, "Why am I leaving speech?" Now, I am making them accountable for their own goals to see when they are making progress and when they are not making progress.

Some of the teachers at School B are also doing a pilot study using palm pilots to complete weekly running records on their students. Once teachers complete the assessments using these palm pilots, the teachers are able to download the results almost immediately to the DIBELS website, which graphs the students' progress. The pilot teachers I spoke to seemed to like having this tool, particularly when conferencing with parents.

When asked how they used their data to improve instruction and impact learning, several teachers at School A and School B discussed their use of the objective printout

included with their quarterly data. According to the teachers, they use the quarterly objective printout to determine where they did well and to determine where they need to improve. For example, if two out of ten missed a particular question, the teachers know they did well. However, if eight out of ten missed it, the teachers know they did not do well and may need some help prior to re-teaching that particular objective. After examining the quarterly data, teachers are quickly able to determine their strengths, weaknesses, and areas that need to be covered again in the classroom. When asked about this practice, the instructional coach at School B responded by saying:

When we have PLCs, like today, they get their data back and we look at the comparative data with the other schools. We talk about how well we are doing as a grade level, look at what the other schools in the district are doing, and then determine what each one of them is doing as a teacher. At that point, they look at their strengths and weaknesses among the grade level. For instance, if your scores are really high and mine are really low, what are you doing that I have not been doing? That empowers teachers to share what they have been doing. We have had some great discussions and some great strategies come out of that in PLC study groups.

While all of the teachers consistently mentioned their use of quarterly data, one of the teachers interviewed at School B discussed how the instructional coach had been working with the teachers in PLC study groups to develop SMART (Specific, Measurable, Attainable, Realistic, and Time-Framed) goals to drive instruction. According to one of the teachers at School B:

We do what is called SMART goals. This is basically a bone diagram. We always do it when we have our quarterly testing data. We take whatever we made as a class, look our lowest objective, and then we chart where we want to get to. If we made a 45% on an objective, we may decide to try to get to 65% on that objective. Then we chart how we are going to do it. How are we going to meet our goal? Are we going to work one-on-one, or are we going to do some extra tutoring? What are we going to do to get there?

In some instances, according to the instructional coach, a few teachers are even having their students write their own SMART goals.

School A and School B do not limit their data usage to the testing grades (3-5). When asked about teachers' use of data in the lower grades, several of the teachers and the instructional coaches discussed their efforts to work with K-2 DIBELS assessments for literacy. Once the teacher has access to their students' reports, they are able to identify specific needs and to determine the direction of their classroom instruction. The DIBELS assessment is done at the beginning of the school year, at mid-year, and at the end of the year. The results indicate whether the students' literacy skills are Intensive, Strategic, Benchmark, or Advanced. If they are Intensive or Strategic, teachers are supposed to go back, monitor progress, and assess these students. As a result, the DIBELS assessment ensures that the teachers are monitoring the progress of students that need to be assessed more frequently.

The instructional coach at School A discussed how she had been working with the teachers in PLC study groups to use informal, formative assessments to drive instruction. According to the instructional coach,

We are not just using quarterly assessments. Something that I have been working on during PLC study groups is trying to help teachers to understand the difference between formative and summative assessments. Formative assessments guide instruction. We are still working on it, but they have done a great job. Before last year, they were taking assessments but they did not know how to look at the data. They had never looked at data, even EOG data. It was kind of who passed and who didn't. They had never even seen the reports.

Aside from the formal assessments, teachers use the informal, formative assessments they conduct in their classroom and compare the two. By having data from both formal and informal assessments, teachers are able to compare data and brainstorm strategies with the instructional coach to meet the needs of students.

Even in grades K-2, teachers at School A and School B are using data, both formal and informal, to guide instruction and impact student learning. Since the implementation and development of the schools' PLCs, teachers in grades K-5 are more comfortable analyzing, understanding, and using data to improve their instructional practices and impact student learning. Prior to the development of the schools' PLCs, a lot of the teachers were not familiar with or comfortable examining their data. While some teachers used their data before the inception of PLCs, the schools' PLCs are encouraging all teachers to begin examining their data and to tailor instruction designed to impact student learning.

Theme Three for School A: Focus on Student Success

The third theme to emerge at School A was a Focus on Student Success. For definitional purposes, *Focus on Student Success* refers to the efforts of teachers and the

school to establish high expectations in the classroom, to celebrate student successes, to challenge students to be and do their very best, to identify and provide additional support for students identified as at risk of failure, and to prepare students to meet the demands of the 21st century. This theme is based on my analysis of teacher interviews and observations from my visits to School A.

All of the teachers at School A consistently mentioned their efforts to focus on the success of their students. Time and again, teachers discussed the importance of establishing high expectations in the classroom, as well as the impact the development and perpetuation of the school's PLC had on instruction and student learning. When asked specifically about this impact, one teacher stated:

I have always tried to have high standards for my students. I think through PLCs and going back and having to teach different ways you don't get caught in a rut. . . . Well, this is the way that I have done it for this many years, and this is the way I am going to continue to do it . . . I have to try new things. I have to step out of my box. I have found that stepping out of my box is okay sometimes, you know. So, I think that it has impacted my teaching on the positive side. It has made me a better teacher.

By improving the quality of their instruction, examining the individual needs of their students, and using data to guide their decisions, the school's teachers are able to help students to achieve at their highest levels. As one teacher commented:

Well, we look at our students on an individual basis. You know, they are all individuals. We have high expectations. We set these goals at the beginning of the year. If you walk into the classrooms, you will see the data for each nine weeks.

We just expect our students to make the growth. I mean, they know. . . . You can see from the charts how low they were at the beginning. By the time you come back, we will have those third quarter graphs up and it is probably, I know in kindergarten, remarkable. They know that they are part of that data. It is not just numbers. They know that they are the ones making the difference. We are sort of guiding them and facilitating them.

During my second visit to School A, I took the opportunity to look at the graphs in this teacher's classroom and in other classrooms. After looking at the data, it was obvious her students had made considerable growth over the course of the school year. For a visual learner, the graphs are a meaningful tool which can be clearly understood by younger students.

During my visits to School A, I saw student work samples visibly displayed in the hallways outside every classroom. My observations and the data obtained during interviews indicate that celebrating student success is important to the teachers at School A. As one of the teachers explained:

We all got 20 in writing yesterday. They all blew the top off of the writing prompt, so we celebrated. We screamed and had a party. So, we celebrate their successes. You know, they all can learn. They all come from different backgrounds, and they don't all have people at home working with them, but we tutor. We do everything that we can here.

Since many of the students at School A do not have someone working with them or celebrating their successful efforts at home, the teachers make it a habit to celebrate with them. The teachers at School A are very student-focused and want their children to know

they care about them, and the teachers have found this kind of support encourages the children to work harder. As one teacher commented, “The kids know that they are safe here. They know that they are important. They know that their education is a priority. Because they see us working hard, they work hard.” The teachers at School A exhibit a strong commitment to provide the support and encouragement their students need to be successful in school.

Aside from establishing high expectations, celebrating student successes, and challenging students to be and do their very best, the teachers at School A identify those students who are at risk of failure and provide additional support to meet their needs. One of the ways the teachers at School A identify these students is through the school’s PLC. When asked about this practice, the instructional coach at School A explained:

We do it a lot in PLC study groups . . . identifying students that we consider “At Risk.” So, we start off looking at our data in PLC study groups, and they go from there and they look at it in grade level meetings.

The staff at School A offers a variety of after-school hour activities to provide additional support for those most in need. When asked about what was done for those students who are at risk or struggling, the principal replied:

We have a tutor that comes in, and she tutors in grades 3, 4, and 5. She is our Title I tutor, and [the teachers] give her the students that may have missed what they are working on in class that day. So, if [the teachers] are working on fractions and they have a few students that are struggling, those are the kids the tutor will take and give extra time. . . . Then, with Saturday Academy, those are high need students. What I did was I went to our EVAAS [Education Value Added

Assessment System] database, determined who the high need kids were, and those are the children that are invited to attend. Saturday Academy is every other Saturday, and it is from 9 o'clock until 11 o'clock. We provide transportation. As a matter of fact, I drive the bus. So, we provide transportation, and we do a hands-on type curriculum because it is obvious that what we are doing during the day is not working. So, for those kids, we have got to try something different. . . . We also do WINS-day. Today is WINS-day, and once again, those are the high need students.

In order to meet the needs of their most disadvantaged students, the staff at School A, including the principal, goes above and beyond the call of duty to provide the struggling student population with the help they need to be successful.

While every effort is made to reach the lowest performing students, teachers at school work equally hard to find unique ways to challenge their highest achieving students. As one teacher commented:

high expectations [are] something we definitely share from kindergarten to 5th grade . . . even that low student, we are not leaving them. . . . We are holding them to high expectations, too. And, then our high students, we are holding them to their high expectations.

The teachers at School A are clearly committed to doing their best to help all students reach their highest expectations.

Aside from preparing their students to meet the day-to-day demands of learning, the teachers at School A are cognizant of the fact that they are preparing their students to be productive and successful adults. As one of the teachers stated, "We have

all got to do our best to help these kids be successful and to prepare them for the 21st century.” As a result of the shift in the professional teaching standards, which focus on preparing students for the 21st century, several of the teachers interviewed indirectly referenced 21st century skills such as collaboration and problem solving. Since the development and perpetuation of the PLC, teachers at School A have a renewed focus on student success, which in turn has improved instruction and student learning. One of the teachers mentioned this preparing of students for the future: “We are all very student-oriented. The students certainly come first. In whatever decision that is made, we think about how this is impacting our student community. How is this going to impact or best impact our students?” The teachers at School A focus on the success of their students and do their part to ensure each child is academically successful.

Theme Four for School A: Research-Based Instruction

The fourth theme to emerge at School A pertaining to the perceived impact of the school’s PLC on improved instruction and student learning was Research-Based Instruction. For definitional purposes, *Research-Based Instruction* refers to the principal’s efforts to encourage and endorse the implementation of programs and instructional strategies that are supported by the research literature and that have been determined to have a significant impact on student achievement and learning. This theme was identified based on teacher interviews and on-site observations.

School A’s principal has consistently worked to implement, research-based programs to improve instruction and student learning. When one such research-based program supplement, The Accelerated Math Program, produced successful results in several grades, the principal then implemented this program school-wide. The principal

also enlisted the assistance of teachers in locating research that would be beneficial to the school's programs. By asking teachers at various grade levels to locate peer-reviewed academic research, to identify effective programs from this research, and then to report back to the principal and the faculty, the principal coordinated efforts to effectively implement programs from this research into the school's programs. According to the several teachers, the principal has not begun so many programs that, as one described, "You get programmed out." However, the principal has consistently, over the last two years, implemented research-based programs that have the potential to be successful or have been successful at School A in the past. In order to ensure these programs continue to be effective, the principal monitors and reevaluates each program on an annual basis.

As a result of the implementation of the research-based programs and instructional strategies, the teachers have seen an impact on student learning and achievement. While programs and strategies alone are not the sole reason for successful impact, they have contributed to the quality of instruction students are receiving in the classrooms. When asked how the development and perpetuation of the school's PLC has impacted their instructional practices and student learning, one of the teachers commented:

I think the instructional strategies are more current and up-to-date than a lot of things when I started teaching ten years ago. Even though you might not be using the same material, you are still using a lot of the same strategies. Giving us more current up-to-date strategies has helped the achievement of my students.

School A's PLC has introduced teachers to ideas from current research-based instructional strategies, thereby improving the teachers' effectiveness in the classroom.

During the 2008-2009 school year, School A's PLC specifically focused on implementing high-yield instructional strategies in the classroom. High-yield instruction encourages students to move beyond minimal comprehension in order to compare and contrast, make connections, and examine metaphors and analogies. Such instructional strategies allow teachers to ensure their students have a deeper grasp of the material beyond a mere superficial understanding. As a result of the addition of research-based instruction and the expansion of existing successful programs, as well as the knowledge gained from the PLC study groups concerning high-yield instructional strategies, the teachers are pleased with the progress their students are making in the classroom. Due to their efforts during PLC study groups, teachers are moving away from what one teacher referred to as, "knowledge-type questions where students can just regurgitate what is said" to implementing more high-yield questioning into their daily instruction.."

Since state-mandated testing requires students to think deeper and to delve into reading passages, it is critical for teachers to know the types of questions their students will encounter during the statewide summative assessments and to adequately prepare them through high-yield instruction. Because of the strategies learned through PLCs, the teachers at School A are doing a better job of helping their students think and perform better. The teachers admit to being more aware of how they ask questions and the types of questions they are asking, and because of this awareness, they are now writing the essential questions on the board each day, discussing these questions with their students at the beginning of each lesson, and going back and reviewing them at the end of the lesson.

Aside from changing the types of questions they are asking, teachers at School A have begun to implement more hands-on and cooperative learning in their classrooms and to differentiate their instruction. As one teacher commented, “I have always had cooperative learning groups in my room, but...the cooperative learning in my class has now been taken to another level because of PLC study groups.” Teachers are doing more than just pairing students and asking them to work together on an assignment. Cooperative learning groups are now more focused and directed than in the past. Through the school’s PLC, this teacher’s knowledge of cooperative learning improved, and this translated into more meaningful cooperative learning activities for the students in the classroom.

As a result of the PLC’s efforts to support instructional practices and student learning, many of the school’s teachers are exploring ways to use hands-on activities and materials for such subjects as reading, which is traditionally harder to provide hands-on activities for than some of the other subject areas such as math. One teacher commented, “I think PLCs have given me a lot more hands-on activities for my students to use that are directly correlated with what they need to learn.” I observed that classrooms in school A often included students working in groups and in learning centers. Very few of the rooms I visited were being taught in a lecture-type format. In those rooms that were using more cooperative learning and hands-on activities, the students appeared to be very engaged and interested in learning.

