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Professional Learning Communities Enhancing Capacity for Improved Student Learning

L. Keith Adams
Fort Hays State University, keith.adams@usd480.net

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PROFESSIONAL LEARNING COMMUNITIES ENHANCING

CAPACITY FOR IMPROVED STUDENT LEARNING

being

A Field Study to the Graduate Faculty

of the Fort Hays State University in

Partial Fulfillment of the Requirements for

the Degree of Specialist in Education

by

Keith Adams

MSEd., Missouri State University

BSEd., Missouri Southern State University

Date_____   Approved_____
                                                                  Major Professor

                                                   Approved_____
                                                                  Chair, Graduate Council

ABSTRACT

Educators continue to be challenged with improving the nation's schools. The No Child Left Behind Act of 2001 created an elusive moving target towards perfection as the ultimate goal. This was a mandate for every school receiving federal funds to close the achievement gap. Recently, states have been applying for waivers to help them move out of the NCLB rut of narrowly focused and unattainable goals.

The pressure of school improvement and its challenges, with limited funding, continue for schools to supply efficient and effective professional development that will benefit student learning. The Secretary of Education, Arne Duncan, wrote in an article for Learning Forward "our nation's schools spend a lot of money on professional development but receive little in return" (Duncan, 2011, p. 70, 71). Schools must continue to look for inexpensive yet effective ways for teachers to become better. For the past few years, professional learning communities have been one of the most efficient and effective forms of professional development because they utilize the expertise of staff within the schools they serve. This approach has enhanced the capacity for learning by establishing collaborative teams of teachers who work together, use best practices, and focus on student learning.

This project looks at the effectiveness of professional learning communities in enhancing capacity for student learning, particularly in four southwest Kansas high schools. The project looks at both qualitative and quantitative data.

ACKNOWLEDGEMENTS

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CHAPTER ONE

INTRODUCTION

Purpose and Definition

The purpose of this paper is to determine if professional learning communities

(PLC's) enhance the capacity for improved student learning. This question will be

answered based upon the correlation of how ongoing professional development with

regular, focused teacher collaboration has a positive effect on student learning outcomes.

Data that will be utilized for this project will look at a combination of qualitative and

quantitative measures. The research will focus on effectiveness of PLC's based primarily

upon increased test scores. Four high schools in Southwest Kansas will be compared to

show if there is, or is not a correlation of increased student performance.

While there does not appear to be an official definition of a PLC, the term in

essence defines itself. Ann Jolly writes in an article for *Teachers Count*, "It's a

community of professionals who engage in regular, collaborative learning. Specifically,

what PLC's bring to mind are communities of educators who work together on an

ongoing basis to learn more about teaching and improving student learning" (2007, p. 1).

According to Richard and Becky Dufour, "PLC's operate under the assumption

that the key to improved learning for students is continuous, job embedded learning for

educators" (2007, p. 3). A major research project from England used the working

definition of, "an effective professional learning community has the capacity to promote

and sustain the learning of all professionals in the school community with the collective

purpose of enhancing pupil learning" (Bolam, McMahon, Stoll, Thomas, and Wallace, 2005, p. 131). With each PLC description, it is apparent the focus is on learning.

In their book *Getting Started* Robert Eaker, Richard Dufour, and Rebecca Dufour (2002) suggest the conceptual framework can be grouped into three major themes: 1) a solid foundation consisting of collaboratively developed and widely shared mission, vision, values, and goals, 2) collaborative teams that work interdependently to achieve common goals, and 3) a focus on results as evidenced by a commitment to continuous improvement.

According to the research of Vicki Vescio, Dorene Ross, and Alyson Adams (January 2006) learning communities are grounded in two assumptions. First, it is assumed that knowledge is situated in the day-to-day lived experiences of teachers and best understood through critical reflection with others who share the same experiences. Second, it is assumed that actively engaging teachers in professional learning communities will increase their professional knowledge and enhance student learning.

Rick Dufour and Robert Eaker are, perhaps, the most recognizable names associated with PLC's, primarily due to a book they co-authored in 1998 which outlined best practices for enhancing student achievement. In this work (Eaker & Dufour, 1998) they listed the characteristics of professional learning communities as:

1. Shared mission, vision, and values

2. Collective inquiry

3. Collaborative teams

4. Actions orientation and experimentation

5. Continuous improvement

6. Results orientation

Dufour and Eaker also emphasize that teachers in professional learning communities should develop lesson plans that focus on student learning as opposed to teachers teaching. Additionally, they claim "it is impossible to create good schools without good teachers, just as it is impossible to have professional learning communities without teachers who function as professionals" (1998, p. 233).

Rationale for Selection of Topic

In the spring of 2009 central office administrators, of the district where this researcher is employed, presented a strategic plan of school improvement referred to as "Chalklines for Success" (Strategic Plan: "chalklines for success", 2009). This plan used an analogy of football players moving the ball down the field one yard marker, or chalkline, at a time.

The comprehensive plan compiled a list of strategies that would be utilized to improve student learning in the district. Key components of the plan included data driven instruction, staff development, building structure, student improvement, district level administrators providing a sense of direction and focus, and financial considerations to fund the improvement efforts.

Specific strategies selected for implementation within parameters of this plan called for an instructional coach at each building to assist in school-based professional development to help meet the instructional needs of students. Another component is to

have interventionists at each building to provide differentiated instruction to students in a

reqular classroom setting in order for them to master academic content and experience

success. Interventionists are certified teachers that provide support for ESL, Title I, and

intensive reading, with additional focus for special education within an inclusionary

model. Next, the plan called for a focus on multi-tiered systems of support (MTSS) that

places students in three tiered levels to support a rapid response to academic and

behavioral needs, with frequent data-based monitoring for instructional decision making.

Professional learning communities (PLC's) was also included in this plan to develop

collaborative teams to work interdependently to achieve common goals. With the focus

on student improvement, and with the professional development being driven by Literacy

First, this district moved forward to implement the elements that were included in the

plan.

      Professional learning communities was selected as a topic of research not only

because of the local implementation of the strategy, but also due to the popularity in other

schools of this approach in enhancing capacity among staff to affect positive changes in

student learning. Byrd, Huffman, and Johnson (2007, p.5) presented that "establishing

professional learning communities may be the impetus to generating capacity for schools

to become high performing." The authors went on to aknowledge that creating and

sustaining learning communities within school systems is not easy.

      Breaking Ranks II, a comprehensive strategy for high school reform, promoted

by the National Association of Secondary School Principals, listed PLC's as a valid

approach leading to school improvement. Breaking Ranks II has a list of 31 core

recommendations for school improvement that focuses on three broad areas: collaborative leadership and profesional learning communities; personalization and the school environment; and curriculum, instruction, and assessment (Breaking Ranks II: Strategies for leading high school reform, 2004, pp. 17,18). Additionally, Mike Schmoker wrote, "Professional learning communities have emerged as arguably the best, most agreed-upon means by which to continuously improve instruction and student performance" (Schmoker, 2006, p.106). Schmoker also promotes the concepts of PLC's by pointing out the powerful structure of teachers meeting in teams to identify essential student learning, develop common formative assessments, analyze current levels of student achievement, and to set goals for student learning.

With the local implementation of the PLC model, and with the global concept of perceived success, the decision was made to proceed with a more in-depth study of the topic. This rationale also led to more specific purposes of reviewing the latest literature and research, and gathering qualitative and quantitative data to determine if there is a postive correlation with PLC's in enhancing capacity for improved student learning through collaboration and shared professional development.

Enhanced Capacity to Affect Student Learning

At its core, the concepts of professional learning communities stand on the premise of improving student learning by improving teaching practices. Ultimately, "the viability of professional learning communities will be determined by their success in enhancing student achievement" (Vescio, et al., January 2006, p. 6). It is important to emphasize that a PLC is most successful when it is used as infrastructure to support the

school's vision and goals for improvement (Morrissey, 2000). Morrissey continues to share that the goal is not to become a PLC, but rather to use the infrastructure of the PLC to build capacity for staff problem-solving.

