2-27-2012

Reflective Practices in Professional Learning Communities: A Case Study of the Missouri Professional Learning Communities Project

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REFLECTIVE PRACTICES IN PROFESSIONAL LEARNING COMMUNITIES: A CASE STUDY OF THE MISSOURI PROFESSIONAL LEARNING COMMUNITIES PROJECT

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A Dissertation Submitted to The Graduate School
at the University of Missouri – St. Louis
in partial fulfillment of the requirements
for the degree of Doctor of Education

January 2012

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BY

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DISSERTATION

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University of Missouri-St. Louis, 2011

St. Louis, Missouri

ABSTRACT

Dewey (1933) provided the foundation for reflective practice in education with the notion that learning is not in the doing, but rather it is in the thinking about the doing that creates learning. Evidence is growing about the importance of reflection for improving teaching and learning practices to increase student achievement (York-Barr, et al., 2006).

The p*rofessional learning community* (PLC) has become the new catchphrase as schools engage in systems-change efforts for school improvement. DuFour, Eaker, and DuFour (2005) call professional learning communities the "most powerful strategy for sustained, substantive school improvement" (p.7).

If reflective practice is a means by which teaching and learning improve and if professional learning communities provide a framework for system-wide school improvement, are the two interdependent?

Using a mixed method, bounded case study research design, ten schools currently participating in the Missouri Professional Learning Communities Project (MO PLC) were selected for this study of the relationship between the level and extent of reflective practices and the implementation level of the professional learning communities process. Five schools previously identified as *minimally implementing* the PLC process and five schools identified as *deeply implementing* the PLC process were selected for the study. Using an online whole-staff survey and interviews with two school leaders in each school, data was collected and analyzed using a concurrent triangulation strategy. The

Reflective Practice Spiral (York-Barr, 2006) provided the basis for the pre-determined themes used to code the interviews.

The findings of this study suggest a relationship between the level and extent of reflective practice and the implementation level of the professional learning communities process. Certainly, findings from this study can support recommendations for future work of the MO PLC Project, as well as provide a springboard for further study of other school improvement initiatives supported by the Missouri Department of Elementary and Secondary Education.

Acknowledgements

"Reach for the stars! Dream big! You can do whatever you set your mind to do!" Such were the words of my 3rd grade teacher, Mrs. Frances Herndon, long since deceased, but words that have inspired me to reach many goals throughout my life. The journey toward this degree of Doctor of Education, like all major goals in life, has not been without challenges and bumps in the road; there have been many times when I considered quitting. My thanks to all those who kept me going. First, to the love of my life, my husband, Jim, who was my best cheerleader. To my children, thank you for being such great role models of perseverance in pursuit of your lofty goals, and a special thanks to my daughter, Jessica, for the many hours of transcribing and typing. My thanks to my friend and colleague, Janice Rehak, for the camaraderie and counseling she provided as we walked and sometimes stumbled throughout the coursework together. My thanks to Dr. Clark Hickman for his compassion and kindness during a particularly challenging time when my mother became ill and passed away; he encouraged me to give myself time to grieve, but to not give up. My thanks to Dr. Carole Murphy, my advisor and friend, whose relationship with the MO DESE Leadership Academy was the impetus for beginning this journey which also provided her with a unique understanding of my work at the MO DESE. My thanks to Dr. Jim Shymansky, whose questions challenged me to think deeply and whose advice and support kept me focused on the destination. My thanks, too, to Dr. Kathleen Brown and Dr. Margaret Dolan, committee members, who provided expertise in reviewing my dissertation proposal and offered suggestions and support to complete the study.

I dedicate this study to my grandchildren --to Riley and Colt that I hold in my arms now–and to other grandchildren yet to come. May you always … “Reach for the stars! Dream big!” And, know that you can “Do whatever you set your mind to do!” May all my grandchildren and grandchildren everywhere, have a teacher like “Mrs. Herndon.”

I also dedicate this study in memory of my mother, Zaza Wolfe, who modeled “reflection” in her daily life-- blessing us with over 20 years of personal reflections in the later years of her life by keeping a daily journal. Her legacy of life and love, through these reflection journals, will fill our hearts and minds for generations to come.

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CHAPTER 1

INTRODUCTION

Learning is not in the doing, it is in the thinking about the doing that creates learning (Dewey, 1933). This premise is the foundation of *reflective practice*. More recently, Schőn expanded the foundational concepts of reflective practice as a dialogue of thinking and doing through which one becomes more skilled (Schön, 1983). In *Reflective Practice to Improve Schools - An Action Guide for Educators* (York-Barr, Sommers, Ghere, Montie, 2006), the authors look at the work of both Dewey and Schőn to discern the similarities and differences, but more importantly offer a framework and strategies for thinking and acting as reflective educators to provide a rationale for its potential to improve schools.

For the past two decades, a new term has emerged in the world of school improvement – professional learning communities (PLC). *B*oth practitioners and researchers alike have sought ways to define professional learning communities and to assess the impact the professional learning communities process has on schools seeking improvement. DuFour, Eaker, and DuFour (2005) call professional learning communities the "most powerful strategy for sustained, substantive school improvement" (p.7). In Hord's (2009) article, "Professional Learning Communities" she references the work of Lambert when she states, "It is vital that … staff members understand the linkage between learning with students in the classroom and learning with colleagues" (p. 40). In an earlier article written for *JSD*, Hord reiterates the purpose for a professional learning community by asking these questions: "What are you learning? Why are you learning that? How are you learning it? These questions direct the members' attention to the core

purpose of the community's work--intentional professional learning for the purpose of improved student learning" (2008, p. 13).

All proponents of the professional learning communities concept agree that there are basic or essential characteristics of a professional learning community that set one organization apart from another. Although terminology differs somewhat, a component identified by all researchers is the creation of a collaborative culture as a precursor or essential component to the development and sustainability of a professional learning community. To delve deeper into the tenets of a collaborative culture, one finds reflective practice as a fundamental component of effective collaboration. Might it be the difference in moving schools forward to the ultimate goal of school improvement--greater student achievement? The purpose of this research study is to examine the reflective practices used in schools participating in the *Missouri Professional Learning Communities Project (MO PLC)* that are at different implementation levels in the PLC process.

Statement of Problem

Theorists, researchers, philosophers, and educators have studied reflective practice for centuries. There are many common themes, as well as differing views as to the dimensions and merits of reflective practice. There is growing evidence of the importance of reflection for improving teaching and learning practices with the explicit intent of increasing student achievement (York-Barr, et al., 2006). For purposes of this study, reflective practices are defined as "reflection is the practice or act of analyzing our actions, decisions, or products by focusing on the process of achieving them" (Killion & Todnem, 1991, p.15).

The term, professional learning communities, has become the new catchphrase for school improvement. Researchers representing a wide variety of school reform and improvement initiatives are *On Common Ground* (DuFour, et al., 2005) when it comes to supporting the tenets of professional learning communities with the ultimate goal of improving student achievement. Definitions of professional learning communities may vary from author to author, researcher to practitioner; however, *a focus on learning in a collaborative culture that focuses on greater student outcomes* is a theme common to all and defines the PLC framework for this study.

Schools have historically been institutions of individual isolation. Teachers have taught in individual classrooms, have been responsible for their own students, and have been responsible for their own individual learning. Reflection has historically been an individual act -- intentionally or unintentionally used by teachers as they think about and improve their individual practices in the teaching/learning process. In *systems-change theory*, the paradigm shift is from the individual to the whole system. The professional learning communities process is a *systems-change* approach to school improvement. Reflective practice at its rudimentary level begins with the individual but has its greatest potential to influence the learning and growth in a school when schoolwide (system-wide) reflective practice becomes the embedded cultural norm of the school (York-Barr, et al., 2006).

Question for the Study

If reflective practice is a means by which teaching and learning improve and if professional learning communities provide a framework for system-wide school improvement, are the two interdependent? Are schools that are effectively functioning as

professional learning communities also employing schoolwide levels of reflective practice? Conversely, are schools that are just beginning or are struggling in the professional learning communities process employing rudimentary levels of reflective practice? The researcher chose to focus on this question for this study:

> Is there a relationship between the level and extent of reflective practice found in a school and the level of implementation of the professional learning communities process found in the school?

Purpose of the Study

In 2003, the Missouri Department of Elementary and Secondary Education (MO DESE) began the Missouri Professional Learning Communities Project as a school improvement initiative sponsored by state funds appropriated for Professional Development. From a handful of schools in 2003, this statewide project has expanded to over 300 schools that have received training and support in the professional learning communities process through resource specialists in the regional professional development centers located across the state. The current delivery model for this initiative utilizes a "*train-the-trainer*" approach with school leadership teams in a three-year training curriculum. Additional administrator trainings, on-site support and regularly scheduled *formative assessments* guide the school through the professional learning communities process. Currently, an on-site *summative assessment* is administered at or near the end of the training cycle (Missouri Department of Elementary and Secondary Education, 2008).

In the spring of 2010, the MO DESE joined with Dr. Douglas Reeves of the Leadership and Learning Center to conduct a statewide study of nineteen state-sponsored

initiatives--one of which was the MO PLC Project. The purpose of the audit was to determine what initiatives are most frequently being implemented in Missouri schools, what the range of implementation for each prioritized initiative is and what the relationship between each initiative and student achievement is. In a report of the findings to the MO State Board of Education, Reeves (2010) stated:

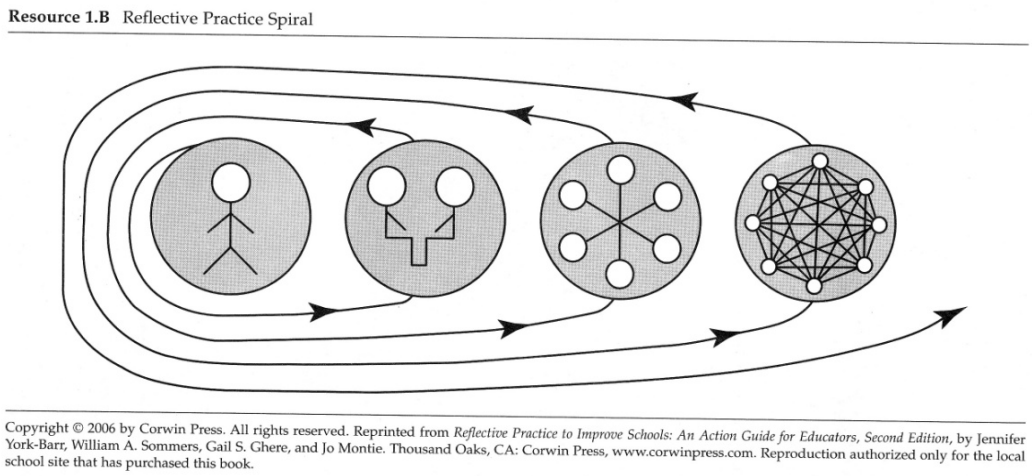
> Depth of implementation is most clearly related to gains in student achievement for **Professional Learning Communities, Missouri Preschool Program, the Missouri Reading Initiative and Schoolwide Positive Behavior Support**. Of all the initiatives that were reviewed in this study, Professional Learning Communities appear to have the greatest potential impact on student achievement (p. 1).

Why do some schools reach deep levels of implementation of the PLC process while other schools do not? Although the continuum of reflective practices is not part of the established training curriculum of the MO PLC Project, is it possible that some schools reach deep levels of implementation of the PLC process because they employ deep or systems-level reflective practices?

The purpose of this study was to examine the relationship between the reflective practices found in schools only *minimally implementing* the professional learning communities process and the reflective practices found in schools *deeply implementing* the professional learning communities process. Although there are many descriptors that identify the level of implementation of schools becoming professional learning communities, for purposes of this study, the results of the implementation audit conducted by Reeves (2010) provided the implementation level data of the selected

schools. The *"Reflective Practice Spiral"* (York-Barr, et al., 2006) was used as the framework for determining and assessing the reflective practices of the purposefully selected individuals in the schools. This model, as is shown in Figure 1, begins with *individual reflective practices* and extends to the *partner level reflective practices*, then to the *small group* or *team level reflective practices*, and finally to the outermost circle, the *schoolwide level of reflective practice* (York-Barr, et al, 2006).

Figure 1. Reflective Practice Spiral



Note: From *Reflective Practice to Improve Schools* (p. 20) by J.York-Barr, W.A. Sommers, G.S. Ghere, & J. Montie, 2006, Thousand Oaks, CA: Corwin Press. Copyright 2006 by Corwin Press. Reprinted with permission from J.York-Barr, November 9, 2010.

Delimitations

Schools that participate in the Missouri Learning Communities Project voluntarily choose to participate in the school improvement initiative. Schools must provide evidence of a commitment by a majority of the staff members, as well as signed documentation of administrative support for involvement in the trainings, on-site visits and on-going

evaluations. Furthermore, an application that includes a financial commitment is required. Therefore, this study recognizes the unique characteristics of the participating schools that will limit the extent to which these findings may be generalized to schools outside of the Missouri Professional Learning Communities Project. This study will focus on identifying the level and extent of reflective practices found in schools in the MO PLC Project that have been identified as either minimally implementing the professional learning communities process or deeply implementing the professional learning communities process.

Assumptions

The assumptions being made are that the schools used in this study that were identified by Reeves during the implementation audit were accurately assessed and still remain at the minimally implementing and deeply implementing stages in the professional learning communities process. It is appropriate to reveal that the author of this research study is the Director of the MO PLC Project, and as such, provided information to the Leadership and Learning Center as the implementation audit was being developed. The MO DESE Director of each initiative in the study had the responsibility to provide the external evaluators with documents and resources that described the initiative. Copies of the MO PLC training curriculum, support resources, assessment tools, and web and printed materials relevant to the MO PLC Project were sent to the Leadership and Learning Center evaluators. These materials provided the basis for the development of the PLC implementation rubric tool that was used to assign implementation levels to schools in the sampling.

The author of this study was not involved in the random selection process or privy to the names of the schools and districts participating in the study while the audit was being conducted. It is assumed that the whole-staff surveys, the administrator interviews and the artifacts and documents collected by the external evaluators were an accurate representation of the implementation levels of schools participating in the MO PLC Project. A final assumption is that the results of the Reeves audit and the implementation rubric can be generalized to the other schools currently participating in the MO PLC Project since the training curriculum, the support resources, the assessment measures and the print and web materials are used throughout the statewide Project.

Significance

The Missouri Professional Learning Communities Project has received increasing attention and support over the past three years as a school improvement initiative. Most recently, with the Reeves' implementation audit, the MO PLC Project was said to show the greatest correlation to increased student academic performance when schools implement the process at deep levels. The results of the audit by Reeves suggest that the Missouri Department of Elementary and Secondary Education continue to assess the implementation level of schools in the MO PLC Project and analyze the results of those not implementing at deep levels. The purpose of the continued analysis of implementation level data is to provide schools and the resource specialists who work with schools the data to make better decisions to drive deeper implementation of the PLC process.

Simultaneously, the MO PLC resource specialists spent the past year reviewing and revising the training curriculum. The current focus is on developing the appropriate

assessment tools to both serve the schools in identifying strengths, as well as to inform the resource specialists of areas in which a school needs greater support and/or training. Over the past several years, and supported by the recent study completed by Reeves (2010), summative assessments with schools have indicated that some schools are implementing at deep levels while other schools in the MO PLC Project have struggled to bring about the necessary *systems-change* thinking that results in greater student achievement. Identifying the level and extent of reflective practices found in schools has not been included in those assessments in the past. This study sought to determine if the level of implementation in the professional learning communities process was also indicative of the level and extent of reflective practices found in schools. Could reflective practices be the difference-maker between those minimally implementing and those deeply implementing?

The significance of this study is the potential influence on decisions regarding training curriculum, resources and support for schools participating in the Missouri Professional Learning Communities Project. Professional development that would include specific strategies for developing reflective practices from the individual teacher level to the partner level to the team level and ultimately to the schoolwide level could be the missing element that could move schools from minimal implementation to deep implementation. If the curriculum of the MO PLC Project is changed to include training in reflective practices, so too would the assessment tools need to be revised to include indicators and measurement criteria relative to the level and extent of the reflective practices.

The MO PLC Project continues to search for ways to better serve the needs of schools. It is the goal of the MO PLC Project to build the capacity of all schools to function as effective professional learning communities, deeply implementing the processes that are focused on learning in collaborative cultures with results orientation for increased student achievement. The findings of this study may provide the impetus to add reflective practice trainings and the assessment of such to the MO PLC Project to guide schools toward deeper implementation of the professional learning communities process.

Definitions of Terms

Reflective practices: the practice or act of analyzing our actions, decisions, or products by focusing on the process of achieving them.

*Professional learning communities (plc)**:*** (in this study specific to education) schools that embrace a focus on learning in a collaborative culture that focuses on greater student outcomes.

*Missouri Professional Learning Communities Project**:*** a school improvement initiative supported by the Missouri Department of Elementary and Secondary Education to build the capacity of schools to function as effective professional learning communities.

*Implementation levels of the plc process**:*** (in this study specific to Reeves' MO DESE Implementation audit) –

a. *minimal implementation*: little to no indicators of the plc process
b. *partial implementation*: some indicators of the plc process
c. *proficient implementation*: all indicators of the plc process
d. *deep implementation*: all proficient indicators of the plc process plus indicators of sustainability of the process over time

Systems-change theory: (based on the work by Michael Fullan, 2010) built on the notion of collective capacity that reform must begin by changing the system and the system-level policies.

Reflective Practice Spiral: (work by Jennifer York-Barr, William Sommers, Gail Ghere, Jo Montie, 2006) an organizational structure that depicts reflective practices in four levels – individual, partner, small group/team, and schoolwide. The spiral represents the interconnectedness and cumulative effect of the practices and learning.

"Train-the-trainer": (specific to the professional development of the MO PLC Project) a team of leaders from a school receives training in the essential components of the professional learning communities process and then serves as the trainers for the rest of the staff.

Formative assessments: assessments "for" learning used in regular intervals to inform during the teaching/learning process.

Summative assessments: assessments "of" learning used to measure the endpoint or culmination in the teaching/learning process.

CHAPTER 2

LITERATURE REVIEW

Reflective Practice

Learning takes place when one thinks about the doing (action) – not just by doing (Dewey, 1933). This premise is the foundation of reflective practice. Research and writings on reflective practice have evolved over time through carefully constructed theory and application studies by philosophers, theorists, and teacher educators. Although John Dewey is frequently recognized as the first and most prominent 20th century influence on reflection in education, his views actually had roots in centuries-earlier Eastern and Western philosophical works of Buddha, Plato, and Lao-tzu (York-Barr, Sommers, Ghere, Montie, 2006). In fact, Plato used a phrase from Socrates, "The unexamined life isn't worth living" which can be recognized as the undergirding for the examination of the experiences that reflective practice provides (York-Barr, et al., p.5). In the past few decades, Donald Schőn has contributed and expanded the foundational concepts of reflective practice (Schön, 1983). Researchers and theorists delight in finding the congruencies, dissimilarities and the constraints of the works of Dewey and Schőn and other notable experts in the field of education as the concepts of reflective practices are defined, implemented, analyzed, assessed, and debated.

In the book, *Reflective Practice to Improve Schools* (York-Barr, et al., 2006), the authors refer to Dewey and Schőn as the two most noted and prolific writers on reflective practice. They also suggest that there are subtle, yet significant, differences in their work. "Dewey, whose views emerged during the Progressive Era, when scientific advances were shaping education and social science, emphasized not just rigor but specific

consideration of scientific knowledge. In contrast, Schőn, nearly half a century later, emphasized context and experiential knowledge" (York-Barr, et al., p.4).

Dewey defines reflective practice as that which involves active, persistent, and careful consideration of any belief or practice in light of the reasons that support it and the further consequences to which it leads (Dewey, 1933). Thinking, as defined by Dewey, is the "operation in which present facts suggest other facts (or truths) in such a way as to induce belief in the latter upon the ground or warrant of the former" (p. 8-9). Elements of reflective thinking include the sub-processes that Dewey identified as the state of perplexity, hesitation, and doubt, and the act of searching or investigating for facts that support or nullify the belief (Dewey, 1933). Zeichner & Liston (1996) refer to Dewey's thinking as a holistic way of meeting and responding to problems, a way of being as a teacher.

Schőn (1983) professes that a practitioner's reflection can serve as a corrective to over-learning and that through reflection, tacit understandings (knowledge that is known but cannot be articulated) can be recalled and criticized. Schőn theorized that there are many actions, understandings, and judgments that we do without conscious thought. We may even be unaware that we have knowledge of those things. Schőn believes that we can call up our tacit knowledge through reflective thinking. By articulating "these tacit understandings, we can criticize, examine, and improve our learnings" (Zeichner & Liston, 1996, p. 15).

Bell, in the *International Journal for Academic Development* (2001), refers to Schőn's thoughts on reflective practice as a dialogue of thinking and doing through which one becomes more skilled. Schőn (1983) is credited with the notion of *reflection in*

action (p.68) and *reflection on action (*p.138). In teaching, when reflection occurs in the midst of instruction--while engaged in the act of teaching—Schőn (1983) refers to those thoughts as internal conversations and on-the-spot problem solving called *reflection in action*. If reflection is done before or after an action--in the planning stages before instruction or in thoughtful recollections with self or others following a teaching act, Schőn (1983) calls that behavior *reflection on action*.

