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Physical Education Teachers' Perceptions of the Role of Support Mechanisms within Contemporary Professional Development

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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

PHYSICAL EDUCATION TEACHERS' PERCEPTIONS OF THE ROLE
OF SUPPORT MECHANISMS WITHIN CONTEMPORARY
PROFESSIONAL DEVELOPMENT

A Dissertation Submitted in Partial Fulfillment
of the Requirements of the Degree of
Doctor of Philosophy

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Sport Pedagogy

May 2015

This Dissertation by: Erica A. Pratt

Entitled: *Physical Education Teachers' Perceptions of the Role of Support Mechanisms Within Contemporary Professional Development*

has been approved as meeting the requirement for the Degree of Doctor of Philosophy in
College of Natural and Health Sciences in School of Sport and Exercise Science,
Program of Sport Pedagogy

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ABSTRACT

Pratt, Erica A. *Physical Education Teachers' Perceptions of the Role of Support Mechanisms Within Contemporary Professional Development*. Published Doctor of Philosophy dissertation, University of Northern Colorado, 2015.

The purpose of this study was to explore the role of support mechanisms within professional learning communities (PLCs) and their impact on teaching practice. The specific research questions were: (a) What are the types of support mechanisms within a PLC?, (b) What do physical education teachers perceive as the nature of support mechanisms within a PLC?, and (c) How do physical education teachers view support mechanisms within PLCs as impacting their practice? Participants included 34 elementary physical education teachers representing three active PLCs in the United States. Data sources included: (a) focus group interviews, (b) field notes, (c) informal conversational interviews, (d) follow-up interviews, and (e) artifacts. Data were analyzed using a phenomenological approach and resulted in identification of support within PLCs as occurring between people and within the environment. Specifically personal connections, inclusivity, and helpfulness were related to support between people. Support within the environment was reported as diversity of members and a relaxed atmosphere. Furthermore, the teaching practice of physical education teachers was impacted in two ways: through enhanced curriculum and instruction and teacher empowerment. Overall the identified support mechanisms within PLCs enhanced the curriculum and instruction of the teachers through the development of curriculum guides and implementation of

teaching strategies and best practices within classes. In addition, teachers were empowered to take risks and reported having an increased sense of confidence regarding their teaching. Support within PLCs assisted with teachers' professional learning and ultimately impacted their practice. Enacting change by supporting teachers in their quest for professional knowledge through PLCs is one small step in the right direction in creating meaningful PD that will contribute to teachers' professional learning and ultimately enhance student learning.

Keywords: professional development, professional learning communities, teacher professional learning, situated learning theory

DEDICATION

In Loving Memory of Henry C. Artioli (Nonno)

ACKNOWLEDGEMENTS

It is with genuine appreciation and gratitude that I thank all who have supported me throughout the process of completing this dissertation. I am thankful for the opportunity to have known each of you and to share with you this triumph.

I would like to thank my dissertation committee for their dedication to my success. To Melissa Parker, for her unwavering professionalism, expert knowledge, work ethic, and continued guidance. You have been an exceptional role model and have helped me to become the professional I am today. To Mark Smith, thank you for giving me encouragement, challenging my thinking, and understanding me better than myself sometimes. I know I can always look to you when I need someone to keep me on track and focused. To Christina Sinclair, thank you for your professional insight, candid charm and genuine interest in my work. It has been a pleasure working and learning from you both through classes and world travel. To Eugene Sheehan, thank you for your fresh and new perspective on my thoughts and writing, I admire your passion and commitment to the education profession.

To the participants of this study of whom I am indebted to, this project would not have been possible without their personal and professional contributions through generosity of their time and effort. I admire the work they do with each other and with the children in their schools.

I want to also thank the many professors and classmates I have had the opportunity to learn with and from throughout my doctoral career. In particular, I would

like to thank my fellow sport and exercise science teaching assistants-Cathy, Jeremy, Katie, Kevin, Kin, Lyndsie, Matt, Melissa, Misti, and Sheri. Your camaraderie, friendship and collegiality throughout this experience have not gone unnoticed and I am forever grateful to know each of you.

I also want to extend a sincere thank you to Ann MacPhail, Mary O’Sullivan, Deborah Tannehill, Daniel Tindall and my post graduate friends at The University of Limerick in Ireland, thank you for the warm hospitality and sharing your wealth of knowledge during my stay.

To my colleagues at Northern Arizona University, thank you for taking a chance on me and supporting me throughout the writing process. I appreciate your positive words of encouragement and help throughout this process.

To all my friends, I cannot thank you enough for all of your understanding and helpfulness as I pursued this dream. I am thankful for the precious times we spent together although few and far between. I appreciate the times you took me in and gave me a place to stay and hanging with me throughout the toughest times. Although I would like to list each of you by name, you know who you are.

To my family, thank you for believing in me from start to finish. I know it has been a long and winding road, but I finally made it. Mom, Dad, Alison, Geoff, Robert, Emily, Nonni, and Grammy thank you for your constant support, encouragement and the special care packages. I love you all.

To anyone else I did not mention, but have not forgotten. If you have traveled with me or crossed my path throughout this journey in some way you impacted the outcome of this degree.

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CHAPTER I

INTRODUCTION

Political, professional, and public investment throughout the careers of teachers is necessary to build great societies and contribute to global prosperity (Hargreaves & Fullan, 2012). Unfortunately in many educational fields a gap typically exists between professional preparation and classroom practice (Ha, Lee, Chan, & Sum, 2004). In an effort to fill this gap specifically within physical education contexts, the effectiveness of professional development (PD) programs must be actively explored.

Professional development has been described as essential for deepening teachers' content knowledge and developing their teaching practices (Desimone, Porter, Garet, Yoon, & Birman, 2002). Others argue that PD is about teacher learning and includes changes to the knowledge, beliefs, and attitudes that lead to the development of new skills, concepts, and processes related to the work of teaching (Fishman, Marx, Best, & Tal, 2003). These experiences can include a variety of activities and are generally mandated through contractual agreements, however many teachers often engage in PD merely to become better teachers (Guskey, 2002).

In particular, the educational standards movement, subject specific professional organizations, and a call for research on teacher learning have become impetus for the increased need of designing appropriate opportunities for PD (Bechtel & O'Sullivan, 2006). High expectations for educational performance in physical education have also resulted in PD opportunities as being critical in facilitating learning among teachers

(Bechtel & O'Sullivan, 2006). Therefore, proposed PD programs must be more defined and specific, particularly in areas such as character and content (Borko, 2004; Guskey, 2002).

Most recently, modern educational reform initiatives have impacted the PD of teachers in several academic disciplines, with physical education being no exception (Bechtel & O'Sullivan, 2006; Ha et al., 2004; Martin, McCaughtry, Kulinna, & Cothran, 2008). Typically, many educational reform movements have allocated substantial funding for PD, making it critical to understand what constitutes effective programs (Borko, 2004; Desimone, 2009; Whitcomb, Borko, & Liston, 2009). The No Child Left Behind (NCLB) Act of 2001 contained an example of such educational reform, requiring states to ensure availability of "high-quality" PD for teachers in the United States (Borko, 2004). Bulger and Housner (2009) claimed a central tenet of this legislation is the need for ongoing and collaborative models of PD for teachers.