By using research-based programs and instructional strategies, teachers are improving the quality of instruction their students are receiving in the classroom. Teachers no longer have to use trial-and-error methods to see what works with their

students; instead they have proven instructional strategies at their disposal and can more competently provide the type of differentiated instruction their students need to be successful in the classroom. The development and perpetuation of the PLC offers teachers the opportunity to learn new instructional strategies that have the potential to significantly impact student learning and achievement. Based on the available testing data for School A (see Appendix C), these efforts appear to be effective.

Theme Three for School B: Increased Student Participation

The third theme to arise pertaining to improved instruction and student learning at School B was Increased Student Participation. For definitional purposes, *Increased Student Participation* refers to the efforts of the schools' teachers to encourage and promote student engagement and participation in the classroom. This theme is based on my interviews with the teachers and my direct observations at School B.

Since the implementation of the PLC, School B's teachers are more excited about instruction and are eager to apply what they learn in their classrooms. In turn, their students are more excited about learning and more apt to participate in the classroom as a result of this engagement, since students who see their teachers working hard to be their very best are more apt to give their very best as well. As one of the teachers commented:

I think there are always things that you can learn as a teacher. You are always growing. I think the more that you can learn, the better you can help your students to learn. I think that PLCs, at least here, have really taken the items that we are learning and working on in PLCs to help us be better teachers. . . . You should always be learning as a teacher because you are never perfect. You can always do better, and I think that PLCs help us to be better.

The teachers at school B are using what they learn during PLC study groups to increase student participation in the classroom.

Aside from data notebooks, teachers in School B are also actively involving their students in the development of their classroom mission statements. According to the teachers, this allows the students to have input so it is not just the teachers' determining what the classes are going to do. One of School B's teachers commented on the engagement of students in determining the mission statement:

We are really big on creating a community here. I think we have done a wonderful job of creating a community among the teachers, so we need to do that in our classrooms. We are all trying to take that and make sure our classrooms are more of a community instead of a dictatorship. Kids respond better.

Part of the reason the children at School B are responding so well is that they know the teachers care about them as individuals. The school offers a Back Pack Program, which provides children who might not otherwise have anything to eat with food on the weekend. The school also offers a Homework Lab on Tuesdays, Wednesdays, and Thursdays for those students who, for whatever reason, do not have the support at home to offer assistance with their homework. The teachers also offer a Saturday Academy for students who are at risk or are struggling academically.

With the help of the instructional coach and the PLC study groups, the teachers are also trying to implement more student-led learning in their classrooms. Several of the teachers came up with the idea and shared it with the staff after attending the Ron Clark Academy. Ron Clark, a 2001 Disney Teacher of the Year award winner and the author of several books, such as *The Essential 55* (2003), offers workshops across the country to

share his successful efforts with student-led learning. Ron Clark motivates teachers to seek creative ways to engage all students in the classroom. According to the teachers in this study, sometimes students are better at explaining things than teachers are. Through the use of pre-test and post-test assessments, teachers are able to determine which students comprehend a lesson's objectives and which do not. The teacher then allows students who have mastered the objective to teach their peers. As one teacher explained, "I might tell them, 'This is how you need to learn it', but it is not always how you have to learn it. So, I use the kids and let them help the other kids." Through the use of student-led learning opportunities, the classroom becomes one big community of learners.

Another area of focus at School B is encouraging students to respect adults, peers, and themselves. This idea also came from the Ron Clark Academy. The teachers at School B felt that helping their students to model the behavior of responsible citizens who are respectful of others and of themselves would prepare the students for the 21st century. During one of my visits to School B, I had the opportunity to talk with a couple of students in the office as I waited for the principal. The students were very respectful; in fact, one of the students shared one of the two chairs in the office with his friend so that I might have a place to sit. According to the teachers, this respect is carrying over into the classroom as well. As several teachers' commented, when students feel respected by their peers, particularly those students who are more reserved, they are more comfortable participating in class discussions without the fear of being ridiculed. Based on all indications, the schools' efforts to increase student participation in the classroom is significantly impacting student learning.

Theme Four for School B: Differentiated Instruction

The fourth theme to emerge at School B pertaining to the impact of the development and perpetuation of the school's PLC on improved instruction and student learning was Differentiation of Instruction. For definitional purposes, *Differentiation of Instruction* refers to the teachers' efforts to intentionally modify their teaching practices to provide instruction that is specifically intended to meet the learning needs of each student. This theme is based on my interviews with the teachers at School B and my observations while on-site.

Since School B is a Title I school, a large percentage of the students receive free or reduced-price lunch. Aside from the financial component, many of their students have a variety of academic, personal, and social issues that significantly impact their learning. In an effort to meet this challenge, the teachers at School B must find unique ways to meet their students' instructional needs. The motto for the school district is "Whatever It Takes," which means that the teachers at School B are expected to make every effort to ensure they are meeting the needs of every student. In order to meet the challenges at School B, the focus at is on differentiation so that students at every level have the opportunities they need to learn. According to the instructional coach,

We are a very needy school, and we really try to teach the value that you can learn no matter who you are. That is the reason that we really differentiate as much as possible. Since we know that our kids here have different needs than other kids might have, we have to do whatever it takes to make sure that we are teaching them what they need.

As the teachers analyze data during PLC meetings, they look at each student individually. When a student fails to make adequate progress, the teachers, with the help of the instructional coach, try to determine how they are going to address the student's needs.

Because of the school's PLC study groups, the teachers are learning new high-yield, research-based instructional strategies to meet a variety of learning needs (Marzano, Pickering, & Pollock, 2001). These include the following strategies: (1) identifying similarities and differences, (2) summarizing and note taking, (3) reinforcing effort and providing recognition, (4) homework and practice, (5) nonlinguistic representations, (6) cooperative learning, (7) setting objectives and providing feedback, (8) generating and testing hypotheses, and (9) cues, questions, and advanced organizers. Appendix D includes a complete list of the nine high-yield instructional strategies, as well as the evidence of these strategies in the classroom and benefits of each strategy. As one teacher commented, "not all of our kids are the same. They are different. I think giving us different strategies and different things to do in our classroom has helped. I love learning different things, and I am willing to try anything." By consistently differentiating instruction for their students, the teachers provided their students with the personalized instruction their students need to be successful.

School B's teachers work diligently to help every child be successful and do their very best. As one of the teachers commented:

Whether or not a student is a high level or a low level, our goal is for them to achieve their maximum potential. We make a lot of modifications. [The principal] is very supportive of the modifications that our [Exceptional Children] department provides or the individual teacher provides. We do a lot of sharing of

modifications so that each child's needs are met, including environmental needs.

For students who do not get their homework done, we have a homework lab. We take into account all of their needs.

In an effort to meet these needs, School B offers a school-wide intervention program called "Spark Up" each morning from 8:30-9:00. The students participating in "Spark Up" groups vary based on the students' classroom performance as well as their performance on informal and formal assessments. Students receive differentiated instruction based on their reading level or math level. If a student performs particularly well one week, the student's modification group may change the next week.

The staff at School B works diligently to provide the instructional support the students need through multiple extracurricular methods, including Homework Lab, "Spark Up," Saturday Academy, and tutoring at a local church. With the help of the school's PLC instructional coach, the teachers have developed new, high-yield, research-based instructional practices to assist the students who participate in extracurricular learning activities. According to the instructional coach, by helping the teachers learn new things designed to improve their instructional practices, they are becoming better teachers as well as improving student learning.

During my visit to School B, I had the opportunity to observe the instructional coach working with the teachers on generating and testing hypotheses, which is one of Marzano et al.'s (2001) high-yield instructional strategies. In this PLC workshop, the instructional coach provided each teacher with a written agenda outlining that day's study, time allotted for each of the agenda items, the instructional coach's notes, and steps for incorporating the new strategy. The agenda also included a space for teachers to

take notes. The teachers had the opportunity to view a video clip modeling the strategy and to reflect on the topic for the day, and then the instructional coach encouraged the teachers to think about ways they might use this strategy in areas other than the traditional science-based inquiry, such as using it to conduct historical investigations in social studies. The teachers were to try the strategy in their classrooms and then report back about their efforts at the following week's PLC workshop.

As a result of such differentiated instructional efforts offered through the PLC, School B's teachers are trying new strategies, brainstorming possible solutions, and striving to provide personalized differentiated instruction to meet the needs of all their students. School B is clearly modeling the district's motto to do "Whatever It Takes" to meet the individual needs of its students.

Summary of Findings for School A and School B

The primary purpose of this study is to investigate the factors that influenced and perpetuated the development of the PLCs in two elementary schools. This chapter began with an examination of each school's individual setting and participants, proceeded with a collective examination of both schools, and then offered a presentation of the themes that emerged from the research. In the following summary of the findings, the four research questions provide the framework for the discussion. This summary also addresses the similarities and the differences between the schools' participation in the development and perpetuation of PLCs.

PLC Development

The first research question addressed the development and perpetuation process for PLCs in School A and School B. Since both of the schools were in the same district,

the development and perpetuation processes for both schools were very similar. Considering the fact that the PLCs were part of a district-wide initiative, the major differences were in how the principals at each of the schools developed their schools' vision, mission, values, and goals, as well as how these principals dealt with any resistance they might have encountered during the development process. Since the impetus to implement the PLC model was centralized at the district level, the data indicates the PLC models at both schools were markedly parallel. While components of the development and perpetuation stages differed slightly at each school, there were more similarities than differences.

Prior to the implementation of PLCs, the district's elementary schools struggled to consistently deliver the curriculum and provide quality research-based instruction in the classroom. Most of the schools' teachers operated in isolation and very little collaboration was taking place across the district. The district wanted to change this approach to teaching and learning in order to improve student achievement and learning in all of its schools.

After deciding to implement PLCs across the district, the superintendent hired a new Director of Elementary Curriculum whose primary responsibility was to implement PLCs across the district's elementary schools. The director had previous experience with the instructional coach model and immediately solicited the support of the superintendent to hire instructional coaches for all three elementary schools. In turn, it was the director's responsibility to train all the instructional coaches, educate the principals concerning PLCs, and ensure the principals had the tools they needed to implement the PLC model in their respective schools. Following initial instruction, the director continued to meet with

the instructional coaches weekly and the principals monthly to ensure the district's initiative was moving forward smoothly.

The development of the schools' mission, vision, values, and goals, differed slightly at both schools, but it appears the leadership styles of the two principals could potentially explain the differences in the approach each principal took during this process. According to those interviewed, the principal of School A took a shared leadership approach, while the principal at School B took a more active, supportive leadership approach.

Another area where the two schools differed slightly was the level of initial resistance. The principal at School A appeared to encounter more initial resistance from the staff than the principal at School B. According to the principal of School A, there were several teachers who were initially resistant. In those cases, the principal had to engage in what was the principal referred to as "critical conversations," which involved reiterating that participation in the school's PLC was not optional. However, there were some teachers who eventually chose to seek employment elsewhere rather than to continue to participate in the school's PLC. Based on the interviews with both principals, the initial resistance was not as marked at School B as it was at School A. While the principal at School B noted some initial resistance during the interview process, the principal did not share any specifics as to how this initial resistance was addressed, which supported the fact it was less significant at School B.

Once teachers at School A and School B saw the results of their efforts after the first year of the development stage, their commitment became stronger during the perpetuation stage. Because both schools made efforts to provide teachers with research-

based, high-yield instructional strategies, the teachers were able to improve their instructional practices in the classroom even further during the second year of participating in PLCs. Consequently, teachers at both schools were able to build upon their strengths and to improve their weaknesses. Since both schools focused on the strategies outlined by district guidelines for the second year of the PLC study groups, the study results for both schools were strikingly similar.

During the perpetuation phase, the district's Director of Elementary Curriculum continued to meet with the instructional coaches weekly and principals monthly to provide the support needed to implement high-yield instructional strategies, additional English Language Learners (ELL) training, and several instructionally-based pilot studies. As a result of the director's efforts, the district's elementary schools were finally becoming more instructionally consistent, slowly replacing the haphazard, inconsistent efforts of the past.

In summary, the development and perpetuation of the PLCs at both schools were strikingly similar. Since the development and perpetuation of a PLC was not optional, the primary initial responsibility of both principals was to begin and utilize PLCs at their respective schools, with the support of superintendent, the Director of Elementary Curriculum, the instructional coaches, and the schools' teachers. Both School A and School B were able to successfully develop and perpetuate the PLC model in their respective schools, following the district's mission of doing "Whatever It Takes" to meet the needs of the principals, teachers, and students. While it was important to meet the needs of all three (principals, teachers, and students), the district was primarily focused on meeting the needs of all children.

Principals' Role in the Development of PLCs

The second research question explored the principals' efforts to develop PLCs at School A and at School B. The principals at both schools played significant, but slightly different, roles in the development process. However, both principals were able to successfully develop PLCs in their schools.

The only theme in common for both schools was Decision-Making Opportunities. For School A, the following significant themes also emerged: Tone Setting and Facilitation. For School B, the significant theme of Caring/Supportive Environment emerged.

The principals at both schools exhibited two of the five dimensions of Hord's (1997) characteristics of PLC: Shared and Supportive Leadership and Shared Vision/Values. As far as Shared and Supportive Leadership, the principals at both schools afforded their teachers various decision-making opportunities. For example, both of the schools had representatives from each grade level and specialty area on their Leadership Team or School Improvement Team (SIT). Aside from this opportunity to make decisions, the principal at each school created a leadership team which afforded additional teachers the opportunity to have a voice in such specific areas as school safety, student behavior, and school climate. At School A this leadership group was the Strategic Team; at School B it was the Goal Team. By affording teachers numerous opportunities, the majority of the schools' teachers had the chance to participate in decisions on a school-wide level, not just at the classroom level.