The problem-solving component of professionals working together to share their expertise and experiences will help build capacity and enhance the learning of all students. Staff will utilize the PLC to share professional development and learning experiences with colleagues to assist in differentiated instruction and the implementation of interventions for students in a broader setting than would be possible in an individual class. In a 2010 study conducted by Charles Hurd (Hurd, 2010), the reading levels of English Language Learners (ELL) were analyzed which determined scores improved over a three year period following implementation of PLC's at the school observed. The primary reason cited for the increase in reading scores was the collaborative focus on instructional strategies, specifically sheltered instruction observation protocol (SIOP) in all classes. Teachers helped and supported each other in providing support for student learning with the utilization of these strategies. Morrissey (2000) pointed out that engaging the staff in ongoing inquiry and learning is the most significant element of successfully creating a professional learning community in any school.

There are four main priorities outlined by Eaker et. al. (2002) when building Professional Learning Communities:

1. Focus on learning
2. Focus on collaborative culture
3. Focus on results

4. Provide timely, relevant information

A large part of these four priorities involve teachers analyzing curriculum and creating a curriculum map of essential standards to teach. It involves creating common formative assessments that teachers administer to determine the extent to which students are learning, and should be considered as an assessment "for" learning rather than "of" learning. The collaborative component provides the structure for staff to have an on-going focus for improving teaching and learning.

The research conducted by Vescio et.al (2006) provided the summaries of six studies of student achievement. They examined the relationship between teachers' participation in professional learning communities and student achievement. The results showed that student learning improved when teachers participated in the PLC process. In the studies they cited, participating schools' test scores on state assessments rose on average from 50% proficiency to more than 75% proficiency over a three year period. Based on this evidence they answered the question of whether student learning increases when teachers participate in PLC's with a "resounding and encouraging yes" (2006, p. 16). They concluded "studies which have been done clearly demonstrate that a learning community model can have a positive impact on both teachers and students" (2006, p. 18). Students will benefit from the collaboration of their teachers and will gain greater support and opportunities to succeed when teachers work together to attack problems as a team.

Enhanced Capacity for Staff Professional Development

In a general sense, participation in a learning community leads to changes in teaching practices. Research conducted by Vescio et.al. (2006) cited general conclusions to 10 different studies that showed changes in professional culture demonstrated the establishing of PLC's contributed to a fundamental shift in the habits of mind that teachers brought to their daily work in the classroom. These characteristics were organized into four broad categories: collaboration, a focus on student learning, teacher authority, and continuous teacher learning.

Instructional staff is affected by the creation of PLC's in several ways. To begin with, they must have mutual trust and respect, and be supportive of each other. Perhaps the most noticeable difference in schools using learning communities is the absence of isolationism. It is replaced with required collaboration and interdependence that translates into internal professional development. Teachers systematically monitor their approach to curriculum, teaching, and assessment. They are in the best position to adjust where needed and can utilize the expertise of colleagues on a regular basis to make professional, data driven decisions. This is difficult for some because teachers do not always feel comfortable working in teams. Traditionally, the structure of schools has contributed to teachers working alone. The change to collaborative work is difficult and leaders must respect that it will be an ongoing process, and "although teachers' perceptions about the value of professional learning communities are both valid and valuable, understanding the outcomes of these endeavors on teaching practice and student learning is crucial" (Vescio et al., 2006, p. 2). Rick Dufour (2011) insists there is plenty of evidence that

shows students learn at higher levels when educators work in collaboration, and no evidence that shows students learn better when teachers work in isolation. He goes on to write, "an individual's desire to work in isolation does not trump a professional's obligation to apply what is considered the most effective in his or her field" (Dufour, 2011, p. 60).

One of the main tenets of a learning community is collaboration among colleagues. This is due to the strong foundations of teamwork and support teachers must have for others in instructional planning and data review. And, it appears to be the common denominator for success. The success of collaboration stems from the group focus on meeting the learning needs of all students and working interdependently to reach goals. Teachers in PLC's utilize each other, as well as outside researchers, to provide expertise on learning theory and practice to increase student learning. Working collaboratively is an on-going process that is never finished.

In an article written by David Piercy he indicates, "Teacher collaboration is a prime determinant of school improvement. Unfortunately, though we talk about it a lot, we don't do it as much as we might hope for" (Piercy, 2010, p. 3). He continues to point out there are six conditions necessary for collaboration: 1. Mutual goals, 2. Parity among participants, 3. Shared responsibility for participation and decision making, 4. Shared responsibility for outcomes, 5. Requirement of participants to share their resources, and 6. relationships are voluntary.

Collaboration has been compared with team, and contrasted with group. In a handout that accompanied a presentation by Rick and Becky Dufour (2007) they describe

"team" as a group of people working interdependently toward a common goal for which they are mutually accountable. They went on to articulate that collaboration is a systematic process in which we work together, interdependently, to analyze and impact professional practice in order to improve our individual and collective results. It is morally neutral. They claim the critical question to consider in a PLC is not "do we collaborate," but rather, "what do we collaborate about?"

The way a school builds time into the school day for collaboration varies. Some schools meet monthly, weekly, or daily. Some create common plan time for teachers, while some have late starts or early outs. One Kansas high school was found to have built a schedule that allows daily collaboration with PLC groups, plus an individual plan time each day (Lindsey, 2010). Most schools probably couldn't afford an arrangement like this, but it does create the most collaborative opportunities while protecting the individual plan time for all teachers.

Because each school has its own unique obstacles to overcome with scheduling and organization, leaders must create an efficient time and opportunity for staff to collaborate on issues unique to their particular area of skill. The entire staff must also engage in planning and assessment that utilizes best practices to enhance student learning. Oftentimes, district administration and school boards setup a calendar to support time that is dedicated to teacher inservices to provide the necessary training to support the vision and goals of the district.

Professional development for teachers involves teachers in the dual capacities of both teacher and learner. Professional learning communities have evolved in a way that

helps teachers create new visions of what, when, and how individuals learn. Literature

provides modest evidence there is a possible impact on teaching (Vescio et.al, 2006).

Professional Development within the framework of PLC's promote a broader concept

that when school staff work together collaboratively with a clear focus on learning, the

school's overall capacity to raise standards is enhanced (Bolam et al., 2005). Robert

Marzano and Rick Dufour co-authored a book in which they wrote, "improvement

strategies based on building collective capacity regard educators as the solution to, rather

than the cause of, the complex problems confronting public education" (Dufour &

Marzano, 2011, p. 19). They also encourage that teams should identify the right things to

work on and avoid shortcuts, which will help to keep members grounded in the right

purpose and avoid unnecessary conflicts.

Method and Purpose for Conducting Research

Research was conducted using a mixed method approach that focused on four

high schools located in southwest Kansas. These schools were chosen based on

similarities in location, student demographics, relative size of student population (largest

four in the region), and educational challenges. Additionally, all four of the schools

utilize PLC's in school improvement efforts.

Surveys and questionnaires (appendix B) were sent to faculty and administration

that provided both qualitative and quantitative data. Additionally, student performance

data were gathered in the fall of 2011 from the Kansas State Department of Education

website that lists performance data of schools over time. The building report cards for

each school provided information on student demographics, graduation rate, and score

percentages on the state math and reading tests. Composite ACT scores were gathered from each school through e-mail contact with the building principals.

All performance data from the four schools were compiled into a single document (appendix A) for purposes of comparison. This format made it easier to mine the data for trends and changes over time for all four of the schools. Data in this table compared the information over a six year period in order to establish a baseline from before implementation of PLC's – because no school had implemented the process more than five years prior to the gathering of these data.

Surveys were created in survey monkey and sent as an attached link to the building principal of each school, who in turn sent it to his or her faculty. The survey itself was compiled from a survey created by the High Five Consortium (used with permission, see appendix D) and open-ended questions created by this researcher and an instructional coach. The two part survey consisted of 10 major themes that utilized a Likert scale to rate responses for quantitative measures and five open-ended questions that calculated responses as negative, positive, or neutral towards PLC's for qualitative measures.

The survey responses for all four schools were compiled into one document (see appendix A) that assisted in reading the composite responses.

The questionnaire sent to each principal (see appendix B) was created by the researcher and was used to gather quantitative data unique to each building that couldn't necessarily be found on the state's website.

The purpose of the research was to ascertain if there is a correlation between PLC's and enhanced capacity to improve teaching and learning. This was determined through review of student performance data over time, and review of survey and questionnaire responses. The results and conclusions gathered from the research will be discussed in more detail later.