Although no current or explicit definition exists to describe what high-quality PD looks like, several generic characteristics of contemporary PD have been identified within physical education and other academic disciplines. Characteristics include high standards, content focus, in-depth learning opportunities for teachers, ongoing collaboration anchored in improving student achievement, and access to alternative teaching methods (Armour & Yelling, 2004a; Deglau & O'Sullivan, 2006; Garet, Porter, Desimone, Birman, & Yoon, 2001; Parker, Patton, Madden, & Sinclair, 2010). Although these recommendations contradict many traditional forms of PD, they may potentially decrease ineffective practices and attempt to increase the standard of teacher and student learning (Armour & Yelling 2004b; Garet et al., 2001).

Systematic investment in the profession of teaching throughout the careers of teachers is necessary for educational change (Hargreaves & Fullan, 2012). Cochran-Smith and Lytle (1999) contend that teachers must have opportunity to work collaboratively with others to develop local knowledge while critically reflecting on theory and research throughout their careers. If teaching is said to be a professional occupation similar to medicine and law, teachers should be “well prepared, sufficiently paid, properly supported, collectively responsible, and shrewd in their judgments” (Hargreaves & Fullan, 2012, p. 185).

Hord and Tobia (2012) argue that the pathway to professionalism lies in teachers engaging in professional learning communities (PLCs). Hargreaves and Fullan (2012) posit that PLCs are one facet in creating systematic change within the teaching profession and investing in what they call “professional capital”. Professional capital encompasses three types of capital: human, social, and decisional capital that can be reinvested by individuals or groups of teachers (Hargreaves & Fullan, 2012). Building professional capital takes time and support from all individuals involved in the educational process in order for transformation of the teaching profession to occur.

Despite these proposed recommendations and the number of research efforts in multiple academic disciplines, current implementation of continuing professional development in schools continues to reflect antiquated methods (Armour, Makopoulou, & Chambers, 2009; Garet et al., 2001). In many cases, school administrators follow a top down approach mandating one-day workshops employing traditional methods of PD that are often removed from the context of teaching (Armour & Yelling, 2007; Garet et al., 2001; Nieto, 2009). As a result, physical education teachers often do not receive

meaningful or relevant PD to meet their needs as educators. Despite this grim reality, several scholars remain optimistic of the possibility that meaningful continuing PD and sustained educational improvements can be implemented if change is carried out in small, manageable steps over time (Armour & Yelling, 2007; Bechtel & O'Sullivan, 2006; Bulger & Housner, 2009; Guskey, 2002).

Professional development opportunities in physical education must engage teachers in active learning tasks with a clear vision and be monitored and evaluated to allow for capacity building to encourage future learning (Deglau & O'Sullivan, 2006; Ko, Wallhead, & Ward, 2006; MacPhail & Young, 2009; Makopoulou & Armour, 2011a; McCaughtry, Cothran, Kulinna, Martin, & Faust, 2005; O'Sullivan & Deglau, 2006; Patton, Parker, & Pratt, 2013). In an effort for teachers to build capacity through PD, teachers need to learn pedagogical skills in teaching different types of students, generic skills, and assessments (Ha, Wong, Sum, & Chan, 2008). Alternative and contemporary PD opportunities in the form of PLCs and other collaborative activities can contribute to teachers' capacity building and lead to external reform (Hargreaves & Fullan, 2012).

Makopoulou and Armour (2011a) acknowledge that limited changes can occur to teaching practices due to a lack of support. Effective continuing PD systems should support teacher's attempts at collaborating through PLCs, communities of practice (CoPs) or other contemporary CPD opportunities where professional learning can take place (Armour et al., 2009). When groups of teachers collaborate within PLCs to create necessary "supportive conditions coupled with thoughtful facilitation" collective learning can occur (Patton et al., 2013). This type of collegial support has been found to benefit teachers by assisting with understanding of complex concepts and applying theoretical

knowledge in the classroom (Madden, 2010). Therefore in order to engage in productive change to the teaching profession, a balance of pressure and support mechanisms for curriculum reform is necessary (Ha et al., 2008).

Collaborative and contemporary methods of PD that are meaningful, active, and supported may result in positive changes to the professional learning of teachers. Although the need for support within PLCs is apparent, it remains unclear as to how physical education teachers are supported by one another while participating in collaborative PD activities. Identification of the support mechanisms within PLCs may potentially contribute to overall investment in professional capital of educators, thus providing systematic change to the profession of teaching.

Purpose of the Study

The purpose of this study was to explore the role of support mechanisms within professional learning communities (PLCs). By identifying ways in which teachers perceive support within PLCs, leaders and organizers of PD can better provide teachers with meaningful professional learning experiences throughout their careers. The need for support within PLCs has been identified as a critical element within the literature, therefore, the research questions guiding this study were:

- Q1 What are the types of support mechanisms within professional learning communities (PLCs)?
- Q2 What do physical education teachers perceive as the nature of support mechanisms within professional learning communities (PLCs)?
- Q3 How do physical education teachers view support mechanisms as impacting their practice?

Significance of Study

Increasing professional capital among teachers through the use of PLCs shows promise for the transformation of education. Researchers have indicated that several structures within professional learning opportunities such as time, support, meeting protocols, and resources must be provided to overcome problems associated with the teaching profession (Hargreaves & Fullan, 2012; Hord & Tobia, 2012). Professional learning communities have been identified as a potential method for increasing teacher effectiveness and student learning. This study is significant because it identified specific support mechanisms imbedded within PLCs as a way to improve teacher and student learning.

CHAPTER II

REVIEW OF LITERATURE

In an era of high accountability, diverse student populations, political pressure, and rapid advancements in information and communication technologies, teaching has become more demanding than ever (Hargreaves & Fullan, 2000). Current educational reform, in an effort to meet these demands, has necessitated high-quality professional development (PD). Professional development activities include any interactions (informal and formal) to increase knowledge and skills to improve teaching practice among teachers and may be one way to assist children in learning complex and analytical skills of the 21st century (Darling-Hammond & Richardson, 2009; Desimone, 2009). As a result, updated methods of PD have been employed to meet the professional learning needs of teachers in the form of fresh opportunities that foster the development of professional capital and personal growth among educators (Hargreaves & Fullan, 2012).

Professional development has become a flourishing area of inquiry in recent years and many scholars have begun to identify several generic characteristics of effective PD (Armour & Yelling, 2004a; Garet et al., 2001). Although these findings have been primarily within in the general education literature, serious consideration must be applied to their relationship in physical education contexts (Armour & Yelling, 2004a). Several questions still remain regarding the effectiveness of collaborative approaches to PD and the ways teachers are supported in the quest for meaningful professional learning.

This review of literature will examine the existing knowledge base related to PD in general education and physical education. Much of the literature related to PD describes factors that contribute to the development of teachers. The importance of professional engagement of teachers in contemporary PD as a means for improving the field of physical education through quality instruction and student learning will be highlighted.

This chapter will begin with a detailed description of the theoretical and conceptual frameworks upon which this study is based. More specifically, the theory of constructivism inclusive of situated learning as the theoretical framework and the notion of professional capital as the conceptual framework will be introduced. A third section will identify how teachers learn best through various methods of professional learning followed by a review of the existing literature related to PD within educational contexts. In subsequent sections, examples of contemporary methods of PD will be described in the form of professional learning communities (PLCs) and communities of practice (CoPs) while drawing conclusions regarding current implementation and effectiveness in physical education. In addition, a description of the mechanisms of support that are currently available to practicing teachers participating in PD and professional learning will be identified. Lastly, the literature will be summarized in an effort to highlight the importance and need for physical education teachers to be supported within PLCs as potential to improve the quality of teaching and learning in schools.