The principals at both schools also allowed their teachers opportunities to participate in the creation and development of the school's vision and values. While the

principal at School A appeared to play a less active and visible role in the development process than the principal at School B, all of those interviewed indicated that the final product was a reflection of the schools' vision and values, not solely those of the principals. Both schools' mission and vision statements aligned with the goal of preparing children to meet the demands of today's society. While the schools' teachers were given a voice in the decision-making process, the mission and vision statements for School A appears to be more teacher- and instruction-focused, the mission and vision statements for School B appear to be more student-focused, which indicates the school climate and tone that the principals established at their respective schools. All of those interviewed indicated they were proud of the vision that they developed for their respective schools and their students. By allowing the teachers to have input in this process, the principals were able to increase support for the development of their schools' PLCs.

As far as differences between the two principals, the principal at School A appeared to play a more active role in setting the tone for the development of the school's PLC and was more actively engaged in the facilitation of the school's PLC. As far as tone setting, the principal expected teachers at School A to be professionals who were committed to high standards in education. In an effort to make sure the school's teachers were collaborating with the other teaching professionals, the principal often conducted performance checks to ensure these expectations were being met. The principal at School A consistently ensured the school's focus remained on effectively teaching children.

The principal at School A was also more actively involved in the facilitation process. Throughout the PLC's developmental phase, the principal carefully planned,

assisted, and promoted each aspect of the process. Almost all of the teachers interviewed described the principal as a facilitator, or in some instances, a “Facillo-manipulator.” The principal of School A was influential in the facilitation of the school’s PLC, and this principal had a clearly developed plan and goals for the PLC to meet, leaving nothing in the development of the school’s PLC to chance.

The principal’s efforts at School B to create a caring and supportive environment were significant in the development of the school’s PLC. The principal worked hard to build and sustain an environment where the staff members feel appreciated, encouraged, empowered, supported, and valued. The principal fostered a nurturing school climate where the staff felt they were cared about and had the support of the school’s administration. The principal at School B provided a very caring and supportive environment for the staff and worked diligently to ensure the schools’ teachers were providing the same caring and supportive environment that the schools’ children needed to be successful and to reach their potential. Through the principal’s efforts to exhibit the highest levels of caring and support, the principal was able to further support the PLC development process at School B.

While similarities and differences existed between the two principals, their efforts were both successful. The principals’ efforts to offer teachers decision-making opportunities, to establish the tone conducive to the development of the schools’ PLCs, to facilitate the PLC process, and to create a caring and supportive climate supported the development of both schools’ PLCs. The principals provided the support their teachers needed during the development of the PLCs, making the development process successful in both schools.

Principals' Role in the Perpetuation of the PLCs

The third research question explored the efforts of the principals to perpetuate PLCs at their respective schools. Based on the findings, each school's principal was instrumental in the perpetuation of the PLC. While the principals' roles differed slightly at each school, both principals were able to successfully perpetuate their schools' PLCs.

Common themes for both schools were the Priority/Non-Negotiable commitment to participation in PLCs and Overcoming Time Barriers. For School A, the additional significant theme of Conducting Professional Development Needs Assessments emerged. For school B, the significant theme of Active Involvement emerged.

By sending the message that the PLC was a non-negotiable priority, the principals at both schools were able to successfully perpetuate their schools' PLCs. Attendance and participation in the schools' PLC was an expectation that was important to the principals of both schools. The principals at both schools communicated to all faculty that PLCs would take precedence over all other non-teaching related responsibilities. The schools' teachers were not to schedule field trips, plan parent meetings, or make other appointments that would jeopardize their ability to attend the weekly PLC study group meetings. As a result of the principals' efforts, all of the teachers knew that attendance at PLC meetings was not an activity to be negotiated with their principals.

Another factor common to both schools was the principals' efforts to overcome time barriers. The principals at both schools effectively and efficiently managed the various time constraints through creative scheduling measures, soliciting the assistance of support personnel and volunteers, and working diligently to guarantee that their teachers'

instructional time, grade level planning, and PLC study groups were protected and embedded into the school day instead of after school hours.

The principals also used either the assistant principal or the instructional coach as professional development liaisons for staff. As a result, teachers did not have to miss instructional time with their students or to rely on non-certified substitutes to provide instruction in order to leave school for professional development. Since these liaisons shared what they had learned with the teachers upon their return, the teachers benefited from the knowledge attained from the professional development opportunity without jeopardizing the quality of instruction their students received.

At School A and School B, the principals also implemented vertical planning meetings during the school day, which allowed teachers to collaborate with those grade levels immediately above or below them. Vertical planning is consistent with Hord's (1997) fifth dimension of a professional learning community, Shared Personal Practice. The principals at both schools also used creative lunch schedules and coverage, as well as the time before students arrived in the mornings, to provide additional opportunities for teachers to collaborate with one another. According to all of the teachers interviewed, they valued the principals' efforts to embed as much as possible committee meetings, PLCs, vertical planning, and grade-level planning during the school day. Not only did this scheduling free up personal time for the teachers, it also gave teachers at both schools additional time in the afternoon to provide support services, such as tutoring, to those students in need of additional help.

The findings indicate differences between the roles of the principals at School A and School B during the perpetuation process. The principal at School A conducted

annual professional development needs assessments of staff and then tailored a school-wide professional development plan aligned with those needs. While many of the topics to be covered during PLC study groups were determined at the district level, the principal at School A used these needs assessments to offer additional professional development, such as technology training, that was designed to meet the specific needs identified in the surveys. Consequently, the principal was able to offer the specific support the teachers at School A felt they needed to improve instruction and student learning.

A theme to emerge at School B that did not emerge at School A was the principal's active involvement in the PLC process. All of the teachers interviewed at School B consistently referenced the principal's efforts to attend, to monitor, and to consistently participate in the school's PLC. The principal at School B participated in weekly PLC study groups and grade level meetings and also engaged in frequent collaborative dialogue with the school's PLC instructional coach. The dialogue between the principal and the instructional coach focused on improving the instructional practices of teachers and impacting student learning. All of the teachers interviewed consistently noted the principal's efforts to take time away from a busy schedule to attend and participate in the various aspects of the school's PLC. By collaborating so frequently with the school's instructional coach, the principal served as role model of collaboration for the school's faculty. According to the teachers, the principal's active involvement and willingness to set an example for others to follow was significant in the perpetuation of the PLC at School B.

While both similarities and differences existed between the two principals, their efforts were both successful. Both of the principals' efforts to make the schools' PLCs a

non-negotiable priority and to explore ways to overcome time barriers were significant in the perpetuation process. Individual principal's efforts, including conducting annual professional development needs assessments, and being an active participant in the schools' PLCs, also significantly contributed to the PLCs' perpetuation. The principals both saw the importance of perpetuating the schools' PLCs, were very involved in the various aspects of the schools' PLCs, and provided the support their teachers needed during the perpetuation process. Both principals also used their knowledge of the specific needs of their schools to make the perpetuation process successful.

The Impact of the PLCs on Improved Instruction and Student Learning

The fourth research question examined teachers' perceptions of the relationship between the development and perpetuation of the PLC and improved student learning at School A and School B. Based on all indications, a relationship existed between the development and the perpetuation of the PLCs and improved instruction and student learning at both School A and School B, although the impact differed slightly between schools.

The significant themes that emerged at both schools concerning the positive relationship between PLCs and improved student learning were Sharing/Collaboration and Data-Driven Instruction. Teachers at both schools felt a relationship existed between the development and perpetuation of the PLCs and increased levels of sharing and collaboration among the schools' teachers and consistent use of data-driven instruction, resulting in improved instruction and student learning at both schools. For School A, the additional themes of Focus on Student Success and Research-Based Instruction emerged.

At School B, the significant themes that emerged were Increased Student Participation, and Differentiation.

Of the themes to emerge from the research, sharing and collaboration was the most frequently referenced. According to the teachers at both schools, since the development and perpetuation of the PLCs, teachers were consistently sharing best practices, collaborating within and across grade levels, working collaboratively with other schools within their district, and asking their colleagues for suggestions as to how to help specific students they might have in common. The principals' efforts to increase the amount of common planning time have allowed this additional sharing and collaboration. The development and perpetuation of both schools' PLCs have made teachers feel a new comfort toward sharing and collaborating within the supportive confines of the schools' PLCs. The teachers at both schools no longer suffer the feelings of isolation so commonly associated with the teaching profession. Teachers at School A and School B are now part of a community of learners focused on improving instruction and student learning.

Since the development and perpetuation of the PLCs, teachers at both schools also report that they feel more confident analyzing and understanding data than ever before. Teachers are consistently using local benchmark data conducted quarterly at each school to drive their instructional practices. When the data indicate particular strengths or weaknesses, teachers are now using this information to help others or to seek the help of others. Having data to demonstrate strengths and weaknesses in instructional practices, as well as the strengths and weaknesses of students, helps teachers to explore and determine specific strategies to meet needs and build on strengths. According to the teachers at

School A and School B, they are reflecting, perhaps more than ever before, as to how they might become better teachers. Teachers are beginning to share data with their students, compare their data to the data obtained from other schools, re-teach specific objectives, pilot new programs designed to improve student learning, develop SMART goals for their classrooms, and use data notebooks at some grade levels. Teachers are no longer haphazardly trying to determine what their students need; they now have the data to support their instructional practices and to address the needs of their students.

While two of themes to emerge for each school were the same, two of themes were different. At School A, the teachers consistently noted the PLCs impacted their focus on student success and to use research-based instruction. Since the development and perpetuation of the PLC at School A, teachers have increased their expectations for students, and the students are beginning to meet the challenge. The school's PLC has allowed teachers a safe and supportive environment in which to learn and try new strategies and then to reflect upon how these strategies impact instruction. In cases where students continue to struggle, teachers in PLCs work together to identify these students sooner, to provide intervention services designed to help them be successful, and to do all they can to prepare them for the 21st century. As a result of the teachers' efforts to model collaboration for their students, their students are working harder and are beginning, some of them for the first time, to experience academic success.

The teachers at School A are also beginning to use more research-based instruction in their classroom. As a result of the school's PLC, teachers are learning improved instructional practices and high-yield instructional strategies that have been proven to produce results in the classroom. Teachers are asking questions to promote

more active learning, using more hands-on learning activities, and increasing cooperative opportunities in their classrooms. Since the PLC at School A offers a forum for learning research-based strategies, teachers are able to meet the needs of their students more effectively than by resorting to what they have always done or by exploring trial-and-error methods in the hopes of meeting their students' needs.

At School B, those interviewed consistently referred to efforts to increase student participation and provide differentiated instruction as a result of participating in a PLC. Whether it is due to their culture, their lack of confidence, or some other reason, many of the school's students are often very hesitant to participate in the classroom. With the help of the school's PLC, teachers have increased the level of excitement in their classrooms, allowed students to participate in the development of their classroom mission, started using data notebooks at certain grade levels, and offered additional student-led learning opportunities. The teachers at School B have also worked to meet the very basic needs of their students, which including providing food for some students through such efforts as the Back Pack Program, so that the students then are able to focus on their academics. In cases where the student's lack of participation in the classroom is due to their academic needs not being met, teachers are providing a Homework Lab after school to offer support for these students' success.

Teachers at School B focused on increasing student participation because it allows the teachers additional opportunities to informally assess their students' strengths, weaknesses, and needs. Participation in classroom activities allows teachers to know whether or not their students are grasping the material so that teachers have the

opportunity to re-teach or to provide support for the struggling students before formal assessments.

With the support of the school's PLC, the teachers at school B also have been able to differentiate their instructional strategies in order to better meet the needs of a diverse population of learners. The PLC provides a means for teachers to explore alternative teaching strategies, develop classroom modifications, implement high-yield instructional strategies, and extend targeted intervention through the school's "Spark Up" program. Such differentiation is essential if teachers hope to improve student learning and to prepare their students to meet the challenges of standardized testing and the 21st century.

According to my findings, a relationship exists between the development and perpetuation of the PLCs at both schools and improved instruction and student learning. Teachers are collaborating and sharing more frequently, using data to drive instruction, focusing on student success, using research-based instructional strategies, increasing student participation, and providing differentiated instruction. Teachers have been able to improve their instructional practices in order to reach a diverse population of learners who might have otherwise gone without the support they needed to be successful students and productive citizens. Based on the N.C. School Report Card and the interview data, the schools' efforts to improve instruction and student learning have paid off. At School A, the overall reading proficiency rates in grades 3-5 from the end of the first year with a PLC to the end of the second year with a PLC rose by 9.7 percentage points, and the overall math proficiency rates rose by 14.9 percentage points. Similarly, at School B the overall reading proficiency rates in grades 3-5 rose by 14.3 percentage points, and the overall math proficiency rates rose by 14.5 percentage points.

Due to the demonstrated success of PLCs at School A and School B, the district plans to continue the PLCs at all three of its elementary schools during the 2009-2010 school year. The district's Elementary Curriculum Director plans to focus on increasing the use of student data note booking, to revise common formative assessments, and to begin the use of science note booking in the classrooms. Aside from these new goals, the district will continue to focus on learning, to perpetuate the collaborative culture that exists, and to focus on results in formative assessments, data, and SMART goals. Based on the recognition the district has received for its efforts thus far and the perceptions of those interviewed during the research study, the implementation of the PLC model district-wide has been a successful initiative thus far.

Conclusion

In closing, the research findings indicate that the principals at both schools played significant, but slightly different, roles in the development and the perpetuation of their school's respective PLCs. By allowing the teachers to participate in the development process, and by making PLCs a non-negotiable priority, and by overcoming time barriers during the perpetuation process, the PLCs at both schools were able to successfully move from the development stage to the perpetuation stage.