Costa gives this description of reflective practice in the Foreword of *Reflective Practice to Improve Schools: (York-Barr, et al., 2006)*

> To be reflective means to mentally wander through where you have been and try to make some sense out of it. Reflection involves such habits or dispositions as:
>
> - Metacognition: Thinking about thinking and conducting an internal dialogue before, during, and after an event
> - Connecting information to previous learning
> - Drawing forth cognitive and emotional information from several sources: visual, auditory, kinesthetic, tactile
> - Acting on and processing the information--synthesizing, evaluating
> - Applying insights to contexts beyond the one in which they were learned (p. xvii).

A distinguishing characteristic of a reflective educator would be one with a high level of commitment to his or her own professional development (Zeichner & Liston, 1996). Reflective educators have a sustained interest in being life-long learners through examination of their thoughts, actions, practices and the actions and practices of others.

Reflective educators examine, analyze, and reframe information to move new understandings into actions (York-Barr, et al., 2006).

A profile of a reflective educator is one who:

- Stays focused on education's central purpose: student learning and development
- Is committed to continuous improvement of practice
- Assumes responsibility for his or her own learning – now and life-long
- Demonstrates awareness of self, others, and the surrounding context
- Develops the thinking skills for effective inquiry
- Takes action that aligns with new understandings
- Holds great leadership potential within a school community
- Seeks to understand different types of knowledge, internally and externally generated (York-Barr, et al., 2006, p.16).

Reflective Practices and Professional Development

Dewey's philosophy has long been used in teacher preparation programs as the moral imperative to think about the doing in the teaching-learning process; but, more recently schools, colleges, and departments of education have embraced the concept of reflective practice through Schőn's process with a more concrete and contextual approach (Ferraro, 2000). Portfolio development has become a favorite tool used in pre-service teacher education so that beginning teachers gather the significant artifacts that represent their professional development. In doing so, teachers must reflect on their teaching practices--what worked and what did not and why (Ferraro, 2000). Using the National Board for Professional Teaching Standards model, the Interstate New Teacher

Assessment and Support Consortium (INTASC) has included the use of portfolios in the performance-based assessments for teachers (Ferraro, 2000).

Silva (2003), in the Teacher Education Quarterly, reports on the concept of "triad journaling" (p. 71) as a way for all members of the *student teaching triad* to benefit from the effects of reflective practices. In this context, Silva (2003) suggests a change in terminology to identify the roles in the student teaching triad as 1) the student teacher to be called the intern; 2) the cooperating teacher to be referenced as the mentor; and, 3) the university supervisor to be referred to as the professional development school associate. Journals, a common tool required in many student teaching programs, serve as a method of documenting and learning from one's own experience by reflecting on the events, beliefs, emotions, concerns, questions, problems, and future plans. Silva (2003) contends that when all members of the triad participate in journaling, the professional growth of the intern, the mentor, and the professional development school associate will be enhanced. Journaling can provide a way to make inner thoughts about teaching and learning public for others to see, question, and understand. University supervisors often use journals as a communication link to better understand the challenges, as well as the insights of pre-service teachers during their teaching experiences. Silva (2003) draws on the research by Killion (1991) in suggesting that journals can bolster collegial dialogue as teachers share their journals with each other, collaboratively posing and solving problems as well as providing "reciprocal support" (p. 70) for professional growth. Journaling leads to "self-study, communication, and collaborative learning" (p. 71) and has been "relatively unexplored in the research as a tool for enhancing the teaching and learning of prospective teachers, practicing teachers, and university teacher educators" (Silva, 2003).

Reflective practice has also been defined in terms of *action research* which has become a standard concept in teacher education programs (Ferraro, 2000). Action research allows the teacher educator to put theories into practice in their classroom, reflect on those practices, analyze the results, and then share the results with mentors and colleagues. "This collaborative model of reflective practice enriches students' personal reflections on their work and provides students with suggestions from peers on how to refine their teaching practices" (Ferraro, 2000, Refining the Concepts section, ¶ 4).

The concept of serving as a mentor or coach or being a participant in a coaching relationship is another form of reflective practice (Ferraro, 2000). A popular coaching model used in many schools today is *Cognitive Coaching*^{SM}, developed by Costa and Garmston (2009). Coaching, in this professional development model, is defined as "a way of thinking and a way of working that invites self and others to shape and reshape their thinking and problem solving capacities" (Costa, 2009, Overview of Cognitive Coaching^{SM} section, ¶ 1). The trained coach serves as a mediator who "figuratively stands between a person and his thinking to help him become more aware of what is going on inside his head" (Overview of Cognitive Coaching^{SM} section, ¶ 3). In this model, it is important to note that it is the person being coached, not the coach, who then evaluates the effectiveness and appropriateness of his/her own work.

Coaches are trained to use maps and tools to assist the person being coached to navigate through his/her thinking.

> The three maps of Cognitive Coaching^{SM} are planning, reflecting, and problem-resolving….The three maps interact with each other. When a person reflects on something he has done, he often begins thinking about the next activity or event

> and begins planning, based on what he learned from reflecting on a previous experience. Problem solving can come from a person feeling 'stuck' or can be part of reflecting or planning" (Costa & Garmston, 2009, Overview of Cognitive Coaching℠ Training section, ¶1 & 2). Costa and Garmston (2009) see this technique as a "powerful approach to enhancing performance and building learning organizations" (Overview of Cognitive Coaching℠ section, ¶5).

Some professional development workshops, institutes, or job-embedded professional development initiatives also incorporate reflection into practice. Not all professional development programs are specific to teaching methods and strategies. They can also focus on teacher attitudes, management skills, and ethical implications of practices in classrooms that cause "teachers to step back and critically reflect not only on how they teach, but also on why they teach in a particular way" (Ferraro, 2000, Incorporating Reflection Into Practice section, ¶ 4). "Reflective practice can be a beneficial form of professional development at both the pre-service and in-service levels of teaching. By gaining a better understanding of their own individual teaching styles through reflective practice, teachers can improve their effectiveness in the classroom" (Ferraro, 2000, Conclusion section, ¶ 1).

Professional Learning Communities

The characteristics of a reflective educator identified by York-Barr, et al. (2006) of being focused on student learning, being committed to a life-long of professional learning and being committed to ongoing improvement through new understandings (p.16) brings to mind a term that has surfaced in both organizational and educational change research in the past two decades – the professional learning community. Hord

(1997), notable researcher and author of numerous books and articles related to professional learning communities, references work by Astuto and colleagues from 1993 who described a professional community of learners as teachers and administrators who continuously seek and share learning and then act on what they learn. This community of continuous inquiry and improvement has since become known as a *professional learning community*.

In *Professional Learning Communities at Work,* DuFour and Eaker (2005) claim that, "the most powerful strategy for sustained, substantive school improvement is developing the ability of school personnel to function as professional learning communities" (p.7). In the current age of high-stakes accountability and increasing attention on failing schools, educators across the country have eagerly embraced this potentially promising school reform strategy of professional learning communities.

DuFour's claim was based on his experiences as a practitioner, first as the principal and then the superintendent of Adlai Stevenson High School in Lincolnshire, Illinois. What DuFour tried to capture in his promulgation of the professional learning communities concept was what he actually saw, felt, and did as the leader of a school district that was focused on improvement. His efforts were supported by his co-author, Eaker, who served as a former fellow with the National Center for Effective School Research and Development, bringing theory and practice of school improvement together. More recently, Eaker and DuFour (2005) embarked upon another school improvement quest – to analyze the "common ground" on which leading authorities on school improvement could agree. The result of this collaboration is *On Common Ground* (DuFour, et al., 2005) which brings educational leaders, such as Roland Barth, Michael

Fullun, Lawrence Lezotte, Jonathon Saphier, Douglas Reeves, and others, to align their support of the power of professional learning communities as a strategy for school improvement.

What then are the characteristics or basic tenets of a professional learning community? Hord's (2008) article, "Evolution of the Professional Learning Community" does not infer triteness, but rather simplicity when she defines the concept this way, "The three words explain the concept: Professionals coming together in a group – a community – to learn" (p. 10). However, Hord (2008) drives the thinking deeper when she questions, "What are they learning? The learning is not trivial, nor is it unplanned" (p. 12). In Hord's (2007) National Staff Development Council's pre-conference session, she cites five attributes of professional learning communities that are repeatedly supported in literature: shared beliefs, values, and vision; shared and supportive leadership; collective learning and its application; supportive conditions; and shared personal practice.

The concept of *collective learning and its application* is demonstrated in a professional learning community when teachers come together to study collegially and work collaboratively. Members of a professional learning community engage in inquiry that includes reflection and discussion focused on instruction and student learning. Learning is continuous and the process is cyclic, putting what they have learned into practice, assessing, reflecting, and again discussing. Collaboration builds shared knowledge bases (Hord, 2007).

DuFour, Eaker and DuFour (2005) identify three "big ideas" of a professional learning community: 1) ensuring that students learn; 2) a culture of collaboration; and 3)

a focus on results. These ideas cause a shift in thinking to the school reform movement represented by professional learning communities.

Shifting from the focus on *teaching* to one on *learning* means that in a professional learning community schools adopt the thinking that every student can learn at high levels and it becomes the responsibility of everyone at the school to ensure that all students learn. All the policies, practices, and decisions of the school are based on *learning* (Eaker, DuFour & Burnette, 2002).

In a professional learning community, a second shift occurs from the isolation of teachers and teaching practices to the collaborative culture that supports learning for all (DuFour, et al., 2002). For school communities to achieve a collective purpose with a collective commitment that will ensure all students learn, it becomes necessary to engage in continuous, job-embedded inquiry in a climate that not only allows shared learning, but also demands it. Getting teachers out of isolated classrooms, changing the notion of *my* students to *our* students and building trusting relationships that promote professional growth in a collective sense rather than evaluation of individuals are not easy tasks to accomplish. Structures, both physical and human, contribute to the success of establishing a collaborative culture. Kohn and Nance (2009) use the following chart to describe the differences in a collaborative culture from a top-down culture where the administrator mandates and proclaims edicts (2009):

Figure 2. Collaborative vs. Top-Down Cultures

In collaborative cultures …	In top-down cultures …
• Teachers support one another's efforts to improve instruction. • Teachers take responsibility for solving problems and accept the consequences of their decisions. • Teachers share ideas. As one person builds on another's ideas, a new synergy develops. • Educators evaluate new ideas in light of shared goals that focus on student learning.	• Teachers discourage challenges to the status quo. • Teachers depend on principals to solve problems, blame others for their difficulties, and complain about the consequences of decisions. • Ideas and pet projects belong to individual teachers; as a result, development is limited. • Ideas are limited to the "tried and true" – what has been done in the past.

Note: From "Creating Collaborative Cultures" by B. Kohn and B. Nance, 2009, *Educational Leadership, 67* (2), p. 70. Copyright 2009 by ASCD. Adapted with permission.

To focus on results demands a shift from the traditional decisions regarding the purchase of textbooks, resources, and manipulatives to the goal setting found in a professional learning community that reflects a study of student achievement. This focus causes the community of educators to put student outcomes as the basis for school improvement, commonly referred to as data-driven decision-making. It also causes teachers to critically examine how they are assessing the learning and strategies necessary to increase student learning. Stiggins, in *On Common Ground*, emphasizes that student assessments *for* learning take center stage over assessments *of* learning (DuFour, et al.,

2005). “Schools must systematically monitor student learning on an ongoing basis and use evidence of results to respond immediately to students who experience difficulty, to inform individual and collective practice, and to fuel continuous improvement” (DuFour, DuFour and Eaker, 2008, p. 18 – 19).

Many other notable researchers and practitioners besides DuFour and Hord have embraced, analyzed, critiqued, and defined the essential components of a professional learning community. Although semantics may differ among various authors, the common ground to be examined in this study is the collaborative culture identified by DuFour and the collective learning of which Hord speaks, both of which provide the infrastructure for reflective practices in a professional learning community.

Missouri Professional Learning Communities Project

The Missouri Professional Learning Communities Project (MO PLC), a state sponsored initiative for school-improvement, began during the 2003-2004 school year and evolved from the Missouri Accelerated Schools Project which had served as a school reform initiative for many years. The Missouri Professional Learning Communities Project began with staff located in four regional professional development centers. Each year since then, the interest and participation in the professional learning communities process has increased. During the 2007-2008 school year, the need for professional learning communities support resulted in nearly doubling the number of staff statewide with resources now available in each of the nine regional professional development centers (Missouri Department of Elementary & Secondary Education, 2008). During the 2010-2011 school year, despite total elimination of the state appropriation of professional development funds, increased federal support allowed for another scale-up of the MO

PLC initiative not only to provide services to more schools, but to better assess and monitor the implementation level of the schools involved in the professional learning communities process.

An external evaluator and notable researcher, Dr. Douglas Reeves of the Leadership and Learning Center, conducted an implementation audit of nineteen Missouri Department of Elementary & Secondary-sponsored initiatives in the spring of 2010 in an effort to identify which initiatives were having the greatest impact on student achievement. The report, presented to the State Board of Education in May 2010, states:

> Depth of implementation is most clearly related to gains in student achievement for **Professional Learning Communities, Missouri Preschool Program, the Missouri Reading Initiative and School-wide Positive Behavior Support**. Of all of the initiatives that were reviewed in this study, Professional Learning Communities appear to have the greatest potential impact on student achievement (Reeves, 2010, p. 1).

It is not enough to *play* PLC or *say* PLC. It is when the indicators of the professional learning communities process are deeply implemented--when the tenets and characteristics of a professional learning community become the "way we do business" every day-- that schools fully realize gains in student achievement.

Guiding Principles of the MO PLC Project?

The Missouri Professional Learning Communities Project conceptual framework draws from the research and resources of many nationally and internationally recognized educational experts--DuFour, Hord, Stiggins, Ainsworth, Reeves--to name just a few. The foundation of the MO PLC process is built on the three big ideas of DuFour's work –

ensuring that students learn, building a collaborative culture and a focus on results (DuFour, et al, 2005). In the MO PLC process, professional learning communities see student learning, not teaching, as their mission. The policies, instruction, curriculum, programs, professional development, and other functions of the school all support student learning. In maintaining this constant focus on learning, four questions become paramount:

1. What should students know and be able to do?
2. How will the school determine that students have learned the essential knowledge and skills?
3. How will the school respond when students do not learn?
4. How will the school respond when they already know it? (Missouri Department of Elementary & Secondary Education, 2008.)

During the 2009-2010 school year, the MO PLC Project began reviewing and revising the training curriculum. Modeling the training done with schools, the *essential learning outcomes* (ELO's) for the MO PLC Project were identified. The training curriculum strands that have been identified are: 1) foundation for learning community culture; 2) building leadership teams; 3)administrative leadership; 4) how effective teams work; 5) what students need to know and do; 6) assessment; 7) systematic process for intervention/student success; 8) continuous improvement.

The curriculum work for the MO PLC Project continues with discussions regarding scope and sequence for content delivery and the identification of indicators of proficiency. Additionally, due to the findings of the implementation audit by Reeves, work is also being done to develop assessment tools that will better inform resource

specialists and schools themselves as to the integrity and level of implementation of the professional learning communities process in each school.

The MO PLC school-improvement model focuses on increasing student achievement by building the capacity of school personnel to create and sustain the conditions that promote high levels of student and adult learning (Missouri Department of Elementary & Secondary Education, 2008).

Connecting Professional Learning Communities and Reflective Practice

In *The Fifth Discipline*, Senge (2006) identified a learning organization as a place "where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (p. 3). Newmann, Louis and Kruse consider the learning community in schools to include people from multiple constituencies at all levels who collaboratively and continually engage in reflective dialogue about students, teaching and learning, and identify related issues and problems (cited by Hord, 1997). Costa and Kallick (2000) suggest that "every school's goal should be to habituate reflection throughout the organization--individually and collectively--with teachers, students, and the school community" (Getting Into the Habit of Reflection section, , ¶ 3). Martin-Kniep (2008) recognizes the contributions that many have given to the notion of professional learning communities over the years, but she focuses on the collegial inquiry and reflective practice as the language and sustenance of professional learning communities. To "provide participants with the opportunity to articulate and analyze their thinking and their practices, reconcile individual questions and issues with organizational needs, compare contexts and situations and find

meaningful patterns, and search for the big picture without losing sight of particulars" (Martin-Kniep, 2008, p.6) exemplify an effective community of learning professionals.

The Reflective Practice Spiral articulated by York-Barr (2006) illustrates the hierarchical nature of reflective practice. The four levels are *individual reflective practice, reflective practice with partners, reflective practice in small groups* or *teams, and schoolwide reflective practice* (York-Barr, et al., 2006). To reach the greatest potential for reflective practice as a schoolwide improvement strategy, all levels must be understood and employed.

> The learning and positive growth that individuals experience from engaging in reflective practices provides an informed, experiential foundation on which to advocate and commit to expanding the practice of reflection beyond themselves. As we develop our individual reflection capacities, we can better influence the reflection that occurs with partners and in small groups or teams of which we are members. As more such groups become reflective in their work, the influence and potential of reflective practice spreads throughout the school (York-Barr, et al. p. 20).

In the *individual reflection* level, each educator has full responsibility and control. Individual reflection can include journaling, reviewing a case, reading literature, developing a portfolio, watching a video or listening to an audio of a taped lesson, or just purposeful and thoughtful pauses where the individual questions the *doing.* The benefits of individual reflective practice are realized as one becomes more aware of personal performance, develops personal purpose goals to reach desired improved outcomes and then seeks out the learning to improve practice (York-Barr, et al, 2006).

Reflective practice with partners can be done in all the ways mentioned above and more. Cognitive coaching, examining student work together, and more recently, online dialogue, are avenues to learn together. Reflecting about the issues of teaching and learning with another person, especially when trust is high, allows the individuals to learn both from and with each other. Humor is often an added bonus in partner reflection as it is easier to be reminded of keeping issues in perspective when sharing them with another person. In addition to the benefits realized by individual reflection, reflective practice with a partner brings a different perspective to the learning with decreased feelings of isolation and greater confidence and commitment to the work through stronger collegial relationships (York-Barr, et al., 2006).

The third level in the reflective practice spiral is *reflective practice in small groups and teams*. The potential impacts of reflection increases throughout the spiral, however so, too, do the personal risks (York-Barr, et al., 2006). Groups and teams are often assigned or mandated and relationships are often not a precursor to the appointment to a particular group or team. Both the number of people and the level of commitment of the individuals to the learning affect interactions and outcomes. Nonetheless, diversity can also bring greater learning and the ways in which teams can employ reflective practice includes all of the above and more. Action research, study groups, case-study reviews, book reviews, and data teams--all provide opportunities for teams to focus their learning for greater gains. Utilizing group reflective practice expands the benefits of individual and partner reflection by increasing the variety and amount of expertise and experiences that support increased and sustained improvements in practice (York-Barr, et al., 2006)

Schoolwide reflective practice offers the greatest potential for reflective practice to improve schools (York-Barr, et al., 2006). Systems-change and organizational reform thinking in the past decade have led schools to recognize that individual professional development is important; but to impact a whole system, change must be embraced and employed by the whole system. The structures, supports, policies and practices of the system must be evaluated for substantive and sustained school improvement. Schoolwide reflective practice can be utilized in a variety of ways--entire school staff being involved in study groups, interdisciplinary groups that create integrated student outcomes and cross-grade-level teams to explore and then present best practices for effective transitions. Every staff member does not have to be involved in every initiative or every learning activity of the school improvement efforts. What is important is that every person be committed to the learning that results from schoolwide reflective practice and that every person be immersed in the collaborative culture of continuous inquiry for school improvement. Benefits of schoolwide reflective practice expand learning opportunities through increased support of an expanded and strengthened network which leads to an enhanced sense of common purpose, with meaningful and sustained schoolwide school improvement efforts (York-Barr, et al., 2006).

The potential impact of reflective practice from the individual level through the schoolwide level is based on the assertion that the individual continues individual reflection, continues to share with a trusted partner, engages in team and group reflection, and feels ownership of the schoolwide reflective practices. In a learning community, each participant rigorously investigates his or her own practice, but also recognizes the active, open questioning and feedback from others as central to the

development of all the dispositions of practice of professional learning communities (Martin-Kniep, 2008). The Reflective Practice Spiral provides a framework to help ground the learning from the individual all the way through the system to maximize growth. As combinations of different groups come together to reflect and learn, relationships are strengthened, creating a stronger collaborative culture which in turn binds more closely the community of learning professionals (York-Barr et al., 2006).

Summary of Literature

To capitalize on the "most powerful strategy for sustained, substantive school improvement" (DuFour, et al, 2005, p.7) schools must invest in organizational system-change to become a professional learning community. An essential component of an effective learning community is a collaborative culture where collective and continuous inquiry drives the learning.