Theoretical Framework

Learning can be defined as a relatively permanent and irreversible change in behavior resulting from practice (Forman, 1980). In an effort to explain changes to

human behavior, several learning theories have been developed to describe the complexities of learning. Constructivism is one learning theory that espouses the generation of knowledge and meaning through interactions between individual experiences in which learners in a particular group continuously compose and reconstruct knowledge through cognitive activity and participation (Choi, 2006). Beyond a learning theory, constructivism is also an epistemology or detailed study of knowledge used to determine the origin, nature, methods, and limits of human knowledge (Pritchard & Woollard, 2010).

Constructivism has its roots in the cognitive sciences and is based on the philosophical perspective or belief that knowledge is constructed rather than discovered (Fosnot & Perry, 2005). More specifically, constructivism is a psychological theory of learning describing structures, language, activity, and meaning making based on evolution and development (Fosnot & Perry, 2005). As suggested by the theory title, constructivism views knowledge development and understanding as slowly constructed over time (Pritchard & Woollard, 2010).

Within educational contexts, the constructivist perspective addresses how teachers learn about teaching and how that knowledge is used to interpret and solve teaching quandaries (Doyle, 1990). The constructivist perspective focuses on learning and does not provide theory for teaching, curriculum or instruction; however, it is important to note that many instructional approaches are based on some type of learning theory (Fosnot, 2005; Rovegno & Dolly, 2006). In addition, learners within a constructivist environment are typically involved in active processes, which are often learner-centered. Individuals that are free to learn through exploration and sharing ideas with peers may

contribute to a constructivist environment in which learning is social in nature (Azzarito & Ennis, 2003). The focus of constructivism lies within cognitive development and deep understanding (knowledge) rather than viewing learning as a linear process (Fosnot, 2005).

Constructivism allows for individuals to grow in learning through making connections with previous knowledge. The “constructivist movement” can be most associated with the work of theorists Piaget and Vygotsky and recognized as an epistemology since the second half of the twentieth century. Formally a biologist, Piaget is recognized for his notable contribution to academia through his constructivist learning theory, which describes how individuals process information and sensory data to build knowledge and understanding through exploration of their environment. His studies of child development identify learning as a process of constructing meaning and the basis for social constructivism (Pritchard & Wollard, 2010).

A major belief of social constructivism is that knowledge is a constructed product and must occur through social interactions. Vygotsky expounded upon the notion of constructivism and included not only social interactions, but also discourse and aspects of culture and context that he believed are necessary for constructing knowledge (Pritchard & Woollard, 2010). Vygotsky (1997) described “collective social experiences” as a phenomenon distinguishing humans from animals. These collective social experiences include the individual conditional reactions and relations through social interactions that allow for humans to relate to another’s experience through interaction and observation. Interactions among learners allows for potential development through problem solving with more capable peers as opposed to actual development through individual problem

solving, also known as the zone of proximal development (Bransford, Derry, Berliner, Hammerness, & Beckett, 2005). Ultimately various social environments impact the social orientation of an individual based on his/her relationship to their surroundings and can impact cognitive functions (Vygotsky, 1997).

Based on these beliefs, social constructivism emerged as a theoretical foundation due to learning being a primarily a social process. Pritchard and Wollard (2010) describe reality, knowledge, and learning as three aspects of social constructivism. Reality within social constructivism is constructed through shared human social activity. In this instance, each individual creates his/her own reality often dissimilar from others based fundamentally on the fact that the experiences and interactions of each individual differ. Therefore knowledge is created by humans, varying among people and is constructed through social and cultural processes and interactions with their environment. In some cases, however, there may be a misconception based on interpretations of information in relation to individual's pre-existing knowledge. Lasting learning occurs when individuals engage in social activity with others or when new or repeated sensory input is related to pre-existing knowledge. Furthermore, social constructivism has become a basis for many educational theories and research frameworks in several educational and scientific areas.

A constructivist approach allows learners the opportunity to connect their previous experiences from one environment or situation and be able to apply them meaningfully to subsequent experiences in their own lives. According to Rovegno (1998) the constructivist pedagogical approach emphasizes the importance of constructing (new) knowledge from prior knowledge and experiences. The importance or ability to apply previous experiences and knowledge will help enhance the holistic learning of an

individual (Azzarito & Ennis, 2003). Teachers as learners can also benefit from direct experiences in teaching over time leading to increased knowledge through reflection (Doyle, 1990).

The use of constructivist theory has prompted various reactions among physical education researchers acknowledging its value in relation to physical education (Azzarito & Ennis, 2003; Rovegno, 1998). Rovegno and Dolly (2006) recognize the importance of this work; however, it is important to consider the extent to which principles apply to certain physical education content areas and settings. In addition, constructivism has been used to explore teaching in physical education within naturalistic settings to discover how teachers use teaching methods, select content, and organize environmental factors.

Constructivism as a theoretical orientation for qualitative studies in physical education has become more recognized within the professional literature over the last two decades. Kirk and Macdonald (1998) argue the use of a constructivist perspective in physical education research as potentially producing positive outcomes when compared with other inquiry approaches. The theoretical underpinnings of several studies in physical education are housed in a constructivist perspective, which investigates the social nature of learning (Azzarito & Ennis, 2003; Hay & Macdonald, 2010; Rovegno, 1998).

Based on the assumption that professional learning is a social process, Wenger (2009) described the interconnectedness of meaning, practice, community, and identity to “characterize social participation as a process of learning and knowing” (p. 211). Therefore the construction of knowledge is inseparable from the contexts and activities in which it is developed. Professional learning of teachers can be viewed as being situated

in the sociocultural practices of a community where relationships occur within collaborative forms of PD.

Situated perspectives as a form of constructivism focused on the “impact of the activity (or task) and the physical, social, and environment on individuals’ meanings, actions, development and learning” (Rovegno, 2006, p. 271), therefore the notion of “embodied social learning” (Korthagen, 2010, p. 99) could not be overlooked in educational contexts. Situated learning has existed as a unit of analysis in which individuals acted in the context, setting, or activity in which they were engaged (Lave, 1988). Previous studies on teacher learning using situated perspectives in physical education have relied on the use of collaborative groups as a method for interpreting data (Rovegno, 2006).

One form of situated learning is the concept of a community of practice (CoP) or “any collectivity or group who together contribute to shared or public practices in particular spheres of life” (Kirk & Macdonald, 1998, p. 380). Communities of practice are comprised of three aspects: a *domain* or shared interest, a *community* that was made up of a collectivity of individuals that interact regularly, and a *practice* or shared knowledge base (Wenger, 1998). Communities could be found anywhere and were informal, integral, and evolving throughout our lifetimes (Wenger, 2009).