Furthermore, the research supports that a relationship did in fact exist between the development and perpetuation of PLCs and improved instruction and student learning at both School A and School B. The principals, instructional coaches, and teachers at both schools felt that their efforts to collaborate and use data to drive instruction were significant and that the principals played a significant role in the development and perpetuation of the schools' PLCs. By adopting a "Whatever It Takes" philosophy,

School A and School B have successfully developed and perpetuated PLCs that have significantly impacted both instruction and student learning.

CHAPTER FIVE

CONCLUSIONS

Introduction

This study examined how two elementary schools developed and perpetuated professional learning communities, the role of each school's principal in the development and perpetuation process, and the perceived impact of each school's PLC on improved instruction and student learning. While the decision to implement PLCs was made at the district level, both principals used their personal knowledge of the schools, teachers, and students to develop and perpetuate successful PLCs. Based on the perceptions of those interviewed, a relationship did, in fact, exist between the development and perpetuation of PLCs and improved instruction and student learning. Aside from discussion of each research question, this chapter includes sections on the significance of the study, strengths of the study, delimitations and limitations of the study, recommendations for future studies, and implications for practice. The chapter will end with a brief conclusion summarizing the research.

Discussion of Findings

Discussion of Research Question One

How did the professional learning communities in two elementary schools develop and perpetuate? The decision to implement PLCs was made at the district level. The major difference between how the principals developed and perpetuated their respective PLCs was the manner in which each developed the school's vision, mission, values, and goals and in how each principal dealt with any resistance encountered during the development and perpetuation process.

Prior to implementing the district-wide PLC model, the district's elementary principals and instructional coaches attended a training conducted by the DuFour Institute. While PLCs offer the most powerful conceptual model for transforming schools, the DuFour approach is more broadly about school improvement (DuFour et al., 2004). PLCs are just one of the components of the DuFour approach to school improvement.

While the decision to implement PLCs was made at the district level, as Chan-Remka (2007) suggested, PLCs cannot exist without a principal who is able to provide support to the school's faculty. During the development and perpetuation process, the district's Superintendent and Director of Elementary Curriculum provided the schools' principals with assistance that included supplying each school with a full-time instructional coach to help implement focused PLCs. If not for the assistance that the district-level leaders provided the principals, the district's PLC initiative may have been unsuccessful.

Prior to the implementation of PLCs, both schools were on Watch Status and faced the potential of additional state-level mandates to ensure their students were learning prior. The resulting improvements at schools in this study further support the impact that a community of learners aimed at a common goal can have on improving student learning. Through their efforts to tap into the wealth of knowledge within their own faculties and by working together collaboratively, both schools in this study made considerable differences in the quality of instruction that their students received in the classroom. PLCs offer schools the opportunity to build on the strengths of their employees and to develop strategies to meet the unique needs of their students by

changing the schools' focus, mission, values, and vision from teaching to student learning (Blankstein et al., 2008; DuFour et al., 2004; Hord, 1997; Hord & Sommers, 2008; Huffman & Jacobson, 2003). With the support of the principals, as well as the district, the two schools in this study have both built on the strengths of their faculties and developed strategies to meet the unique needs of their students. Although each school's mission and vision differed slightly and reflected each school's culture, both schools actively demonstrated the district's goal of doing "Whatever It Takes."

According to Reeves (2009), the answer to the following question is the true test for sustainability: "If funding evaporated and administrative mandates were withdrawn, would this change endure?" (p. 123). In an effort to ascertain the sustainability of the PLCs at school A and school B, all of the participants were asked the following question at the conclusion of each interview: "Hypothetically, if all the students were to achieve 100% proficiency, do you still see the value of continuing the school's Professional Learning Community?" In response to this question, all of the participants, except one, felt PLCs were a wonderful way for teachers to improve professionally and had the potential to significantly impact student learning and achievement. The only teacher who did not immediately respond in support of keeping the school's PLC replied,

I can see it both ways. If we did not have the position, we could save the money, lower class sizes, and put that PLC instructional coach position back in the classroom. However, I can also see keeping it. I think it is helpful to continue to inform teachers of the new strategies. There are always new things that you can learn to keep up with the new trends. So probably, I would say to continue it.

Despite an initial hesitancy, this teacher, too, saw the value of continuing PLCs after reflecting further on the question.

One of the greatest challenges to any school reform effort is sustaining the reform over a period long enough to produce substantial results (Taylor, 2006). Since the PLCs at both schools were the result of a district-wide initiative, the development process at both schools was strikingly similar. Aside from the manner each school chose to develop their respective PLC's vision and mission statements, no major philosophical or procedural differences emerged during my research. Following the development and perpetuation of PLCs at both schools, each school's overall reading and math proficiency rates have risen over the course of the last two years. While two years of progress might not necessarily constitute "substantial results," the improvements in proficiency rates are significant and merit further exploration.

It is worth noting that the principal at School A did appear to encounter more initial resistance than the principal at School B. Once the initial resistance at School A subsided, the development and perpetuation process moved forward in much the same manner at both schools. During the development and perpetuation phases, both principals appeared to tailor their efforts to the needs of their teachers and students. Considering the commitment at the district, school, and classroom levels toward continuing PLCs, the likelihood of sustaining PLCs long enough to produce substantial results is quite high.

Discussion of Research Question Two

What was the role of the principals in the development of a professional learning community in two elementary schools? Based on my findings, the principals at both schools played a significant role in the development process. The following themes were

significant at School A: (1) Decision-Making Opportunities, (2) Tone Setting, and (3) Facilitation. At School B, the following themes emerged as significant: (1) Decision-Making Opportunities and (2) Caring/Supportive Environment. A complete list of the definitions for each of the themes is included in Appendix F. Despite the differences, both schools were able to develop successful PLCs.

The principals' efforts to provide teachers with a voice in the decision-making process were significant at both schools. Hipp et al. (2008) defined this as inclusive leadership, which is marked by the manner in which decisions are made, responsibilities are assumed, and trust develops. According to this model of leadership, teachers take a leadership role concerning activities pertaining to teaching and learning, and the principal focuses on strategies to support teachers' work and creativity (Hipp et al., 2008). By allowing the teachers an opportunity to participate in the decision-making process and by distributing and sharing leadership opportunities, the principals at both schools in this study afforded teachers opportunities to make decisions, accept responsibility, and develop trust in their own ability to improve instruction and student learning. Stoll et al. (2006) suggest that principals can foster the necessary conditions for PLCs by distributing leadership opportunities. By allowing teachers the opportunity to serve in various leadership capacities, these principals fostered teacher leadership and supported the PLC development process at their respective schools.

According to McKinney (2004), principals desiring to develop PLCs must be willing to share authority and allow teachers to participate in decision-making opportunities. Furthermore, McKinney determined that most principals take the following steps in order to develop a PLC: (1) maintain a clear vision focused on improving student

achievement, (2) allow teachers the opportunity to participate in the development of the school's vision, (3) utilize in-house, ongoing, teacher-led staff development, (4) encourage staff to rely on their teaching peers to foster their own professional growth, and (5) support teachers' efforts. As part of development process, both schools' teachers were asked to participate in the creation of the mission and vision statements which would guide the day-to-day operations and the long-term focus of the schools' PLCs. At School A, the mission and vision statements consistently focused on the responsibility of teachers to ensure students learned. At School B, the mission and vision statements focused instead on creating an environment where children could reach their fullest potential.

While both schools' teachers participated in the development of the mission and vision statements, each school's mission and vision statements were reflective of the individual principal's leadership style as well. After allowing the teachers at School A and School B to develop the vision, mission, values, and goals that would guide the schools' efforts to develop into a PLC, much of the responsibility was on the teachers to incorporate what they learned within the confines of the PLC to improve instruction and student learning. The principals expected and encouraged the teachers at both schools to rely on teaching peers and instructional coaches to foster professional growth and then to apply this new knowledge in the classroom. The principals established the tone, facilitated the development process, and created a caring and supportive environment, and then made the teachers responsible to implement the schools' vision in the classroom and to focus on improving student achievement.

With the support of the schools' principals, the teachers were able to focus their energy on incorporating the research-based instructional strategies learned during PLC study groups to improve student learning. By providing teachers with a voice in the decision-making process, as well as the tools they needed to be successful, the principals at School A and School B were able to successfully develop PLCs at their respective schools. Of all the themes to emerge concerning the development process, giving teachers "a voice" appeared to be one of the most significant. By incorporating teacher input, the principals avoided having the teachers perceive PLCs as just one more district-level mandate; such a perception which would most likely have made the teachers less receptive and would potentially have jeopardized the PLCs' success.

Research surrounding PLCs also has shown that leadership sets the tone and direction for the school climate and is influential in creating a culture that forces attention on the issues that are truly important to making the school successful for all (Hipp et al., 2008). By setting the tone of high expectations, fostering a climate favorable to collaboration, and conducting performance checks to make sure teachers were working together as grade-level teams to improve instruction and student learning, the principal at School A created an environment conducive to learning for both teachers and students. The principal at School A consistently kept the school's focus on the business of teaching children. By establishing a tone and school climate of high expectations, the principal ensured the schools' teachers were constantly cognizant of the instructional focus of the school's PLC. Without such vigilant tone-setting and direction by the principal, the outcome for PLC development may have been very different at School A, particularly considering the initial resistance the principal encountered.

Another factor significant at School A was the principal's effort to facilitate the development process. The principal at School A worked diligently to carefully plan, assist, and advance the PLC development process. While the instructional coach and the teachers were given the opportunity to take leadership roles and to actively participate in the PLC's development, the principal provided the necessary guidance to move the PLC successfully forward.

Richardson (2003) suggested that principals with a Managerial Leadership style significantly impacted the maturity of a school's PLC. Aside from displaying trustworthiness and competence, the principal at School A focused both on group and individual goals, facilitated teachers' efforts to develop their skills, and made astute decisions based on the values and needs of the schools' teachers. The efforts of School A's principal are consistent with those identified in the Managerial Leadership literature (Chemers, 2000). The principal's ability to leave nothing to chance, while still giving the key stakeholders a voice, was critical.

At School B, one of the keys to the successful development of the PLC was the caring and supportive environment created by the principal. The principal at School B provided the teachers with the caring and supportive conditions the teachers needed to focus their efforts on improved instruction and student learning. Not only did the principal at School B create a caring and supportive environment for the schools' teachers, the principal also expected the schools' teachers to create the same caring and supportive environment in their classrooms for their students. As Coleman (2005) suggested, transformational leadership is critical to the success of PLCs. Transformational leaders are more concerned with empowerment than control strategies

(Conger, 1999). Bass (1985) defined transformational leadership as the combination of the following three components: charisma, individualized consideration, and intellectual stimulation. According to Bass, transformational leaders are inspirational and easy to follow, considerate and thoughtful of others, and stimulate the effort and intellect of their subordinates. Since taking the principal position, the principal of School B has demonstrated these leadership abilities by transforming the school into a caring and supportive learning environment where teachers can learn together. By establishing an atmosphere where staff members feel appreciated, encouraged, empowered, supported, and valued, the principal has allowed the teachers to focus their attention on their own learning and the learning of their students.

While both principals exhibited facets of what Barth (1990) would define as collegial behaviors, the principal at School B exhibited slightly more of these behaviors than the principal at School A. In collegial schools, staff members talk about practice, observe each other in practice, work on curriculum by planning, designing, researching and evaluating the curriculum, and teach each other what they know about teaching (Barth, 1990). As a result of the principal's efforts to establishing a caring and supportive environment, the teachers at School B felt comfortable turning to their colleagues for guidance pertaining to instruction and other curriculum-related issues. Despite the fact that the principal at School A was able to successfully develop the PLC, School B appears to be slightly ahead of School A in collegiality as defined by Barth (1990). Consequently, the principal at School A must continue to work to develop a school environment that achieves the level of collegiality at School B. In order to do so, the principal at School A will need to practice Little's (1981) collegial behaviors of a

principal by continuing to recognize and reward the collegial efforts of teachers and by modeling collegiality through closely working with the schools' teachers and the instructional coach. Since the principal of School A had to overcome more initial resistance than the principal at School B, it appears to have taken longer for the culture of School A to progress toward collegiality. In the event the principal at School A were to transfer to another school before these efforts were complete, it would be advisable to hire a replacement that is familiar with PLCs and the school's culture. Otherwise, the progress School A has made could be jeopardized.

The principals at both schools were able to realize the goal of establishing PLCs that support teachers and improve student success. While the differences were minimal, each principal's leadership style, as well as the specific needs of the schools, cannot be ruled out as potential explanations for the differences between the two principals' actions during the development phase of each school's PLC.

Discussion of Research Question Three

How have the principals in these two elementary schools perpetuated the professional learning community? The principal at School A and School B were both significant in the perpetuation process. At School A, the following themes surrounding the principal's actions were significant to the perpetuation process: (1) Priority/Non-Negotiable, (2) Overcoming Time Barriers and (3) Conducting Professional Development Needs Assessments. At School B, the following themes surrounding the principal's actions were significant during the perpetuation process: (1) Priority/Non-Negotiable, (2) Overcoming Time Barriers, and (3) Active Involvement. A complete list of the definitions for each of these themes is included in Appendix F.

As Hargreaves (2002) suggests, those making educational change efforts often find it difficult to move beyond the development phase, when new ideas and practices are initially tried, to the perpetuation phase, when new practices are integrated and become the natural practice. By making the schools' PLCs a priority and refusing to negotiate on teacher participation, the principals were able to clearly communicate the importance of perpetuating the schools' PLC to the teachers. The teachers understood that "PLC Thursdays were sacred" and that their attendance was necessary.