"The single most important factor for successful school restructuring and the first order of business for those interested in increasing the capacity of their schools is building a collaborative internal environment that fosters cooperative problem-solving and conflict resolution" (Eastwood & Seashore Louis, 1992, p. 215). Some consider a collaborative environment that of camaraderie – the social gatherings and celebratory activities that connect school communities emotionally. Some reference collaborative environments by consensus on operational guidelines and procedures such as a schoolwide behavior plan or academic policies. Others see collaborative environments representing staff organized into committees that function cohesively to manage the operations of the school from curriculum decisions to extra-curricular schedules. However, schools who are determined to positively influence student achievement must

not settle for congeniality, coordination, or "collaboration lite" (DuFour, 2003, p. 63). Congeniality, cooperation, consensus, and committees do not impart the necessary qualities of collaboration that transforms schools. DuFour (2003) defines collaboration as "the systematic process in which we work together to analyze and impact professional practice in order to improve our individual and collective results" (p. 63). Teachers cannot be invited or encouraged to collaborate. Collaboration must be the norm and embedded in the routine practices of the school. The skills and strategies for effective collaboration must be taught, monitored, and assessed. Structures and protocols for collaboration must be valued, guaranteed, and protected by school leaders.

A collective commitment for developing and sustaining a collaborative culture focused on learning with an action orientation on results begins at the individual participant level with purposeful and thoughtful pauses and moves toward the active, open dialogue of planning, doing, and reflecting at the schoolwide level. When a school has fully embraced and deeply implemented the tenets of the professional learning community process with a collaborative culture, the rewards of greater student achievement are realized.

Much of the research related to reflective practices from the past century involves the actions and behaviors of individuals in a solitary process. Great thinkers and great philosophers of the past like Dewey and Schőn have imparted much wisdom to and about the reflective practitioner – but their work focused on the *individual* who is learning by thinking – reflecting *in* or *on* his/her actions. With the recent surge of professional learning communities as a *systems approach* to school improvement, the emphasis on collaborative teaming for collective inquiry and decision-making, and the

popularity of coaching and mentoring for improving teacher effectiveness, there is a need to identify and study the social processes--the level and extent of reflective practices in schools.

CHAPTER 3

METHODOLOGY

Introduction

In the Methodology chapter, the design and procedures used in this study are described. The *Introduction* also includes a brief review of the purpose of the study and the questions studied.

In systems-change theory, the paradigm shift is from the individual to the whole system. Professional learning communities is a *systems-thinking* approach to school improvement. Reflective practice at its rudimentary level begins with the individual but has its greatest potential to influence the learning and growth in a school when schoolwide reflective practice becomes the embedded cultural norm of the school. (York-Barr, et al., 2006)

If reflective practice is a means by which teaching and learning improve and if professional learning communities provide a framework for system-wide school improvement, are the two interdependent? Are schools that are effectively functioning as professional learning communities also employing schoolwide levels of reflective practice? Conversely, are schools that are just beginning or are struggling in the professional learning communities process employing rudimentary levels of reflective practice?

Question for the Study

Is there a relationship between the level of reflective practice taking place in a school and the implementation level of the professional learning communities process in that school?

This study examined the relationship between the level and extent of reflective practice occurring in schools participating in the Missouri Professional Learning Communities Project at the minimal and at the deep implementation levels.

Research Design

The *bounded system* of case study research (Creswell, 1998) formed the basis of this mixed method study. Creswell (1998) defines the bounded system as bounded by time and place and the case or multiple cases being studied--a program, event, activity or individuals. This study is bounded by schools involved in the Missouri Professional Learning Communities Project at specific implementation levels in the professional learning communities process. The units of analysis for this case study will include multiple cases--ten schools that have been identified at two different points in the professional learning communities process.

Case study research has become the most widely used approach to qualitative research in education (Gall, et al., 2007). Gall, Gall and Borg (2007) also imply that the term *case study research* is sometimes used synonymously with qualitative research. Qualitative research is sometimes referred to as “interpretive research” (Gall, et al., p.31) and considered synonymous with constructivist epistemology. Due to the uniqueness and phenomenological aspects surrounding professional learning communities and reflective practice research, a qualitative approach will be used for a portion of this study.

Quantitative research as defined by Gall, et al., (2007), is “inquiry that is grounded in the assumption that features of the social environment constitute an objective reality that is constant across time and settings” (p. 650). This methodology describes and explains features of the observable behaviors of samples with numerical data and subjects

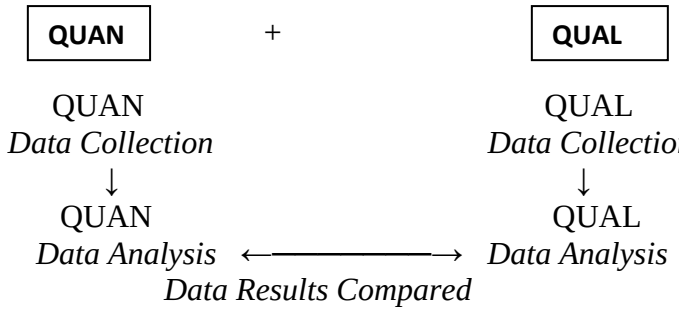
these data to statistical analysis (Gall, et al). In the quantitative portion of the study, survey results indicating the level and extent of reflective practices found in each of the selected schools have been described through a statistical analysis to identify frequency, distribution, means and standard deviations of each of the four subsets of the survey as determined by the Reflective Practice Spiral.

According to Roberts (2010), although the qualitative approach and the quantitative approach are grounded in different paradigms, it is possible to combine them into one study. "Qualitative and quantitative approaches in a single study complement each other by providing results with greater breadth and depth" (Roberts, p.145). Using quantitative methods to summarize large amounts of data provides a basis for conducting further study by confirming the findings through the rich descriptive detail that qualitative methods provide. Alternatively, a case study employing qualitative methods to study a particular phenomenon might be made stronger by partially validating one's qualitative analysis by using some form of quantitative data (Roberts, 2010).

Creswell (2009) provides a historical perspective of mixed methods procedures and supports the growing popularity of its use, particularly in the social and health sciences, as the problems studied in those arenas are often complex whereby neither quantitative nor qualitative research alone is sufficient. Additionally, the evolution of research has resulted in interdisciplinary teams of researchers with diverse areas of interest and expertise that has naturally led to the inclusion of more than one approach in a single study. Finally, the most compelling reason to conduct a mixed method study is that it provides greater insight and an expanded understanding of the research problem.

Mixed method research designs are classified according to two major dimensions: a) time order (i.e., concurrent versus sequential) and, b) paradigm emphasis (i.e., equal status versus dominant status). M*ixed method notation* (Creswell, 2009) uses shorthand labels and symbols to communicate the strategies employed in the mixed method procedures. "Quan" and "Qual" represent quantitative and qualitative, respectively. Capital letters – QUAN or QUAL -- denote priority or increased weight; lowercase letters denote lower priority or weight; a plus sign (+) indicates the concurrent collection of data; an arrow (→) represents a sequential collection of data (Creswell, 2009). This mixed-method study will utilize the Concurrent Triangulation Strategy with both quantitative data collection and qualitative data collection occurring in the same phase and being given equal weight as depicted by this model.

Concurrent Triangulation Design



(Creswell, 2009, p. 210)

The intent of this concurrent mixed methods study was to identify the extent and type of reflective practices employed by schools that are deeply implementing the professional learning communities process and the extent and type of reflective practices employed by schools that are minimally implementing or struggling to implement the professional learning communities process. T*riangulation* involves using multiple data sources in an investigation to produce understanding. Qualitative researchers often use

this technique to ensure that a study is rich, robust, comprehensive, and well developed (Cohen & Crabtree, 2006). The intent of collecting quantitative and qualitative data concurrently is to compare the two databases with equal weight for cross-validation or corroboration of data (Creswell, 2009).

Although the data collection and analysis for both methods of study was conducted at relatively the same time, to clearly distinguish between the two processes, the quantitative portion of the study will be referred to as Part 1 and the qualitative portion of the study will be referred to a Part 2.

Population and Sample

Teachers and administrators from schools that have previously participated or are currently participating in the Missouri Professional Learning Communities Project were the subjects of the study. The population to be studied is further bound by the identification of the level of implementation of the professional learning communities process. The population, therefore, for this study is the twenty-seven schools and four districts that participated in the implementation audit conducted for the Missouri Department of Elementary &Secondary Education by Reeves, external researcher and educational consultant, in February and March of 2010. Those schools were randomly selected from a population of over two hundred schools currently involved in the MO PLC Project. Using an implementation rubric, the schools in the study were assigned a numerical value of implementation after a rigorous assessment that included surveys, interviews and artifacts. Because Reeves's assessment of the implementation level included multiple sources of data and was a random selection of all schools participating in the MO PLC Project, it was assumed that his findings (implementation levels of the

professional learning communities process) are representative of the entire MO PLC Project population.

Sampling procedures

Given the nature of the research questions to be studied, a purposeful sampling of ten schools was selected from the population of twenty-seven schools and four districts that have previously been identified by levels of implementation. The sampling included five schools identified by Reeves' in the implementation audit to be *deeply implementing* the professional learning communities process and five schools that were only *minimally implementing* the professional learning communities process.

The design strategy of purposeful sampling is justified in this study as explained by Patton (2002). "Cases for study … are selected for study because they are 'information rich' and illuminative, that is, they offer useful manifestations of the phenomenon of interest: sampling, then, is aimed at insight about the phenomenon not empirical generalization from a sample to a population" (Patton, p. 40-41).

The phenomena to be studied are clearly articulated in the question of the study: Is there a relationship between the level and extent of reflective practice found in a school and the level of implementation of the professional learning communities process found in the school? Comparing the findings from the extreme ends of the professional learning communities implementation continuum provided the greatest opportunity for differences in the level and extent of reflective practices, should they exist.

The specific schools in this study were selected from the twenty-seven that participated in the Reeves audit. The number of faculty members participating in Part 1 (quantitative portion) was anticipated to be as many as two hundred respondents.

In Part 2 (qualitative portion) of the study, purposeful sampling was used to select two educators from each of the ten schools. Because leaders are key to the implementation of the professional learning communities process, the researcher requested that one of the participants be the administrator of the school. The other participant was an individual of the administrator's choice. The only selection criterion was that the individuals must have been with the school throughout the history of the school's participation in the Missouri Professional Learning Communities Project. If the principal had not been at the school for the duration, he/she was asked to select another person in an administrative position or a lead teacher who met the selection criteria. The specific phenomena of study were the reflective practices employed by the members of the professional learning community in the school, hence the selection criterion. Twenty educators comprised the sample for Part 2 of the study.

Instrumentation

In this study, an online survey was used to measure the relationship between the level of implementation of the professional learning communities process and the level and extent of reflective practices in each of the ten schools selected for the study. The first section of the survey instrument asked demographic information--i.e. gender, position, years of experience in education, etc. The second section of the survey instrument consisted of twenty-four items specific to acts or practices relative to the four subset areas of the Reflective Practices Spiral. Those four subsets are: individual reflective practices, partner reflective practices, team reflective practices and schoolwide reflective practices. The items on the survey are identified and described in detail by York-Barr, et al. (2006) as practices or activities that fall under the four levels. Response

choices-rarely, sometimes, frequently, usually- were scored using a Likert Scale of 1 – 4 respectively. The Likert Scale provided the opportunity to gather data on the extent or frequency with which each of these practices is used by the person taking the survey. In an effort to create a more valid survey, the phenomena being studied--"reflective practice"--were not used in the title or in any other part of the survey. Additionally, the items occurred in random order rather than in the progressive order of the Reflective Practice Spiral Theory (See Appendix B- *Professional Growth Activities Survey*).

At the same time, the level and extent of reflective practices was explored using semi-structured telephone interviews with twenty participants. These interviews were conducted with two purposefully selected individuals from each of the ten schools. The open-ended interview questions were specific to the four subsets of the Reflective Practice Spiral. Following the recommendation of Charmaz (2006), the interview questions were focused to the topic of the study and began with "collective practices first and, later, attend to the individual's participation in them and views of them" (p.29). Possible probes for each question were also included on the interview protocol to assist the researcher in eliciting clarity of responses yet remain focused on the topic. The interview protocol included a heading where the date, start time and end time, participant's name, position and amount of time in education was recorded. A set of instructions was included on the interview protocol that was shared verbatim with the interview participant at the onset. A brief "warm-up" question began the interview and a final thank you statement ended the interview (See Appendix C- *Interview Protocol for Professional Growth Activities).*

Because no instrument was found by the researcher that tested the phenomena of this study, the survey instrument and the interview protocol and questions were designed specifically for this study by the researcher. Therefore, guidelines outlined by Fink (2006) for pilot testing were used to check the clarity of the questions and to get feedback on the ease of use of the online survey. To pilot test with participants similar to those that will be participating in the actual study, two schools participating in the MO PLC Project with a minimum of twenty teachers in each school were asked to take the online survey. The principal and a teacher of his/her choice from each of the schools were solicited to participate in the pilot interview. These two schools were selected from the twenty-seven schools with an implementation score, but not part of the five minimally implementing or the five deeply implementing that participated in the study. Although the two schools did not participate in the actual study, having access to the implementation level of the schools in the pilot study allowed the researcher to practice data analysis using the statistical procedures.

Data Collection Procedures

To reduce bias by the researcher, the results of the Reeves' audit that identified the level of implementation of the twenty-seven schools and four districts were given to an associate to rank order from the school with the highest implementation level to the school with the least level of implementation. After ranking the schools, the associate was asked to select the top five (the schools deeply implementing the PLC process) and the lowest five (the schools minimally implementing the PLC process). The associate was then instructed to list the schools in a random order--keeping confidential the rank order that indicated the level of implementation of the schools.

A letter describing the purpose of the study and the requested commitment to participate was sent to each of the ten principals of the identified schools (See Appendix D--*Informational Letter).* An explanation of the instrumentation pieces--the whole-staff survey and the interviews by the administrator and a teacher of his/her choice--was outlined in the letter, as well as the proposed timeline for the study. The letter indicated that a telephone call would be made to ascertain whether the letter was received, to answer any questions and to get a verbal commitment to participate in the study. Included in the letter were copies of the consent forms for both the school leader interviews and the whole staff participation in the online survey (See Appendix E- *Informed Consent Form--Faculty Members* and Appendix F- *Informed Consent Form -- School Leaders).* Following the telephone contact, an email message indicating the principal's consent to participate in the study was sent. In the prior experience of the researcher, giving principals written information initially allows them to process the request, but the telephone follow-up provides the personal contact that generally results in a more positive participation rate. Sending the commitment communication electronically provided a fast and convenient way for a busy administrator to respond yet provided the researcher with the necessary paper trail of consent for the IRB process.

After agreement to participate was received, the researcher sent a different online survey link to each of the administrators and an electronic copy of the consent form to be completed by each staff member taking the survey. The administrator was asked to forward the survey link, the consent form and the instructions to all certified staff members. The survey consisted of twenty-four practices or acts that are indicators of reflective practice (See Appendix B-- *Professional Growth Activities Survey*). These

items reflect the four subsets of the Reflective Practice Spiral (York-Barr, et al). The survey items were placed in random order to prevent the participant from establishing a pattern relative to the four subsets.

Schools were initially given a two-week timeframe in which to complete the on-line survey. A reminder was sent after the first week. The timeframe was extended from a few days to an additional two weeks in a couple of the schools. Repeated reminders, thanking those who had participated in the survey and asking those who had not to please consider completing the survey, were sent to administrators in some schools where responses were light. The collection tool (Survey Monkey) allowed the researcher to monitor the number of responses. In two of the schools, follow-up telephone calls were made to the administrator to encourage participation.

Just before each survey was closed, a thank you note with a small monetary token of thanks was sent to the principals encouraging the purchase of special treats or snacks for the teachers' workroom. Generally, on the day the note was received, there was a final surge in survey responses. Included in the thank you note was a stamped addressed envelope in which the administrator placed all the completed consent forms and mailed them to the researcher.

Simultaneously to Part 1, within each of these ten purposefully selected schools, individual interviews were conducted with the administrator and a teacher of his/her choice. The only selection criterion was that both individuals must have been with the school throughout the history of the school's participation in the Missouri Professional Learning Communities Project. If the principal had not been at the school for the duration, he/she was asked to select another person in an administrative position or a lead

teacher who met the selection criteria. The specific phenomena of study were the reflective practices employed by educators in the professional learning community.

Through electronic communication, a specific day and time of the interviewee's choice was established. The day before the interview, the interview guide was sent to the administrator asking him/her to forward the questions to the other individual to be interviewed. In the past experience of the researcher, and given the topic of the study (reflective practices), it was appropriate to allow the interview participants to know (and reflect) on the questions before the interview occurs. The telephone interviews were digitally recorded, and then transcribed verbatim by an associate. There was no mention of the Reeves' implementation audit in any of the interviews. Throughout the data collection procedures, care was taken to ensure ethical treatment to all participants and confidentiality of responses.

Data Analysis

The Reflective Practice Spiral was the framework for analyzing both the Quantitative and Qualitative data. The four subsets – individual practices, partner practices, team practices and schoolwide practices – provided the themes by which the data were compared.

Quantitative Data

The findings of the quantitative data are presented in a table for each of the ten schools in each of the four subsets identified in the Reflective Practice Spiral. The *descriptive statistics* techniques as described by Gall, et al (2007) were used to organize and summarize the numerical data.

Table 1

Template for Online Survey Results by Question

	School 1	School 2	School 3	School 4	School 5	School 6	School 7	School 8	School 9	School 10
Question 1	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 2	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 3	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 4	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 5	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 6	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 7	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 8	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 9	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 10	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 11	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 12	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 13	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 14	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 15	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =

	School 1	School 2	School 3	School 4	School 5	School 6	School 7	School 8	School 9	School 10
Question 16	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 17	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 18	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 19	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 20	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 21	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 22	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 23	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Question 24	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =

The variability of the scores within each of the subsets was analyzed to determine the congruence of scores to the mean. Measures of central tendency for each of the predetermined subsets-- individual reflective practices, partner reflective practices, team reflective practices and schoolwide reflective practices --for each of the ten schools describe the average set of scores for that school. These data, both in part – (relative to each subset), and in whole – (all subsets combined), were used for further interpretation and continued study in the relational analysis with the levels of implementation of the professional learning communities process. To compare practices from one school to another, the schools were scored from 1 to 8 in each subset with 1 being the school with the lowest average score and 8 being the school with the highest score. These data ultimately provide the researcher with the answers to the questions proposed by the study.

Table 2

Template for Online Survey Results by Reflective Practice Spiral Subset

	School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
Individual - Quest 1 - 6	N = Mean = SD = .	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Partner – Quest 7 - 12	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Team/Group Quest 13-18	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =
Schoolwide Quest 19-24	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =	N = Mean = SD =

Qualitative Data

A content analysis with the pre-determined themes identified in the Reflective Practice Spiral subsets was used to code the interview transcriptions. Specific steps in the analysis of the transcriptions from the interviews included reading through all the data--in one setting-- without making any notes. The purpose of this step was to get an overall sense of the interview responses holistically. In the second reading, the two transcripts representing one school were read--at one setting--and general thoughts or reactions to the similarities or discrepancies between the two interviews were noted as the researcher used colored pencils to code the transcribed interviews. Each interview transcription was analyzed line by line and color-coded with colored pencils – i.e. blue for "Individual Reflective Practices", red for "Partner Reflective Practices", etc. This process was done for each of the ten sets of transcriptions.

The subsets described by York-Barr, et al., (2006) were the major codes and the practices listed in the survey served as the descriptors. A listing of *other* practices not identified by York-Barr, et al., but given in the responses was documented on the worksheet. These other practices were closely analyzed to determine if they were a reflective practice and to determine into which category they might fit.

Additionally, to increase reliability, two colleagues were trained in the same coding process. Following the steps outlined by the researcher, each rater independently coded the interview transcriptions. After the coding of each interview, papers were compared. Discrepancies in coding were minimal and easily resolved. The researcher then used the code book worksheet (See Appendix G) to collect and organize the data from the coded interviews.

The codes, descriptors and the responses in the interviews were then organized in a table separated by school and individual (See Table 3-Interview Coding Worksheet). The researcher looked at the data from both individuals in the school and the number of codes represented in the subsets to determine the strength area of the reflective practice subset --individual, partner, team or schoolwide reflective practices—of each school.

To further check for reliability of the coding and scoring process, the researcher conducted a follow-up review several weeks after the initial study. Four interview transcriptions were chosen at random, coded by the researcher using the same process as the original coding, and then scored using the coding worksheets. No differences in codes or scoring from the original results were found in the follow-up review.

Table 3

Template for Interview Coding Worksheet

Reflective Practices Summary – School 1 Interview A – (Role)		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices		
Partner Reflective Practices		
Team/Group Reflective Practices		
Schoolwide Reflective Practices		
Other Related Practices		
Interview B – (Role)		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices		
Partner Reflective Practices		
Team/Group Reflective Practices		
Schoolwide Reflective Practices		
Other Related Practices		

Merging the Data

The results of the interviews were used to triangulate the data, that is, to lend support or to show discrepancies with the results of the whole-staff surveys. Using the quantitative results, the schools were scored from least frequency of reflective practice to greatest frequency. Means and standard deviations in each of the four subsets for each of the schools have been displayed in a matrix.