CHAPTER TWO

REVIEW OF LITERATURE

Educational Reform Movements

Within the past few decades there have been a plethora of educational reform

efforts that reformers have intended to impact student learning. In 1957, following the

launch of sputnik, the American public panicked that we had fallen behind educationally

to the Soviet Union. This led to the National Defense Education Act (NDEA) that was

passed in 1958 and the first federal act to provide educational aid at all levels (Zhao,

2009, p 23). In 1960, the scare came once again from the Soviets as they placed missiles

in Cuba, only ninety miles from U.S. soil. The decade of the 1960's also saw the federal

government increase its role in public education with the passing of the Vocational

Rehabilitation Act 1963, the Higher Education Act 1963, and the Elementary and

Secondary Education Act of 1964.

A "Nation at Risk" came about in 1983 from a report submitted to the U.S.

Secretary of Education (The National Commission on Excellance in Education, April

1983). The report made five main recommendations:

1. **Recommendation A: Content** *we recommend that State and local high school graduation requirements be strengthened and that, at a minimum, all students seeking a diploma be required to lay the foundations in the Five New Basics by taking the following curriculum during their 4 years of high school: (a) 4 years of English; (b) 3 years of mathematics; (c) 3 years of science; (d) 3 years of social studies; and (e) one-half year of computer science. For the college-bound, 2 years of foreign language in high school are strongly recommended in addition to those taken earlier.*
2. **Recommendation B: Standards and Expectation** *we recommend that schools, colleges, and universities adopt more rigorous and measurable standards, and higher expectations, for academic performance and student*

3. *conduct, and that 4-year colleges and universities raise their requirements for admission. This will help students do their best educationally with challenging materials in an environment that supports learning and authentic accomplishment.*
4. **Recommendation C: Time** *we recommend that significantly more time be devoted to learning the New Basics. This will require more effective use of the existing school day, a longer school day, or a lengthened school year.*
5. **Recommendation D: Teaching** *this recommendation consists of seven parts. Each is intended to improve the preparation of teachers or to make teaching a more rewarding and respected profession. Each of the seven stands on its own and should not be considered solely as an implementing recommendation.*
6. **Recommendation E: Leadership and Fiscal Support** *we recommend that citizens across the Nation hold educators and elected officials responsible for providing the leadership necessary to achieve these reforms, and that citizens provide the fiscal support and stability required to bring about the reforms we propose.*

Another major federal initiative came into law in 1994 following

recommendations of the first ever coalition of state Governors on educational issues

commissioned in 1989 by President George H.W. Bush. The Goals 2000: Educate

America Act – P.L. 103-227 contained eight national goals (The National Goals Report:

Building a nation of learners, 1993). The goals are: by the year 2000…

- ➢ All children in America will start school ready to learn.
- ➢ The high school graduation rate will increase to at least 90 percent.
- ➢ All students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy.
- ➢ The Nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.
- ➢ United States students will be first in the world in mathematics and science achievement.

- ➢ Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.
- ➢ Every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning.
- ➢ Every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.

As part of the reauthorization of the Elementary and Secondary Education Act in 2002, "No Child Left Behind has undoubtedly been the most significant component of recent education reform efforts in the United States" (Zhao, 2009, p. 2). Further, Zhao points out that the massive reform efforts have been intended to close two types of achievement gaps. The first is the gap inside the United States among the different subgroups of the population; the second is the gap between the United States and other countries.

The works of Yong Zhao provide an interesting perspective as he makes the comparison to the high stakes test-driven standards brought on by educational reforms in the U.S., particularly NCLB, and his native country of China. In China the focus is on passing the "test" with little attention given to creative thinking. He claims that even though many products are made in China, not very many products are created in China. He feels that the U.S. educational reforms are stifling creativity and if changes are not made soon, products will neither be made nor created in this country.

Review of Research Studies

A fairly recent study by Charles Hurd (2010) of ELL students in a Virginia elementary school looked at the effects of PLC implementation on the reading scores of students who had been identified as having a language other than English as their first language to speak and use academically.

His purpose was to investigate the impact of the principles of a professional learning community on the instructional practices and reading achievement of a cohort of ELL students in grades three through five. This study focused on one elementary school and consisted of interviews conducted with the principal and faculty in separate settings. Hurd also conducted observations and took field notes of classrooms to determine how PLC's affected teaching strategies in the classroom. Finally, he compared the reading scores from the state assessment of ELL students over time to ascertain growth in reading ability. While this study was limited in size, it showed a positive impact on reading scores, an increase in faculty collaboration (where teachers claimed a benefit was to increase professional awareness of instruction), and an increase in a commitment for continuous improvement school-wide. The principal and the teachers interviewed in the study indicated that PLC's helped them to maintain an emphasis on student achievement.

In a 2007 project that focused on teaming and faculty collaboration in four metropolitan high schools in the Midwest, researchers studied teamwork and professional collaboration as a school reform model (Brungardt, Gallagher, Nichols-Luttrell, and Merrigan, 2007). The team used research methods that consisted of both qualitative and quantitative data that utilized three different survey instruments. At the conclusion of

their research they found that PLC's are an effective way to improve schools. Other findings showed school size impacted the study while socio-economic status did not. They concluded by their findings that professional collaboration can be used to reform schools, and that it is a relatively inexpensive and effective method of school improvement.

An extensive study of PLC's in England sought to answer the questions of how feasible and useful the idea of PLC's are (Bolam et al., 2005). The study consisted of four main activities:

- Literature review

- An analysis of questionnaire survey responses from 393 schools across England

- Case studies of 16 school settings

- Three workshop conferences for representatives from the case study schools

They found that PLC's go through three stages of development within schools – starter, developer, and mature. The study brought out 14 main conclusions that ranged from promoting school-wide capacity building, to dynamics of PLC's over time. The primary conclusion that came out of the study, however, is that PLC's increase student learning and is well worth pursuing.

There was another component to the English study that was not found in most American studies. In England, they considered the educational staff to be all who worked with students - including classified staff. Whereas, most of the American professional learning communities only include certified teachers among the educational staff and do

not invite classified staff members to participate in the PLC model. Additionally, they determined that some school staff members were more resistant to change than in other schools. The ability to make the changes necessary to become a high functioning learning community depends, in large part, on the culture that has already been established in the school prior to implementation. And, "if the PLC is successfully implemented, the staff will acquire a collective response to any academic issue encountered by students" (Elbousty & Bratt, 2010, p. 6).

Researchers at Brown University conducted an extensive study to look at the characteristics of professional learning communities. One component of their study looked for evidence of effectiveness for teacher professional development. They found, "that the teaching culture and collaboration improved, and teachers became more focused on student learning than prior to the implementation of PLC's" (Feger & Arruda, 2008, p. 12). They also found that student achievement improved, and concluded that PLC's have a positive impact on school-wide changes. This is true, in part, due to the professional development work that comes through PLC's by "in house" developers such as instructional coaches, lead teachers, administrators, and others.

Resistance to PLC's

While there is a great deal of support for the effectiveness of PLC's, this does not mean acceptance is universal and without some resistance. Byrd et. al. (2007) concluded from their research that one of the greatest obstacles to school improvement is educators' resistance to change. In their research presented to the Northeastern Educational Research Association, Elbousty and Bratt, "hold the assumption that change nearly

always encounters resistance. Certainly the PLC model will generally encounter initial resistance from veteran faculty used to working in isolation; paradoxically, however, resistance can be seen as a strength of the model" (2009, p. 14). While change is sometimes hard, challenging the status quo is typically healthy for professional growth and improved performance.

In an extremely critical article from Alberta, Canada, the author has little good to share about the rapid pace at which schools are racing to become professional learning communities. He claims PLC's are not unproblematic and states they, "tend to restrict teacher learning and support the status quo, it shifts the responsibility for educational shortcomings to individual teachers, and it employs processes designed to make teachers more manageable" (Tarnoczi, 2006, p.1). Tarnoczi admits that his paper does not necessarily look into PLC's impact on student learning. His focus, rather, continues throughout the paper to look at what he refers to as preferential treatment of some relationships and an institutional use of power. He states that, "in a practical sense changing teacher behavior is one of the few ways that school administrators and politicians can influence the educational system" (2006, pp. 5-6). And, he credits the use of PLC's as the tool that is used to exercise control of teachers by shaping their thoughts of school. Teachers are made to think, he contends, that their teaching practices are deficient and they must continuously work to improve. This causes self-doubt, anxiety, fear, and uncertainty without taking into consideration they have little control over many broader areas of education such as mandated curriculum, economics, child poverty, and funding. Tarnoczi concludes his paper by stating, "the communities do little more than

provide social pressure to normalize management's intentions. All in all, professional

learning communities appear to have a lot more to do with managing teachers and

protecting the status quo than with inducing educational creativity" (Tarnoczi, 2006, p.