After year one of the development phase, teachers knew that their participation in the PLC was requisite for its success. If the principals had failed to make PLCs a priority or had been willing to negotiate on teacher participation, the likelihood of the teachers' making PLCs a priority might have been jeopardized. As one teacher commented, "It is not like we started off making it a priority and then, as the year went on, the principal would say, 'Oh well, you are just going to miss one PLC.' [Failing to participate] has never been an issue." Through the principals' efforts to consistently make PLCs a priority, teachers understood failure to participate was not an option, which significantly contributed to the success of the PLCs at both schools. The practice of attending and actively participating in the schools' PLC study groups became an integrated and natural part of the teaching practice at both schools. The principals' ability to firmly support and communicate their belief in PLCs was an essential component of this perpetuation process.

Another factor common to both schools was overcoming time barriers. The principals at both schools effectively and efficiently managed the various scheduling constraints and worked diligently to guarantee that their teachers' instructional time,

grade-level planning, and PLC study groups were protected. According to the research, it is the principal's responsibility to protect against attempts to jeopardize the time needed for the school to come together as a community of learners (Drago-Severson, 2004; DuFour et al., 2004). By incorporating the majority of the PLC activities within the school day, no additional demands were placed on the teachers' time outside of the school. As Stropkaj (2002) suggests, time is significant factor in enhancing the relationships within the PLC. Since time is a constant that must be managed, the efforts of the principals to make the most effective use of their teachers' time were significant and encouraging. If the principals had mandated these meetings after school hours, both schools' PLCs could have been easily viewed as a chore, rather than something the teachers looked forward to each week. By working to address the issue of time constraints, the principals were able to make PLCs a beneficial learning opportunity for teachers.

While the themes of establishing PLCs as priority/non-negotiable activities and of overcoming time barriers were consistent at both schools, there were also some interesting differences between the efforts of the principals at both. At School A, the principal conducted an annual needs assessment. By soliciting teachers' input, the principal, with the help of the instructional coach, was able to provide the unique, needs-specific learning opportunities the school's teachers requested, such as the Sheltered Instruction Observation Protocol (SIOP) training. If not for the needs assessment, the principal may not have known the schools' teachers required help to meet the needs of the school's English Language Learners (ELL). After completing the training, the ELL subgroup at School A was able to make Adequate Yearly Progress (AYP) during 2008-

2009, which it had not done the previous year. The principal's efforts to survey the schools' teachers resulted in a PLC at School A that was more needs-specific than universal.

At School B, the principal's active involvement in the PLC process emerged as significant. The principal at School B frequently attended and participated during weekly PLC study groups and grade-level meetings, as well as engaged in frequent collaborative dialogue with the school's instructional coach. In order to foster the necessary conditions for PLCs, principals must create a culture that promotes and encourages inquiry and ensures learning for staff at all levels, including administrators, support personnel, and teacher assistants (Stoll et al., 2006). The principal's efforts to actively participate in the process fostered the necessary conditions for the school's PLC to successfully perpetuate. Participation also allowed the principal to stay abreast of what was going on during PLCs and to compare PLC-introduced strategies to actual incorporation into classroom practices. Consequently, the principal was able to provide suggestions and support that teachers needed to address any discrepancies between the two.

Because of the time and energy involved to move a PLC from initial development to the perpetuation stage, the process of creating a community of learners is clearly a journey for all those involved in the process (Hipp et al., 2008). How leaders approach, commit to, and protect deep learning in their schools is key developing sustainability (Hargreaves & Fink, 2003). Since each school is different, the processes at each may look very different. Despite the fact that similarities and differences existed between the two principals in this study, both were able to successfully perpetuate PLCs at their schools.

Through their efforts to make PLCs a non-negotiable priority, explore new ways to overcome time barriers, conduct annual professional development needs assessments, and actively participate in PLCs, the principals at both School A and School B have been able to create sustainable PLCs. Both principals valued and contributed to the perpetuation process by providing the support their teachers needed and by acting on knowledge of the specific needs of their schools, students, and teachers. The principals' individual leadership styles, as well as the specific needs of the schools, cannot be ruled out as potential explanations for the differences between the approaches of the two principals during the perpetuation phase of their schools' PLCs.

Discussion of Research Question Four

What, if any, relationship do teachers perceive exists between the development and perpetuation of the PLC and improved instruction and student learning? Based on all indications, a relationship existed between the development and the perpetuation of the PLCs and improved instruction and student learning at both schools. While the teachers' perceptions differed slightly between School A and School B, the findings indicated that a relationship did in fact exist.

The following themes were determined to be significant at School A: (1) Sharing/Collaboration, (2) Data-Driven Instruction, (3) Focus on Student Success, and (4) Research-Based Instruction. At School B, the following significant themes emerged: (1) Sharing/Collaboration, (2) Data-Driven Instruction, (3) Increased Student Participation, and (4) Differentiation. A complete list of the definitions for each of these themes is included in Appendix F. While the results differed slightly, the teachers at both schools felt that a relationship existed between the development and perpetuation of the

PLC and increased levels of sharing and collaboration. The teachers at both schools also consistently stated that the use of data-driven instruction has resulted in improved instruction and student learning.

Of the themes to emerge from the research, sharing and collaboration was the most frequently occurring theme. PLCs provide teachers with an opportunity to learn together and then apply what they learned to meet the needs of their students. This type of deep, rich learning evolves when teachers have the forum in which to interact and converse with one another, to pursue intentional learning, to share and test new ideas, to ask questions, to seek clarification, to discuss results, and to determine how to apply knowledge they have acquired in the classroom (Blankstein et al., 2008). Participating in the development and perpetuation of the PLC, teachers in this study consistently began sharing best practices, collaborating within and across grade levels, working collaboratively with other schools within their district, and asking their colleagues for suggestions as to how they might help specific students they might have in common. In order to support these collaborative efforts, the principals at both schools increased the amount of common planning time, further supporting the perpetuation process.

Since the development and perpetuation of the PLC, teachers at both schools feel more confident analyzing and understanding data than ever before. According to the literature, PLC participants must work collaboratively with one another to find the answers to how they will respond when students are not learning (Buffman & Hinman, 2006). Providing teachers access to easily manageable data is not enough to foster teaching and learning (Blankstein, 2004). Teachers must also be able to interpret data to determine areas that need improvement. In the PLC, teachers learn to examine student

performance data and decide where students are doing well and where improvement is needed; this, in turn, establishes what the teachers need to learn, as well as how they will learn it (Hord & Sommers, 2008). At both schools, the teachers are now consistently using data to drive their instructional practices by identifying particular strengths and weaknesses and then using this information to work collaboratively in order to determine specific strategies to meet the identified needs. Because the teachers now have skills to analyze and understand their data, they benefit from being more confident making instructional decisions based on data to improve instructional practices.

While two of the themes to emerge for each school were the same, each school also had two additional themes. The teachers at School A consistently referenced their efforts to focus on student success, as well as on research-based instruction. At School B, the teachers noted efforts to increase student participation and to provide differentiated instruction. Although the additional themes at each school were different, all of the themes reflect both schools' consistent focus on effective instruction and on student learning.

Teachers at School A are now, perhaps more than ever, focusing on the success of each student. As a result of the PLC, teachers have the opportunity to reflect upon the effectiveness of their practices and programs in relation to student outcomes, to determine how well students are being served, and to identify student achievement areas in need of improvement. The collaborative, safe and supportive environment of the school's PLC has allowed teachers opportunities to try new strategies and to reflect upon how these strategies impacted instruction. With the support of the PLC, the teachers are now expecting more from their students, and their students are meeting the challenge.

When these students are successful, teachers are making a concerted effort to celebrate their student's accomplishments. Based on the improved test results, there has been a lot to celebrate at School A over the last two years.

At School A, teachers are also beginning to use more research-based instruction in their classrooms. PLCs provide teachers with opportunities to develop impactful educational goals for students, as well as to make effective teaching adaptations for their students (Hord, 1997). As a result of the PLC, teachers at School A are learning improved instructional practices and high-yield strategies that have been found to produce results in the classroom. These additional instructional strategies, which include asking better questions, using more hands-on learning activities, and increasing cooperative learning opportunities, meet the demands of an increasingly needy population of students. With the knowledge they have attained in the PLC, teachers are able to provide targeted and effective classroom instruction tailored to the learning styles of their students.

In an effort to improve student learning, the teachers at School B consistently noted their efforts to increase student participation in the classroom. While quality classroom instruction continues to be a necessary prerequisite for school improvement, efforts to ensure students' learning should drive the instruction (DuFour et al., 2004). Whether it is due to culture, lack of confidence, or various other reasons, many of the schools' students had previously been very hesitant to participate in the classroom. As a result of the strategies discussed in the PLC study groups, teachers have increased the level of excitement in their classrooms, encouraged students to participate in the development of their classrooms' mission statements, begun to instigate the use of data notebooks at certain grade levels, and offered additional student-led learning

opportunities. By increasing student engagement in the classroom, the teachers are subsequently increasing student learning as well.

Considering the diversity of their population, the teachers at School B must provide a variety of differentiated instructional practices to meet the needs of their students. In a true PLC, teachers adjust instruction and share best practices based on student achievement. When students are not learning, interventions are developed, implemented, and evaluated in a cyclical process (O'Donovan, 2007). With the support of the school's PLC, teachers have been able to explore alternative teaching strategies, provide classroom modifications, implement high-yield instructional strategies, and provide targeted school-wide intervention through the school's "Spark Up" program. The teachers understand what works in one student's case may not work in another, and in the collaborative environment of the PLC, School B's teachers are willing to keep exploring alternatives until they find differentiated instructional practices that work.

According to my findings, a relationship did exist between the development and perpetuation both schools PLCs and improved student learning. As a result of the teachers' efforts to collaborate, to use data to drive instruction, and to use research-based and differentiated instructional strategies, there is a renewed focus on student success at both schools. When teachers use the techniques they have learned during PLCs to provide differentiated instruction designed to meet the needs of all their students, participation increases in the classroom and the engaged students are more apt to learn. With the help of the instructional coaches and PLC study groups, teachers have been better able to reach a diverse population of learners.

Since the inception of the schools' PLCs, test scores have risen as much as fourteen percentage points in reading and math when compared previous years' test results. Both schools' reading and math scores have continued to improve annually and are approaching or surpassing the state averages in some instances. During 2008-2009, both schools met all their Adequate Yearly Progress (AYP) goals and were meeting the needs of their identified subgroup populations which had previously underperformed in years past.

Teachers at both School A and School B are collaborating and sharing more frequently, using data to drive instruction, focusing on student success, using research-based instructional strategies, increasing student participation, and providing differentiated instruction. As a result of PLCs, teachers have been able to improve their instructional practices and to more effectively reach a diverse population of learners, and these improvements are evident in a comparison of test results from previous school years. While the principals at both schools played a significant role in the development and the perpetuation of their schools' respective PLCs, it was the schools' teachers who applied what they learned during PLCs to improve instruction and impact student learning. As a result of the efforts of all the parties involved, including district administration, principals, teachers, and students, both schools have successfully developed and perpetuated PLCs that have significantly impacted instruction and student learning.

Significance of the Study

PLCs offer schools the ability to tap a faculty's wealth of knowledge, to work collaboratively to meet the needs of students, and to create a community of learners (both

students and teachers) aimed at the common goal of student learning (Barlow, 2005; Blankstein et al., 2008; DuFour et al., 2004; Halverson, 2003; Hord, 1997; Hord and Sommers, 2008; Stoll et al., 2006). The schools in this study provide an example of the collective efforts of district-level administrators, principals, instructional coaches, and teachers who work collaboratively to create an effective community of learners that meets the needs of students and reaches the common goal of student learning. This research study provides insight into how the principals of these two schools managed to develop and perpetuate their schools' efforts to create PLCs.

This study provides additional evidence that shared leadership practices support the development of a school's PLC (Hipp et al., 2008; McKinney, 2004). The principals at these two schools worked diligently to provide teachers with leadership opportunities and to allow them to participate in decision-making opportunities within the school, including the development of the schools' vision and mission. By encouraging the collective efforts of others, providing support, and working collaboratively to develop a school-wide plan to meet the unique needs of teachers and students, the principals in this study were in an effectual position to foster the development and perpetuation of PLCs at both schools.

As Chan-Remka (2007) found, PLCs cannot develop or survive without the support of the principal. Both principals in this study played substantial roles in the development and perpetuation process of their schools' PLCs. This study is significant in that it adds to the knowledge base concerning how principals successfully develop and perpetuate PLCs. While each school is different, the ability to examine the findings of

this study across cases improves the transferability to other schools desiring to create PLCs.

As Stevens (2007) found and this study further supports, creating a PLC is not without its struggles. Developing a PLC can be challenging, as the principal of School A learned. While it is not uncommon to encounter resistance during the development process, the principals in this study played a significant role in overcoming this resistance by ensuring each school's PLC was a non-negotiable priority for the faculty.

Much like the development process, perpetuating a PLC does not come without its own unique challenges. As Stropkaj (2002) found, overcoming time barriers can significantly impact the perpetuation process for schools desiring to create PLCs. Based on my research, overcoming time barriers was significant in the perpetuation of both schools' PLCs. The principals of School A and School B were able to perpetuate their respective PLCs by developing schedules that made the best use of the time available in each school day and that allowed for increased levels of collaboration within and across grade levels. As Coleman (2005) suggested, principals must possess both leadership and management skills. Not only did the principals at both schools in this study possess the ability to lead the development and perpetuation of their PLCs, but they also arranged their schools' schedules in order to allow enough time for PLCs study groups within the school day. This embedding of PLC facets within the school day was significant in the perpetuation process. If the principals had been unable to schedule the time within the school day, the response to PLCs may have been very different at both schools, particularly if the teachers had viewed PLCs as one more demand on their already overburdened after school hours.