Within this model, situated perspectives related to the concept of legitimate peripheral participation as “a way to speak about the relations between newcomers and old-timers, and about activities, identities, artifacts and communities of knowledge and practice” (Lave & Wenger, 1991, p. 29). This concept explained the shift from individual to social practices that allowed for an appropriate theoretical lens to view the relations

among new and veteran members of a community and the contexts in which they taught and learned. The use of situated learning perspectives as a form of constructivism was an acceptable approach to seek answers to how teachers are supported in their quest for professional learning (Wenger, 1998, 2009).

Previous research using constructivist theory has highlighted the importance of the active construction of knowledge through active engagement in learning. Constructivism influences human life (Pritchard & Woollard, 2010) and the relationship between learning and the social environment (Rovegno & Dolly, 2006). Social constructivist theorists have described the importance of social interactions and relationships on the ability for students and teachers to learn (Pritchard & Woollard, 2010). The social and situated nature of constructivism may allow for an in depth view of how teachers are supported, therefore the challenge now is for educators to determine what this paradigm will bring to teaching practice (Fosnot, 2005).

Conceptual Framework

Based on radical ideas for changing the future of the teaching profession, Hargreaves and Fullan (2012) suggest the notion of investing in individual teachers and schools through what they call “professional capital”. Similar to economic philosophies in business contexts, professional capital refers to the need for making personal investments in individuals and schools in order to make a return. Professional capital is comprised of three essential elements: human, social, and decisional capital. This includes investing in the talents, relations between individuals and discretionary judgements of teachers. Each element plays a key role in the overall phenomenon of

professional capital and directly relates to the social nature of constructivism and contexts of situated perspectives within professional learning groups of teachers.

Human capital began as a thought in the 1960s as a way to invest in the development of knowledge and skills within humans. This idea can be applied to the profession of teaching whereas teachers can develop requisite knowledge of knowing how to teach diverse groups of students through empathy and possessing passion and moral commitment to providing service within schools (Hargreaves & Fullan, 2012). Human capital is generally the investment in the individual talents of teachers.

Social capital exists among relations between people. Moving individual teachers to work together in collaborative efforts while developing communication, learning, and trust is a way to accelerate learning among groups to strengthen social capital.

Hargreaves and Fullan (2012) described several possible methods for achieving social capital among schools in the form of critical friend networks and moderated marking where teachers learn from each other. These types of social capacity building can be referred to as assets that continue to produce benefits among educators.

Decisional capital is the ability for teachers to make discretionary judgments as professionals and can be acquired through experience, reflection, and practice enhanced by social capital by drawing on the insights of others (Hargreaves & Fullan, 2012). Collaboration among teachers can help sharpen decisional capital through interactions where strategies are constantly refined and poor judgments and ineffective strategies are discarded along the way (Hargreaves & Fullan, 2012).

Overall, professional capital is described as assets that make up, define, and develop a profession and practice. Similar to characteristics of a CoP, high quality

interactions among peers can contribute to professional capital by providing conditions for professionals to meet, allow for opportunities for innovation, inquiry into practice together, provide stable leadership, and learn from colleagues outside of the school (Hargreaves & Fullan, 2012). It is impossible to achieve professional capital in schools with poor conditions, fear, and low support. The notion of professional capital as a mechanism for increasing the capabilities of teachers and students is vital to the future of the teaching profession and society (Hargreaves & Fullan, 2012).

Investing in the human, social, and decisional aspects of professional capital by providing various collaborative PD activities throughout the professional careers of teachers has potential for increasing the overall effectiveness of teaching and learning. As teachers work in collaborative environments in which they are able to develop in these areas, teaching may be recognized as a credible profession comprised of committed individuals working toward a common goal. Professional capital can lead to the career development of teachers and contribute to life-long learning.

Understanding the unique professional learning needs of teachers through the application of professional capital in physical education contexts may show promise for how teachers are supported in their own learning. Knowing more about how teachers are supported in their professional learning may potentially hold insight as to how to support students' learning. This conceptual framework added a well-articulated view of several elements necessary for assisting teachers with becoming a sustainable investment in schools.

Teacher/Professional Learning

In recent decades, professional learning has become a major concern in educational arenas with regard to research and practice (Cochran-Smith & Lytle, 1999). In order for professional learning to occur, teachers must have opportunity to develop their professional knowledge throughout their careers to serve the best interests of their students (Armour et al., 2009). Teachers learn best through studying, doing, reflecting, collaborating with others, sharing what they see, and evaluating students and their work (Darling-Hammond, 1998).

According to Cochran-Smith and Lytle (1999) teacher learning takes place over time, is more constructivist rather than transmitted, and must be active allowing previous knowledge to be linked with new knowledge. Three prominent conceptions of teacher learning as described by the authors are knowledge-for-practice, knowledge-in-practice, and knowledge-of-practice (Cochran-Smith & Lytle, 1999). Knowledge-for-practice is assumed to be formal knowledge and theory (often generated in a university setting) used to improve teaching practice. Practical knowledge or knowledge-in-practice is embedded in the work of teachers whereas teachers deepen their knowledge through interactions with expert teachers, make wise judgments, and design rich learning interactions (Cochran-Smith & Lytle, 1999). Lastly, knowledge-of-practice differs from formal or practical knowledge and typically exists within contexts of inquiry communities in order for teachers to construct their work and connect with larger social, cultural, and political issues (Cochran-Smith & Lytle, 1999). These three types of knowledge formations can have implications for the complexity of teacher learning during the 21st century.

In an effort to understand the complexity of teacher learning, Fishman et al. (2003) devised a model which encompasses practical classroom experience, interpretation of student change and impact on the knowledge, beliefs and attitudes of teachers. The context for the model was based on a large-scale, systematic standards-based science education reform in the United States. A qualitative study was conducted with middle school science teachers and their students with regard to teaching and learning within the Water Quality curriculum. Initially PD was offered to the teachers during Saturday workshops (face-to-face sessions supported by media in the form of a curriculum guide) lasting approximately six hours, and four monthly workshops (curriculum reviews and peer-information exchanges). The following year the PD was redesigned to reflect student difficulties in the sessions in order to increase effective teacher practices. The re-design had a positive impact on teachers' overall knowledge and beliefs and their classroom enactment and improved student performance. It was reported that a focus on discrete elements of students' learning proximal to the curriculum being taught should be the focus of PD, thus helping teachers to learn new practices (Fishman et al., 2003).

In response to a paucity of research in the area of teacher career-long learning, Makopoulou and Armour (2011a) studied physical education teachers to determine if they engage in or fail to engage in career long professional learning. In particular, the nature and quality of existing PE-CPD and the features of effective PE-CPD in Greece were explored. A qualitative and interpretive design (case study, questionnaires, and interviews) was used to investigate the learning of nine teachers with depth. Although the current study cannot be generalized, it is suggested that implementation of PE-CPD must

be regularly monitored, evaluated, and actively engage teachers (Makopoulou & Armour, 2011a).

In a smaller yet related qualitative case study conducted with the same data set, the authors found four themes regarding why teachers engaged in professional learning. It was reported that learning can occur everywhere, teachers face contextual, cultural, and structural barriers to learning, and teachers exhibit different dispositions to professional learning and personal dimensions (Makopoulou & Armour, 2011b). Previous findings by Borko (2004) validate these conclusions as teacher learning occurs within many contexts with individuals and in social systems (Borko, 2004). Examples of these contexts may include classrooms, school communities, PD courses/workshops, through brief conversations with colleagues, or with students (Borko, 2004).