Those findings provide the answer to the primary research question of this study: Is there a relationship between the level and extent of reflective practice found in a school and the level of implementation of the professional learning communities process found in the school?

Table 4

Template for Summary Matrix

SCHOOL:

Online Staff Survey	**School Leaders Interview Scores**	
Individual Ref Practices Mean =	Individual Ref Practices Tchr. Ldr. -- Admin --	
Partner Ref Practices Mean =	Partner Ref Practices Tchr. Ldr – Admin --	
Team/Group Ref Practices Mean =	Team/Group Ref Practices Tchr. Ldr -- Admin --	
Schoolwide Ref Practices Mean =	Schoolwide Ref Practices Tchr. Ldr – Admin –	**PLC Implementation Rank**
Strength Area:	Strength Area:	

Validating the Findings

Strauss and Corbin (1990) refer to the *theoretical sensitivity* or the personal quality of the researcher. This quality references the "ability to give meaning to data, the capacity to understand, and capability to separate the pertinent from that which isn't" (Strauss & Corbin, 1990, p.42). This attribute can come from many sources – professional literature, professional experiences and personal experiences (Strauss & Corbin). The literature review presented in this study, as well as educational readings over the course of this researcher's thirty years in education, provide a strong foundation for this study. Having served as a classroom teacher and a building-level administrator employing school improvement strategies aimed at increasing student achievement through developing collaborative cultures where teachers and administrators focus on shared learning provides the professional experience that supports the study. Additionally, as the statewide director of the Missouri Professional Learning Communities Project, this researcher has a keen interest in examining the reflective practices found in schools at various stages in the professional learning communities process.

Given the uniqueness of this study's theoretical constructs and the mixed method strategy, Lincoln and Guba's (1985) Evaluative Criteria provide appropriate parameters for considering the trustworthiness of the study.

- Credibility – confidence in the 'truth' of the findings
- Transferability – showing that the findings have applicability in other contexts

- Dependability – showing that the findings are consistent and could be repeated
- Confirmability – a degree of neutrality or the extent to which the findings of a study are shaped by the respondents' and not researchers' bias, motivation or interest (cited by Cohen & Crabtree, 2006, ¶ 1).

Multiple sources of data (triangulation) ensure greater credibility and confirmability. Additional techniques for establishing confirmability include *reflexivity*, which is the attitude of careful systematic attention to the context of the research (Cohen & Crabtree, 2006). Reflexivity refers to the influence the researcher's past experiences may have on the process of collecting and interpreting the findings (Cohen & Crabtree). In keeping with the notion of greater learning is in the *thinking about the doing* (Dewey, 1933), the researcher kept a reflexive journal recording the methodological steps of the study and some of the challenging logistics of the study (Lincoln & Guba, cited by Cohen & Crabtree, 2006). Use of a reflexive journal throughout this study, from the approval of the study through the presentation of the findings, allowed the researcher to reflect as the study developed. After all, "reflection is the practice or act of analyzing our actions, decisions, or products by focusing on the process of achieving them" (Killion & Todnem, 1991, p.15). The focus on improvement and learning has been the goal of this researcher and the motivation for this study from its conception.

CHAPTER 4

RESULTS

This chapter presents the findings of the level and extent of reflective practices of ten schools involved in the Missouri Professional Learning Communities process. These ten schools represent implementation of the professional learning communities process at two levels. Five of the schools are minimally implementing the professional learning communities process and five are deeply implementing the professional learning communities process. The results of this study were used to answer the research question: Is there a relationship between the level and extent of reflective practice found in a school and the level of implementation of the professional learning communities process found in the school?

Quantitative Data

Both quantitative and qualitative data were collected concurrently. The numerical data shown in Table 1 represent the findings in the whole-staff online survey. To protect the anonymity of the school, the school name has been removed and is referenced only by a letter. The number of respondents (N=) to the online survey is shown for each school. Despite repeated contact and encouragement, the number of responses from two of the schools-- (School B and School C) --was less than 35% of the teaching staff and therefore was not considered as valid data representative of the whole staff. The response rate (RR) indicates the percent of staff completing the survey as compared to the total number of teaching staff. For each question of the survey, the mean score (the number representing the average from the Likert Scale) and the standard deviation (the statistical measure indicating the variance among the responses) are given.

Table 1-A

Online Survey Results by Questions—Mean, Standard Deviation, N and Response Rates

	School A N = 8 RR = 44%	School B N = 4 RR = 22%	School C N = 3 RR = 8%	School D N = 20 RR = 67%	School E N = 17 RR = 53%	School FN = 23 RR = 47%	School G N = 20 RR = 65%	School H N = 23 RR = 72%	School I N = 10 RR = 77%	School J N = 25 RR = 56%
Q 1 Mean = SD =	2.25 0.9682	2.0 0.7071	2.6667 0.4714	2.25 0.8874	2.352 0.8360	2.4783 0.8272	2.1 0.5385	2.6957 0.7480	2.1 0.5385	2.2 0.7483
Q 2 Mean = SD =	1.625 0.6960	2.5 0.8660	1.6667 0.4714	1.85 0.8529	1.4706 0.6056	1.6957 0.7480	1.6 0.5831	2.0 0.8847	1.6 0.9165	1.6 0.6928
Q 3 Mean = SD =	2.0 0.7071	2.25 1.0897	2.6667 1.2472	1.5 0.8062	1.8824 0.8319	1.6522 0.8652	2.1 0.8307	1.6522 0.8134	1.9 0.7000	1.84 0.8800
Q 4 Mean = SD =	3.0 0.7071	3.0 0.7071	4.0 0.0000	2.85 0.5723	2.7059 0.7487	2.6522 0.6331	2.8 0.7483	3.1304 0.6118	2.7 0.4583	3.2 0.6928
Q 5 Mean = SD =	2.375 1.1110	1.75 0.4330	2.0 0.8165	1.6 0.7348	1.4118 0.5999	1.6087 0.5702	1.85 0.7921	2.1739 0.9624	1.4 0.4899	1.88 0.9516
Q 6 Mean = SD =	1.0 0.0000	1.5 0.5000	1.0 0.0000	1.3 0.6403	1.0 0.0000	1.0435 0.2039	1.1 0.3000	1.1739 0.3790	1.0 0.0000	1.12 0.3250
Q 7 Mean = SD =	2.375 0.8570	2.5 0.5000	3.0 0.0000	2.2 0.9274	1.8824 0.8998	2.3043 0.7480	2.15 0.5723	2.8696 0.7404	2.1 0.5385	2.4 0.8000
Q 8 Mean = SD =	2.5 1.1180	2.25 0.4330	3.0 0.8165	1.95 0.9206	1.7059 0.8235	1.8696 0.7970	2.05 0.8047	2.3913 1.0525	1.7 0.7810	2.16 1.0072
Q 9 Mean = SD =	1.75 0.9682	2.25 0.4330	2.3333 0.4714	1.55 0.6690	1.9412 0.7252	1.5217 0.6507	2.0 0.5477	2.3478 0.8134	2.4 0.4899	1.56 0.6375
Q10 Mean = SD =	1.375 0.4841	1.25 0.4330	1.3333 0.4714	1.4 0.5831	1.1176 0.3222	1.2609 0.5289	1.4 0.5831	1.8261 0.8157	1.2 0.4000	1.68 0.9261
Q 11 Mean = SD =	1.625 0.4841	2.5 1.1180	1.0 0.0000	1.45 0.8047	1.3529 0.6809	1.0870 0.2818	1.65 0.7921	1.7391 0.9876	1.0 0.0000	1.72 1.077
Q 12 Mean = SD =	1.75 0.6614	3.0 0.7071	2.6667 0.9428	2.5 0.7416	2.1176 1.0783	2.6522 0.8652	1.85 0.6538	2.6522 0.8652	2.8 0.6000	2.76 0.8616
Q 13 Mean = SD =	1.75 0.8292	2.5 0.8660	3.6667 0.4714	2.5 0.7416	2.3529 1.1345	2.6087 0.9664	2.25 0.8292	2.9130 0.9741	2.5 0.8062	2.92 0.8908
Q 14 Mean = SD =	1.875 1.1659	2.75 0.4330	2.0 0.8165	2.9 0.9434	2.5294 1.0357	3.0 0.9780	2.3 0.8426	3.1304 1.0344	2.3 1.2689	3.4 S0.6928

Q 15 Mean = SD =	2.0 0.8660	2.0 0.07071	2.6667 0.4714	2.3 1.0050	2.3529 1.0256	2.5217 1.1371	2.5 0.9421	3.0870 1.0597	1.7 0.9000	2.88 0.9516
Q 16 Mean = SD =	2.625 0.9922	2.5 0.5000	3.3333 0.4714	2.45 0.8646	2.5882 0.9737	3.1304 0.7970	2.45 0.8047	3.2174 1.0197	2.5 1.0247	3.04 0.7736
Q 17 Mean = SD =	2.5 1.0000	2.5 0.5000	3.6667 0.4714	2.8 0.7483	2.6471 1.0815	3.1739 0.9161	2.5 0.7416	3.3913 0.7655	3.0 0.07746	3.28 0.7756
Q 18 Mean = SD =	2.5 0.8660	3.25 0.4330	3.3333 0.4714	2.55 0.7399	2.5294 1.0910	2.9130 0.8804	2.45 0.8047	2.8261 0.9161	2.8 0.9798	3.24 0.9069
Q 19 Mean = SD =	2.125 0.7806	3.0 1.0000	2.3333 0.4714	2.1 0.9950	2.4118 0.9113	2.4348 0.8249	2.55 0.9734	3.1304 0.9915	2.2 01.0770	3.04 0.9992
Q 20 Mean = SD =	1.375 0.4841	1.75 0.8292	1.3333 0.4714	1.4 0.5831	1.6471 1.0256	1.9565 0.9545	1.75 0.7665	2.1739 0.9161	1.5 0.5000	2.16 0.8800
Q 21 Mean = SD =	2.125 1.1659	2.75 0.8292	2.0 0.0000	2.6 1.2410	2.7059 1.0155	3.5652 0.5768	2.25 0.8292	3.1304 1.0344	2.0 0.8944	3.32 0.7332
Q 22 Mean = SD =	2.0 1.0000	3.0 0.7071	2.6667 0.4714	2.3 0.7810	2.1765 0.7848	2.5652 0.9244	2.15 0.7921	2.7826 1.0614	2.3 0.6403	2.92 0.6882
Q 23 Mean = SD =	1.125 0.3307	2.25 0.8292	3.3333 0.9428	2.4 0.6633	2.8824 0.6758	3.0 0.8341	1.55 0.5895	2.4348 0.7704	1.9 0.3000	1.72 0.6645
Q 24 Mean = SD =	1.375 0.6960	1.75 0.8292	3.0 1.4142	1.75 0.7665	2.0 0.7670	2.6957 1.0398	1.65 0.6538	2.2609 1.1119	1.7 0.6403	2.04 1.0385

Survey Results

In the online survey, the Likert Scale was applied to the responses as follows: 1 = rarely; 2 = sometimes; 3 = frequently; 4 = usually. Therefore, the question with the highest score would indicate the reflective practice that most respondents would consider used most frequently. Conversely, the lowest mean score would indicate the practice performed least often.

In the eight schools whose scores are being analyzed, all of them show Question 6 --"Video tape instruction for personal review of practices"--as the lowest score or the practice most "rarely" used. In two of the eight schools, Question 4–"Purposeful and thoughtful pauses during and after the teaching/learning process"-- is the practice with the highest score; in two schools, Question 17–"Share effective instructional strategies in collaborative teams"-- had the highest score; in two schools Question 14–"Team with colleagues of similar grade level assignments (horizontal teaming)"--had the highest score; in the remaining two schools, Question 21–"Participate in schoolwide data teams" --had the highest average in one and Question 23–"Engage in group book studies"--had the highest average in the other school.

Although the questions were randomly arranged in the online survey, for purposes of analyzing, the questions are shown in Figure 3 rearranged and numbered in the four subsets of the Reflective Practice Spiral. Table 1B represents the whole staff online survey results for each of the eight schools with the questions in ascending order from the practice with the lowest score to the practice with the highest average.

Figure 3

Survey items grouped by Reflective Practice Subset

Individual Reflective Practices
Q 1 -- Read and critique educational literature
Q 2 – Journal
Q 3 -- Add artifacts to a professional portfolio
Q 4 -- Purposeful and thoughtful pauses during and after the teaching/learning process
Q 5 -- Conduct individual action research
Q 6 -- Video-tape instruction for personal review of practices
Partner Reflective Practices
Q 7 -- Discuss educational literature with a peer
Q 8 -- Engage in cognitive coaching
Q 9 -- Participate in peer observations
Q 10 -- Conduct action research with a teaching partner
Q 11 -- Engage in on-line/distant chats or discussions with another educator
Q 12 -- Examine student work with a colleague
Team/Group Reflective Practices
Q 13 -- Team with colleagues of similar subject assignments (vertical teaming)
Q 14 -- Team with colleagues of similar grade level assignments (horizontal teaming)
Q 15 -- Develop, score and discuss common assessments in collaborative teams
Q 16 -- Review curriculum and course standards in collaborative teams
Q 17 -- Share effective instructional strategies in collaborative teams
Q 18 - Review individual student case studies (shared student) with colleagues
Schoolwide Reflective Practices
Q 19 -- Participate in goal-setting with interdisciplinary teams (teams across grade/content areas)
Q 20 -- Participate in schoolwide action research
Q 21 -- Participate in schoolwide data teams
Q 22 - Engage in schoolwide action planning as a result of shared professional learning activities
Q 23 -- Engage in group book studies
Q 24 -- Engage in study groups with schoolwide focus

Table 1 B

Online Survey Results by Questions – Ranked Order (lowest to highest practice)

	School A N = 8		School D N = 20		School E N = 17		School F N = 23		School G N = 20		School H N = 23		School I N = 10		School J N = 25
Q6 M =	1	Q6 M =	1.3	Q6 M =	1	Q6 M =	1.0435	Q6 M =	1.1	Q6 M =	1.1739	Q6 M =	1	Q6 M =	1.12
Q23 M =	1.125	Q10 M =	1.4	Q10 M =	1.1176	Q11 M =	1.087	Q10 M =	1.4	Q3 M =	1.6522	Q11 M =	1	Q9 M =	1.56
Q10 M =	1.375	Q20 M =	1.4	Q11 M =	1.3529	Q10 M =	1.2609	Q23 M =	1.55	Q11 M =	1.7391	Q10 M =	1.2	Q2 M =	1.6
Q20 M =	1.375	Q11 M =	1.45	Q5 M =	1.4118	Q9 M =	1.5217	Q2 M =	1.6	Q10 M =	1.8261	Q5 M =	1.4	Q10 M =	1.68
Q24 M =	1.375	Q3 M =	1.5	Q2 M =	1.4706	Q5 M =	1.6087	Q11 M =	1.65	Q2 M =	2	Q20 M =	1.5	Q11 M =	1.72
Q2 M =	1.625	Q9 M =	1.55	Q20 M =	1.6471	Q3 M =	1.6522	Q24 M =	1.65	Q5 M =	2.1739	Q2 M =	1.6	Q23 M =	1.72
Q11 M =	1.625	Q5 M =	1.6	Q8 M =	1.7059	Q2 M =	1.6957	Q20 M =	1.75	Q20 M =	2.1739	Q8 M =	1.7	Q3 M =	1.84
Q9 M =	1.75	Q24 M =	1.75	Q3 M =	1.8824	Q8 M =	1.8696	Q5 M =	1.85	Q24 M =	2.2609	Q15 M =	1.7	Q5 M =	1.88
Q12 M =	1.75	Q2 M =	1.85	Q7 M =	1.8824	Q20 M =	1.9565	Q12 M =	1.85	Q9 M =	2.3478	Q24 M =	1.7	Q24 M =	2.04
Q13 M =	1.75	Q8 M =	1.95	Q9 M =	1.9412	Q7 M =	2.3043	Q9 M =	2	Q8 M =	2.3913	Q3 M =	1.9	Q8 M =	2.16
Q14 M =	1.875	Q19 M =	2.1	Q24 M =	2	Q19 M =	2.4348	Q8 M =	2.05	Q23 M =	2.4348	Q23 M =	1.9	Q20 M =	2.16
Q3 M =	2	Q7 M =	2.2	Q12 M =	2.1176	Q1 M =	2.4783	Q1 M =	2.1	Q12 M =	2.6522	Q21 M =	2	Q1 M =	2.2
Q15 M =	2	Q1 M =	2.25	Q22 M =	2.1765	Q15 M =	2.5217	Q3 M =	2.1	Q1 M =	2.6957	Q1 M =	2.1	Q7 M =	2.4
Q22 M =	2	Q15 M =	2.3	Q1 M =	2.352	Q22 M =	2.5652	Q7 M =	2.15	Q22 M =	2.7826	Q7 M =	2.1	Q12 M =	2.76
Q19 M =	2.125	Q22 M =	2.3	Q13 M =	2.3529	Q13 M =	2.6087	Q22 M =	2.15	Q18 M =	2.8261	Q19 M =	2.2	Q15 M =	2.88
Q21 M =	2.125	Q23 M =	2.4	Q15 M =	2.3529	Q4 M =	2.6522	Q13 M =	2.25	Q7 M =	2.8696	Q14 M =	2.3	Q13 M =	2.92
Q1 M =	2.25	Q16 M =	2.45	Q19 M =	2.4118	Q12 M =	2.6522	Q21 M =	2.25	Q13 M =	2.913	Q22 M =	2.3	Q22 M =	2.92
Q5 M =	2.375	Q12 M =	2.5	Q14 M =	2.5294	Q24 M =	2.6957	Q14 M =	2.3	Q15 M =	3.087	Q9 M =	2.4	Q16 M =	3.04
Q7 M =	2.375	Q13 M =	2.5	Q18 M =	2.5294	Q18 M =	2.913	Q16 M =	2.45	Q4 M =	3.1304	Q13 M =	2.5	Q19 M =	3.04
Q8 M =	2.5	Q18 M =	2.55	Q16 M =	2.5882	Q14 M =	3	Q18 M =	2.45	Q14 M =	3.1304	Q16 M =	2.5	Q4 M =	3.2
Q17 M =	2.5	Q21 M =	2.6	Q17 M =	2.6471	Q23 M =	3	Q15 M =	2.5	Q19 M =	3.1304	Q4 M =	2.7	Q18 M =	3.24
Q18 M =	2.5	Q17 M =	2.8	Q4 M =	2.7059	Q16 M =	3.1304	Q17 M =	2.5	Q21 M =	3.1304	Q12 M =	2.8	Q17 M =	3.28
Q16 M =	2.625	Q4 M =	2.85	Q21 M =	2.7059	Q17 M =	3.1739	Q19 M =	2.55	Q16 M =	3.2174	Q18 M =	2.8	Q21 M =	3.32
Q4 M =	3	Q14 M =	2.9	Q23 M =	2.8824	Q21 M =	3.5652	Q4 M =	2.8	Q17 M =	3.3913	Q17 M =	3	Q14 M =	3.4

Survey Results by Reflective Practice Subset

The results of the survey were grouped in the subsets of the Reflective Practice Spiral and the mean and standard deviation were again determined. Table 2 A indicates the scores in each of the eight schools. From this table, the subset of each school with the highest average can be determined; hence the results indicate which of the four level of the Reflective Practice Spiral the whole staff has indicated as the practices used most often.

Table 2 A

Online Survey Results by Reflective Practice Spiral Subsets

	School A N = 8	School D N = 20	School E N = 17	School F N = 23	School G N = 20	School H N = 23	School I N = 10	School J N = 25
Individual - Quest 1 – 6 Mean =	2.0417	1.8917	1.8039	1.8551	1.925	2.1377	1.7833	1.9733
SD =	0.9991	0.9201	0.886	0.8727	0.8383	0.9941	0.7977	0.9794
Partner – Quest 7 – 12 Mean =	1.8958	1.8417	1.6863	1.7826	1.85	2.3043	1.8667	2.0467
SD =	0.8953	0.885	0.863	0.8743	0.7147	0.9751	0.826	0.9956
Team/Group Quest 13-18 Mean =	2.2083	2.5833	2.5	2.8913	2.3667	3.0942	2.4667	3.1267
SD =	1.0198	0.8716	1.0641	0.9831	0.836	0.9846	1.0562	0.8587
Schoolwide Quest 19-24 Mean =	1.6875	2.0917	2.3039	2.7029	1.9833	2.6522	1.9333	2.5333
SD =	0.8934	0.9574	0.968	1.003	0.8562	1.0608	0.7717	1.0306

The subset with the overall highest scores is the Team/Group Subset. However, to better compare practices from one school to another, the schools were scored from 1 to 8 in each subset with 1 being the school with the lowest average score and 8 being the school with the highest score. School H had the highest score in two of the four subsets–Individual, Partner–and scored next to the highest in the other two subsets–Team/Group and Schoolwide. Conversely, School A scored lowest in two of the four subsets–Team/Group and Schoolwide–but scored next to the highest in Individual and scored third from the highest in Partner Practices.