Another significant reason the schools in this study were able to successfully perpetuate PLCs was that the principals were able to incorporate the schools' additional professional development needs within the activities of the schools' PLCs. Although the district determined many components for the PLCs' focus, the principals successfully embedded the teachers' other professional development needs within the PLCs, including technology and SIOP training. By incorporating the additional professional development requests within the school's PLC model, the principals gained teacher support since the schools' teachers viewed these training efforts as a single initiative instead of several initiatives to manage simultaneously.

Aside from the principals' role in the development and perpetuation of the schools' PLCs, this study is significant in that it provides considerable support for the impact of PLCs on improved instruction and student learning. Teachers at both schools attested to the impact of the PLCs on improved instruction and student learning. According to Marks & Louis (1997), teacher empowerment is an important factor in changing teachers' instructional practices. By empowering teachers to share and collaborate, as well as to increase their confidence in their ability to incorporate data-driven instruction, classroom instruction and student learning improved at both schools. Not only did the schools' teachers become more comfortable using local quarterly benchmark data to drive instruction, the schools' teachers and principals were also able to begin using EVAAS (Education Value Added Assessment System) data in grades 3-5 and DIBELS (Dynamic Indicators of Basic Early Literacy) data in grades K-2 to drive instruction and student learning. According to Popham (2008), instruction should be a carefully planned endeavor which uses the best available information or data to guide

evidence-based instructional decision making. Since the teachers at both schools had previously operated in isolation, the schools' PLCs provided the data to empower teachers to work together towards the creation of instruction to improve student learning. By applying the strategies and skills learned during PLCs, these teachers noticed a marked improvement in their instructional practices and student learning. While there is no guarantee all teachers will notice similar improvements, teachers who are willing to apply the knowledge attained through PLCs in their own classrooms may find that their instructional practices and student learning improve as well.

One of the significant ways the teachers improved instruction and student learning was through sharing and collaboration. Previous studies, such as those conducted by Lodico (2005) and Perez (2007), support the need for principals to encourage collaboration among teachers. This study is significant in that it further extends this need by indicating the impact of increased collaboration on improved instruction and student learning. As a result of the principals' efforts to support the development and perpetuation of the PLCs, teachers in this study attested to the impact the increased levels of sharing and collaboration had on improved instruction and student learning. Much like the schools in my study, similar schools that have created PLCs attest to an increased commitment and vigor among both students and teachers (Barlow, 2005; DuFour et al., 2004). Since the inception of both schools' PLCs, the teachers are focusing their attention on the success of their students, exploring ways to increase student participation, implementing research-based instructional strategies, and continuing to provide the differentiated instruction their students need to be successful. The increased levels of commitment and vigor among both students and teachers appear to be effective at both

schools, since both schools' students are experiencing success at a higher rate than in years past.

As Bezzina (2006) suggested, schools desiring to develop PLCs must facilitate learning for both teachers and students. Communities of learners, both teachers and students, were created at School A and School B, and teachers worked together during PLC study groups, grade level meetings, and vertical planning to improve professionally and to improve learning in the classroom. The PLCs offered these teachers a non-judgmental, safe, and supportive environment in which to collaborate with their peers, to address professional development needs, and to meet the learning needs of their students. While the majority of teachers, including those in this study, have always intended to help children learn, PLCs provide teachers with renewed focus on student learning and effective instructional strategies to accomplish achievement goals. As a result, both schools were able to successfully develop and perpetuate PLCs and in turn impact instruction and student learning.

Strengths of the Study

One of the strengths of this study is that it expands upon the existing research and provides the reader with some practical suggestions concerning how two elementary school principals developed and perpetuated PLCs in their respective schools and the impact of those PLCs on improved instruction and student learning. While previous studies gathered qualitative data from either principals or teachers (Chan-Remka, 2007; Coleman, 2005; Lodico, 2003; McKinney, 2004; Perez, 2007; Richardson, 2003; Stevens, 2007; Stropkaj, 2002), none examined the perceptions of both teachers and principals at

the elementary level. This study adds to our understanding of PLCs in that it solicits input from three different perspectives: teachers, principals, and instructional coaches.

In an effort to improve the trustworthiness of this study, every effort was made to triangulate the data. After the initial interviews, I also visited each site separately to observe the schools' PLC study. While on site, I took the opportunity to visit classrooms, speak with teachers informally, and gather or view specific documents I believed to be significant. By confirming the existence of specific documents, as well as analyzing testing results, I was able to triangulate the data to support the impact of the schools' PLCs on improved instruction and student learning.

The principals in this study had assistant principal and classroom teaching experience. Both instructional coaches also had classroom teaching experience. The teachers interviewed in this study represented each grade level, Kindergarten through fifth grade and speech; the only grade not represented was pre-Kindergarten. The number of years of experience of the participating teachers ranged from 1 year to over 20 years. Since the majority of the participants in this study had been employed at their respective schools prior to the decision to implement PLCs, the participants were able to provide input concerning their present experiences as well as their experiences prior to implementing PLCs. A significant strength of this study is that participants were able to provide specific information about the development of PLCs from this historical perspective.

An additional strength of this study is that it gathers data from two schools and can therefore compare, contrast, and discuss the similarities and differences between both schools' efforts to develop and perpetuate a PLC, the role of the principals in the

development and perpetuation process, and the impact of the development and perpetuation of the schools' PLCs on improved instruction and student learning. By examining two schools, I was able to look across schools, which promotes the transferability of my findings.

Delimitations and Limitations of the Study

While this study certainly has the potential to be significant, it is not without its delimitations. As mentioned earlier, each school is a unique entity. Consequently, the successful efforts of one or two schools may not necessarily generalize to other schools. While I believe the PLCs established in these two schools were significant factors in their successful efforts to move from Watch Status to Schools of Distinction, I am unable to ascribe causality to the PLCs or to the efforts of the principals. Additionally, I do not contend that, by following the practices of these two schools and the principals, another school will be able to develop and perpetuate their own PLC. While both PLCs and principals have the potential to improve instruction and student learning, there are too many other factors to imply causation. As a result, this research is not intended to be a quick fix for struggling schools. It is acknowledged that it takes the hard work of everyone involved, including parents, students, and community members, to achieve successful school improvement efforts. There is simply no universal model for improving education; however, certain improvement models, such as the PLC model, have the potential to positively impact both practice and results.

Considering the amount of variation among school districts, even those in neighboring communities, the fact that both schools were from the same school district should also be a delimitation in this study. Since students' needs, the quality of teachers,

and the level of support vary from district to district, the fact that both schools in this particular study are from the same district cannot be ruled out as a limitation.

The methodology of this study is also not without its limitations. While I believe all participants provided their honest opinions, each teacher selected to participate in this study was nominated by the principal. As a result, I cannot guarantee the opinions of those in this study accurately reflect the opinions of all the schools' teachers.

While convenience, access, and geographic proximity were all taken into consideration, the depth of the interview questions, the number of participants, and the fact that two schools were selected to participate in the study impacted the feasibility of ongoing, persistent observations at both sites. The length of the study did not allow time for conducting observations of ongoing PLC study groups and/or observing teachers implementing the instructional strategies learned during PLC study groups in the classrooms. These types of observations would have further supported the impact of the development and perpetuation of the PLCs on improved instruction and student learning.

Recommendations for Future Studies

PLCs continue to be fairly new to the research literature. As a result, there are facets of PLCs that could potentially benefit from future empirical research studies, including the following suggestions:

1. Future studies should explore the efforts to develop and perpetuate a PLC at schools who act independently of district initiatives. Since this study examined the implementation of PLCs as a district-level rather than a school-level decision, the development and perpetuation efforts might look very different when established independently at the school level.

2. This study did not examine the impact of the instructional coach on the success of this particular PLC model, and future research should incorporate questions to ascertain the principals' and the teachers' perceptions of the instructional coach's effect on the success of a school's PLC model. In the interviews for this study, several of those interviewed referenced how the instructional coach had positively impacted their perception of the school's PLC study groups and the success of the school's PLC. Consequently, the significance of the instructional coach in the development and perpetuation process might need to be further clarified for those desiring to create similar PLC models at their schools.
3. Since leadership style is often significant in principal-faculty collaboration, I would suggest that future research directly examine the impact of leadership styles of the principals on the development and perpetuation of PLCs. The leadership style of the principals in this study cannot be ruled out as a significant factor impacting my findings. Using quantitative instruments designed to explore the leadership style of a principal would likely provide more concrete and specific data concerning the impact of leadership on the development and perpetuation of PLCs.
4. Lastly, I would suggest that future studies conduct interviews in a focus group format with representatives from each grade level, as opposed to individual interviews with principal-selected participants. A focus group format would generate additional ideas and dialogue among the teachers and

gather additional rich data concerning the impact of a PLC across grade levels.

Implications for Practice

Based on the findings, this study has the potential to significantly impact practice. In light of current budget cuts and limited professional development funding, the opportunity to offer high quality, in-house professional development will likely be appealing to many in the field of education. PLCs afford schools the opportunity to implement strategies (i.e., professional study groups, peer coaching, action research teams, shared development of learning standards, and cooperative assessment of student work) that allow participants specific and continuous occasions for learning and collaboration (Haar, 2001). Professional learning communities transform teachers' daily work into a form of high-quality professional development.

Principals desiring to develop and perpetuate PLCs may garner knowledge from this study that potentially could be applied to their own schools. Sharing decision-making opportunities, establishing a climate conducive to learning, and being actively involved are all important qualities for principals to possess (Hipp et al., 2008; McKinney, 2004; Perez, 2007; Stevens, 2007; Stoll et al., 2003). The efforts of the principals in this study are reflective of the best practice standards for administrators desiring to develop a PLC.

New endeavors often meet with resistance, and asking teachers to collaborate, to examine the way they have traditionally practiced, and to be willing to change can be difficult. However, the resistance to PLCs often decreases as success increases. Once teachers can see the rewards of their efforts, the school's teachers, not the principal, become the biggest advocates for PLCs.

For this study to impact practice, principals and others desiring to apply the findings of this study must make the adjustments necessary for the PLC to work in their own situations. The findings of this study are not universally applicable; however, this study provides clarity for methods of successfully developing and perpetuating a PLC that impacts instruction and student learning.

For teachers, the findings of this study further support the benefit of PLCs on improved instruction and student learning. According to the literature, if teachers hope to overcome the isolation so often associated with teaching, they need the opportunity to observe other teachers and to have their own teaching practices and instructional behaviors reviewed by their colleagues (Hord & Sommers, 2008). As a result of the PLCs, teachers in both schools have overcome the feelings of isolation so commonly experienced in the past and now benefit from the positive effects of increased collaboration among teaching professionals. For this study's teachers, the development and perpetuation of the PLCs offer support that has impacted instruction and student learning.

Conclusion

In closing, the findings of this study strongly support the significance of the principal in the development and perpetuation of the PLCs in two elementary schools. While the decision to implement PLCs was a district-wide initiative, the principals at both schools managed to successfully develop PLCs at their respective schools by allowing teachers to participate in decision-making opportunities, establishing a tone of high expectations, and creating a caring and supportive environment. After successfully developing a PLC, the principals were able to successfully perpetuate their school's PLCs

by making participation a non-negotiable priority, overcoming time barriers, conducting professional development needs assessments, and being actively involved in the perpetuation process.

Aside from the principal's role in the development and perpetuation process, the findings further support the impact of PLCs on improved instruction and student learning. By increasing sharing and collaboration, allowing data to drive instruction, focusing on student success, encouraging increased student participation, offering research-based instruction, and differentiating instruction, teachers at both schools felt the development and perpetuation of the schools' PLCs have significantly improved the quality of instruction and increased student learning. While the nature of this research study does not allow for ascribing causality to the findings, the fact that both schools have moved from Watch Status in 2006-2007 to making Adequate Yearly Progress (AYP) in 2007-2008 and 2008-2009 is clearly significant. Since there is no way to know what would have happened over the course of the last two years if PLCs had not been implemented throughout the district, it is impossible to say PLCs are the sole reason for the success. However, based on the findings of my research, I feel confident the PLC model is worth exploring further since it presents a viable alternative for schools wishing to re-examine their current professional development practices. For those districts, schools, and teachers willing to do "Whatever It Takes" to meet the needs of their students, PLCs offer a means to accomplish their mission, achieve their vision, and to reach their goals.

References

- Ary, D., Jacobs, L. C., & Razavieh, A. (2002). *Introduction to research in education* (6th ed.). Belmont, CA: Wadsworth/Thomas Learning.
- Barlow, D. (2005). On common ground: The power of professional learning communities. *Education Digest*, 70(8), 76-77.
- Barth, R. S. (1990). *Improving schools from within: Teachers, parents, and principals can make a difference*. San Francisco: Jossey-Bass.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.
- Berends, M. (2004). In the wake of A Nation at Risk: New American schools' private sector school reform initiative. *Peabody Journal of Education*, 79(1), 130-163.
- Bezzina, C. (2006). "The road less traveled": Professional communities in secondary schools. *Theory Into Practice*, 45(2), 159-167.
- Blankstein, A. M. (2004). *Failure is not an option: Six principles that guide student achievement in high performing schools*. Thousand Oaks, CA: Corwin Press.
- Blankstein, A. M., Houston, P. D., & Cole, R. W. (Eds.) (2008) *Sustaining professional learning communities*. Thousand Oaks, CA: Corwin Press.
- Bogdan, R. C., & Biklen, S. K. (1992). *Qualitative research for education* (2nd ed.). Boston: Allyn and Bacon.
- Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher*, 33(8), 3-18.
- Bryk, A. S., Deabster, P. E., Easton, J. Q., Luppescu, S., & Thum, Y. E. (1994).