22).

It is acknowledged by PLC proponents that "some critics of systematic

collaboration even offer a conspiracy theory, arguing that any effort to embed

collaborative processes into the school day represents an administrative ploy to compel

teachers to do the bidding of others and demonstrates a lack of commitment to

empowering teachers" (Dufour, 2011, p. 58). Rick Dufour contends, "collaboration alone

will not improve a school, and in a toxic school culture, providing educators with time to

collaborate is likely to reinforce the negative aspects of the culture and deteriorate into

complaint sessions."

Inevitably there will be resistance to change. According to educational

researcher Robert Marzano, there will always be negative results to report. He stated that

his observations have shown 20% to 40% of studies in any given area report negative

results. This is due to the wide variety of variables that will determine if a particular

strategy is going to produce positive results (Marzano, 2009).

Ann Jolly (2007) points out that PLC's are "hard work." And, in some cases

people become disenchanted with them because they are looking for a "quick fix" rather

than a long-term commitment to quality. Jolly's observation provides the background for

the contention of Laura Servage when she states, "professional learning communities

focus their efforts on the means of teaching and not on its ends" to show it is an on-going

process (2008, p. 2). Therefore, PLC's should be looked at for the long haul and staff

must commit to, support, and successfully deal with the inevitable resistance of a few as

they work towards improvement.

In their extensive study in England, Bolam et. al. (2005) found some of the

inhibitors to PLC's to be resistance to change, staff turnover, central and local policies,

and other general changes within the school setting. They also found that some teachers

prefer to work in isolation rather than collaboratively. Research from the Educational

Alliance at Brown University found that underlying assumptions for establishing PLC's

lies in the belief that teaching is still largely an isolated profession (Feger & Arruda,

2008). Some teachers are reluctant to learn new things, or participate in mandated

collaboration. The Brown University study also found that if participation was voluntary

then teachers were more likely to view PLC's in a positive way. However, in order to

effect learning and school-wide implementation, the teachers must not be allowed to opt

out of the process.

Leadership Styles and Their Affect on PLC's

In the book *School Leadership that Works* (Marzano, R.J., Waters, T., &

McNulty, B.A., 2005), the authors analyze theories and research on leadership practices.

They showed through meta-analysis that principals can have a profound affect on the

achievement levels of students in their schools. They point out many of the leadership

styles that one can identify with, ranging from transformational leadership to instructional

leadership that has an affect on student learning. One of the styles listed is Total Quality

Management (TQM) in which the top attributes are: change agency, teamwork,

continuous improvement, trust building, and eradication of short-term goals. These attributes fall in line with the leadership characteristics necessary to promote PLC's, as pointed out by Mike Schmoker (2006, pp. 133-136). Additionally, "the results of a multilevel analysis conducted at the national level revealed that principals creating a climate of collective learning and sense of belonging among teachers have the greatest impact on student achievement" (Byrd, J.K., Huffman, J., & Johnson, J., 2007, p. 2).

The research of Byrd et. al (2007) of 601 schools also found that principals who spend less time on management issues, such as school plant and student discipline, and more time on curriculum and instruction are more effective. They recommend that teacher and administrator preparation programs should consider an emphasis on the characteristics of professional learning communities.

In order to develop strong PLC's there must be an element of trust established between administrators and teachers. It has been suggested that, "schools who are experiencing major problems with professional trust will struggle to make significant changes necessary for development and implementation of vibrant learning communities" (Muirhead, 2009, p. 2).

In her dissertation focused on Elementary principals in southwest Kansas, Kelly Gillespie (Gillespie, 2010) researched key concepts to understanding which leadership elements are needed to develop an environment to create and sustain professional learning communities. She found through her research and experiences working with school districts as the executive director of the Southwest Kansas Educational Service Center, that the building leader is the key to success in implementing and sustaining

PLC's. While her research was limited to elementary principals, the concepts and surveys used could also be expanded to middle and high school level administrators.

Summary of Literature

The literature shows that while there is some resistance and difficulties to overcome in implementing PLC's, the overall results show positive gains in student learning as evidenced by increases in test scores and teachers' perceptions. There were increases in ELL student learning, increased faculty collaboration, and increases in school-wide commitment for continuous learning.

Professional learning communities are shown to be a relatively inexpensive and effective way to improve schools. While most PLC's go through three stages of development (starter, developing, and mature), the growth over time leads to long term commitment to improvement and is well worth pursuing.

Principals have a profound affect on student learning by virtue of the leadership roles they serve in. When one takes a stand to establish a climate for learning, and establishes conditions for collaboration, learning is improved. There will be staff turnover, changes in policies, and continued resistance as some teachers hang onto isolationism. However, if principals focus more on professional learning communities as the catalyst to improve student learning, then it is more likely to occur and be sustained over the long haul regardless of staff turnover and other factors. By establishing strong collaboration among teachers it helps to overcome inconsistencies within the faculty and makes it more likely that a guaranteed and viable curriculum will be established and followed.

CHAPTER THREE

OVERVIEW OF SCHOOLS IN THE STUDY

For the purposes of this study, four high schools were chosen to participate

based upon certain criteria. All four of the high schools share similarities that help to

bring more reliability to the research. All of the schools are located in rural southwest

Kansas where agriculture is the main industry in the area. With a large number of cattle

feedlots, pig barns, and meat processing plants, the source of household income is

similar. The expectations for education and employment opportunities are also similar.

Additionally, there are oil and gas industries that contribute to the economy in all four of

the school districts. In order to protect the identity of those involved, these schools are

not identified by name. Throughout this study they are referred to as schools "A",

"B","C", and "D" only. None of the students were interviewed personally, or took part in

any of the study directly. Teachers and administrators volunteered to complete surveys

that were sent to them through a link in an e-mail.

School Size

All of the schools involved in the study house grades nine through 12 and fall

within a 4A to 6A state classification. This classification is based upon total headcount

of students within the district taken on September 20th of each school year. In Kansas the

highest class ranking is the 6A classification. Schools are identified based upon the

largest 32 classified as 6A, the next largest 32 as 5A, the next largest 64 as 4A and this

trend continues down to 1A classification. All four of these schools have a student

population between 450 to 2,000 students and a certified staff of between 34 and 127 persons.

Demographics

All four of the schools have similar demographics. There is a high number of English Language Learners (ELL) in each of the schools, with the lowest percentage found in school "B" at 16.3% ELL and the highest found in school "A" at 37.4% ELL students (Appendix A). In addition to high numbers of students whose first language is not English, each of the schools has a large number of other challenging sub-groups as well. The largest number of white students is 37.5% found in school "B" and the lowest is 22.5% found in school "C". The largest racial group in each of the four schools is by far the Hispanic population which has the lowest percentage of 59% in school "B" and the highest found in school "C" with 66.9% of the student body listed as Hispanic.

There is also evidence of a large number of economically disadvantaged students in each of these schools. School "B" has the lowest number of students in this category with 41.6% of their students qualifying for free or reduced lunches. The other three schools have the majority, from nearly 60% to close to 70%, of their students receiving free or reduced lunches.

With the exception of white students, there have been significant increases over the six year period for each subgroup for all four schools combined. The number of economically disadvantaged students grew by 13.6% over this time span. The number of ELL showed a 15.5% increase, Hispanics increased by 8.8% overall, while white student populations decreased 9.8% over these six years.

*S*chool Utilization of PLC's

In addition to the similarities in demographics and regional location, the final reason these four high schools were chosen to participate in this study is that all four schools utilize professional learning communities as a method of school improvement in an effort to enhance student learning. These data were collected from a six year period in order to establish a baseline because one school has used PLC's for five years prior to the start of this research project. Even though the other three schools indicated they have used PLC's for one or more years, the six year period allowed for a comparison of information for each school from when they began to implement the concepts and practices associated with professional learning communities through more than a full year of implementation.

While this study looks at the use of PLC's in the similar settings of these four high schools (demographics, location, economic opportunities, and use of PLC's), it does not take into account any other strategies that may be used within each school. It is understood that a combination of strategies may be in play while analyzing data that may affect student performance numbers making it difficult to pinpoint a mono-causal effect for school improvement and performance gains. With this in mind, however, it is also important to understand the qualitative data will help to sift out the correlation between the use of professional learning communities and student performance from any other strategy that may also be utilized within the schools.