Attard and Armour (2005) provided a compelling account of the ways a teacher learns through professional practice. Written as an autoethnography, the primary author describes his thoughts and feelings as a means to better understand how teachers enhance their own learning. Overall this research study design promoted an ongoing and reflective process allowing the teacher to think about potential changes in their teaching practice. Teacher learning should be considered as it relates to PE-CPD ensuring professional knowledge development within physical education (Armour et al., 2009). MacPhail (2011) similarly described her professional journey as a physical education teacher educator and highlighted her use of evidence based teaching, commitment to developing lifelong learners and the ability to model lifelong learning practices to pre service teachers as contributing to her own personal growth.

The use of a single case study design by Pissanos and Allison (1996) illustrated the career long learning of an experienced teacher with regard to socializing conditions and perceptions of continued professional learning. It was found that through higher education and the inseparable nature of the participant's personal and professional life had impacted her PD. The authors propose future research in the area of professional learning to help combat the occupational socialization of teachers.

McCaughtry et al. (2005) reported the relationships between protégé and mentor teachers as being favorable and impacting teaching and career development through psychosocial support within a PD program. Over one school year, 30 physical education teachers in the Midwestern U.S. participated in reform PD opportunities throughout the Exemplary Physical Education Curriculum (EPEC). A quantitative study using self-reports from teachers on the Mentor's Aptitude Inventory and the Mentoring Functions Scale was used to determine how reform PD could influence experienced teachers about mentoring new teachers and influence their thinking about teaching and the mentoring experience. Both mentors and protégés in the study reported positive feelings of self-competence, however, some dips in self-confidence occurred when mentors perceived protégés as having more content knowledge than them. Based on characteristics of reform PD, mentors and protégés were purposefully assigned to work together on a weekly basis using active learning opportunities and resulted in effective influences on their thoughts regarding teaching. In order for lasting change to occur, studies specific to PD in physical education indicate that mentoring programs must be practical, on-going and provide opportunities for mentoring relationships to develop between teachers (McCaughtry et al., 2005; Patton et al., 2005).

Interestingly, the use of mentors in collaborative learning environments often orchestrated the process of change among teachers (Martin et al., 2008; Patton et al., 2005). Frequent interactions between mentors and teachers helped to foster trusting relationships which eventually lead to changes for project goals (Patton et al., 2005). Likewise Kulinna, McCaughtry, Martin, Cothran, and Faust (2008) found “increases in attitude, perceived behavior control, intention, teaching behavior, and some positive changes in social group” as the result of a year-long PD intervention project (p. 303). These findings illustrate the importance of a mentor role in providing meaningful PD opportunities for teachers.

Policymakers and school leadership have begun to realize that the optimum way for teachers to learn is not through one-day workshops, formal learning opportunities or watching instructional videos, but rather through interactions with each other (Tee Ng & Tan, 2009). Teachers learn through collaboration, examination of student work, doing, and reflecting (Darling-Hammond, 1998). Unfortunately teaching and professional learning are often fractured into two separate entities occurring at different locations and times (Armour, Makopoulou, Chambers, & Duncombe, 2010). Approaches to improve learning experiences are to ground learning in teachers’ own practice by conducting learning activities at school sites within individual teachers’ classrooms and to encourage teachers to bring experiences from their classrooms to staff development activities (Putnam & Borko, 2000).

The notion of teacher and professional learning in physical education contexts is important to consider as teachers change and develop throughout their careers. The need for PD to address these transformations is critical to the success of teachers and

ultimately the quality of education. Providing resources and support is necessary for teachers to learn in collaborative and meaningful ways throughout their career.

Unfortunately, teacher learning remains an area of concern as adequate PD opportunities are not always provided to ultimately cultivate learning and growth among professionals.

Professional Development

Teachers are often at the center of many reform efforts due to an assumption that their role in the classroom will ignite educational change. Therefore a strong relationship exists between PD and modern educational reform as occurring synonymously and often with PD as a central component (Desimone, 2009; Fishman et al., 2003; Guskey, 2002; Pritchard & Marshall, 2002). Cornerstone to most educational reform, PD has been described as a primary focus to improve education through bridging the gap between teacher preparation and standards-based reform in the U.S. and elsewhere (Birman, Desimone, Porter, & Garet, 2000; Fishman et al., 2003). In recent times standards-based reform initiatives continue to impact PD in all academic disciplines, including physical education (Bechtel & O'Sullivan, 2006; Ha et al., 2004; Martin et al., 2008). Within the field of physical education, the National Association for Sport and Physical Education (NASPE, 2004) has identified six standards to “develop physically active individuals who have the knowledge, skills and confidence to enjoy a lifetime of healthful physical activity” (p. 11). The role and purpose of the NASPE standards are to define student learning in physical education or “what a student should be able to know and do” through providing a framework of “realistic and achievable expectations” for performance at each grade level (NASPE, 2004, pp. 1, 3).

National educational reform such as The No Child Left Behind (NCLB) Act of 2001 in the United States does not recognize physical education as a core subject, which has resulted in many PD opportunities in physical education lacking coherence, progression and relevance to instruction (Armour & Yelling, 2004b). In an effort to integrate physical education into the NCLB Act, The Fitness Integrated with Teaching (F.I.T.) Kids Act was designed to address the obesity epidemic in the United States emphasizing the need for quality physical education. The F.I.T. Kids Act supports PD opportunities for physical education teachers directly related to their curricula and to promote physical activity and healthy lifestyles. In an effort to provide support it is recommended that stakeholders become active participants in developing curricula and coordination of statewide programming of preservice teacher preparation and ongoing PD for inservice teachers (Bulger & Housner, 2009).

Professional development is essential for providing educators with knowledge and skills needed to provide high quality instruction to students. If the aim of PD is to aid teachers with students' thinking and learning, teachers must use what they learn about students to inform their instructional practices (Whitcomb et al., 2009). In most developed countries, educators and school personnel identify PD as necessary for retaining teachers, improving schools and building capacity among professionals to address educational problems (Pritchard & Marshall, 2002). As a result, PD is often mandated through modern educational reform proposals and is seen as essential for improving education (Guskey, 2002).

Therefore, the need for high quality PD is imperative as substantial funding through reform efforts is now being allocated to school districts around the world, thus

making it critical to understand what constitutes effective PD programs (Borko, 2004; Desimone, 2009; Whitcomb et al., 2009). If high quality PD in educational contexts is imperative, why are current forms of PD offered to teachers described as “woefully inadequate” (Borko, 2004, p. 3)? Typically PD opportunities for teachers are mandated by school administrators as one-day workshops employing traditional methods of PD and are often removed from the context of teaching (Armour & Yelling, 2007; Garet et al., 2001; Nieto, 2009). These traditional types of PD have been deemed as wasteful as they are provided with little or no follow-up or sustained support (Guskey & Yoon, 2009).

Although multiple academic disciplines spanning the globe have conducted and reported research on PD, current implementation in schools continues to resemble more traditional forms (Armour et al., 2009; Garet et al., 2001). Several researchers agree that traditional forms of PD are ineffective as they often take place at certain times, are off-site with minimal follow up and offer little support to integrate learning with practice (Armour & Yelling, 2004a; Garet et al., 2001; Guskey & Yoon, 2009; McCaughtry et al., 2005). Traditional PD methods do not contribute to ongoing learning and collaboration among professionals.