- Measuring achievement gains in Chicago public schools. *Education and Urban Society*, 26(3), 306-319.
- Buffum, A., & Hinman, C. (2006). Professional learning communities: Reigniting passion and purpose. *Leadership*, 35(5), 16-19.
- Buysee, V., Sparkman, K., & Wesley, P. (2003). Communities of practice: Connecting what we know with what we do. *Exceptional Children*, 69(3), 263-277.
- Capers, M. (2004). Epilogue: Teaching and shared professional practice- A history of resistance; A future dependent on its embrace. In S. Hord (Ed.), *Learning together, leading together: Changing schools through professional learning communities* (pp. 151-162). New York: Teachers College Press.
- Chan-Remka, J. (2007). The perceptions of teachers and administrators in relation to the implementation of professional learning communities (Doctoral dissertation, Johnson & Wales University, 2007). *Dissertation Abstracts International*, 60, 2411.
- Chemers, M. M. (2000). Leadership research and theory: A functional integration. *Group Dynamics: Theory, Research, and Practice*, 4, 27-43.
- Clark, R. (2003). *The essential 55: An award winning educator's rules for discovering the successful student in every child*. New York: Hyperion.
- Coleman, C. H. (2005). Teachers' perceptions of administrative leadership styles and schools as professional learning communities (Doctoral dissertation, University of New Orleans, 2005). *Dissertation Abstracts International*, 66, 1571.

- Coleman, J. S., Campbell, E., Hobson, C., McPartland, J., Mood, A., Weinfield, E., et al. (1966). *Equality of educational opportunity*. Washington, DC: U.S. Government Printing Office.
- Conger, J. A. (1999). Charismatic and transformational leadership in organizations: An insider's perspective on these developing streams of research. *Leadership Quarterly*, *10*, 145-179.
- Creswell, J. W. (2005) *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (2nd ed.). Upper Saddle River, NJ: Pearson.
- Darling-Hammond, L. (1995). Policy for restructuring. In A. Lieberman (Ed.), *The work of restructuring schools: Building from the ground up* (pp. 157-175). New York: Teachers College Press.
- Darling-Hammond, L., & Sykes, G. (Eds.). (1999). *Teaching as a learning profession: Handbook on policy and practice*. San Francisco: Jossey-Bass.
- Drago-Severson, E. (2004). *Helping teachers learn: Principal leadership for adult growth and development*. Thousand Oaks, CA: Corwin Press.
- DuFour, R. (2004). What is a "professional learning community"? *Educational Leadership*, *61*(8), 6-11.
- DuFour, R., DuFour, R., Eaker, R., & Karhanek, G. (2004). *Whatever it takes: How professional learning communities respond when schools don't learn*. Bloomington, IN: National Education Service.
- Edmonds, R. R. (1979). Effective schools for the urban poor. *Educational Leadership*, *37*, 15-27.
- Engstrom, M. E., & Danielson, L. M. (2006). Teachers' perceptions of an on-site staff

- development model. *The Clearing House*, 79(4), 170-173.
- Fullan, M. (2008). Leading professional learning. In J. H. Munro, *Educational leadership: Round table viewpoints* (pp. 181-186). Boston: McGraw-Hill.
- Haar, J. (2001, October). *Providing professional development for rural educators*. Paper presented at a meeting of the National Rural Education Association, Albuquerque, NM. (ERIC Document Reproduction Service No. ED023474)
- Halverson, R. (2003, October 10). Systems of practice: How teachers use artifacts to create professional community in schools. *Educational Policy Analysis Archives*, 11(37), 1-34. Retrieved March 7, 2008, from <http://epaa.asu.edu/epaa/vlln37>
- Hargreaves, A. (2002). Sustainability of educational change: The role of social geographies. *Journal of Educational Change*, 3 (3-4), 189-214.
- Hargreaves, A., & Fink, D. (2003). The seven principles of sustainable leadership. *Educational Leadership*, 61(7), 1-12.
- Hipp, K. K., Huffman, J. B., Pankake, A. M., & Olivier, D. F. (2008). Sustaining professional learning communities: Case studies. *Journal of Educational Change*, 9, 173-195.
- Hord, S. (Ed.). (2004). *Learning together, leading together: Changing schools through professional learning communities*. New York: Teachers College Press.
- Hord, S. M. (1997). *Professional learning communities of continuous inquiry and improvement*. Austin, TX: Southwest Educational Development Laboratory. (ERIC Document Reproduction Service No. ED410659)
- Hord, S. M., & Sommers, W. A. (2008). *Leading professional learning communities:*

Voices from research and practice. Thousand Oaks, CA: Corwin Press.

Huffman, J. (2003). The role of shared vision and values in creating professional learning communities. *NAASP Bulletin*, 87(637), 21-34.

Huffman, J. B., & Jacobson, A. L. (2003). Perceptions of professional learning communities. *International Journal of Leadership in Education*, 6, 239-250.

Joyce, B. (2004). How are professional learning communities created? *Phi Delta Kappan*, 86(1), 76-83.

Lee, V. E., & Smith, J. B. (1995). Effects of high school restructuring and size on early gains in achievement and engagement. *Sociology of Education*, 68, 241-270.

Lee, V. E., Smith, J. B. & Croninger, R. G. (1995). Another look at high school restructuring. *Issues in restructuring schools*. Madison, WI: University of Wisconsin-Madison, School of Education.

Little, J. W. (1981, April). *School success and staff development in urban desegregated schools: A summary of recently completed research*. Boulder, CO: Center for Action Research.

Lodico, M. E. (2003). Traits of professional learning communities in two most improved high schools in North Carolina (Doctoral dissertation, Western Carolina University, 2003). *Dissertation Abstracts International*, 64, 4002.

Louis, K. S., & Kruse, S. (1995). *Professionalism and community: Perspectives on reforming urban schools*. Thousand Oaks, CA: Corwin Press.

Louis, K. S., Kruse, S., & Raywid, M. A. (1996). Putting teachers at the center of reform: Learning schools and professional communities. *NAASP Bulletin*, 80, 9-21.

- Marks, H. M., & Louis, K. S. (1997). Does teacher empowerment affect the classroom? The implications of teacher empowerment for instructional practice and student performance. *Educational Evaluation & Policy Analysis, 19*(3), 245-275.
- Marzano, R. J. (2007). *The art and science of teaching: A comprehensive framework for effective instruction*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001). *Classroom instruction that works*. Alexandria, VA; Association for Supervision and Curriculum Development.
- McKinney, D. A. (2004). The role of the principal in developing a professional learning community in selected Chicago public elementary schools (Doctoral dissertation, Northern Illinois University, 2004). *Dissertation Abstracts International, 65*, 3237.
- McLaughlin, M. W., & Talbert, J. E. (1993). *Contexts that matter for teaching and learning*. Palo Alto, CA: Stanford University, Center for Research on the Context of Secondary School Teaching.
- McLaughlin, M. W., & Talbert, J. E. (2001). *Professional communities and their work of high school teaching*. Chicago: University of Chicago Press.
- Merriam, S. B. (1988). *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass.
- Morrissey, M. S. (2000). *Professional learning communities: An ongoing exploration*. Austin, TX: Southwest Educational Development Laboratory.

- National Association of Elementary School Principals. (2002). *Leading learning communities: Standards for what principals should know and be able to do*. Alexandria, VA: Author.
- National Commission on Excellence in Education (NCEE). (1983). *A nation at risk: The importance of educational reform*. Washington, DC: U.S. Government Printing Office.
- National Commission on Teaching and America's Future. (2003). *No dream denied: A pledge to America's children*. Washington, DC: Author.
- Newman, F. M., & Wehlage, G. G. (1995). Successful school restructuring: A report to the public and educators (Report No. R117Q00005-95). Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED387925)
- No Child Left Behind Act of 2001, Pub. Law No. 107-110. 115 Stat. 1425 (2002).
- O'Donovan, E. (2007). Professional learning communities. *District Administration*, 43(3), 94-95.
- Ogawa, R. T., & Bossert, S. T. (1995). Leadership as an organizational quality. *Educational Administration Quarterly*, 31(2), 224-243.
- Opuda, M. J. (2003). NCLB—A threat or a challenge to public education? A reply to Edmondson and Shannon. *Journal of Research in Rural Education*, 18(1), 35-38.
- Patton, M. Q. (2003). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.

- Perez, P. D. (2007). Schools as professional learning communities: The actions of the principal (Doctoral dissertation, The University of Texas at Austin, 2007). *Dissertation Abstracts International*, 68, 1756.
- Popham, W. J. (2008). *Transformative assessment*. Alexandria, VA: The Association for Supervision and Curriculum Development.
- Quellmalz, E., Shields, P.M., & Knapp, M.S. (1995). *School-based reform: Lessons from a national study*. Washington, DC: Planning and Evaluation Service, office of the Under Secretary, U.S. Department of Education.
- Reeves, D. B. (2009). *Leading change in your school: How to conquer myths, build commitment, and get results*. Alexandria, VA: The Association for Supervision and Curriculum Development.
- Richardson, V. L. (2003). The relationship between principal leadership styles and the maturity of schools as professional learning communities (Doctoral dissertation, The George Washington University, 2003). *Dissertation Abstracts International*, 64, 752.
- Riggs, E. G., & Seratfin, A. G. (1998). The principal as instructional leader: Teaching high school teachers how to teach reading. *NASSP Bulletin*, 82, 78-84.
- Rosenholtz, S. J. (1989). *Teachers' workplace: The social organization of schools*. New York: Longman.
- Schmoker, M. (2001). *The results fieldbook: Practical strategies from dramatically improved schools*. Alexandria, VA: Association for Supervision and Curriculum Development.

- Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York: Currency Doubleday.
- Setzler, D. A., & Himley, O. T. (1995). A model for professional development and school improvement in rural schools. *Journal of Research in Rural Education*, 11(1), 36-44.
- Shaughnessy, J. (1998). *Initial guidelines on becoming a learning community*. Portland, OR: Northwest Regional Educational Lab. (ERIC Document Reproduction Service No. ED442174)
- Stevens, C. (2007). Elementary principals' perspectives in developing and sustaining professional learning communities (Doctoral dissertation, University of Oklahoma, 2007). *Dissertation Abstracts International*, 68, 1265.
- Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2006). Professional learning communities: A review of the literature. *Journal of Educational Change*, 7, 221-258.
- Stoll, L., Bolam, R., McMahon, A., Wallace, M., Thomas, S., Hawkey, K., & Smith, M. (2003, January). *Creating and sustaining professional learning communities*. Paper presented at the Sixteenth International Conference for School Effectiveness and Improvement, Sydney, Australia.
- Stropkaj, W. J. (2002). Principals building professional communities: A multi-site case study of an elementary, middle, and high school principal (Doctoral dissertation, University of Pittsburgh, 2002). *Dissertation Abstracts International*, 63, 1660.

- Taylor, J. E. (2006). The struggle to survive: Examining the sustainability of schools' comprehensive reform efforts. *Journal of Education for Students Placed at Risk*, 11 (3 & 4), 331-352.
- Thompson, S., Gregg, L., & Niska, J. (2004). Professional learning communities, leadership, and student learning. *Research in Middle Level Education Online*, 28(1), 35-54.
- Wald, P. J., & Castleberry, M. S. (Eds.). (2000). *Educators as learners: Creating a professional learning community in your school*. Alexandria, VA: Association for Supervision and Curriculum Development. (ERIC Document Reproduction Service No. ED439099)
- Yin, R. K. (1994). *Case study research: Design and methods*. London: Sage.

Appendix A:

Interview Questions

1. *Shared and supportive leadership:*

- How would you describe the principal's leadership style?
- What, if any, opportunities exist for teachers to fill leadership roles in the school?
- Please expand on the principal's role in this process.

2. *Shared vision and values:*

- How would you describe the common vision of the school?
- What, if any, values are commonly shared by the school?
- How was the school's vision determined?
- Discuss the principal's role in this development of the school's vision and values.
- Describe the teacher's role in the development of the school's vision and values.
- What impact have the school's vision and values had on the mission and goals for the school?

3. *Collective learning and application of learning:*

- How does the faculty as a whole assess and address the instructional needs of students?
- What opportunities exist for teachers to collaborate with one another in doing this?

- How are the learning needs of professionals addressed within the school?
- What opportunities do these professionals have to share their knowledge with others in the school?

4. *Supportive conditions:*

- What, if any, opportunities do teachers have to collaborate with one another in your school?
- Do you feel the collaboration efforts of the school's teachers are encouraged? If so, how are these collaboration efforts encouraged? What, if any, role does the principal play in fostering and sustaining these efforts?
- Are there any barriers to collaboration in your school? If so, how would you describe them?
- What, if anything, is done to overcome these barriers? What, if any, role does the principal play in overcoming these time barriers?

5. *Shared personal practice:*

- It is not uncommon for teachers to express feelings of isolation associated with the teaching profession. Have you ever experienced or can you relate to these feelings of isolation expressed by others in the teaching profession? If so, how has the school addressed the feeling of isolation so often associated with the teaching profession?
- What, if any, opportunities do teachers have to share their professional expertise with other teachers?

- Based on your opinion, what else could be done to allow teachers additional opportunities to share professional expertise with one another?

6. *Perceptions of the principal's role in the development of the PLC:*

- In your opinion, what, if any, role did your school's principal play in the implementation of a professional learning community at your school?

7. *Perceptions of principal's role in the perpetuation of the PLC:*

- Based on your school's efforts to implement a professional learning community and the nomination of your school's superintendent, it is clear that your school's efforts to meet the needs of your students have obviously been successful.
- In your opinion, what, if any, role has your school's principal played in the perpetuation of a professional learning community in your school?