CHAPTER FOUR

PROJECT OVERVIEW

Purpose of Study

The purpose of this project is to review the professional practice of professional learning communities and determine if they enhance the capacity to improve student learning in schools. Along with the review of related literature and research, four high schools with similar backgrounds were also studied to determine a correlation for enhanced collaboration and professional development as it relates to the concept of professional learning communities.   All four of these high schools share similar demographics and are in a similar region of southwest Kansas.

Methods of Data Collection

In order to obtain data that is both qualitative and quantitative there were multiple methods of collection used. It was determined through a questionnaire that was sent to each principal of the schools (see appendix B) that PLC's have been used from one to five years. Therefore, in order to establish a baseline from before this strategy was incorporated, performance data were collected from a six year span (see appendix A). The majority of the performance data were gathered from Kansas building report cards located on the Kansas State Department's website (2011). Additional performance data (primarily ACT scores) were collected from the questionnaire that each principal completed (see appendix B).

Data from school report cards are based upon the Adequate Yearly Progress (AYP) reports. Each school in the state has to submit data to the state department of

education each year.   These data are factored and an AYP report for each school and district is created. Schools and districts are required to meet minimum goals to show proficiency and to meet the requirements of the No Child Left Behind (NCLB) act. These data include reading, math, and graduation rates from each subgroup of thirty or more students. As stated earlier, AYP reports were reviewed from a six year period in order to determine scores from before the addition of PLC's and throughout the years since they have been implemented into the school improvement strategies of the four schools that participated in this study.

In addition to these quantitative data, a survey was sent to each school to gather both quantitative and qualitative data. This survey was sent, along with a letter of explanation, to each principal (see Appendix B) with a link to a website for the survey. This survey was created on survey monkey by using a combination of a survey developed by the High Five Consortium for use in the Wake County Public School System (Jackl, 2009, p. 3), and open-ended questions developed by this researcher. The survey was administered to their faculty to help determine the effectiveness of their investment in PLC's as a school improvement strategy. The "high five" survey, which was originally developed to determine if PLC's were cost-effective in the Wake County public school, was used with permission (see Appendix D) from G. Patrick Rhodes, superintendent of Orange County Schools and director of the High Five Consortium.

The survey used for this research was developed by combining questions from the High Five Consortium with five open-ended questions developed by this researcher to further ascertain the perception of the educators in the selected schools on their use of

professional learning communities surrounding ten major themes. The ten major themes had more than one question for each theme. Each question, where appropriate, followed a Likert scale from one to four to further determine the perception of use and effectiveness within each school by theme. These themed questions, open-ended questions, and the breakdown of the results are used to determine the impact of PLC's in these four high schools that were the focus of this research project (see Appendix C).

Research Limitations

Certain limitations in this research were identified. The main limitation was the collection of the surveys. It is difficult to get completed surveys from all of the educators from four different schools. While the percentage of participation varied from school to school, the overall average for the four schools was 48% with the greatest participation of 74% coming from school "B" and the lowest rate of 39% coming from school "D." These two schools had the smallest and largest faculties, respectively. It is also difficult to determine if perceptions are slanted or skewed based upon some other influences that are being imposed upon the teachers at the time they completed the survey. Interestingly, the lowest participating school also had the highest number of negative responses (see Appendix C). In all fairness, however, the next lowest participating school had the most positive responses. So the correlation to participation is shown to be based upon the size, from smallest to largest, of the faculty as much as any other factor.

Equally difficult is the ability to determine if the test scores and graduation rates are affected primarily by the implementation of PLC's, or if there are other programs and phenomena that have been influential in improving student performance. With these

limitations in mind the project continued and was able to gather a fair amount of data for review. The school report cards posted on KSDE allowed for 100% of math and reading test scores and graduation rates to be gathered. Additionally, 100% of the composite ACT scores from each of the schools were gathered from each building principal. The participation rate from faculty members in the schools was not as good as hoped for. The total number of faculty for all four schools was 357 but only 171 participated, or 48% as noted earlier

CHAPTER FIVE

PROJECT SPECIFICATIONS

Overview of Survey

Surveys were designed and sent to each of the four high schools chosen to participate in this study. A questionnaire (see Appendix B) was sent to each principal of the high schools involved. There were a total of seven questions with multiple responses on the letter that was sent as an e-mail attachment for the building principal to answer.

The first question asked for the student population of grades nine through 12. All responses indicated a student population of between 445 and 2,000 students. All of the high schools surveyed fall between the 4A and 6A state classification.

Question two asked for the number of teachers on the faculty. The responses indicated the schools had a certified staff between 34 and 127. Also, as part of the certified staff, question number three asked for the number of administrators. Each school had at least three administrators.

Questions four through 11 dealt specifically with professional learning communities. These ranged from how long they have used PLC's to if they have experienced any resistance. The shortest amount of time was one year and the longest was five years. All four of the principals surveyed indicated they had experienced resistance from their staff to the implementation of PLC's in their school. Also determined by these questions was how and when teachers collaborate, what types of professional development they have, and how often common formative assessments are administered.

The final question asked the principal to provide the ACT composite scores for the past five years for their school. There was a follow up question after the original mailing to gather the latest ACT scores and complete the six year table of data in order to match the building report card data that was gathered from the KSDE website.

At the end of the letter sent to the principals (see Appendix B) was a brief explanation to the teachers about the survey concerning the implementation of PLC's in their school. Along with the explanation was a web link to survey monkey for each of the four high schools. While the questions were the same for each of the schools, there was some personalization to the survey form for each school that included their name and mascot in the heading of the survey. However, for purposes of anonymity this was not included in this report. In fact, none of the schools or survey participants are identified by name. The only designation given is school "A", "B", "C", and "D" to distinguish data.

The survey that each teacher was asked to complete was developed by using a combination of questions from a survey instrument, used with permission (see appendix D) from the High Five Consortium designed to determine the influence of PLC's in the large Wake County Public School District. In addition to the "high five" survey, open-ended questions designed by this researcher and an instructional coach trained in PLC implementation were added to gather qualitative data and determine perceptions of faculty on school climate, student performance, and effectiveness of professional learning communities in their school.

The survey instrument had ten major themes with multiple questions that used a Likert scale to gauge responses from one to four, with one being the lowest level of implementation. Results are displayed showing a range of responses for each school (see Appendix C). The majority of the responses show a positive impact. The ten themes, nine of which are imperative to the implementation of PLC's, included: 1) focus on learning (five questions), 2) collaborative culture (seven questions), 3) instructional strategies (four questions), 4) common formative assessments (two sections and five questions total), 5) impact (four questions), 6) support and resource allocation (three questions), 7) meeting frequency (one question), 8) meeting length (one question), 9) meeting time (one question), 10) and years of teaching experience (one question). The open-ended questions were designed primarily for the collection of qualitative data to gain a better overall perception of the faculty concerning the implementation of PLC's into their schools. There were five questions total: 1) how PLC's are part of school improvement?, 2) PLC's effect on school climate?, 3) overall student achievement?, 4) what has had the greatest impact on student learning over the past five years?, and 5) have PLC's been successful?

Independent and Dependent Variables

The independent variables in this project mainly included school size, socio-economic status, student demographics, and location. Dependent variables primarily included survey participation, staff perceptions, use of PLC's, and student performance. Many factors, such as end of the school year stress, program overload, pressures of state

testing, consistent or effective us of PLC's, and pre-conceived bias could have also played a part in the responses given by some of the participants.

The participation rate varied between the four schools. A total of 171 teachers out of possible 357 participated in the survey. This equated to 48% participation for all schools combined. The greatest amount of participation was from school "D" with 50 teachers completing the survey. However, 50 teachers only equated to 39% for school "D" and actually represented the lowest participation rate coming from any of the schools. School "B" had a participation of 74% with 25 of 34 teachers responding. All four schools had 100% completion and participation from the building principal in sending data and following up with their faculty by sending the survey link and reminders to complete the survey.

CHAPTER SIX

PROJECT SUMMARY

The conclusion of this research project indicates that professional learning communities have had a positive impact on student learning in schools throughout the United States and Internationally. The information provided in the previous chapters indicates that PLC's have enhanced capacity in schools through focused professional development that have had a positive correlation on student learning. Following is a summary of each chapter's main focus within this research project.