Table 2 B

Online Survey Results by Reflective Practice Spiral Subsets in Rank Order

Individual Reflective Practices

1	2	3	4	5	6	7	8
School I N = 10	School E N = 17	School F N = 23	School D N = 20	School G N = 20	School J N = 25	School A N = 8	School H N = 23
1.7833	1.8039	1.8551	1.8917	1.925	1.9733	2.0417	2.1377

Partner Reflective Practices

1	2	3	4	5	6	7	8
School E N = 17	School F N = 23	School D N = 20	School G N = 20	School I N = 10	School A N = 8	School J N = 25	School H N = 23
1.6863	1.7826	1.8417	1.85	1.8667	1.8958	2.0467	2.3043

Team/Group Reflective Practices

1	2	3	4	5	6	7	8
School A N = 8	School G N = 20	School I N = 10	School E N = 17	School D N = 20	School F N = 23	School H N = 23	School J N = 25
2.2083	2.3667	2.4667	2.5	2.5833	2.8913	3.0942	3.1267

Schoolwide Reflective Practices

1	2	3	4	5	6	7	8
School A N = 8	School I N = 10	School G N = 20	School D N = 20	School E N = 17	School J N = 25	School H N = 23	School F N = 23
1.6875	1.9333	1.9833	2.0917	2.3039	2.5333	2.6522	2.702

Qualitative Data

While schools were participating in the online survey, a telephone interview was conducted with the principal and a teacher leader from each of the schools. The interview protocol was closely followed (see Appendix C), the interviews were digitally recorded and then transcribed verbatim. The code book was established (see Appendix G) using the indicators from the Reflective Practice Spiral which mirrored the items found on the online survey. It was the intent of the researcher to use the interviews to either lend support or show a discrepancy between the perceptions of the school leaders and the responses of the whole staff on the twenty-four reflective practices described in the Reflective Practice Spiral.

The transcribed interviews were coded by two trained colleagues and then the results of their coded interviews were compared to the researcher's coded interviews. The few discrepancies in scoring were discussed and consensus was reached on each coded interview. The coded practices were placed into the Code Book worksheet (see Appendix G). The data from the coded worksheets were then transferred into Table 3 to depict the level and extent of reflective practices as perceived by the principal and teacher leader in each of the eight schools. Schools are identified by number, and the interviews are labeled "A" for principal and "B" for teacher leader.

The interview protocol was sent to each interviewee a couple of days before the scheduled interview to serve as a reflection instrument to assist the school leaders in the interview process. In eighteen of the twenty interviews conducted, the interviewee referenced the interview protocol during the interview simply going through the practices listed on the protocol indicating whether or not the practice was used in the school. A

couple of interviewees responded to the questions by giving the number of the practice listed on the interview protocol. The probe for question one was revised, asking the school leader to identify the practice he/she felt was used most often. Those responses are shown in bold in Table 3. The interviewee was asked to identify the practice that he/she felt has had the greatest impact on student achievement. Those responses are underlined in Table 3. Both of these practices were weighted (given double points) in the subset total. The rationale behind the weighted scoring is two-fold. First, when an individual is able to name a specific practice as one that he/she feels is used most often or one that he/she believes has had the greatest impact on improving student achievement, a deeper level of thought and commitment to the response is required. Secondly, since one of the research questions to be answered is specific to the level and extent of reflective practices, having school leaders identify the practice perceived to be employed most often is significant to the study. Similarly, identifying the practice having the most impact on student achievement also indicates a perception of a significant level and extent of that practice.

To further support the level and extent of practices used in the school, the interviewee was asked to name a practice not being used, but one that he/she felt might be a good practice to consider in the future. These responses are shown in Table 3 in italicized print. Those practices were not awarded points in the scoring, but were used in the analysis of the results which are further explained in Chapter 5. The total number of responses given and the reflective practice level of the responses perceived to be important but not being done, provided the researcher with insight into the vision of the school's leaders, as well as possible future work in the school.

At the end of each interview, the researcher asked the interviewee if there were any other professional development practices that he/she felt to be important or impacting their school that had not already been identified or discussed. Those additional practices, which are also further discussed in Chapter 5, are listed in Table 3 under “Other Related Practices”.

Table 3 A

Interview Coding Worksheet - School A

Interview A –		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	Total Individual = 0
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	**1. "What I see a lot of my teachers doing right now is that a lot of them get together and discuss the students' work."*** Total Partner = 2
Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	1. "They talk amongst each other and they collaborate with other. At the high school level, the math teachers are talking together. With such a small group of math teachers, I see the math and the science teachers collaborating together because of the common bond there." (Made the most difference?) <u>" I would have to go with teaming."</u>** Total Team = 2

Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	1. *"I think we are lacking in our goal setting of expectations."**** 2. *"The other thing is … professional development. They don't want to go. They don't like that to be an important thing."**** Total Team = 0
Other Related Practices		

Interview B –		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	Total Individual = 0
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	1. "I only do number 7 - examining student work with a colleague." Total Partner = 1

Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	1. "Everyone is involved, but we are fairly small, so we have difficulty with the PLC concepts, so we try to do the best we can with that (collaborative teaming)." 2. "**Sharing instructional practices, I think we do that quite a bit. I think that's one that almost everybody participates in**."* 3. *"I don't think this writing, scoring and discussing common assessments applies to us here because we're not teaching the same subject areas in the same grade levels."**** 4. *"Reviewing curriculum and course standards is something we are going to concentrate on this year." "We don't have any current written curriculum."**** Total Team = 3
Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	1. "I don't know if we'd call them data teams, but we have teams that meet and go over all of our MAP data and our other scores." 2. *"Something that we don't do that we probably should do is action research."**** Total Schoolwide = 1
Other Related Practices		
Added Notes:		In this interview, no practice was identified as "most beneficial".

Table 3 B

Interview Coding Worksheet – School D

Interview A –		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	1. "We have an action research class here in my building. It is optional so not everyone participates." Total Individual = 1
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	*1. "I'd like to get into some peer observations." "I wish we would do more peer scoring of our common assessments."**** **2. "We have a mentor teacher or a coach for our reading program. She acts as a lead teacher. That has been hugely successful."*** Total Partner = 2
Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	1. "We haven't started scoring them, but we have written common assessments." 2. "We participate in curriculum camps." Total Team = 2
Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research	1. <u>"So, I guess what is working best is the schedule that we have for time provided to work in our PLC groups. It's the number one reason we are successful</u>

	3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	because we have embedded time."** 2. "We have at least 3 or 4 book studies going on. They come from within the PD tracks." Total Schoolwide = 3
Other Related Practices		1. … our professional development committee get together and decide what these 4- 5 topics are going to be. We call it a PD track … and the track is actually taught by us … so we find experts on the staff and they teach us … Total Other = 1

Interview B –		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	1. "We are reading and analyzing educational literature and several teachers do book studies." 2. *"I don't think we are video-taping our own teaching … and I think that would be really helpful."**** Total Individual = 1
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	1. "Discussing educational literature with a peer, we do that, as well". 2. "Examining student work with a colleague -- Since we started the PLC process, we've done a lot more of that." Total Partner = 2

Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	1. "Collaborative teaming, that has been a really, really big thing here." "I think the collaborative teaming has had the most impact."** 2. "Writing, scoring and discussing common assessments is another big one." 3. "Reviewing the curriculum and/or course standards with a partner or a team, that's a big one." 4. "Sharing instructional practices with a peer or in a team, that's a big one." Total Team = 5
Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	1. "Developing data teams, we also do that a lot." **2. "Participating in needs-based school wide professional development is done in a new process where we get to choose a PD track… I think is very good and more scheduled and involves everyone."*** Total Schoolwide = 3
Other Related Practices		

Table 3 C

Interview Coding Worksheet – School E

Interview A –		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	1. (The practices used by all the teachers were) … reading and analyzing educational literature. 2. *"The ones we have not done are definitely the video-taping or journal writing."**** 3. "The practices used by all the teachers were purposeful pauses during their teaching …" Total Individual = 2
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	1. (The practices used by all the teachers were) … discussing educational literature with a peer. 2. (The practices used by all the teachers were) … examining student work with a colleague. Total Partner = 2
Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	1. "We have horizontal and vertical teams - there's all kinds of people there to help." 2. (The practices used by all the teachers were) … collaborative teaming at grade level. (What has been most beneficial to improvement**?) "Definitely number 12, the collaborative teaming. That was a huge factor in becoming a professional learning community. And then the other one is 19 - the data team work."*** 3. (The practices used by all the teachers were) … writing, scoring, and discussing common assessments. 4. (The practices used by all the

		teachers were) …reviewing curriculum and/or course standards with a partner or team. 5. (The practices used by all the teachers were) … sharing instructional practices with a peer or in a team Total Team = 6
Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	1. (The practices used by all the teachers were) … setting and monitoring goals for self and others. 2. (The practices used by all the teachers were) …<u>developing data teams that meet regularly to analyze and make decisions based on the data."** (Biggest impact)</u> 3. (The practices used by all the teachers were) … participate in needs-based professional development with ongoing discussions and continuous improvement goals. 4. (The practices used by all the teachers were) … participating in a book study. Total Schoolwide = 5
Other Related Practices		1. "We started implementing school-wide positive behavior support last year." Total Other = 1

Interview B –		
Category:	**Definition:**	**Examples:**

Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	1. "We read and analyze literature." 2. *(What is not being done that would be good for Hawthorne?) Videotaping, journal writing and peer observations.**** 3. "We use thoughtful pausing during our teaching and learning. Total Individual = 2
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	1. " … and we discuss literature with a peer." 2. "We examine student work …" Total Partner = 2
Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	1. "… and collaborative teaming …" <u>"Collaborative teaming and data teams have been the most useful</u>."** 2. " … and writing, scoring and discussing common assessments." Total Team = 3
Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	1. "… and data teams." "Collaborative teaming and data teams have been the most useful."** 2. "We do book studies …" Total Schoolwide = 2
Other Related Practices		

Table 3 D

Interview Coding Worksheet – School F

Interview A –		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	Total Individual = 0
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	Total Partner = 0
Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	1. *"Something we never really talked about is common grading. I think we'll get to that in our data teams. I think it'll help bring our grade level teams together."**** Total Team = 0
Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams 4. Engage in schoolwide action	1. "We trained our coaches the first year … and then we put staff into data teams."

	planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	Total Schoolwide = 1
Other Related Practices		1. "We have evolved … reading coaches in the building … and then a math coach. So, a lot of our professional growth has been in-house." 2. "We've been a MIM school for 3 or 4 years and we've been able to do a lot of additional professional growth that we wouldn't have been able to do without MIM." 3. (Most impact in improving teaching and learning?) <u>I would say following the Reading First model has made the most difference."**</u> Total Other = 4

Interview B –		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	1. All of us do" (read and analyze educational literature) Total Individual = 1
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	1. "Most do" (discussing literature with a peer) 2. "Well, we are all being coached, all do." 3. "Most" (observe their peers). 4. "All of us" (conduct action research) 5. "We all do this" (examining student work with a colleague)

		Total Partner = 5
Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	1. "All do" (collaborative teaming) 2. "All do" (writing, scoring and discussing common assessments) 3. "All do" (reviewing curriculum and course standards with a partner or team) 4. "Most do" (sharing instructional practices with peer or team) Total Team = 4
Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	1. "All do" (data teams that meet regularly to analyze and make decisions on data) (Most beneficial?) <u>I would definitely say working in data teams</u>.** 2. "All do" (participate in needs-based schoolwide professional development) 3. "All do" (participate in a book study) Total Schoolwide = 4
Other Related Practices		1. *"I would like to see more along the lines of communication through the district website."**** Total Other = 0

Table 3 E

Interview Coding Worksheet – School G

Interview A		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	Total Individual = 0
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	1. "Number 7 is used by some." (examining student work with a colleague) Total Partner = 1
Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	**1. "As an administrator, I know that the collaborative teaming is great."*** ***2. "It's a little scary, that we might be going toward common assessments but we aren't there yet."***** 3. "They all do number 14 - review the curriculum". "I would say it's working on the curriculum that keeps them accountable."** 4. "And, we all do number 15; they share instructional practices with each other." Total Team = 5

Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	1. *"What isn't yet is number 17 - that's my goal for this school year is to get goal setting by all the teams."**** Total Schoolwide = 0
Other Related Practices		

Interview B		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	1. *" ...and then the journal writing where you would actually stop and reflect on what you've done, how it worked, maybe consider why it didn't work, sharing that with others,**** Total Individual = 0
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	1. *"..., but school-wide probably most beneficial that I think for all of us would be to participate in some cognitive coaching."**** Total Partner = 0

Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	1. " Most times it's by subject area." (collaborative teaming) Most helpful one to me is always going to be to collaborate with my grade level and with my vertical alignment.** **2. "... the ones that are being used by everybody ... we do collaborative teaming. In the lower grades and junior high, we do it by grade level because we have the same students."** 3. "We do some writing, scoring, discussing common assessments." 4. "The next one ... that everybody does is, sharing instructional practices with a peer or in a team." Total Team = 6
Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	1. "The ones that have been mandated, or that everyone is supposed to be doing is data teams. They meet regularly for analyzing, and that started last year." 2. "And then, the participating in school-wide professional development because there's some stuff been initially started that's been mandated and that we do." *3. "In your focus study groups could be your information that comes out of your journaling and your coaching."**** Total Schoolwide = 2
Other Related Practices		

Table 3 F

Interview Coding Worksheet - School H

Interview A –		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	1. "Well we do 1 and 2." (pauses and reading educational literature) 2. "Well we do 1 and 2." (pauses and reading educational literature) Total Individual = 2
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	1. "As far as discussing educational literature, we look at all the literature. We discuss educational literature, not only with peers, but also with, like schoolwide." 2. "And, participating in cognitive coaching, I just went through and got the cognitive coaching deal so we've done that since I've been here." 3. *"Peer observations are probably an area we need to work on."**** 4. "Six, we're completely engaged in all the time. … that includes whole school and they work with their peers on that. They work in teams of two and then they share their research with all of us." (action research) 5. "Online chats with other institutions … so we have blogs. … I am on the phone or internet with tons of folks … and I see my teachers doing the same thing. Online chats, webinars, that kind of stuff -- we're on it. We really view that as a professional learning community, like the

		whole community." 6. "Examining student work with a colleague, we do that on a regular basis." Total Partner = 5
Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	1. "I have my very best comm arts person writing someone else's lesson plans. She writes for her partner. … So, by putting the expert teacher in there, they include all the pieces … It's not scripted, what they really do is make sure that all the components are included on that lesson plan. They'll pull internet resources, everything in the high-level DOK ..." 2. "So, collaborative teaming, we have common planning time. And, they meet once a week during the lunch hour, and that's voluntary. So, there's some logistics stuff, but primarily the focus is data. We meet every Friday -- looking at data and developing lessons. Normally, we do that together." 3. "We do everything with 'assessment FOR learning'. ...then we build our common assessments around that. We look at all our assessments. … So, we score our assessments … our norm is 24 hours turn-around ... to give immediate feedback. We discuss those assessments all the time." 4. “We start with the end in mind, we developed our power standards and then we build our common assessments around that. 5. "Instructional strategies -- it's constant in our collaborative teams." 6. "The present these (case

		studies) to the whole staff, too." Total Team = 6
Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	1. "And, setting and monitoring -- teachers set their own goals -- and the kids set their goals -- and then they'll look at their data and set their goals. We have …. Spreadsheet and then in real time they can look at their chart and see where they are on their goal." " As a whole school, we look at our vision and collective commitments to set our whole school goals." 2. "Our whole school is a data team. …. They expect to look at data and analyze the data. It's what they do." 3. "Oh, yes, most definitely!" (engaged in shared professional learning) 4. "This year our big study is Marzano's 'Highly Effective, Highly Engaging Strategies'". Total Schoolwide = 4
Other Related Practices		1. (Most impacting?) "I have to give you two -- but they are related. Setting and monitoring goals with self and others and sharing assessment data with students; setting the goals and giving the assessment feedback almost immediately to the kids. Those are the 2 things that will make the difference in any school -- any time -- hands down!"** Total Other = 2

Interview B –		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	1. (*Not done but would be good to do?) I chose number 4 (journal writing) and the one about professional portfolios. Simply because the journal writing implies reflections, and to move forward you have to stop and think about where you've been, and where you are, and exactly what your next step should be."**** Total Individual = 0
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	1. "We do quite a bit of 10 and 17." (Examining student work and setting and monitoring goals.) Total Partner = 1
Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	1. "As well as, basically 12 through 15, we do all of those most." (collaborative teaming, writing, scoring, discussing assessments, reviewing curriculum, and sharing instructional practices) 2. (same as above) 3. (same as above) 4. **"The one I see used most often is 'sharing instructional practices', number 15**."* Total Team = 5
Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams	1. "We do quite a bit of 10 and 17." (Examining student work and setting and monitoring goals.) (Most impacting?) 2. <u>The collaborative teaming and</u>

	4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	sharing instructional practices, and the goal-setting, both individually and building-wide."** Those are firmly embedded ... every staff member in this building participates in those; I'd say 100%. Total Schoolwide = 3
Other Related Practices		Total Other = 0

Table 3 F

Interview Coding Worksheet – School I

Interview A –		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	1. *"I feel like we could probably do a better job of video-taping our own teaching. We don't do any of that..."* *** Total Individual = 0
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	Total Partner = 0
Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	1. "We do have collaborative time set up … like our specials meet one day a week, then our K- 2 meets one day a week …" (everyone involved in?) "Yeh, everybody's involved and we have it built into our schedule." Total Team = 1
Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research	1. "I feel like we need to do a better job of developing individual and team goals and find a way to monitor these goals through

	3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	individual teachers or colleagues." 2. "I think the biggest practice …. Out of professional development in PLC is probably our focus on learning vs teaching. We've provided an eagle's nest or flight time -- a thirty minute period within the day when kids are struggling … with a lot more instruction and the rest of the kids go off ..." "We're getting a lot more focused on our resources ..." (Biggest impact?) I think the PLCs are more of a change of attitude; it's not a program and I don't see it ever going away.** Total Schoolwide = 3
Other Related Practices		1. "We also have some teachers that have created … especially our special teachers -- our Art, PE, and Music -- and what they're doing is hitting these rooms and going in and out for resource time and helping us pull the kids aside and have them read." So like our first grade teacher ... they're coming in and helping her." Total Other = 1

Interview B –		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	1. *(Not doing but would like to) I like the idea of developing a professional portfolio."**** 2. (Biggest impact?) I am part of the PLC Leadership Team, so I have learned a tremendous amount from that professional development.** Total Individual = 2

Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	1. "And, we started a group book study, so we're looking at educational literature. That's something new we're trying this year." 2. "And, we do teacher walk-throughs where we go into each other's classrooms. And everyone's involved in that." 3. "During our collaborative time, we examine the student work." Total Partner = 3
Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	**1. "Probably the biggest change since we started PLC is the collaborating time and we have all of our staff in collaborative teaming groups. Since we only have one teacher per grade level, we do it, I guess, it would be vertically."*** *2. "Due to our small size we really can't get into much of the common assessments. We all kind of do our own thing."**** 3. "We have worked on reviewing curriculum." Team Total = 3

Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	1. "And, every year since we started PLC, we've been writing SMART goals." 2. Most impacting?) "Because I am part of the Leadership Team, I would say the professional development has that the RPDC provides for us and that we bring back all of that information to the staff."** 3. "And, we started a group book study, so we're looking at educational literature. That's something new we're trying this year." Total Schoolwide = 4
Other Related Practices		Total Other = 0

Table 3 G

Interview Coding Worksheet – School J

Interview A – Principal		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	1. *"We are hoping to get more into that this year because all of our teachers now have a flip cam." We're actually going to be using the videotaping … to do some intensive coaching with particular teachers. …. We're trying to do something that is more coaching across that grade levels, letting the teachers pair up and do videotaping of each other and kind of give each other feedback."**** Total Individual = 0
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	1. "Both administrators have that training, and we have some of our teachers who have gone to this training." 2. *"We have a little peer observation going on, but again, that is something we would really like to do more of."**** Total Partner = 1
Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams	1. "We definitely do the collaborative teaming. … and we also do where they're in PLCs with representatives from every grade level." 2. "We definitely do the collaborative teaming. We do grade level teaming …" 3. "We do writing and scoring of common assessments. We do

	6. Review individual student case studies (shared student) with colleagues	that in the PLC team." Total Team = 3
Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	1. "We set goals for ourselves -- as well as for our PLC teams." **2. "By doing action research, we do SMART goals. I see that as action research data … and we are developing strategies … and we do that with all of our grade levels, K -5. We also do, not just in our building, but in our district …"*** 3. "We have data teams." 4. "Most of them are involved in professional development -- and we have goals that focus our improvement." 5. "And we do have focused study groups." Total Schoolwide = 6
Other Related Practices		1. (Most impacting?) "PLC cycle for school improvement and that cycle has four basic components to it … that's gathering data, responding to data, and then developing from that data a specific SMART goal … measuring the growth when you are implementing those strategies from the SMART goal ... reflecting on the results. So, that would probably be the thing that has made the biggest impact on us ..."** Total Other = 2