Unfortunately, traditional types of PD opportunities are typically off-site, expensive, and disruptive to students’ learning (Armour & Yelling, 2007). It has been argued that these traditional models of PD are “incompetent” and have failed the physical education teachers and students in schools (Armour et al., 2009). Traditional PD models are often too narrow in scope and encourage teachers to rely on other’s expertise rather than generating their own ideas and knowledge. While these traditional forms of PD have been criticized as being less effective than reform approaches, not all features are

worthless (Birman et al., 2000). On the contrary, traditional methods of PD (i.e., workshops or institutes) can actually be useful when they include research-based practices, active learning experiences, are adaptable to meet the needs of teachers, allow for collaboration, and are sustained over longer periods of time (Guskey & Yoon, 2009).

A recent education editorial regarding the international state of PD based on data from six countries; United Kingdom, Israel, Hong Kong, New Zealand, Canada, and the U.S., summarized characteristics of effective PD to be collaborative and contextualized to the classroom, led by highly skilled teachers rather than outside “experts”, and long-term and sustained professional learning (Swaffield, 2009). These recommendations criticize many traditional forms of PD for potentially contributing to ineffective practice in an attempt to increase the standard for teaching (Armour & Yelling 2004b; Garet et al., 2001). In an effort to provide more meaningful opportunities for educators, traditional PD needs to be altered to include a wider range of learning opportunities for teachers.

Conversely, contemporary and more effective PD experiences typically take place within the school day, include collective participation of teachers from the same schools involving study groups, are sustained over time and inclusive of mentoring and coaching (Armour & Yelling, 2004a; Garet et al., 2001). Castelli, Centeio, and Nicksic (2013) validated this notion and summarized several structures of contemporary PD as being inclusive of knowledge of subject matter, collective and collaborative, continual long duration, active learning, and building communities of practice (CoPs) with support. These characteristics may result in connecting learning with practice ultimately impacting teaching practice and student achievement (Garet et al., 2001). Challenges to contemporary PD exist in providing supportive, meaningful, and sustained supportive

structures, therefore, research on the efficacy of these efforts continues to be critical (O'Sullivan & Deglau, 2006).

Professional Development in Physical Education

Contemporary methods of PD have been employed within physical education contexts in order to determine the effects on teachers (McCaughtry et al., 2005). The authors described several generic characteristics of reform PD as being sustained over months and years, relationships between teachers and specialists, contextualized within schools, having relevance to practitioners, ready to use ideas, active adult learning, and mentors with similar schools, grades, subjects, and personalities. Although not an easy task, the possibility of meaningful PD is contingent on change carried out in small, manageable steps over time, hopefully resulting in sustained educational improvements (Armour & Yelling, 2007; Bechtel & O'Sullivan, 2006; Bulger & Housner, 2009; Guskey, 2002).

Several researchers have conducted longitudinal investigations of continuing professional development in physical education (PE-CPD; Deglau & O'Sullivan, 2006; Kulinna et al., 2008; O'Sullivan & Deglau, 2006; Parker et al., 2010; Patton & Griffin, 2008). In order for change to occur, studies specific to PE-CPD indicate that mentoring programs must be on going and provide opportunities for mentoring relationships to develop between teachers (McCaughtry et al., 2005; Patton et al., 2005). McCaughtry et al. (2005) investigated the role of mentors on protégé teachers. Over one school year, 30 teachers in the Midwestern U.S. participated in PD opportunities throughout the Exemplary Physical Education Curriculum (EPEC), an award-winning curriculum cited by the CDC in 2001. This curriculum was designed to prepare students to be physically

active for a lifetime and consisted of four content areas: physical fitness, activity-related knowledge, motor skills, and personal/social skills. The researchers found that mentor teachers with experience played an important role in the empowerment of new teacher's perceptions of teaching.

Guskey and Yoon (2009) found an absence of PE-CPD studies that met credible evidence guidelines provided in the What Works Clearinghouse of the U.S. Department of Education. This is meaningful as the What Works Clearinghouse provides educators with a central, trusted body of scientific evidence of what works in education enabling teachers to make informed decisions about how to meet high standards. The absence of large scale and long-term investigations in the area of PE-CPD is a call for concern and action to expand the knowledge base in this area.

Typically, PE-CPD is linked to the personal PD plans of teachers and federally funded grants. As noted by several scholars, however, these current practices often fail to achieve improvements in teacher practices and student learning (Armour & Yelling, 2004b; Ko et al., 2006). Ko et al. (2006) investigated high-quality PE-CPD to determine how physical education teachers used information presented in a Sport Education (SE) workshop in their lessons. The workshop consisted of several phases of implementation and data collection that included both qualitative and quantitative measures. Phase I consisted of teachers attending a SE workshop taught by an experienced instructor. During Phase II teachers submitted SE unit and lesson plans to be coded and analyzed and in phase III teachers' SE lessons were observed and videotaped. Following the SE unit each participant was interviewed regarding their perceptions of the PE during Phase IV. The research brought to light issues that currently impact the way physical education

teachers receive PD. Findings suggest that prior teacher knowledge, contextual barriers, and complexity of PE-CPD content directly affect construction of PD opportunities for physical education teachers (Ko et al., 2006).

Ward, Doutis, and Evans (1999) initiated the need for PD as a mechanism for reform of a school physical education curriculum. An inductive analysis method was used to study the school culture of the Saber Tooth School and physical education curriculum to determine to what extent does a partnership between teachers, university faculty and health and physical education consultant enable school faculty to pursue an agenda of systematic change in a physical education curriculum (Ward et al., 1999). Findings indicated themes of collegiality among teachers (willing to make changes to their work as a result of formal and informal collaboration), planning and assessment (feeling personal satisfaction for a doing a job “well done”) and professionalism (feeling empowered to take risks; Doutis & Ward, 1999).

Patton and Griffin (2008) explored the evolution of teacher/student roles throughout the planning, instruction, and assessment of two middle school physical education teachers. In order for change to occur in physical education, teachers must participate in programs that are intense, include access to multiple resources and provide ongoing support (Patton & Griffin, 2008). The Assessment Initiative for Middle School Physical Education (AIMS-PE) was used as a tool to examine and reframe assessment practices and curricular programs to encourage active teaching and learning. It was concluded that teachers increased their planning, organization and management and improved the instructional alignment of their lessons causing a shift in teacher roles to more indirect teaching practices. Continued research in the area of PE-CPD with respect

to contemporary methods that include collaborative learning opportunities for teachers should be explored.

Communities of Practice

The notion of a CoP within PD contexts has received considerable attention in recent years (Deglau & O’Sullivan, 2006; Vaughan, 2007). In order to understand the potential impact of a CoP as a mechanism for PD, a clear definition and description of the characteristics of a CoP must first be identified. A CoP is a “group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, McDermott, & Snyder 2002, p. 4). Almost all members of any profession belong to a community of practice to a certain extent, whether explicit or not.