Chapter one was an introduction to professional learning communities. Within this chapter a definition and overview was provided. The working definition was established as: collaborative professional effort intended to enhance student learning by working interdependently. This definition was also supported by the assumptions of researchers Vescio et al. (January, 2006) by their indication that 1) knowledge is situated in the day-to-day lived experiences of the teacher and best understood through critical reflection with others who share the same experiences, and 2) actively engaging teachers in professional learning communities will increase their professional knowledge and enhance student learning. Collaboration is key to understanding the success of PLC's. Mel Riddile (September, 2012) writes that collaboration is important for high performing schools that seek cooperation rather than control. He goes on to write of its power in effective leadership when he states "one person working alone cannot implement any major initiative. Successful implementation requires the combined efforts of every staff

member" (p.77). Collaboration, interdependence, and teamwork are the backbone of professional learning communities.

There was also a rationale established for researching this topic. First of all, the local efforts of the researcher's school district included mandates from central office administration to utilize PLC's to increase teacher collaboration. Secondly, through the research supported at the national level, there has been a push to utilize PLC's to improve schools. Breaking Ranks II provides educational research that includes PLC's as part of the overall school improvement model to use for school enhancement (2004). Finally, the rationale includes the global success that PLC's have had in improving the capacity for staff development. Professional learning communities have been popular and successful at all of these levels and have been touted as the impetus to generate capacity to become a high performing school.

Also in chapter one, the premise of this paper was stated and reiterated. Simply put, enhancing staff capacity through collaborative professional development positively affects student learning. At its core, PLC's improve student learning by improving teaching practices. The data and research bear out that problem solving and working together as professionals helps teachers to focus their efforts, differentiate instruction, and provide appropriate interventions to students on targeted objectives.

Finally, in chapter one the method and purpose for conducting the research was laid out. There was a mixed method approach that involved four high schools in southwest Kansas. These high schools were chosen due to their similarity in location,

size, and demographics. Most importantly, they were selected because they each utilize

PLC's as part of their school improvement efforts. Data were collected through surveys

and questionnaires from teaching staffs and administration from each of the four high

schools. The survey was designed by using questions (with permission, see Appendix D)

from the High Five Consortium that was developed to determine PLC effectiveness in the

Wake County public school system. In addition to the Likert-styled questions, open-

ended questions were added to obtain qualitative data (see Appendix C). Additionally,

quantitative data were gathered from state assessment scores, graduation rates, and

demographics that were retrieved from the Kansas State Department of Education's

website as reported on each school's building report card. Information that could not be

gathered from the KSDE website was obtained directly through e-mail correspondence

with each principal (see Appendix B). Test scores and demographics were compiled for

each school on a table for comparative purposes (Appendix A).

Chapter two is the review of literature relating to PLC's. This chapter begins with

a quick overview of the educational reform movements of the past few decades starting

with the National Defense Education Act from 1958 following the launch of the Soviet

satellite *Sputnik*. Some of the major reforms that followed included the 1963 Vocational

Rehabilitation Act, 1963 Higher Education Act, and the 1964 Elementary and Secondary

Education ACT.

Following the initial school reform movements came the 1983 "Nation at Risk"

report that concluded our nation's schools were failing and needed significant

improvement. This report included five major recommendations intended to move our Nation's school system towards becoming stronger.

The next major education reform movement came along during the George H.W. Bush administration. The Goals 2000: Educate America Act came about following a state governor's coalition on educational issues. This act set out eight broad goals that were to be accomplished in American schools by the new millennium. More than a decade after the target date for these goals, they have yet to be reached.

The most recent in the line of educational reforms came with the 2002 reauthorization of the Elementary and Secondary Education Act. This act, known as No Child Left Behind, was signed into law by President George W. Bush and set an annual target that moved higher each year. The goal was that all students would meet adequate yearly progress based upon the set targets of students to meet proficiency on state assessments. The number of students meeting proficiency would increase annually until 100% of the students would meet AYP on state assessments.

It seems appropriate to here re-iterate the observations of Yong Zhao (2009) as he declares the purpose behind the educational reforms within the United States. He claims they have a two-fold purpose of 1) closing the gap between subgroups within the U.S. and, 2) closing the gap between the U.S. and other countries.

Following the review of major educational reforms, chapter two also contains the review of research studies that have been conducted around the world. These studies looked at literature, leadership styles, student learning, and case studies to determine

effectiveness of PLC's within a broad range of educational settings. While most of the studies showed a positive effect on student learning, there was some resistance to PLC's found in some of the studies. Most of this resistance was determined to stem from educators' reluctance to change and accountability. The most scathing article against PLC's came out of Alberta, Canada. The author of this article took the position that PLC's were nothing more than an attempt to provide social pressure by school managers to control teachers and place blame.

Overall, however, the review of literature shows that while there is some resistance (which is to be expected with any reform effort), the overall benefits are well documented and worth the effort. The overwhelming majority of the studies indicate increases in ELL student learning, increases in faculty collaboration, and increases in school-wide commitment for continuous learning. These increases have resulted in positive gains in student test scores. Professional learning communities are shown to be a relatively inexpensive and effective way to improve schools.

Chapter three gives an overview of the schools involved in the research study. These four schools were chosen to participate in the study due to certain criteria. All of these schools are located in southwest Kansas and share similarities. All are in a similar geographic location with similar demographics. All have similar challenges brought on by location and demographics. Each of these schools utilizes professional learning communities as part of their school reform efforts.

Based on the surveys and testing data (see Appendixes A & C) from these schools, PLC's have had a positive impact in enhancing the capacity for professional development which seems to have led to a greater focus on student learning. Data over a six-year period indicate growth (or holding steady in some cases) in student performance on state assessments. This growth has occurred in spite of the increase in the number of challenges presented by the growing number of subgroups that confronted the educators in each of these schools over the six-year span.

The table in Appendix A indicates that over a six-year period there was an increase for all four schools of economic disadvantaged students, with 15.2% in school "D" showing the largest increase. Over the same period of time the average increase of all four schools in ELL students was 15.5%, with 19.3% in school "D" showing the largest increase. The number of Hispanic students increased by 8.8% on average in all four schools, while the white student population decreased an average of 9.8% over the same six year period. Interestingly, while the number of ELL, minority, and economically disadvantaged students continued to rise over the six year span, AYP scores for reading and math still increased. One of the correlating factors between all four schools is they all utilize professional learning communities to enhance capacity for professional development. This collaborative interdependence appears to have a positive impact on assessment scores. Therefore, quantitative data show student learning has been impacted positively by enhanced capacity developed within the professional learning communities.

Chapter four provides an overview of the research project. This project utilized a mixed methods approach and collected both quantitative and qualitative data. In addition to the review of related literature, four high schools in southwest Kansas were included in a research study to determine the effect on student learning based upon each of the four schools utilizing PLC's as part of their school improvement framework.

In order to obtain the data needed there were multiple collection methods used. To begin with, a questionnaire was sent via e-mail to each building principal (see Appendix B). This letter explained the project and the parameters that would be used. It was stated clearly that no school would be identified by name. There were seven questions for the principal to answer that could not be obtained (easily or at all) through public access of school data from any other means. Secondly, in addition to the administrator questions, there was a web link to send to their faculty. This link led them directly to a survey designed on survey monkey that had questions created through the use of a survey instrument from the High Five Consortium designed for Wake County Public Schools, and five open-ended questions designed by this researcher and an instructional coach. These questions were designed and developed to gather qualitative data to help determine the effectiveness on the capacity and climate of schools pertaining to their use of PLC's as professional development. The use of survey monkey made it easier to gather and compare results.

Finally, the majority of the quantitative data were gathered from building report cards located on the Kansas Department of Education's website (2011). This information

is accessible to the public and contains information spanning several years. The AYP reports for all four schools involved in the study were downloaded for the six year period included in the study. These data included reading and math scores, and graduation rates for each subgroup.

There were certain limitations acknowledged in the gathering of the data.   The main limitation was faculty completion of the survey. As a dependent variable, it is difficult to control the number of surveys completed. While the percentage of participation varied from school to school, the overall average for the four schools was 48%, with the greatest participation of 74% from school "B" and the lowest rate of 39% from school "D." These two schools had the smallest and largest faculties, respectively.