Interview B – Teacher Leader		
Category:	**Definition:**	**Examples:**
Individual Reflective Practices	1. Read and critique educational literature 2. Journal 3. Add artifacts to a professional portfolio 4. Purposeful and thoughtful pauses during and after the teaching/learning process 5. Conduct individual action research 6. Video tape instruction for personal review of practices	1. *"The only one I don't see happening at all is number 3." (videotaping) "But last year we all got video cameras … so it would be a cool thing to have a student taping us while we were teaching, and then use it with our grade level peers to talk about out teaching styles, what we can do to improve."**** Total Individual = 0
Partner Reflective Practices	1. Discuss educational literature with a peer 2. Engage in cognitive coaching 3. Participate in peer observations 4. Conduct action research with a teaching partner 5. Engage in on-line/distant chats or discussions with another educator 6. Examine student work with a colleague	1. "I'm not involved in this right now, but it is done in my building." 2. "And, number 7 (examining student work with a colleague), is something we all have been doing." Total Partner = 2
Team/Group Reflective Practices	1. Team with colleagues of similar subject assignments (vertical) 2. Team with colleagues of similar grade level assignments(horizontal) 3. Develop, score and discuss common assessments in collaborative teams 4. Review curriculum and course standards in collaborative teams 5. Share effective instructional strategies in collaborative teams 6. Review individual student case studies (shared student) with colleagues	1. "We all do collaborative teaming." … "and then we also have them vertical." 2. "We all do collaborative teaming." "Once we started doing, having actual PLCs, we have them by grade level…" (Most impact?) <u>Oh, collaborative teaming! We all work together and plan our lessons together, and we can share, bounce ideas off each other, and also come back and have that reflective piece of, oh this really worked great</u>

		..."** 3. "We all do number 13." (writing, scoring and discussing common assessments) 4. "We all do number 14." (reviewing curriculum and/or course standards with a partner or team) 5. "We all do number 15 (sharing instructional practices) because we're within our little groups." Total Team = 6
Schoolwide Reflective Practices	1. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas) 2. Participate in schoolwide action research 3. Participate in schoolwide data teams 4. Engage in schoolwide action planning as a result of shared professional learning activities 5. Engage in group book studies 6. Engage in study groups with schoolwide focus	1. "… have that reflective part of how do we fix it if it's not working so well … we can tweak it on each other and say, oh that's a really great idea but that DOK level is not very high. What can we do to bump that up to make it higher level learning?" 2. "Well, then during intervention time, one of the three o f us will pull all of those students … we'll work strictly on money, while another one might be working with students who aren't getting time and another one might be working with students who aren't getting fractions ..." 3. "We all do 19 (data teams) … I mean, it's just part of our PLC … what we do." "We meet as a PLC and look at data on the 5th day for the week …" 4. "And so, what the district did for us was they sent one of our tech men to a district who has had the Envision (math program) for several years and videotaped what they call a

		star-teacher doing the Envision math lesson at every grade level. And then, posted it in our computer in our noodle and then we could all look at it and say, ah I didn't know we could do that." 5. "We all participate in book studies within our PLCs." 6. "We have our own forte … mine went for new technology and parent alliance and some other people go toward other focus groups, like curriculum." Total Schoolwide = 6
Other Related Practices		Total Other = 0

NOTE: **"bold" (*)** indicates practice used most often - double points;
"underline" (**) means practice most beneficial - double points;
Italicized (****) indicates – what is NOT in place but considered important – no points

Merging the Data

After reviewing the data separately, the final step was to merge the data for each school into a matrix providing the quantitative data from the online survey and the results of the interviews that indicate the strength area by each of the school leaders. Finally, at this stage the researcher opened the envelope to unveil the level of implementation of the professional learning communities process of each of the eight schools previously determined but which, until then, had been kept secure from the researcher. The schools were ranked from the lowest or most minimally implementing the professional learning communities process to the school most deeply implementing the process. Using this matrix to triangulate the date, the researcher was able to respond to the research question: Is there a relationship between the level and extent of reflective practice found in a school and the level of implementation of the professional learning communities process found in the school? Tables 4 A – J represent the comprehensive data for each of the eight schools and will be discussed further in Chapter 5.

Table 4 A

Summary Matrix – School A

Online Staff Survey Score reflects school's ranking compared to other schools (from 1 as lowest to 8 as highest)	**School Leaders Interview Scores**	
Individual Ref Practices Mean = 2.0417 Score: 7 out of 8	Individual Ref Practices Tchr. Ldr. -- 0 Admin -- 0	
Partner Ref Practices Mean = 1.8958 Score: 6 out of 8	Partner Ref Practices Tchr. Ldr. – 1 Admin -- 2	
Team/Group Ref Practices **Mean = 2.2083** **Score: 1 out of 8**	**Team/Group Ref Practices** **Tchr. Ldr. -- 3** **Admin -- 2**	
Schoolwide Ref Practices Mean = 1.6875 Score: 1out of 8	Schoolwide Ref Practices Tchr. Ldr. – 1 Admin -- 0	
	Other Ref Practices Tchr. Ldr.= 0 Admin. = 0	
Strength: **Team/Group Ref Practices**	**Strength:** **Team/Group Ref Practices**	**PLC Implementation Score = 1 (lowest implementer)**

The online survey results for School A indicated the strength area to be Team/Group Reflective Practices with a mean score of 2.2083. Both the teacher leader interview and the principal interviews support that finding. However, when comparing School A Team/Group mean to that of the other seven schools, School A ranked lowest of all schools. Additionally, School A ranks lowest of all schools in the Schoolwide Practices subset. When the level of professional learning communities implementation level was checked, it was revealed that School A was ranked number one, or the lowest implementer of all eight schools.

Table 4 B

Summary Matrix -- School D

Online Staff Survey Score reflects school's ranking compared to other schools (from 1 as lowest to 8 as highest)	**School Leaders Interview Scores**	
Individual Ref Practices Mean =1.8917 Score: 4 out of 8	Individual Ref Practices Tchr Ldr = 1 Admin = 1	
Partner Ref Practices Mean = 1.8417 Score: 3 out of 8	Partner Ref Practices Tchr Ldr = 2 Admin = 2	
Team/Group Ref Practices **Mean = 2.5833** **Score: 5 out of 8**	**Team/Group Ref Practices** **Tchr Ldr = 5** **Admin = 2**	
Schoolwide Ref Practices Mean = 2.0917 Score: 4 out of 8	Schoolwide Ref Practices Tchr Ldr = 3 Admin = 3	
	Other Ref Practices Tchr Ldr = 0 Admin = 1	
Strength: **Team/Group Ref Practices**	**Strength:** **Team/Group Ref Practices**	**PLC Implementation Score: 8 (deepest implementer)**

The online survey results indicated the strength area for School D is Team/Group Reflective Practices. Administrator and teacher leader interviews support that finding. When comparing the results of each subset mean to that of the other seven schools, School D is found to be near the middle – ranking third, fourth or fifth in each of the subsets. However, the professional learning communities implementation level of School D was revealed to be eighth, or the deepest implementer of all the schools in the study.

Table 4 C

Summary Matrix -- School E

Online Staff Survey Score reflects school's ranking compared to other schools (from 1 as lowest to 8 as highest)	**School Leaders Interview Scores**	
Individual Ref Practices Mean = 1.8039 Score: 2 out of 8	Individual Ref Practices Tchr Ldr = 2 Admin = 2	
Partner Ref Practices Mean = 1.6863 Score: 1 out of 8	Partner Ref Practices Tchr Ldr = 2 Admin = 2	
Team/Group Ref Practices **Mean = 2.5000** **Score: 4 out of 8**	**Team/Group Ref Practices** **Tchr Ldr = 3** **Admin = 6**	
Schoolwide Ref Practices Mean = 2.3039 Score: 5 out of 8	Schoolwide Ref Practices Tchr Ldr = 2 Admin = 5	
	Other Ref Practices Tchr Ldr = 0 Admin = 1	
Strength: **Team/Group Ref Practices**	**Strength:** **Team/Group Ref Practices**	**PLC Implementation Score: 5**

School E shows the Team/Group Reflective Practice to be the strength area and ranked fourth compared to the other schools in that subset. The interviews of the administrator and the teacher leader supported that finding. Of particular note is the extent to which the administrator in School E believes the Team/Group and Schoolwide Practices are being done, yet the online survey scores do not indicate that same level or extent. School E ranked fifth in the implementation level of professional learning communities process.

Table 4 D

Summary Matrix -- School F

Online Staff Survey Score reflects school's ranking compared to other schools (from 1 as lowest to 8 as highest)	**School Leaders Interview Scores**	
Individual Ref Practices Mean = 1.8551 Score: 3 out of 8	Individual Ref Practices Tchr Ldr = 0 Admin = 0	
Partner Ref Practices Mean = 1.7826 Score: 2 out of 8	**Partner Ref Practices** Tchr Ldr = 5 Admin = 0	
Team/Group Ref Practices **Mean = 2.8913** **Score: 6 out of 8**	Team/Group Ref Practices Tchr Ldr = 4 Admin = 0	
Schoolwide Ref Practices Mean = 2.7029 Score: 8 out of 8	**Schoolwide Ref Practices** **Tchr Ldr = 4** **Admin = 1**	
	Other Ref Practices Tchr Ldr = 0 Admin = 4	
Strength: **Team/Group Ref Practices**	**Strength:** **Partner Ref Practices &** **Schoolwide Ref Practices**	**PLC Implementation Score: 4**

The mean score for the online survey for School F indicated that the staff scored the Team/Group Reflective Practices as the strength area. Compared to the other seven schools, Team/Group Reflective Practices ranked sixth overall. Of particular significance in comparing results, School F scored higher than all other schools in the Schoolwide Reflective Practice subset. The combined responses of the teacher leader and administrator would support that finding; however, the scores from the teacher leader interview singularly indicated the strength area would be the Partner Level. School F ranked 4th in the implementation level for professional learning communities process.

Table 4 E

Summary Matrix -- School G

Online Staff Survey Score reflects school's ranking compared to other schools (from 1 as lowest to 8 as highest)	**School Leaders Interview Scores**	
Individual Ref Practices Mean = 1.925 Score: 5 out of 8	Individual Ref Practices Tchr Ldr = 0 Admin = 0	
Partner Ref Practices Mean = 1.85 Score: 4 out of 8	Partner Ref Practices Tchr Ldr = 0 Admin = 1	
Team/Group Ref Practices **Mean = 2.3667** **Score: 2 and 8**	**Team/Group Ref Practices** **Tchr Ldr = 6** **Admin = 5**	
Schoolwide Ref Practices Mean = 1.9833 Score: 3 out of 8	Schoolwide Ref Practices Tchr Ldr = 2 Admin = 0	
	Other Ref Practices Tchr Ldr = 0 Admin = 4	
Strength: **Team/Group Ref Practices**	**Strength:** **Team/Group Ref Practices**	**PLC Implementation Score: 3**

The strength area of School G identified by the online survey results was the Team/Group Reflective Practices. The mean score, however, in that subset placed School G second when compared to the other seven schools. The interviews with the teacher leader and the administrator both support Team/Group Reflective Practices to be the strength area. School G ranked third in the implementation level of professional learning communities process. The rankings of the other subsets place School G near the middle of the group overall.

Table 4 F

Summary Matrix -- School H

Online Staff Survey Score reflects school's ranking compared to other schools (from 1 as lowest to 8 as highest)	**School Leaders Interview Scores**	
Individual Ref Practices Mean = 2.1377 Score: 8 out of 8	Individual Ref Practices Tchr Ldr = 0 Admin= 2	
Partner Ref Practices Mean = 2.3043 Score: 8 out of 8	Partner Ref Practices Tchr Ldr = 1 Admin = 5	
Team/Group Ref Practices **Mean = 3.0942** Score: 7 out of 8	**Team/Group Ref Practices** **Tchr Ldr = 5** **Admin = 6**	
Schoolwide Ref Practices Mean = 2.6522 Score: 7 out of 8	Schoolwide Ref Practices Tchr Ldr = 3 Admin = 4	
	Other Ref Practices Tchr Ldr = 0 Admin = 2	
Strength: **Team/Group Ref Practices**	**Strength:** **Team/Group Ref Practices**	**PLC Implementation Score: 6**

The online survey results indicated the strength area for School H to be the Team/Group Reflective Practices. The mean for this subset ranked School H seventh when compared to the other schools. The teacher leader and administrator interviews support that finding. Of particular interest to the researcher is that School H ranked at the top (eighth) overall in both the Individual subset and the Partner subset. In addition to ranking seventh in the Team/Group Practices, School H also ranked seventh in the Schoolwide Practices. The professional learning communities implementation level for School H was revealed to be sixth out of the 8 schools studied.

Table 4 G

Summary Matrix -- School I

Online Staff Survey Score reflects school's ranking compared to other schools (from 1 as lowest to 8 as highest)	**School Leaders Interview Scores**	
Individual Ref Practices Mean = 1.7833 Score: 1 out of 8	Individual Ref Practices Tchr Ldr = 2 Admin = 0	
Partner Ref Practices Mean = 1.8667 Score: 5 out of 8	Partner Ref Practices Tchr Ldr = 3 Admin = 0	
Team/Group Ref Practices **Mean = 2.4667** **Score: 3 out of 8**	Team/Group Ref Practices Tchr Ldr = 3 Admin = 1	
Schoolwide Ref Practices Mean = 1.9333 Score: 2 out of 8	**Schoolwide Ref Practices** **Tchr Ldr = 4** **Admin = 3**	
	Other Ref Practices Tchr Ldr = 0 Admin = 1	
Strength: **Team/Group Ref Practices**	**Strength:** **Schoolwide Ref Practices**	**PLC Implementation Score: 2**

The online survey results for School I indicated Team/Group Reflective Practices to be the strength area. When compared to the other seven schools, however, this subset ranked third overall. The interview scores from the teacher leader and administrator did not support the online survey finding, but rather indicated the strength area to be Schoolwide Practices. Interesting though, when compared to the other seven schools, Schoolwide Practices ranked second overall. The implementation level of School I in the professional learning communities process was also revealed as second out of the 8 schools in the study.

Table 4 H

Summary Matrix -- School J

Online Staff Survey Score reflects school's ranking compared to other schools (from 1 as lowest to 8 as highest)	**School Leaders Interview Scores**	
Individual Ref Practices Mean = 1.9733 Score: 6 out of 8	Individual Ref Practices Tchr Ldr = 0 Admin = 0	
Partner Ref Practices Mean = 2.0467 Score: 7 out of 8	Partner Ref Practices Tchr Ldr = 2 Admin = 1	
Team/Group Ref Practices **Mean = 3.1267** Score: 8 out of 8	Team/Group Ref Practices Tchr Ldr = 6 Admin = 3	
Schoolwide Ref Practices Mean = 2.5333 Score: 6 out of 8	**Schoolwide Ref Practices** **Tchr Ldr = 6** **Admin = 6**	
	Other Ref Practices Tchr Ldr = 0 Admin = 2	
Strength: **Team/Group Ref Practices**	**Strength:** **Schoolwide Ref Practices**	**PLC Implementation Score: 7**

The online survey results indicated the Team/Group Reflective Practice subset was the strength area. Compared to the other seven schools, School J ranked eighth in the Team/Group subset. Although the interview scores for the Team/Group subset were relatively high (totaled 9), the strength area identified in the interviews by the teacher leader and administrator was the Schoolwide Reflective Practice subset. That combined score of 12 was significantly higher than the Schoolwide subset scores of any other school in the study. School J ranked seventh in the implementation level of professional learning communities process.

Chapter 5

DISCUSSION

Introduction

The purpose of this study was to examine the relationship between the reflective practices used in schools and the implementation level of the professional learning communities process. As the Director of School Improvement Initiatives for the Missouri Department of Elementary & Secondary Education, should a correlation exist between the level and extent of reflective practices in a school and the depth of PLC implementation, the researcher could use the results of the study to inform future decisions regarding the MO PLC Project. Additionally, the results of this study could be shared with directors of other state-supported school improvement initiatives to affect programmatic decisions for the MO DESE.

Previous Research

Reflective practice has deep historical and theoretical roots. A review of literature shows reflective thinking in early philosophical writings attributed to Buddha in 624 BC and Socrates in 471 BC. From Dewey in the 1930's to Schön in the 1980's, 20th century education pedagogy has dabbled with reflective practice in varying degrees. More recently, York-Barr (2006) in *Reflective Practice to Improve Schools* expands on the studies of many current writers and researchers to call reflective practices an active and complex process that serves as the foundation for continuous learning. "The ongoing process of reflection and renewal propels teacher growth. Conversely, the absence of reflection and renewal leads to disengagement and withdrawal" (Steffy, Wolfe, Pasch, & Enz, 2000, p.3). With increasing research, there is a greater emphasis in the literature

about reflective practices particularly in pre-service teacher education and preparation programs. Additionally, nursing programs, leadership development programs and ongoing development for practicing educators include training in and use of reflective practices.

Educational institutions have historically been constraining and confining for both students and teachers, promoting teaching in isolation and silos of and for learning. School schedules, structures and norms have ruled the teaching and learning process for decades. Too many schools are failing; too many students are dropping out; too many teachers are leaving the teaching profession. “Reflective practice is at the root of renewed life and energy in schools” (York-Barr, et al, p. *xx*).

Fortunately, much work has been done of late regarding growing school environments to support and sustain learning and continuous improvement. Professional learning communities, sometimes referred to as communities of learning professionals has become an often used slogan in schools. Although specific terms may vary among researchers and practitioners, developing and sustaining collaborative cultures that promote increased student learning by focusing on results are the hallmarks of professional learning communities.

The work of York-Barr (2006) interlaces with the work of the well-known researcher of professional learning communities, Hord, in the *collective learning* realm. York-Barr (2006) states, “When educators in a school join together to reflect and learn, they make a difference by harnessing the potential of their collective resources: diverse experience and expertise, shared purpose and responsibility for students, expanded understanding of students throughout the school, professional and social support, and

hopefulness about meaningful and sustained improvement" (p. 27). Hord (2007) points to the collective learning in a professional learning community as teachers coming together to study collegially and collaboratively to engage in inquiry that includes reflection and discussion focused on instruction and student learning. Learning is continuous and the process is cyclic, putting what they have learned into practice, assessing, reflecting, and again discussing. Collaboration builds shared knowledge (Hord, 2007).

A study of nineteen state-supported initiatives was conducted in the spring of 2010 for the Missouri Department of Elementary and Secondary Education by the Leadership and Learning Center to determine the implementation levels of the initiatives in schools and the relationship between each initiative and student achievement. A report provided by Reeves to the MO State Board of Education indicated:

> Depth of implementation is most clearly related to gains in student achievement for Professional Learning Communities, Missouri Preschool Program, the Missouri Reading Initiative and Schoolwide Positive Behavior Supports. Of all of the initiatives that were reviewed in this study, Professional Learning Communities appear to have the greatest potential impact on student achievement (Reeves, 2010, p.1).

The results of the study were very positive for the MO PLC Project indicating high impact and high implementation. Following the study, Reeves's recommendation to the State Board of Education about this initiative was to "invest disproportionate resources and time at the state, district, and school level … building local capacity for long-term sustainability" (p. 5). Furthermore, a recommendation was made to continue to assess the implementation level of the schools participating in the MO PLC initiative

because it was found that when schools were deeply implementing the PLC process, the greatest gains in student achievement were realized.

The Reeves's report was the genesis for this study. Why do some schools reach deep levels of implementation of the PLC process while other schools do not? As discussed in Chapter 2, there is growing evidence of the importance of reflective practice for improving teaching and learning to improve student achievement (York-Barr, et al., 2006). This researcher examined the level and extent of reflective practices in schools relative to the implementation level of professional learning communities in those same schools for a possible relationship between the two system-wide school improvement processes.

Summary

Ten schools that were participating in the Missouri Professional Learning Communities Project were selected from a pool of schools that had previously been assessed for depth of implementation of the PLC process. Five of the schools selected were minimally implementing the PLC process and five of the schools were deeply implementing the PLC process. To avoid bias by the researcher, a colleague conducted the selection process and kept the implementation levels of the selected schools concealed until all the data had been collected. Despite repeated and varied approaches to garner participation in the online survey by all members of the staff, the participation rate was so low in two of the schools that the researcher chose to not include the results from those two schools in the study. Ironically, when the implementation levels of all ten schools were revealed after all the data had been collected, one of the non-responsive schools fell in the "minimally implementing" group and one of the schools fell in the

"deeply implementing" group. That allowed for the remaining eight schools that are reported in this study to be equally divided as either minimally or deeply implementing the professional learning communities process. Of the schools remaining in the study, four were elementary schools, two were intermediate schools and two were high schools.

Is there a relationship between the level and extent of reflective practice found in a school and the level of implementation of the professional learning communities process found in the school? Evidence from this study suggests a correlation exists between the two processes.

Significant Findings

- In all eight schools, the strength area shown by the online survey results was the Team/Group Reflective Practices subset.

This is a significant finding because collaborative teaming is one of the essential components of the MO PLC Project curriculum. All eight of these schools, as participants in the MO PLC Project, have received extensive training and support in the collaborative teaming practices. Additionally, the interviews with school leaders in five of the eight schools indicated that Team/Group Reflective Practices are also considered the greatest strength area.

- Ranking the schools by the total number of reflective practices identified by school leaders during the interviews placed the four "minimally implementing" schools (A, F, G, I) as the lowest four schools in overall number of reflective practices identified.