The mediating influences of a CoP are the development and management of knowledge ultimately increasing the ability for members of the CoP to be stewards of their created knowledge (Wenger et al., 2002, p. 6). Teachers must have opportunity to choose their own topics while working collaboratively with other educators in the context of the school that are on-going and meaningful (Nieto, 2009). The basic structure of all CoPs includes three elements: a domain, a community, and shared practice. The domain of a CoP refers to its ability to legitimize the community by establishing purpose and providing guidance for its meaning and actions for its members and other stakeholders. The community involves the heart as well as the head in a unique blend of intimacy and openness to inquiry. The community is based on mutual respect and a level of trust that provides for social interactions and relationships to develop. Finally, practice is the

specific knowledge the community develops, maintains, and shares. When all three aspects of a CoP function together, a social structure or knowledge structure is formed.

In an attempt to demonstrate the potential usefulness of a CoP, O'Sullivan (2007) shared a brief report of the potential impact this type of PD has in physical education contexts. Due to the ability of a CoP to engage members in a "collective process of learning" the CoP allows for teachers to come together over time to develop strong identities as teaching professionals, enhance students' experiences and better their program (O'Sullivan, 2007, p. 24). The concept of CoP in physical education contexts has become more apparent within the PE-CPD literature in recent years (Duncombe & Armour, 2004; Parker et al., 2010; Tannehill, O'Sullivan & Ní Chróinin, 2006).

In an effort to determine the effectiveness of a CoP among physical education teachers, Deglau and O'Sullivan (2006) conducted a study of a cohort of 24 teachers grant funded by a Physical Education for Progress (PEP) program in Columbus, Ohio. Inductive analysis using an observational case study methodology was employed to determine what teachers' believed about teaching and their practices and how a CoP influenced their sense of themselves as professionals in their current PE program. It was determined that teachers felt a sense of self efficacy, similar to the findings of Martin, McCaughtry, Hodges Kulinna, & Cothran, (2009), and formed strong identities as teaching professionals. Deglau and O'Sullivan (2006) recommended the use of CoP in PE as "the CoP is itself a mediating influence on multiple levels when considering teacher change" (p. 380).

In a related study, Degalu, Ward, O'Sullivan, and Bush (2006) used inductive methods to inquire as to what issues teachers discussed and how they chose to speak

about issues. Seventeen physical education teachers from Columbus, Ohio were paid ten dollars an hour to attend a minimum of four PEP-talk discussions at a local establishment to discuss issues relating to their roles as educators. These teachers had been involved in previous PD activities and knew the authors of the study relatively well. Teachers discussed concrete topics and often felt powerless or even marginalized. These teachers chose to make changes in their schools by reaching out to peers for support.

Similarly, Tannehill et al. (2006) examined the changes of beliefs and practice of teachers as a result of participating in a CoP within a structured professional development program. Unfortunately some struggles occurred throughout the participation and only some instances of individual teachers implemented some of what they had learned. It was further reported that while teachers understood the importance of working together, the teachers seemed unsure of how to work together (Tannehill et al., 2006).

In a most recent study of the landscape of CoPs in physical education contexts in Ireland, Parker, Patton, and Tannehill (2012) reported a continuum of the PD initiatives that ranged from a collection of teachers to an authentic CoP. This continuum highlights characteristics within each category of teacher groups based on four themes of purpose, success, guideposts and roadblocks, and the role of the facilitator as seen in Table 1. Overall, these groups of teachers participated in contemporary PD, however, to varying degrees of structure, leadership, and support.

Table 1

Overview of the Landscape of Community of Practice as Professional Development in Irish Physical Education

	Collection of Teachers	Established Group		Authentic CoP
	IPPEA	PEAI	KES	USI
Purpose	New ideas and knowledge	Get ideas	Focused initiative External imposed	Focus initiative
Success	Acquisition of new ideas	Acquisition of new ideas	Accomplished objective + empowerment	Accomplished objective + empowerment
Guideposts Roadblocks	When together Leader attempts to sort issues arising	Continuous Group solves organizational issues. No focused issues to sort	Continuous Issues defined by group, solved by leader or shared facilitators	Continuous Issues identified by group and solved by group
Role of Facilitator	External and internal leaders and workshop leaders	Internal leaders and workshop leaders	Shared facilitation, leader, and workshop leaders	Shared facilitation and workshop leaders

Adapted from “Mapping the landscape of communities of practice as professional development in Irish physical education,” by M. Parker, K. Patton, and D. Tannehill, 2012, *Irish Educational Studies*, 31(3), p. 324.

Patton et al. (2005) studied the role of the mentor relationship in a teacher development program. Specifically, K-12 physical education teachers, researchers and mentors (college/university faculty), employed the Assessment Initiative for Middle School Physical Education (AIMS-PE) funded by the Centers for Disease Control (CDC). A 2-year investigation was designed to determine what factors contributed to effective

mentoring and what contexts, activities, and interactions influenced development of a CoP. The goals of this project included providing assistance to inservice teachers for reconsidering assessment practices to increase physical activity knowledge and behaviors of students. Findings provided substantial evidence that positive, reciprocal and mutual mentoring roles support teacher learning with and from each other (Patton et al., 2005).

Studies in both education and physical education point to the potential role of a facilitator as having an impact to strengthen collaborative PD (Parker et al., 2010; Smith, Wilson, & Corbett, 2009). Patton and Parker (2014) recently determined how facilitators conceive their role in ongoing PE-CPD through an international research project involving facilitators of PD. The unique aspect of this study was that all participants were engaged as a lead-facilitator of a PD project that was long-term and had clearly articulated pedagogical objectives. It was reported that successful facilitation allowed for teachers to construct new meaning based on prior knowledge and experience, were influenced by others through a social environment and recognized formal knowledge as being relevant (Patton & Parker, 2014). The social nature and careful facilitation of collaborative PD may potentially have implications for how teachers develop knowledge and ultimately change teaching practice. Similar to the concept of a CoP, professional learning community (PLC) was described as a mechanism for supporting teacher learning.

Professional Learning Communities

Similar to CoPs, increased collaboration among teachers provides an opportunity for the use of PLCs as a means for PD. Collins and O'Brien (2011) defined a PLC as “a group of teachers and administrators within a school who create a collaborative work

culture, continuously seek and share learning, and then act on their collaborative learning” (p. 372). Borko (2004) reported evidence of strong PLCs fostering teacher learning and instructional improvement. The intention of such communities is for teachers to increase their knowledge of subject matter and pedagogical practices in an effort for students to make strides in achievement.

Glazer and Hannafin (2006) recommend the need for alternative and feasible methods to support teaching communities and sustain opportunities for professional growth and continued learning. The authors further indicate that collaborative approaches to professional learning through continual sharing of instructional resources and skills promote mutual growth. Support within teacher communities, therefore, became a mutual responsibility in which individuals collaborate through reciprocal interactions that develops a common understanding and is permeated throughout the community (Glazer & Hannafin, 2006). Reciprocal interactions are said to occur between individuals or within a community and supports teacher learning and development through mutual relationships (Glazer & Hannafin, 2006). These interactions can be expressed through various forms of communication (written and non-verbal gestures) and physical movements in an effort to maximize teacher learning (Glazer & Hannafin, 2006). These authors demonstrate the role of collaborative apprenticeships as a method for professional learning within teaching communities as seen in Table 2.