8. *Perceptions of the development and perpetuation of the PLC on instruction and student learning:*

- In your opinion and based on your experience, what, if any, relationship exists between the development and perpetuation of the professional learning community and improved instruction and student learning?
- In what, if any, way has the development and perpetuation of the professional learning community changed your teaching practices?
- If your teaching practices have changed as a result of the development and perpetuation of the professional learning community, how do you

feel these changes have impacted instruction? How have these changes impacted student learning?

- Is there any documentation and/or data available (i.e., observations, student testing data, etc.) that would support these perceived changes?

When appropriate, the questions were reworded in order to ascertain the perceptions and opinions of the principals and the instructional coaches. For example, when asking the schools' principals questions pertaining to "the role of the principal", the word principal was replaced with the words "you" or "your." In an effort to ascertain the principals' and the instructional coaches' perceptions concerning "Shared Personal Practice" (Question 5), the principals and the instructional coaches were asked to comment on both their personal experience as classroom teachers and their current situation as either the principal or the instructional coach at School A or School B. Throughout the interview process, every effort was made to gather the principals' and the instructional coaches' input with as little rewording of the questions as possible.

Appendix B:

Consent Form

1. Study title: The Development and Perpetuation of Professional Learning Communities in Two Elementary Schools: The Role of the Principal and Impact on Teaching and Learning

2. Performance sites: 1. _____ Elementary School
 2. _____ Elementary School

3. Investigators: Chad Maynor- Ed.D. Candidate (828) 322-4948
 Dr. Meagan Karvonen- Dissertation Chair (828) 227-3323

4. Purpose of study: The primary purpose of this study is to investigate the factors that influenced and perpetuated the development of a professional learning community (PLC) in two North Carolina elementary schools. The researcher will attempt to examine what, if any, leadership practices of the principal were perceived to support the development and perpetuation of the professional learning community in two North Carolina elementary schools. Additionally, the researcher will examine what, if any, relationship teachers perceive exists between the development and perpetuation of the professional learning community and improved instruction and student learning.

5. Participant inclusion: This study will include +/- 10 volunteer participants from two elementary schools selected after being nominated by their superintendent and voluntarily agreeing to participant in the above-mentioned research study.

6. Participant exclusions a. Anyone who does not wish to participate
 b. Anyone not at least 18 years of age

7. Description of study: The primary purpose of this study is to investigate the factors that influenced and perpetuated the development of a professional learning community (PLC) in two North Carolina elementary schools. The researcher will attempt to examine what, if any, leadership practices of the principal were perceived to support the development and perpetuation of the professional learning community in two North Carolina elementary schools. Additionally, the researcher will examine what, if any, relationship teachers

perceive exists between the development and perpetuation of the professional learning community and improved instruction and student learning. Data will be obtained via interviews, document analysis, and direct observation.

8. Benefits: While current participants are likely to receive very few benefits from their participation, the information obtained will add to the scholarly research-base pertaining to how the principal developed and perpetuated the development of a professional learning community in two North Carolina elementary schools, as well as the perceived impact on instruction and student learning.
9. Risks: No risks beyond those normally associated with the performing the skill.
10. Alternatives: This study does not include an alternative protocol or treatment.
11. Removal: At the end of the site visits, participants have fulfilled their requirements.
12. Right to refuse: Participants may chose not to participate at any time during the study.
13. Privacy: Your name will not be published with the results of this study. All video/audio tapes will be kept locked at all times and destroyed after a period determined by Western Carolina University.
14. Release of information: Participants are asked to answer the questions honestly without fear of penalty. As mentioned earlier, all participants' anonymity and confidentiality will be protected.
15. Financial information: There will be not cost for participation in this study.
16. Signatures:

The study has been discussed with me and my questions have been answered. I understand additional questions regarding the study should be directed to the investigators listed above. I understand that the data collected will not be used for any purpose not approved by the IRB. I understand that I may direct questions about participant's rights to the WCU IRB Chair at (828) 227-3177. I am at least eighteen years

of age. I agree with the terms above and acknowledge that I have been given a copy of this consent form.

Signature of volunteer: _____ Date: _____

Witness: _____ Date: _____

Investigator(s): _____ Date: _____

Appendix C:

Overall Reading and Math Proficiency Rates for School A, School B, and State

School Year	2006-2007	2007-2008	2008-2009
School A			
Reading	84.6%	56.7%	68.4%
Math	64.5%	76.1%	91.0%
School B			
Reading	79.2%	46.4%	60.7%
Math	54.8%	64.1%	78.6%
State			
Reading	85.5%	55.6%	67.6%
Math	66.4%	69.9%	80.0%

Appendix D:

Quick Reference Guide of High-Yield Instructional Strategies
(Marzano, Pickering, & Pollock, 2001)

1. Identifying Similarities and Differences
 - a. *Big Idea of the Strategy*- Comparing/Contrasting, Metaphors, Analogies, and Classifying
 - b. *Evidence of Strategies in the Classroom*- Venn diagram, Double Bubble, T-Chart, Bridge Map, and Analogies
 - c. *Benefits of Strategy*- Hits higher level thinking skills and promotes relationships and connections
2. Summarizing and Note Taking
 - a. *Big Idea of the Strategy*- Capturing the most important ideas in our own words/drawings
 - b. *Evidence of Strategies in the Classrooms*- Combo notes, graphic representations, teacher notes, outlines, agendas, highlighting, and sticky notes
 - c. *Benefits of Strategy*- Identifying key concepts and owning knowledge on the student level
3. Reinforcing Effort and Providing Recognition
 - a. *Big Idea of the Strategy*- Recognize accomplishments of certain tasks and focus on effort and progress towards goals (not just accomplishing goals)
 - b. *Evidence of Strategies in the Classrooms*- Rewards for behavior/performance (verbal or concrete recognition) and use of rubrics
 - c. *Benefits of Strategy*- Motivation and students' taking ownership
4. Homework and Practice
 - a. *Big Idea of Strategy*- Less homework should be assigned to younger students than to older students; parental involvement in homework should be kept to a minimum; homework should be identified and articulated; teachers should comment on homework.
 - b. *Evidence of Strategies in the Classrooms*- Teachers should communicate a homework policy, design homework assignments that clearly articulate the purpose and outcome, and vary the approaches to providing feedback.
 - c. *Benefits of Strategy*- Skill mastery and students adapt/shape what they have learned
5. Nonlinguistic Representations
 - a. *Big Idea of the Strategy*- Physical models, mental pictures, pictographs, charts, graph, kinesthetic activity, and graphic organizers
 - b. *Evidence of Strategies in the Classrooms*- Thinking maps, Scott Foresman Graphic Organizers, models, visualizing, drawings, maps, and charts
 - c. *Benefit of Strategy*- Help students remember/represent information with the dual coding theory of information
6. Cooperative Learning
 - a. *Big Idea of the Strategy*- Time for group processing and improvement, team mentality (sink or swim together), shared accountability, each student contributing, and parts of whole

- b. *Evidence of Strategies in the Classrooms*- Literature circles, centers, group projects, Science kits, and competitions
 - c. *Benefit of Strategy*- Promotes teamwork, helps hold students accountable, and is not based on ability (based on other criteria)
7. Setting Objectives and Providing Feedback
- a. *Big Idea of the Strategy*- Provides direction for learning, narrows the focus, and gives timely and meaningful feedback
 - b. *Evidence of Strategies in the Classrooms*- Teacher responses (verbal or written), essential questions, learning objectives are stated and/or posted, SMART goals, and learning contracts
 - c. *Benefits of Strategy*- Teachers and students are focused on important content; setting objectives and providing feedback together help monitor the learning process
8. Generating and Testing Hypotheses
- a. *Big Idea of the Strategy*- Hypothesis generation and testing can be approached in an inductive or deductive manner; students produce better results when using the deductive thinking process; deductive thinking requires students to apply current knowledge to make a prediction about a future action or event; inductive thinking involves students in a process of drawing new conclusions based on information they know or have presented to them; teachers should ask students to clearly explain their hypotheses and their conclusions; research has shown the power of asking students to explain, in a variety of communication modes, their predictions and results.
 - b. *Evidence of Strategies in the Classrooms*- Even though the process of generating and testing hypotheses is most often applied in the science curriculum, teachers should be encouraged to implement the following tasks across all disciplines; teachers should use a variety of structured tasks to guide students through generating and testing hypotheses; Systems Analysis creates activities that ask students to evaluate the parts of a system and generate hypotheses to predict changes if a part of the system were altered; Problem Solving uses their knowledge of concepts related to the problem and students evaluate different approaches to a solution and then generate and test their hypotheses; Historical Investigation engage students in historical investigations by having them create reasonable scenarios of past events for which there is no general agreement. Invention poses an existing problem to students that require them to develop a solution to the problem; Invention often leads to the generation and testing of multiple hypotheses; Experimental Inquiry, which is often referred to as “The Scientific Method”, creates activities that promote student use of the scientific method across all disciplines; Decision Making incorporates the use of a structured decision-making framework and can help examine results of hypothesis testing; teachers ask students to explain their thinking as they test and generate hypotheses
 - c. *Benefits of the Strategy*- Students express learning in their own way; deductive approaches are more effective; inductive are higher level and more difficult; both strategies develop students’ problem solving skills
9. Cues, Questions, and Advance Organizers

- a. *Big Idea of the Strategy*- Wait time is important, activate prior knowledge, and students are encouraged to remember that the most important information is not the most interesting
- b. *Evidence of Strategies in the Classrooms*- Wait time, KWL charts, prior knowledge activities, and graphic organizers
- c. *Benefits of the Strategy*- Ability to use graphic organizers to represent information, higher level of student knowledge, and inference skills

Appendix E:
 Three Big Ideas of Being a PLC
 (DuFour, 2004; DuFour, DuFour, Eaker, & Karhanek, 2004)

1. Focus on Learning

- Learner-centered rather than teacher-centered
- Learning is the constant; time & support are variables
- High levels of learning for ALL students

2. Collaborative Culture

- All teachers and support staff actively participate in PLCs
- Common team norms, pacing, grading, assessments, data analysis, and interventions

3. Focus on Results

- Common formative assessments and grading
- Data analysis & SMART goals

Five Learner-Centered Questions

1. What is it we expect our students to learn?

- Essential skills
- Standard Course of Study

2. How will they learn it?

- High Yield Instructional Strategies
- SIOP strategies
- Differentiation strategies

3. How will we know if they've learned it?

- Quarterly assessments
- Common formative assessments
- Classroom assessments
- Summative assessments
- Data analysis & data notebooking
- SMART goals

4. What will we do if they don't learn it?

- Pyramid of interventions
- Flexible grouping

5. What will we do if they already know it?

- Enrichment & differentiation

Appendix F:

Definitions of Themes

Active Involvement- the principal's efforts to consistently participate in the school's professional learning community, including attendance and participation during weekly PLC study groups/grade level meetings and engagement in frequent collaborative dialogue with the school's PLC instructional coach, with the intent of improving the instructional practices of teachers and impacting student learning.

Caring/Supportive Environment- the principal's efforts to create and maintain an environment where the staff members feel appreciated, encouraged, empowered, supported, and valued.

Conducting Professional Development Needs Assessment- the principal's annual efforts to survey the professional development needs of the school's teachers in order to tailor a school-wide professional development plan aligned with the needs of the school's teaching professionals.

Data-Driven Instruction- the teachers' efforts to consistently use the data attained from a variety of both formal and informal formative and summative assessments to determine the instructional needs of their students and to drive their instructional practices.

Decision-Making Opportunities- the principal's willingness to support the development of shared leadership practices and to allow staff members the opportunity to participate in the decision-making process, including the ability to serve on several site-based, strategic committees aligned with the North Carolina 21st Century Strategic Standards. The term relates specifically to the site-based decision-making opportunities surrounding the developmental phases of the PLC at the school level, including the creation of the

school's vision and values, not to the decision of whether or not the school would actually implement a school-wide PLC model.

Differentiation of Instruction- the teachers' efforts to intentionally modify their teaching practices to provide instruction that is specifically intended to meet the learning needs of each student.

Facilitation- the principal's ability to carefully plan, to assist, and to promote the PLC developmental process.

Focus on Student Success- the efforts of teachers and the school to establish high expectations in the classroom, to celebrate student successes, to challenge students to be and do their very best, to identify and provide additional support for students identified as "At Risk" of failure, and to prepare students to meet the demands of the 21st century.

Increased Student Participation- the efforts of the school's teacher to encourage and promote student engagement and participation in the classroom.

Overcoming Time Barriers- the principal's efforts to effectively and efficiently manage the various time constrictions through creative scheduling measures, soliciting the assistance of support personnel and volunteers, and working diligently to guarantee that teachers' instructional time, grade level planning, and PLC study groups are protected and embedded into the school-day schedule.

Priority/Non-Negotiable- pertains to the principal's efforts to consistently convey to the school's staff that attendance and participation in the school's PLC was an expectation, not an option, and that the school's PLC would take precedence over all other non-teaching related responsibilities.

Research-Based Instruction- the principal's efforts to encourage and endorse the implementation of programs and instructional strategies that are supported by research literature and have been determined to have a significant impact on student achievement and learning.

Sharing/Collaboration- the efforts of the school's teachers to work together in a collaborative manner to learn from and with one another, to share knowledge, to brainstorm new ideas, and to apply what they have learned to improve instruction and impact student learning.

Tone Setting- the principal's ability to establish an atmosphere of professionalism and high expectations among the staff members, to foster a climate conducive to collaboration, and to conduct performance checks to make sure teachers are working together as grade-level teams to improve instruction and student learning.