This is a significant finding as it relates to the emphasis placed on leadership – shared and distributed – in the MO PLC training curriculum. Leaders in professional

learning communities guide the development of the PLC process. Administrators provide the structures and supports for PLCs to be implemented effectively but cultures and practices in professional learning communities in schools cannot be mandated or dictated. Therefore, as the researcher would expect, the responses of the school leaders regarding the practices observed most often and the reflective practices that have been most impacting on student achievement support the results of the whole-staff responses. These findings represent the leaders' perspectives on the level and extent of the reflective practices in each school and when compared to the responses of leaders from the four "deeply implementing" schools, are lesser in number.

- Of the four schools identified as "deeply implementing" the PLC process (D, E, H, J), two schools, (H, J) ranked as sixth, seventh or eighth, meaning they were at or near the top in every subset of the Reflective Practice Spiral on the whole-staff survey.

This is a significant finding that the whole-staff survey in two schools (H, J) identified as deeply implementing ranked seventh and eighth in Team/Group Reflective Practices and sixth and seventh in Schoolwide Reflective Practices. The interview responses from School H and J relative to the extent and level of reflective practices provide support for the staff survey results. In fact, when the total number of practices identified by school leaders was compared, all four of the "deeply implementing" schools show a greater number of practices than the total number of practices identified in "minimally implementing" PLC schools.

- Using the survey results, of the four schools that were "minimally implementing" the professional learning communities process (A, F, G, I),

three of them (A, G, I) ranked lowest (first, second or third) in both Team/Group Reflective Practice subset and Schoolwide Reflective Practice subset on the online survey results.

This is a significant finding as one considers that Team/Group Reflective Practices and Schoolwide Reflective Practices require a higher level of organizational capacity to employ the reflective practices at that level. These results would indicate that the "minimally implementing" PLC schools have not yet reached that level of organizational capacity. An additional note relative to this finding is that two of the schools (A, G) are also high schools. In the experience of this researcher, high schools find collaborative teaming and schoolwide practices more challenging due to scheduling, structures and the emphasis on specific content-focused learning.

- One of the minimally implementing schools (F), ranked eighth in the level and extent of schoolwide reflective practices. The interview responses of school leaders support that strength area.

This is a significant finding because this is the only minimally implementing school that did not reflect lower levels and extents of reflective practices than the deeply implementing schools both in the survey responses and interview responses. In fact, this school ranked higher-indicating a greater level and extent- than even the deepest implementing schools in the schoolwide reflective practice subset. During the interview with the administrator of this school, it was made known that while participating in the MO PLC Project, this school has simultaneously been involved with another MO DESE system-wide school improvement process. The strategies and support of that additional work may have caused an acceleration in their level and extent of schoolwide reflective

practices and/or may have caused an acceleration in the implementation level of the professional learning communities process. Re-assessing the level of implementation of the professional learning communities process in this school would be an important next step.

Limitations of the Study

As noted in Chapter 1, this case study was bounded by schools currently participating in the Missouri Professional Learning Communities Project. Therefore, the data collected and the analysis of the data are specific to schools that have received training in the statewide school improvement initiative that includes a specific curriculum, training process and assessment instruments and may not be generalized to other schools not participating in the MO PLC Project.

The researcher found the data collection in this study to be very time-sensitive. During the field study, the researcher determined that summer months are a difficult time to conduct a study with teachers. It appeared that many teachers, particularly in the smaller schools, did not access their school email account during the summer months. In an effort to maximize participation, the study was postponed until August when teachers and school leaders were back in the buildings and engaged in preparations to start a new school year.

Additionally, the researcher learned that involvement and support of the administrator is key to collecting data from whole staffs. In two schools, the administrators signed consent forms to participate in the study and participated in scheduled interviews, but did not promote the whole-staff survey. Despite repeated email requests and reminders to encourage whole-staff participation, the researcher learned that

in one school the administrator selected just a small number of teachers to participate and sent the survey link only to those individuals. In the other school, the researcher learned that the online survey link was never forwarded to the staff by the principal, but the teacher leader who participated in the interview was instructed to forward the link. It is this researcher's opinion that to conduct a study involving whole staff, it is imperative that the administrator promote and model participation. As an aside, the same has been found to be true in the MO PLC Project work with schools; the administrator must be involved in the work, attend the trainings and guide the development of professional learning communities by providing the necessary structures and supports.

Another limitation of this study was the time that elapsed from the assessment of the implementation level of the schools in the Leadership and Learning implementation audit and the data collection of this study. When this study began, it was the intent of this researcher to have the study completed within a few months. The doctoral process–from committee formation to proposal presentation through the IRB process ending with approval from the Graduate Dean took much longer than this researcher envisioned. The time it took for the preparation and beginning steps of this study caused the actual data collection to fall at a time that was not conducive to communicate with teachers so the study was postponed until a new school year began. All of these steps and events resulted in a greater than expected span of time between the implementation level assessment and the study comparing the relationship of the reflective practices. Because the schools selected for the study were at the extreme ends of the implementation continuum, it is expected that even if there were changes in their level of implementation of the PLC process during this elapsed time, a significant discrepancy between the five "minimally

implementing" and the five "deeply implementing" would have remained. An exception to that thinking is discussed in the findings relative to one school involved in the study.

One additional observation by this researcher regarding participation by teachers in the online survey came unintentionally. Although the proposed timeline for the survey to be available for teachers to respond was two weeks, to gather more participation the timeline was expanded for each school. At the end of two weeks, the researcher sent an email reminder extending the survey window. During the following week, the researcher mailed a note of appreciation to the administrator with a twenty dollar bill that he/she could provide a snack or treat for teachers as a token of my appreciation. The researcher was copied on several of the emails sent to the faculty about the note of appreciation on the day the treats were provided. Whether due to guilt or simply positive reinforcement, the number of respondents increased on the day the teachers received the special treat.

Compelling Support for Further Study

Much of the research related to reflective practices from the past century involves the actions and behaviors of individuals in a solitary process. Dewey and Schőn, considered to be great thinkers and great philosophers, imparted much wisdom to and about the reflective *practitioner*, but their work focused on the *individual* who is learning by thinking or reflecting *in* or *on* his/her actions. With the recent surge of professional learning communities as a *systems approach* to school improvement, the emphasis on collaborative teaming for collective inquiry and decision-making, and the popularity of coaching and mentoring for improving teacher effectiveness, there is a need to identify and study the social processes of reflective practices. The most prevalent research in

recent years regarding reflective practices, albeit sparse, is found in teacher preparation programs and in the medical field, particularly in nursing programs.

The researcher found one study regarding the development of the reflective capacity involving a group of experienced teachers in the Teacher Knowledge Project (TKP) in Vermont. During this five-year study, which began in 1997, teachers were engaged in professional development through structured and systematic reflective practice. Six themes emerged from this study:

- Renewed enthusiasm for teaching
- Looking at teaching with "fresh eyes"
- Shifts in understanding teaching
- Becoming more reflective and aware as teachers
- Enhancing the quality of student learning
- Building professional communities (Curtis, 2005, Analyzing the Data section, ¶ 3).

The study indicates that the professional development seminars "provided the opportunity, the conditions, and the frameworks for reflective professional development… facilitated by an experienced school teacher and an expert trainer…" (Curtis, 2005, Conclusion, ¶ 2). Given the framework of the professional development provided to schools participating in the MO PLC Project-curriculum, trainings, resources and support- could the highly trained MO PLC resource specialists provide this same opportunity to advance the reflective practices in schools? Further investigation of this study to determine parallels would be informing.

Additionally, while conducting this study, the researcher was intrigued by the posting of a presentation given at the National Science Teachers Association (NSTA) Professional Development Institute held in New Orleans, LA, in March 2009. The framing questions for this workshop were:

1. *What are the components of professional learning communities?*
2. *What is reflective practice and how does it build community?*
3. *What evidence is there that professional communities lead to changes in teacher practice and increase student understanding?*
4. *How do professional development strategies such as identifying learning goals, looking at student work, lesson study contribute to reflective practice?*
5. *How can you build communities through reflective practice into your context?* (DiRanna, 2009, Framing Questions section, ¶ 1).

The lead presenter of the session was Kathy DiRanna, the K-12 Alliance Statewide Director for WestEd, a research and educational service agency dedicated to improving teaching and learning. Through a personal communication with DiRanna a copy of the power point presentation was acquired by this researcher. This interactive workshop emphasized using tools and processes as a professional learning community to focus on improving student achievement.

DiRanna, et al., (2009) reports a professional development strategy called Teaching Learning Collaborative (TLC) in the book *Professional Learning Communities for Science Teaching – Lessons from Research & Practice. T*he tools and processes in the TLC model ensure the learning community employs reflective practices to plan lessons,

assess learning and make adjustments when students do not learn. Similar strategies- plan, teach, assess and adjust- are found in the MO PLC curriculum. Continued research into the tools and processes of the TLC model for alignment with the MO PLC Project are needed.

Both of the studies outlined above support the need to further study reflective practices in schools engaged in the professional learning communities process. In personal communications with two researchers cited in this review of literature, DiRanna and York-Barr, this researcher received encouragement and support for the proposed study. In seeking permission to duplicate the diagrams found in *Reflective Practice to Improve Schools – An Action Guide for Educators*, the author, Jennifer York-Barr, indicated that she had no knowledge of the Reflective Practice Spiral being used in any other formal research. She further states that the Spiral "does, however, reflect what we know about how organizations grow and develop, i.e., organizations do not change until the people within the organizations change" (personal communication, November 9, 2010). Both DiRanna and York-Barr indicated an interest in learning about the findings from this study when completed.

A final implication for further study is one that involves a potential for collaborative efforts at the MO DESE. One of the minimally implementing schools (F), ranked eighth in the level and extent of schoolwide reflective practices. This researcher considers those results to be reliable as the interview responses of school leaders support that as a strength area. This was the only "minimally implementing" school that did not indicate lower levels and extents of reflective practices than the "deeply implementing" schools. In fact, this school ranked higher than even the deepest implementing schools in

the schoolwide reflective practice subset. During the interview with the administrator of this school, it was revealed that this school, simultaneous to their MO PLC training, has also been involved in an additional MO DESE system-wide school improvement initiative. The strategies and support of that work may have caused acceleration in their level and extent of schoolwide reflective practices. Might it also have caused acceleration in their implementation level of the professional learning communities process? Re-assessing the level of implementation of the PLC process in this school would be an important next step. Identifying other schools that have engaged in that same system-wide school improvement process while receiving training and support in the MO PLC curriculum would be an important future study. Do the two school improvement models work in tandem to accelerate systems-change?

Conclusion with Recommendations for Change

The Missouri Department of Elementary and Secondary Education has launched a state reform plan to become *Top 10 by '20* referencing the desire to be among one of the top ten states in the nation in education outcomes by the year 2020. To that end, four over-arching goals with objectives, strategies and actions have been articulated. Data points or benchmarks goals have been set to measures the success toward the implementation of the reform plan. The State Board of Education has embraced and endorsed the plan and Department leaders have presented and promoted the *Top 10 by '20* plan to stakeholders to garner support and ownership of the lofty goal. It has become the lens through which all Department efforts are viewed.

Additionally, the stagnated efforts of the reauthorization of the Elementary and Secondary Education Act (ESEA), more recently known and referred to as the No Child

Left Behind (NCLB) law, has caused many states, including Missouri, to consider applying for ESEA Flexibility, a waiver from some of the current NCLB requirements. Efforts are currently underway to draft an application that addresses the three primary sections: Principle 1: College-and Career-Ready Expectations for All Students; Principle 2: State-Developed Differentiated Recognition, Accountability and Support; and, Principle 3: Supporting Effective Instruction and Leadership.

Principle 2 of the Flexibility application, (2G) specifically asks state education agencies (SEA) to:

> "Describe the SEA's process for building SEA, LEA, and school capacity to improve student learning in all schools and, in particular, in low-performing schools and schools with the largest achievement gaps…" (Missouri Department of Elementary and Secondary Education, 2011, *Build SEA, LEA and School Capacity to Improve Student Learning* section p. 17).

Given the tremendous challenges facing schools today as they strive to meet the increasing federal standards of NCLB, our schools are finding the road to success ever-more difficult. More schools are labeled "failing" and the state's responsibility to aid and assist looms greater and greater. To make the situation even more difficult, the economic conditions facing our whole country have left our state with fewer and fewer resources available to help schools. We have an increasing number of unfunded mandates that do little more than remind us that success is the expectation but provides no financial support to that end. Conversations among leaders continue to speak to the question of how to do more with less.

The Missouri Professional Learning Communities Project has shown great promise for improving student learning when schools deeply implement the essential components of a collaborative culture focused on results to ensure learning for all. In fact, of all nineteen initiatives studied that receive state-support, MO PLC showed the greatest potential for increasing student achievement. However, understanding why some schools are deeply implementing and why some schools are not is a necessary step to improve the training curriculum, support and assessment instruments of the MO PLC Project.

This study indicates that a possible relationship exists between the level and extent of reflective practice and the level of implementation of the professional learning communities process. It is the intent of this researcher to share this study with leaders in the MO DESE who are charged with school improvement. Additionally, it is the intent of this researcher to share these findings with the MO PLC State Management Team for further review, reflection and dialogue. This researcher will advocate for changes to the training curriculum, support resources and assessments to include specific and directed professional development on reflective practices from the individual to the partner to the team to the schoolwide level so as to positively impact learning.

This study has the potential to not only inform the MO PLC Project, but has the potential to inform other school improvement efforts at the Missouri Department of Elementary and Secondary Education, as well as to begin to fill the gaps in research relative to the social processes of reflective practices and their place in professional development.

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Appendix A

A.1

MO DESE Implementation Rubric

Professional Learning Communities

Missouri Department of Elementary and Secondary Education
Implementation Rubric

Initiative: Professional Learning Communities

Description: The Missouri Professional Learning Communities Project is a comprehensive school improvement program that offers guidance to Missouri schools in their efforts to focus on the fundamental purpose of schooling (learning); develop a vision of their ideal school where all students learn; commit to behaviors that will help reach the vision; and set goals that are SMART (specific and strategic, measurable, achievable, results-oriented, and time-bound). In a PLC, school efforts focus on improving student achievement.

Information from http://www.dese.mo.gov/divteachqual/sii/prolearning/description.htm states:

Professional learning communities see student learning, not teaching, as their mission. The policies, instruction, curriculum, programs, professional development, and other functions of the school all support student learning. In maintaining this constant focus on learning, four questions become paramount:

1. What should students know and be able to do?
2. How will the school determine that students have learned the essential knowledge and skills?
3. How will the school respond when students do not learn?
4. How will the school respond when they already know it?

The state PLC school-improvement model focuses on increasing student achievement by building the capacity of school personnel to create and sustain the conditions that promote high levels of student and adult learning.

WHAT DOES A SCHOOL THAT IS A PROFESSIONAL LEARNING COMMUNITY LOOK LIKE?

- The daily work of the school is driven by common purpose, shared vision and collective commitments.
- There are high expectations regarding student achievement and a commitment on the part of staff to accept responsibility for student learning.
- The learning of each student is monitored on a timely basis using common core curriculum and common assessments aligned with state standards

A.2

MO DESE Implementation Rubric

Professional Learning Communities

Professional Learning Communities

After each criteria the data source is in parenthesis. The following codes are used: S- Online Survey, D- Document Review, PI – Personal Interview.

- School structures support student learning and provide additional time and support for students who initially do not achieve intended outcomes.
- Job-embedded professional development leads to the collective identification of, reflection about, and implementation of "best practices" for improved student achievement.
- Staff members work collaboratively in processes that foster continuous improvement in all indicators of student achievement.
- The use of data promotes an action orientation and focus on results.
- Leadership of school improvement processes is widely dispersed and helps sustain a culture of continuous improvement.

A.3

MO DESE Implementation Rubric

Professional Learning Communities

Professional Learning Communities

After each criteria the data source is in parenthesis. The following codes are used: S- Online Survey, D- Document Review, PI – Personal Interview.

	4	3	2	1
Criteria	**Deep Implementation**	**Proficient Implementation**	**Partial Implementation**	**Minimal Implementation**
Learning Context	EVERYTHING IN THE PROFICIENT CATEGORY PLUS: • PLC teams have the opportunity to report and share student progress, effective instructional strategies and PLC successes with leadership and other PLC teams (PI). • PLC teams display data in a common area for colleagues to view. (PI)	• A shared vision of school and student success has been collaboratively developed and communicated to all stakeholders. (PI) • All faculty members, including support staff, are members of a PLC teams and are active participants. (PI,S) • PLC team meetings are regularly scheduled (day/time) at least once every week for at least 45 minutes during the contracted school day. (PI, S,D) • PLC team meetings consistently follow an agenda, follow collaboratively developed group norms, roles and responsibilities and use protocols to foster collaborative work including developing and scoring common assessments. (PI, D) • PLC teams meet in a room that has resources to support PLC teams including chart paper, markers, resources on instructional strategies and assessments. (PI) • Records/minutes of PLC team meetings are kept in a team notebook/folder. (PI, D	• Some grade level or core content area teachers along with some support staff are participating members of a PLC team. (PI, S) • PLC teams meet monthly on a regularly scheduled day and meetings may be before or after the contracted school day. (PI,S, D) • PLC team meetings may have an agenda. Norms along with roles and responsibilities and the use of protocols are limited or fulfilled by a few key participants. (PI, D) • Records/minutes of PLC team meetings are kept in a team notebook/folder.(PI, D)	Insufficient evidence to support a conclusion of partial implementation.

A.4

MO DESE Implementation Rubric

Professional Learning Communities

Professional Learning Communities

After each criteria the data source is in parenthesis. The following codes are used: S- Online Survey, D- Document Review, PI – Personal Interview.

	4	3	2	1
Criteria	**Deep Implementation**	**Proficient Implementation**	**Partial Implementation**	**Minimal Implementation**
Instructional Practices	EVERYTHING IN PROFICIENT PLUS: • Instructional focus is driven by multiple sources of data including state and local assessments. (PI) • PLC teams differentiate instruction based on common formative assessment data in order to target students 'needs. (PI, D) • PLC teams implement system-wide tiered-level interventions monitored at least every 3 weeks with increasing time and intensity based on multiple sources of student academic and behavior data.(PI) • PLC teams collaboratively score student assessments. (PI, S)	• PLC teams have high expectations for all students and those are communicated clearly to students and parents. (PI) • PLC teams make collaborative decisions on essential learning outcomes, instructional strategies, and assessments, etc. (PI,D) • PLC teams consistently use common formative assessments several times per instructional unit to measure student learning and make instructional decisions based on the data to ensure learning for every student. (PI, D,S) • PLC teams collaboratively develop intervention strategies based on common formative assessments. (PI, S) • PLC teams create, implement, monitor and adjust SMART (specific, measurable, achievable, results-oriented and time bound) goals based on common formative assessment data. (PI, D) • PLC teams collaboratively develop rubrics for inquiry-based learning experiences and assessments. (PI)	• PLC teams have high expectations for all students but these are not clearly communicated to students. (PI) • PLC teams make collaborative decisions on essential learning outcomes and assessments. (PI) • PLC teams use common formative assessments, at least once per instructional unit to measure student learning and make instructional decisions based on the data to ensure learning for every student. (PI, S) • PLC teams create SMART (specific, measurable, achievable, results-oriented and time bound) goals (PI) • Individual teachers create rubrics for inquiry-based learning experiences and assessments and share with PLC team members. (PI)	Insufficient evidence to support a conclusion of partial implementation.

A.5

MO DESE Implementation Rubric

Professional Learning Communities

Professional Learning Communities

After each criteria the data source is in parenthesis. The following codes are used: S- Online Survey, D- Document Review, PI – Personal Interview.

	4	3	2	1
Criteria	**Deep Implementation**	**Proficient Implementation**	**Partial Implementation**	**Minimal Implementation**
Professional Development	Everything in Proficient Plus: • All members of faculty have actively engaged in additional PLC professional development to support PLC teams based on a needs assessment. (PI, S) • Staff and whole-school professional learning needs are regularly and consistently identified. (PI) • Opportunities are automatically planned to ensure staff can learn with and from each other. (PI)	• The Leadership Team has completed PLC training offered by the Regional Professional Development Center, as specified below, taking into consideration the year of implementation. **Year 1**: 3-day Summer Academy and 7 days of training for Leadership Team; 1 day of administrator training. **Year 2**: 5 days of training; **Year 3**: 3 days of training; **Years 1, 2 & 3**: on-site, job-embedded support and on-going technical support with materials and resources. (PI, D) • All members of staff have participated in professional development provided by trained Leadership Team members focused on building a PLC team. (PI, D) • PLC teams receive on-site specific feedback on PLC team meetings, creation of assessments, instructional strategies or how to use data from Leadership Team and/or RPDC staff. (PI)	• Less than 80% of staff has participated in professional development focused on building a PLC team. (PI, S) • The Leadership Team has completed PLC training offered by the Regional Professional Development Center, as specified below, taking into consideration the year of implementation. **Year 1**: 3-day Summer Academy and 7 days of training for Leadership Team; 1 day of administrator training. **Year 2**: 5 days of training; **Year 3**: 3 days of training; **Years 1, 2 & 3**: on-site, job-embedded support and on-going technical support with materials and resources. (PI, D)	Insufficient evidence to support a conclusion of partial implementation.