Another difficulty in determining the effectiveness of PLC's is whether or not other programs have played a role in student success. In all of the schools involved in this project each one had an eclectic approach to school improvement. There was more than PLC's used for professional development at each school. With these limitations in mind, there was still a fair amount of data gathered that showed a direct correlation with PLC's providing focus for professional development on a regular, ongoing basis that kept student learning as the primary focus.

Chapter five provided the project specifications. This chapter describes the method of information gathered used to determine a correlation to the use of PLC's and student test scores.

First of all, a questionnaire was sent to each building principal. This had a two-fold purpose. One was to gather information that could not be obtained from the KSDE website, and the other was to forward a link to survey monkey to their faculty. The questions asked of the building principal are found in Appendix B and provide both qualitative and quantitative data.

Secondly, the survey instrument that was designed and sent to the four high schools in the study were comprised of questions used with permission from the High Five Consortium and open-ended questions designed by this researcher and an instructional coach trained in PLC's and staff development. These questions were designed to determine staff perception of the use of PLC's on school climate and their perceived effectiveness on student learning.

Finally, the acknowledgement of research limitations, and independent and dependent variables were listed. As part of these limitations, participation rates were included from both the faculty and building principal of each of the four schools.

Chapter six provided an overview of each of the previous chapters while chapter seven will provide some recommendations to be taken from the study. For all practical purposes, these final chapters may be considered as summarization of this study. In addition, there are some data listed in the appendices that should help to show how the conclusions and recommendations were drawn from this effort.

CHAPTER SEVEN

RECOMMENDATIONS

While the challenges facing educators continues to grow, accountability also continues to increase. Professional learning communities are an effective way to meet these challenges. The research and literature in this study have shown that PLC's are both an efficient and effective way to enhance the capacity for professional development that leads to improved student learning. The primary conclusion from the Bolom et al. (2005) study is that PLC's increase student learning and is well worth pursuing. The use of the expertise of staff is effective if it is done correctly. And it must promote a sense of a team working interpedently to attack issues in order to be effective.

As the cartoon in *Figure 1* suggests, collaboration utilizes the skills and expertise of each individual to help make the team better. In a true PLC, the team works together to make schools better.

Figure1: Collaboration -Expert and authority.

Rick Dufour and Robert Marzano (2011) write, there are three big ideas that drive PLC's. The first idea centers on the premise that the fundamental purpose of schools are to ensure students learn at high levels. This idea has four questions to guide the process: 1) what is it we want students to know, 2) how will we know if students are learning, 3) how will we respond if students are not learning, and 4) how will we enrich and extend the learning for students who are proficient? The second big idea is that if we are to help all students learn, it will require collaborative work. The third big idea is that educators must create a results oriented environment and provide appropriate interventions in a timely manner.

It is recommended that the three big ideas listed above be implemented in a systematic manner as a model to drive school improvement. These ideas promote a data driven approach to increase student learning. School improvement must focus on facts not opinions. Decisions must be made based on data not hunches. With a well-established approach to professional learning communities, and the use of other best practices, educators will be far better equipped to handle the challenges of the profession with support and confidence.

It is also recommended that teachers are able to train and view the research ahead of time on why PLC's are effective. Much of the pushback and negative attitude from teachers comes from the feelings of "this is just another mandate from the top." When something is mandated to teachers from administration, it is typically met with resistance. As the Byrd et al. (2007) study suggests, educators are resistant to change.

Marzano (2009) also indicates that resistance to change is inevitable. However, change must happen. In the case of PLC's the changes that must happen are to embrace the professional collaboration, inter-dependability and teamwork that are required to meet the demands facing educators. With the implementation of the common core state standards this will be needed even more. Professional learning communities build capacity to improve student learning by taking a team approach to meeting the challenges that lay before us.

APPENDIX A: DEMOGRAPHIC AND PERFORMANCE DATA

School "A" six year demographic and performance data						
	2006	2007	2008	2009	2010	2011
AYP – Reading	63.1	60.3	67.7	73.1	71.5	69.4
AYP – Math	45.8	55.8	55.7	69.1	72.7	68.2
AYP – Graduation Rate	89.2	88.6	92	88.3	85.2	*83.3
Economically Disadvantaged	54.9	57.1	57.3	61.8	66.6	69.5
ELL	22.4	26	31.5	33.9	35.9	37.4
Hispanic	54.6	57.9	59.6	61.5	59.4	64.8
White	39.8	35.9	33.8	32	30.6	26.7
ACT scores	21	20.8	21.1	21.1	20.6	20.7
School "B" six year demographic and performance data						
	2006	2007	2008	2009	2010	2011
AYP – Reading	74.5	66.7	79.5	84.3	92	94.5
AYP – Math	58.9	70.2	80.2	84.4	80.2	80.2
AYP – Graduation Rate	80.1	86.7	88.2	87.7	85.7	*80.2
Economically Disadvantaged	29.7	39.9	40.5	41.7	43.6	41.6
ELL	3.8	5.3	8	14.5	12.8	16.3
Hispanic	50.8	44.2	47.5	57	58.4	59
White	48.3	46.6	43.4	40.8	39.4	37.5
ACT scores	20.8	19.4	20.3	19.8	21.6	21.6
School "C" six year demographic and performance data						
	2006	2007	2008	2009	2010	2011
AYP – Reading	62.8	56	61.3	61.2	75.2	92.9
AYP – Math	30	46.5	47.2	55.1	78.1	87.8
AYP – Graduation Rate	65.7	70.1	79.4	75.3	84.9	*77
Economically Disadvantaged	56.4	57.3	54.8	63.9	66.7	68.9
ELL	10.5	16.2	18.6	16.5	20.8	25.7
Hispanic	59.9	62.1	61.8	63.7	67	66.9
White	30.6	29.0	28.7	25.1	22	22.5
ACT scores	20.4	20.2	19.9	19.3	19.6	19.3
School "D" six year demographic and performance data						
	2006	2007	2008	2009	2010	2011
AYP – Reading	73.3	59.6	66.4	80.5	92.6	95.8
AYP – Math	50.9	63.2	85.2	89.5	89	90.2
AYP – Graduation Rate	79.7	81.6	77.6	79.4	80.8	*74
Economically Disadvantaged	44.1	46.1	47.1	51.9	57.4	59.3
ELL	7.5	11.6	14	16.2	24.1	26.8
Hispanic	54.3	56.4	57.4	57.9	65.4	63.9
White	35.5	32.6	30.7	29.6	27.6	28.2
ACT scores	20.6	20.8	20.4	20.4	20.1	20.3

*The graduation rate formula changed in 2011

APPENDIX B: LETTER TO SCHOOL PRINCIPALS WITH SURVEY LINK

Mr. School Leader
Principal, High School
SW, Kansas
mr.principal@usd.net

Dear Principal:

This is a request for your participation in a research project designed to gain a better understanding of the effectiveness of Professional Learning Communities. In particular, I am attempting to gather information on how PLC's build capacity for professional development that leads to greater student learning. While the answer to these questions should affect schools throughout the nation, my overall project is focused on answering these questions for four southwest Kansas high schools that share similarities in location, demographics, and other comparable challenges.

This project will utilize both quantitative and qualitative data. The building reports located on the Kansas State Department of Education's website will be utilized to provide the majority of the quantitative data needed. The part I am asking you to contribute is to provide data for your school that I cannot access on the KSDE website pertaining to PLC's. Additionally, I need your assistance in sending an e-mail link to your faculty for a survey that will collect perception data. This survey is relatively short and should not take a great deal of time to complete. It has a variety of Likert-style and open-ended questions that address at least 10 major areas of PLC characteristics.

Data used will not be associated directly to any school by name. Each school will be randomly assigned with a designation of school "A, B, C, or D." This will be the only method of reference to schools within the project itself.

For your part as the building administrator, please answer the following questions:

1. What is the current number of student, based on upon the 9/20 count in your 9-12 building? How many teachers are on your faculty?
2. Counting yourself, how many administrators are in your building? How long have you used Professional Learning Communities? What led to the implementation of PLC's in your building?
3. What type of professional development has been used to assist with PLC implementation? How often do PLC's meet in your building?

4. What arrangements are made to accommodate for teacher collaboration (i.e. Common plan time, early dismissal, etc.)?
5. How often are common formative assessments administered in your building?
6. Do teachers collaborate with other teachers of like content, or a cross-sectional group? Has there been any resistance of staff to PLC implementation? If yes, what are some examples? How has resistance been addressed?
7. What is the composite ACT score for your students for the past five years?