A.6

MO DESE Implementation Rubric

Professional Learning Communities

Professional Learning Communities

After each criteria the data source is in parenthesis. The following codes are used: S- Online Survey, D- Document Review, PI – Personal Interview.

	4	3	2	1
Criteria	**Deep Implementation**	**Proficient Implementation**	**Partial Implementation**	**Minimal Implementation**
Leadership Practices	Everything in Proficient PLUS: • Leadership uses data from PLC Surveys to make adjustments to PLC teams to deepen teacher commitment and focus on student learning through the use of data. (PI, S) • Leadership uses data from PLC teams to monitor the School Improvement Plan and make midcourse adjustments based on the data. (PI)	• All stakeholders value learning as the top priority for the school and take responsibility (and action) to ensure the success of every student in the school. (PI) • Administrator regularly reviews and acknowledges meeting records and agendas and gives feedback to PLC/teachers. (PI) • Leadership communicates daily, through words and actions, high expectations for students and staff focusing on teaching and learning. (PI) • Leadership schedules monthly opportunities for PLC's to share data-driven successes and challenges. (PI) • Leadership provides the necessary supports for collaboration (i.e. time, high-quality professional development, teaming structures, etc.) (PI, S)	• Administrators delegate the review of meeting records and agenda. (PI, S) • Some leadership members periodically model team work and leadership of learning. (PI) • Other staff is involved in leading some PLC activities. (PI, S)	Insufficient evidence to support a conclusion of partial implementation.

Appendix B

B.1

PLC Professional Growth Activities Survey

PLC Professional Growth Activities

1. Demographics

Please complete the demographic questions before proceeding to the survey.

1. Gender:

- ◯ Male
- ◯ Female

2. Level:

- ◯ Early Childhood
- ◯ Primary
- ◯ Intermediate
- ◯ Middle School/Jr. High
- ◯ High School
- ◯ Career/Tech Center

3. Position:

- ◯ Classroom Teacher
- ◯ Non-core/Specials Teacher
- ◯ Administrator
- ◯ Other

4. Years of Experience:

- ◯ Less than 5 years
- ◯ 5 years - 10 years
- ◯ 11 years - 20 years
- ◯ More than 20 years

5. PLC involvement:

- ◯ Active member of a PLC team
- ◯ Not an active member of a PLC team

B.2

PLC Professional Growth Activities Survey

PLC Professional Growth Activities

2. Professional Growth Activities

Teachers engage in various professional growth activities -- from individual practices to schoolwide practices. Consider the list of activities found below and indicate the extent, if any, in which you participate.

6. Read and critique educational literature

◯ rarely ◯ sometimes ◯ frequently ◯ usually

7. Journal

◯ rarely ◯ sometimes ◯ frequently ◯ usually

8. Add artifacts to a professional portfolio

◯ rarely ◯ sometimes ◯ frequently ◯ usually

9. Purposeful and thoughtful pauses during and after the teaching/learning process

◯ rarely ◯ sometimes ◯ frequently ◯ usually

10. Discuss educational literature with a peer

◯ rarely ◯ sometimes ◯ frequently ◯ usually

11. Engage in cognitive coaching

◯ rarely ◯ sometimes ◯ frequently ◯ usually

12. Participate in peer observations

◯ rarely ◯ sometimes ◯ frequently ◯ usually

13. Conduct action reserach with a teaching partner

◯ rarely ◯ sometimes ◯ frequently ◯ usually

B.3

PLC Professional Growth Activities Survey

PLC Professional Growth Activities

3.

14. Engage in on-line/distant chats or discussions with another educator

○ rarely ○ sometimes ○ frequently ○ usually

15. Team with colleagues of similar grade level assignments (horizontal teaming)

○ rarely ○ sometimes ○ frequently ○ usually

16. Team with colleagues of similar subject assignments (vertical teaming)

○ rarely ○ sometimes ○ frequently ○ usually

17. Participate in goal-setting with interdisciplinary teams (teams across grade/content areas)

○ rarely ○ sometimes ○ frequently ○ usually

18. Conduct individual action research

○ rarely ○ sometimes ○ frequently ○ usually

19. Participate in schoolwide action research

○ rarely ○ sometimes ○ frequently ○ usually

20. Develop, score and discuss common assessments in collaborative teams

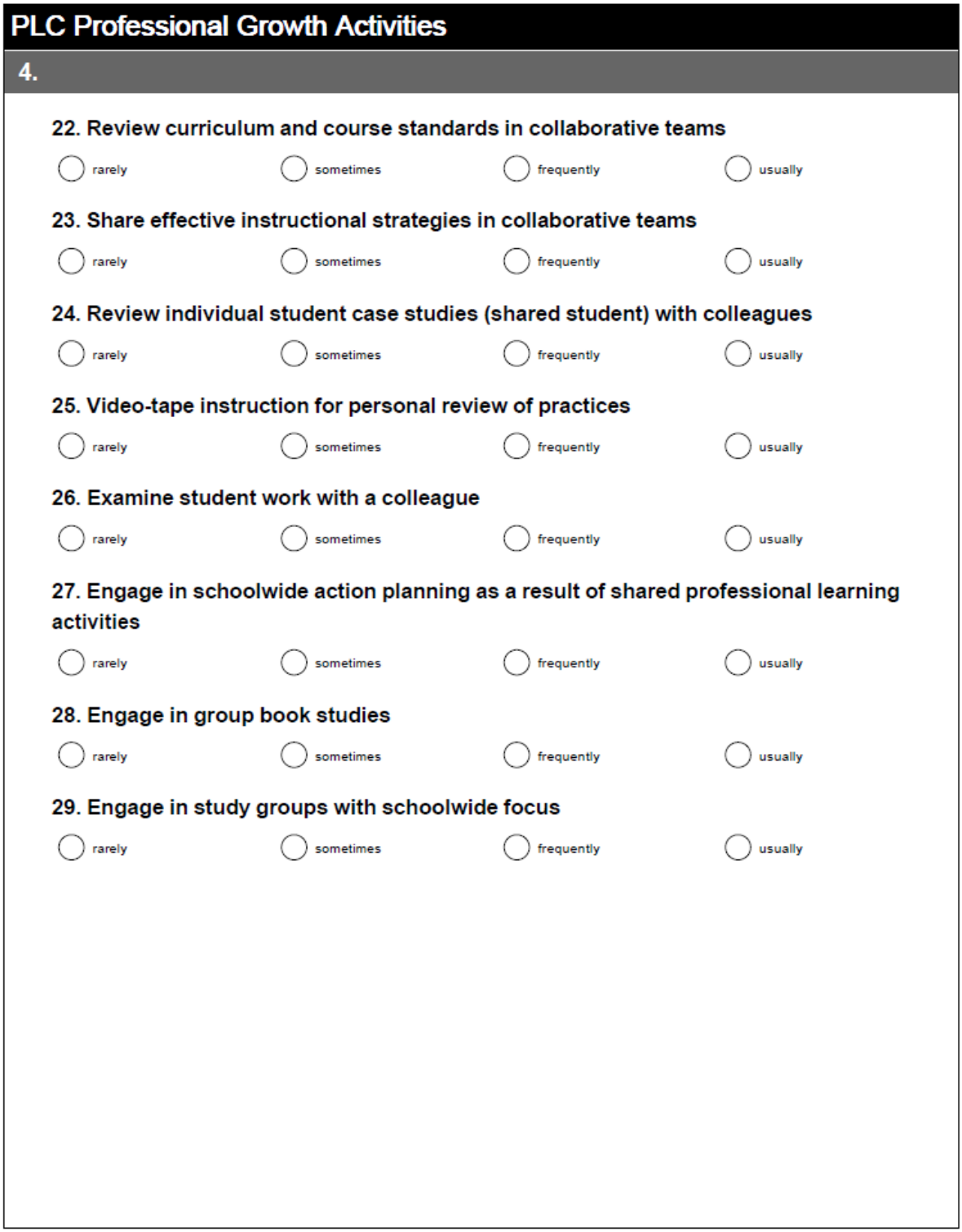
○ rarely ○ sometimes ○ frequently ○ usually

21. Participate in schoolwide data teams

○ rarely ○ sometimes ○ frequently ○ usually

B.4

PLC Professional Growth Activities Survey



PLC Professional Growth Activities

4.

22. Review curriculum and course standards in collaborative teams

○ rarely ○ sometimes ○ frequently ○ usually

23. Share effective instructional strategies in collaborative teams

○ rarely ○ sometimes ○ frequently ○ usually

24. Review individual student case studies (shared student) with colleagues

○ rarely ○ sometimes ○ frequently ○ usually

25. Video-tape instruction for personal review of practices

○ rarely ○ sometimes ○ frequently ○ usually

26. Examine student work with a colleague

○ rarely ○ sometimes ○ frequently ○ usually

27. Engage in schoolwide action planning as a result of shared professional learning activities

○ rarely ○ sometimes ○ frequently ○ usually

28. Engage in group book studies

○ rarely ○ sometimes ○ frequently ○ usually

29. Engage in study groups with schoolwide focus

○ rarely ○ sometimes ○ frequently ○ usually

Appendix C

C.1

Interview Protocol for Professional Growth Activities in MO PLC Schools

Name of participant _____ School _____

Beginning Time: _____ Ending Time _____ Duration _____

Thank you for agreeing to this interview about the professional development activities in your school. You are helping me collect data for my doctoral study so on a personal level I really appreciate your help. Furthermore, the data will also be helpful in future considerations regarding the Missouri Professional Learning Communities Project so your responses are especially important and appreciated.

Valuing your time, I will try to keep this interview to 15 – 20 minutes. As I mentioned in my previous email this is a semi-structured interview, so although there are only three basic questions, I may ask you to explain or expand some of your responses. Please know that I will not use your name in my report so I appreciate your candid responses. If you wish to withdraw from this interview or not answer any of the questions, please know that you are able to do so.

Warm-up: **Let's begin with you telling me about yourself. How long have you been at** _(name of school) _____ what**is your position here?** _____

Teachers and administrators engage in various professional growth activities and practices – at the individual, partner, team and/or schoolwide level. In my email to you I listed some of those more common practices – however there are certainly many more. (Shown below is the list sent previously.)

1. Purposeful or thoughtful pauses during or after the teaching/learning process;
2. Reading and analyzing educational literature;
3. Videotaping your own teaching for review of instructional practices;
4. Journal writing;
5. Developing your professional portfolio;
6. Doing action research – either by yourself or with a peer or as a whole school;
7. Examining student work with a colleague;
8. Discussing educational literature with a peer;
9. Participating in cognitive coaching – either as a coach or as the one being coached;
10. Doing peer observations;

C.2

Interview Protocol for Professional Growth Activities in MO PLC Schools

11. Having online chats with another educator;
12. Collaborative teaming – either with grade level or subject level teachers;
13. Writing, scoring and discussing common assessments;
14. Reviewing curriculum and/or course standards with a partner or in a team;
15. Sharing instructional practices with a peer or in a team;
16. Participating in a book study – with a partner or a team or whole school;
17. Setting and monitoring goals for self or with others – partner teachers or team members or whole school goals;
18. Focused study groups;
19. Developing data teams that meet regularly to analyze and make decisions based on the data;
20. Participating in needs-based schoolwide professional development with ongoing discussions and continuous improvement goals.

(Questions)

1. (Teacher and Administrator)**What professional growth practices or structures do you see educators in your school using?**
   (Probe) **What practices or structures would you say are used by all or most of the teachers? What structure or practice do you see used by only a few teachers that might benefit others?**

2. (Teacher)**From the list or from other activities that may not be listed, what professional growth practices have you found to be most useful in improving <u>your</u> teaching?**
   (Administrator)**From the list or from other activities that may not be listed, what professional growth practices have you found to be most useful in improving the teaching of the teachers in this school?**
   (Probe) **To what extent do the teachers engage in** <u>____(name the practice given)____</u>

3. (Teacher and Administrator)**What practices/structures/activities that are <u>not</u> being used by you or others in your school do you believe might be most useful in improving teaching in your school?**
   (Probe) **Why do you think that practice or structure would be good to have in your school?**

Appendix D

D.1

Informational Letter

College of Education
Division of Educational Leadership and Policy Studies
One University Boulevard
St. Louis, Missouri 63121-4400
,Telephone: 314-516-5944
E-mail: carole@umsl.edu

Date
(Administrator of School)
(Address of School)

Greetings! My name is Mary Ann Burns. As a doctoral student at the University of Missouri – St. Louis, I am conducting a study of several schools involved in the Missouri Professional Learning Communities Project. This letter is soliciting your help.

The study will consist of two parts. Part 1 is a short whole-staff online survey regarding professional growth activities/practices. Part 2 is a brief telephone interview with you, the administrator, and one person who serves on the leadership team. The only criterion for the interviewee is that he/she must have been at the school during the entire time the school has been involved in the MO PLC Project.

Participating schools will be sent a link to the online survey and the following email message:

> *I am a doctoral student at the University of Missouri – St. Louis conducting a case study of the Missouri Professional Learning Communities Project. As a school involved in MO PLC, your school has been selected to participate in a short online survey of professional growth activities/practices. Your responses are completely anonymous; you may decline to answer some or all of the questions. Your participation is voluntary. If you agree to participate, please know your assistance would be greatly appreciated and the results of the study may be used to better inform the work of the MO PLC Project. It will take less than 10 minutes to complete. Simply click on the link below to complete the survey. If you have any questions, feel free to contact me:*
>
> *Mary Ann Burns at maryann.burns@dese.mo.gov or 573-690-0635*

D.2

Informational Letter

(Name of administrator), I truly understand and value your time so I am sending this informational letter to you to explain the study and to request your participation. I will follow-up this letter with a phone call within the next few days. If you will agree to participate, we will schedule the short telephone interview (consisting of only 3 questions) at time of your convenience. We will also determine a time to send the online survey link for your faculty.

Of course, as stated in the short explanation to the faculty, your participation is voluntary. If you choose to discontinue in the study, you may do so at any time. I look forward to talking with you in the coming days.

Sincerely,

Mary Ann Burns

Appendix E

E.1

Informed Consent Form – Faculty Members

Division of Educational Leadership and Policy Studies
Marillac Hall, South Campus
One University Blvd.
St. Louis, Missouri 63121-4499
Telephone: 314-516-5944
E-mail: carole@umsl.edu

Informed Consent for Participation in Research Activities

Reflective Practices in Professional Learning Communities: A Case Study of the Missouri Professional Learning Communities Project

Participant __Faculty member in selected school____ HSC Approval Number ___110325B

Principal Investigator _Mary Ann Burns_____ PI's Phone Number573-690-0635_____

1. You are invited to participate in a research study conducted by Mary Ann Burns and Dr. Carole Murphy. The purpose of this research is to study professional growth practices in schools involved in the Missouri Professional Learning Communities Project.

2. a) Your participation will involve:

   - Reading and signing this consent form indicating that you understand your participation is voluntary.
   - Returning the signed form to the principal.
   - Completing and submitting the online survey regarding your professional growth practices.

.

Approximately 250 educators may be involved in this research. Ten schools involved in the MO PLC Project have been selected to participate in this study.

b) The amount of time involved in your participation will be approximately 10 minutes or less.

E.2

Informed Consent Form – Faculty Members

3. There are no anticipated risks associated with this research.

4. There are no direct benefits for you participating in this study. However, your participation will contribute to the knowledge about the MO PLC Project and may help inform the work of the MO PLC Project in the future.

5. Your participation is voluntary and you may choose not to participate in this research study or to withdraw your consent at any time. You may choose not to answer any questions that you do not want to answer. You will NOT be penalized in any way should you choose not to participate or to withdraw.

6. By agreeing to participate, you understand and agree that your data may be shared with other researchers and educators in the form of presentations and/or publications. In all cases, your identity will not be revealed. In rare instances, a researcher's study must undergo an audit or program evaluation by an oversight agency (such as the Office for Human Research Protection). That agency would be required to maintain the confidentiality of your data. In addition, all data will be stored on a password-protected computer and/or in a locked office.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Mary Ann Burns at 573-690-0635 or the Faculty Advisor, Dr. Carole Murphy at 314-516-5792. You may also ask questions or state concerns regarding your rights as a research participant to the Office of Research Administration, at 516-5897.

I have read this consent form and have been given the opportunity to ask questions. I will also be given a copy of this consent form for my records. I consent to my participation in the research described above.

Participant's Signature	Date	Participant's Printed Name

Signature of Investigator or Designee	Date	Investigator/Designee Printed Name

Appendix F

F.1

Informed Consent Form – School Leaders

Division of Educational Leadership and Policy Studies
Marillac Hall, South Campus
One University Blvd.
St. Louis, Missouri 63121-4499
Telephone: 314-516-5944
E-mail: carole@umsl.edu

Informed Consent for Participation in Research Activities

Reflective Practices in Professional Learning Communities: A Case Study of the Missouri Professional Learning Communities Project

Participant _School Leaders in selected school_____HSC Approval Number ___110325B

Principal Investigator _Mary Ann Burns_____ PI's Phone Number 573-690-0635_____

1. You are invited to participate in a research study conducted byMary Ann Burns and Dr. Carole Murphy. The purpose of this research is to study professional growth practices in schools involved in the Missouri Professional Learning Communities Project.

2. a) Your participation will involve:

   - Providing each teacher a copy of the consent to participate form and providing a collection place for signed forms. (Administrator only)
   - Forwarding the online survey link to each teacher that completes a signed form. (Administrator only)
   - Reading and signing this consent form indicating your understanding of the study.
   - Mailing all the signed consent forms back to the Principal Investigator, Mary Ann Burns, in the postage-paid envelope provided.
   - Participating in a short telephone interview which will be digitally recorded to provide accurate transcription.

   Approximately 250 educators may be involved in this research. Ten schools involved in the MO PLC Project have been selected to participate in this study.

F.2

Informed Consent Form – School Leaders

b) The amount of time involved in your participation will be approximately 15 minutes to distribute and collect the consent forms to teachers and mail them back to the Investigator. Approximately 15 minutes may be needed to forward the online survey link to all participating teachers. The telephone interview will take approximately 15 - 20 minutes. The total amount of time for all these activities will be less than 1 hour.

3. There are no anticipated risks associated with this research.

4. There are no direct benefits for you participating in this study. However, your participation will contribute to the knowledge about the MO PLC Project and may help inform the work of the MO PLC Project in the future.

5. Your participation is voluntary and you may choose not to participate in this research study or to withdraw your consent at any time. You may choose not to answer any questions that you do not want to answer. You will NOT be penalized in any way should you choose not to participate or to withdraw.

6. By agreeing to participate, you understand and agree that your data may be shared with other researchers and educators in the form of presentations and/or publications. In all cases, your identity will not be revealed. In rare instances, a researcher's study must undergo an audit or program evaluation by an oversight agency (such as the Office for Human Research Protection). That agency would be required to maintain the confidentiality of your data. In addition, all data will be stored on a password-protected computer and/or in a locked office.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Mary Ann Burns at 573-690-0635 or the Faculty Advisor, Dr. Carole Murphy at 314-516-5792. You may also ask questions or state concerns regarding your rights as a research participant to the Office of Research Administration, at 516-5897.

I have read this consent form and have been given the opportunity to ask questions. I will also be given a copy of this consent form for my records. I consent to my participation in the research described above.

Participant's Signature	Date	Participant's Printed Name
Signature of Investigator or Designee	Date	Investigator/Designee Printed Name

Appendix G

G.1

CODE BOOK: MO PLC - Professional Development Activities School Leader Interviews

School:

Interviewee:

Theme: Reflective Practices

Category	Definition	Examples	Points	
Individual Practices	Read and critique educational literature			
	Journal			
	Add artifacts to a professional portfolio			
	Purposeful and thoughtful pauses during and after the teaching/learning process			
	Conduct individual action research			
	Video-tape instruction for personal review of practices			
Other Individual Practices				Ind Prac Total
Partner-level Practices	Discuss educational literature with a peer			
	Engage in cognitive coaching			
	Participate in peer observations			
	Conduct action research with a teaching partner			
	Engage in on-line/distant chats or discussions with another educator			
	Examine student work with a colleague			
Other Partner Practices				Partner Total

G.2

Team-level Practices	Team with colleagues of similar subject assignments (vertical teaming)			
	Team with colleagues of similar grade level assignments (horizontal teaming)			
	Develop, score and discuss common assessments in collaborative teams			
	Review curriculum and course standards in collaborative teams			
	Share effective instructional strategies in collaborative teams			
	Review individual student case studies (shared student) with colleagues			
Other Team Practices				Team Total
School-wide Practices	Participate in goal-setting with interdisciplinary teams (teams across grade/content areas)			
	Participate in schoolwide action research			
	Participate in schoolwide data teams			
	Engage in schoolwide action planning as a result of shared professional learning activities			
	Engage in group book studies			
	Engage in study groups with schoolwide focus			
Other School-wide Practices				Schwide Total

NOTES: **"bold" (*)** indicates practice used most often - double points;
"underline" (**) means practice most beneficial - double points;
italicized (***) indicates what is NOT in place but considered important - no points