Thank you for your input. Please forward the following link to your faculty and encourage them to take a few minutes to complete the survey – the more participants the better the data.

Dear Educator:

Please take a few minutes to complete a survey concerning the implementation and effectiveness of Professional Learning Communities (PLC's) in your school. The information will be used as part of a research project for SW Kansas schools. Your responses are voluntary and anonymous. They will go into a database for your school but will not be identifiable on an individual basis. Thank you for your participation! Please follow this LINK and complete the survey as soon as possible.
http://www.surveymonkey.com/s/schoolname

APPENDIX C: SURVEY SUMMARY

Overview of PLC survey summary for four SW Kansas high schools: Range of rating average from 1-4 (with percentage) by theme per school from lowest to highest responses

Major Theme	*School "A"*	*School "B"*	*School "C"*	*School "D"*
Focus on learning	2.51(68%) - 3.48(100%)	2.64(60%) - 3.12(92%)	2.40(53%) - 2.85(83.3%)	1.79(25.1%) - 2.37(51%)
Collaborative culture	2.58(62.5%) - 3.29(87.6%)	2.56(60%) - 3.12(92%)	2.67(68.7%) - 2.96(85.1%)	2.06(36%) - 3.00(84%)
Instructional strategies	2.63(64.6%) - 3.35(91.7%)	2.56(60%) - 3.04(92%)	2.23(37.5%) - 2.96(85.4%)	1.94(28%) - 2.64(66%)
Common formative assessments	3.00(77.1%) - 3.15(83.3%)	2.64(68%) - 2.76(76%)	2.38(57.4%) - 2.68(76.6%)	1.92(28%) - 1.98(30%)
Impact	2.90(70.8%) - 3.40(95.9%)	1.84(20%) - 2.68(72%)	2.38(43.8% - 3.10(93.7%)	1.57(13.5%) - 3.15(91.2%)
Support/resource allocation	2.67(62.5%) - 2.81(75%)	2.20(32%) - 2.76(76%)	2.74(65.2%) - 2.83(72.9%)	2.06(16.7%) - 2.22(28%)
Meeting frequency	Monthly (56.3%)	Monthly (56%)	Weekly (56.3%)	Weekly (90%)
Meeting length	More than 1 hour (52.1%)	30 m to 1 hr (64%)	30 m to 1 hr (77.1%)	30 m to 1 hr (76%)
Meeting time	Late start	Early release	Common plan	Common plan
Years of teaching experience	11-20 (35.4%)	11-20 (40%)	20 plus (29.2%)	5-10 (24%)

Open-ended questions	School "A"	School "B"	School "C"	School "D"
Q. 12 How PLC's are part of school improvement?	Negative: 5/ 48 (10%) Positive: 11/48 (23%) Neutral: 32/48 (67%)	Negative: 3/25(12%) Positive: 9/25(36%) Neutral: 13/25(52%)	Negative: 10/48(21%) Positive: 30/48(63%) Neutral : 8/48(17%)	Negative: 25/50(50%) Positive: 15/50(30%) Neutral : 10/50(20%)
Q. 13 PLC's effect on school climate?	Negative: 8/48 (17%) Positive: 26/48(54%) Neutral: 14/48(29%)	Negative: 11/25(44%) Positive: 8/25(32%) Neutral: 6/25(24%)	Negative: 12/48(25%) Positive: 24/48(50%) Neutral : 12/48(25%)	Negative: 33/50(66%) Positive: 8/50(16%) Neutral : 9/50(18%)
Q. 14 overall student achievement?	Negative: 8/48(17%) Positive: 19/48(40%) Neutral: 21/48(44%)	Negative: 5/25(20%) Positive: 2/25(8%) Neutral: 18/25(72%)	Negative: 12/48(25%) Positive: 22/48(46%) Neutral : 14/48(29%)	Negative: 15/50(30%) Positive: 19/50(38%) Neutral : 16/50(32%)
Q. 15 what has had the greatest impact on student learning over past 5 years?	Negative: 5/48(10%) Positive: 26/48(54%) Neutral: 17/48(35%)	Negative: 3/25(12%) Positive: 5/25(20%) Neutral: 17/25(68%)	Negative: 3/48(6%) Positive: 15/48(31%) Neutral : 30/48(63%)	Negative: 6/50(12%) Positive: 23/50(46%) Neutral : 21/50(42%)
Q. 16 if PLC's have been successful?	Negative: 9/48(19%) Positive: 27/48(56%) Neutral: 12/48(25%)	Negative: 11/25(44%) Positive: 7/25(28%) Neutral: 7/25(28%)	Negative: 10/48(21%) Positive: 24/48(50%) Neutral : 14/48(29%)	Negative: 32/50(64%) Positive: 11/50(22%) Neutral : 7/50(14%)

APPENDIX D: PERMISSION TO USE HIGH FIVE SURVEY INSTRUMENT

From: Adams, Keith
Sent: Wednesday, April 13, 2011 5:18 PM
To: 'Patrick.Rhodes@orange.k12.nc.us'
Cc: 'Steven.Weber@orange.k12.nc.us'
Subject: High 5

Dear Mr. Rhodes:

I am requesting permission to utilize the high 5 PLC survey that I found on the Wake County Public School website. The reason for my request is to be able to utilize the data for a research project that I am conducting for partial completion of my Educational Specialist degree through Fort Hays State University, Hays, KS - Dr. Robert Moody advisor. With this project I am studying the effects of PLC implementation in 4 SW Kansas high schools. In particular, I would like to administer the high 5 survey, along with some additional open-ended questions, to the faculty of each of the four high schools in order to determine the effectiveness of PLC's in building capacity for professional development that enhances student learning. The questions that are addressed in the high 5 survey follow along the same question pattern that will assist me in obtaining needed data to incorporate into my overall research project.

Thank you for your assistance with this project. Please feel free to contact me with any further questions you may have. I am looking forward to hearing from you soon.

Sincerely,

Keith Adams
Principal
Liberal High School
1611 W. 2nd Street
Liberal, Kansas
620-604-1202
"Graduation Matters"

APPENDIX D: PERMISSION TO USE HIGH FIVE SURVEY INSTRUMENT

(continued)

RE: High 5
Patrick Rhodes [Patrick.Rhodes@orange.k12.nc.us]
You replied on 4/19/2011 10:06 AM.
Sent:Tuesday, April 19, 2011 10:05 AM
To: Adams, Keith
Cc: Patricia Coleman [PATRICIA.COLEMAN@orange.k12.nc.us]; Steven Weber
[Steven.Weber@orange.k12.nc.us]

Permission granted

PR

G. Patrick Rhodes
Superintendent
Orange County Schools
200 East King Street
Hillsborough, NC 27278
Phone: 919-732-8126
Fax: 919-732-8120
patrick.rhodes@orange.k12.nc.us

APPENDIX E: INSTITUIONAL REVIEW BOARD (IRB) LETTER OF EXEMPTION

FORT HAYS STATE UNIVERSITY
Forward thinking. World ready.

OFFICE OF SCHOLARSHIP AND SPONSORED PROJECTS

DATE:	November 13, 2013
TO:	Keith Adams, EdS
FROM:	Fort Hays State University IRB
STUDY TITLE:	[530792-1] Professional Learning Communities: Enhancing the Capacity for Improved Student Learning
IRB REFERENCE #:	14-032
SUBMISSION TYPE:	New Project
ACTION:	DETERMINATION OF EXEMPT STATUS
DECISION DATE:	November 13, 2013
REVIEW CATEGORY:	Exemption category # 2

Thank you for your submission of New Project materials for this research study. The departmental human subjects research committee and/or the Fort Hays State University IRB/IRB Administrator has determined that this project is EXEMPT FROM IRB REVIEW according to federal regulations.

Please note that any changes to this study may result in a change in exempt status. Any changes must be submitted to the IRB for review prior to implementation. In the event of a change, please follow the Instructions for Revisions at http://www.fhsu.edu/academic/gradschl/irb/.

The IRB administrator should be notified of adverse events or circumstances that meet the definition of unanticipated problems involving risks to subjects. See http://www.hhs.gov/ohrp/policy/AdvEvntGuid.htm.

We will put a copy of this correspondence on file in our office. Exempt studies are not subject to continuing review.

If you have any questions, please contact Leslie Paige at lpaige@fhsu.edu or 785-628-4349. Please include your study title and reference number in all correspondence with this office.

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