Table 2

Phases and Roles to Promote Collaborative Apprenticeships for Professional Learning in Teaching Communities

Phase	Teacher-leader roles	Peer-teacher roles	Collaborative partnership	Related sources
Introduction	Promotes and models use of strategies in workshop or classroom environments	Observes and participates in learning applications of new methods	Discusses and reflect on teaching and learning experience	Fairbanks, Freedman, & Kahn (2000), Feiman-Nemser (2001)
Developmental	Provides scaffolding, coaching and fading to design, develop and implement learning activities	Acquires skills and strategies in context of participation	Collaboratively design, develop, and implement learning activities	McCotter (2001), Swan et al. (2000)
Proficient	Identifies areas for improvement and exploration	Articulates understanding by autonomously designing activities	Share experience and ideas with peer community	Browne & Ritchie (1991)
Mastery	Observes and participates in learning applications of new methods	Promotes and models use of strategies in workshop or classroom environments	Peer-teacher becomes teacher-leader for design and development of learning applications	Caverly, Peterson, & Mandeville (1997)

Adapted from “The Collaborative Apprenticeship Model: Situated Professional Development Within School Settings,” by E. M. Glazer and M. J. Hannafin, 2006, *Teaching and Teacher Education*, 22, p. 182

Interestingly, the use of mentors in collaborative learning environments often orchestrated the process of teacher change (Martin et al., 2008; Patton et al., 2005). Frequent interactions between mentors and teachers helped to foster trusting relationships through a community eventually leading to changes for project goals (Patton et al., 2005). This transformation occurred because of the ability of teachers to be receptive to the support of their mentors, therefore interested in sharing their knowledge. Likewise Kulinna et al. (2008) found “increases in attitude, perceived behavior control, intention, teaching behavior, and some positive changes in social group” as the result of a year-long PD intervention project. Teachers participated in an initial mandatory district workshop followed by three subsequent workshops conducted by the research team. These findings illustrate the importance of a mentor role in providing meaningful PD opportunities for teachers.

Facilitators who share the same purpose and focus for PD as the teachers participating in PLCs may offer some support in teacher growth. Studies in both education and physical education point to the potential role of a facilitator as having an impact to strengthen professional learning communities (Parker et al., 2010; Smith et al., 2009). Observations in this area require additional research in light of the difficulty and time-costly nature of maintaining a learning community in which teachers should receive support and resources to sustain effective practices. Creating collegial learning opportunities for teachers that includes well-designed, rich and intensive content can improve both teacher and student learning (Darling-Hammond & Richardson, 2009).

Facilitators of professional learning opportunities who share the same purpose and focus for PD as teachers may offer some support in aiding with teacher growth. The use

of CoPs or PLCs has potential to increase teacher and ultimately student learning. One area that necessitates more research is the type of support mechanisms offered to physical education teachers while participating in collaborative PD opportunities. A look at the existing PD research with regard to the type and nature of support mechanisms offered in existing programs can be beneficial to determine effects on teacher learning and growth.

Support in Professional Development

Opportunities that promote professional learning which differ from traditional PD and teacher in-service trainings (such as PLCs, CoPs, and other contemporary forms of PD) must consider the “importance of support mechanisms and the necessity of learning over time” (Lieberman, 1995, p. 75). Support mechanisms, while loosely defined in the PD literature are apparent in many existing PD initiatives and are necessary for teacher change and the development and maintenance of effective contemporary PD in educational contexts (Bechtel & O’Sullivan, 2007). Joyce and Calhoun (2010) believed teachers should receive support when participating in professional and staff development. The authors propose five ways to generate individual growth among teachers through support by offering stipends to generate growth opportunities for educators, providing short-term leave opportunities for PD, providing support to generate knowledge and skills, building an energizing and positive school culture, and using systems for studying teaching to enhance repertoires (Joyce & Calhoun, 2010).

Parker et al. (2010) suggested that if PD was essential to the future of physical education it must be carried out in ways that empower and support personal and professional relationships. They found during a two-year study of four elementary physical education teachers, one district curriculum coordinator, and three participant

observers that collegial relationships were vital in the process of developing and maintaining a community of practice (CoP). The development of these strong collegial relationships led to supporting their efforts in the group which resulted in ability to work toward a common goal.

Madden (2010) reported “multiple forms of support may need to be continuous over time for a teacher to accomplish real change” (p. 148). These forms of support for PD in physical education have been identified as being administrative, collegial and facilitative (Madden, 2010). Administrative support by principals has benefitted teacher change, however, it has been found that this type of support alone is not essential for change to occur (Bechtel & O’Sullivan, 2007). Collegial support enhanced the teacher change process by allowing teachers to gain new ideas or feel reassured while attempting changes and should be a key component of effective PD programs (Armour & Yelling, 2004a; Bechtel & O’Sullivan, 2006). Furthermore, facilitative roles within contemporary PD activities assist in supporting and the development of teachers (Parker et al., 2010; Patton & Griffin, 2008; Patton et al., 2013).

Teachers seeking true professionalism understand the importance of relationships and their importance in fostering mutual respect through “unconditional love” (Hord & Tobia, 2012, p. 95). Unconditional love refers to the ability to support one another without judgment and conditions that encourages professionalism. These ideas along with others have sparked the interest of many researchers to determine the effectiveness of various types of collaborative PD with teachers working alongside each other (Darling-Hammond & Richardson, 2009; Smith et al., 2009).

Summary of Literature

A constructivist approach to qualitative research within this study is appropriate to determine how support mechanisms within professional learning communities impacts physical education teachers' practice. The constructivist and situated perspective identifies learning as constructing meaning through individual past and current experiences that create contexts where future learning takes place (Pissanos & Allison, 1996). An important aspect of social constructivism is the notion of situated learning in which learners involve themselves in activities that are directly related to application of learning in a similar context that might be experienced in the future (Pritchard & Woollard, 2010).

Radical changes to education in the form of professional capital as described by Hargreaves and Fullan (2012) may contribute to the potential investment in teachers in an effort to improve schools. Improving the quality of PD activities mandated through educational reform to reflect a more collaborative approach in the form of professional learning communities may assist in the overall success of promoting professional capital. Although this quest consists merely of a vision, there is optimism for the future of education through this agenda that promises investment in teachers and groups of teachers.

Therefore, contemporary PD opportunities such as PLCs and CoPs have been one step in a positive direction toward improved teaching and learning. Several researchers highlight positive characteristics associated with the collaborative nature of these groups in relation to teacher learning (Bulger & Housner, 2009; Cochran-Smith & Lytle, 1999; Hargreaves & Fullan, 2012; Patton et al., 2013). If contemporary methods of PD are seen

to be effective, then “an essential component of an effective PD program is support from colleagues” (Bechtel & O’Sullivan, 2007, p. 232). Identification of the mechanisms of support among teachers participating in PLCs may play an important role in overall teacher development and lasting school change.

CHAPTER III

METHODOLOGY

The purpose of this study was to identify physical education teachers' perceptions of the nature of support mechanisms within professional learning communities (PLCs). A phenomenological study design allowed for the investigation of physical education teachers' perceptions of the types and nature of support within PLCs and the impact on their teaching practice. This approach allowed for multiple participants to describe their lived or shared experiences of the phenomenon of support (Creswell, 2007). This chapter begins with a diagram of the overall study procedures (see Figure 1) and includes an explanation of the research design, the researcher perspective, descriptions of the participants, methods for gaining access to the research site, followed by data collection and analysis procedures. Finally, elements of trustworthiness within the study are described with respect to credibility, transferability, dependability, and confirmability.

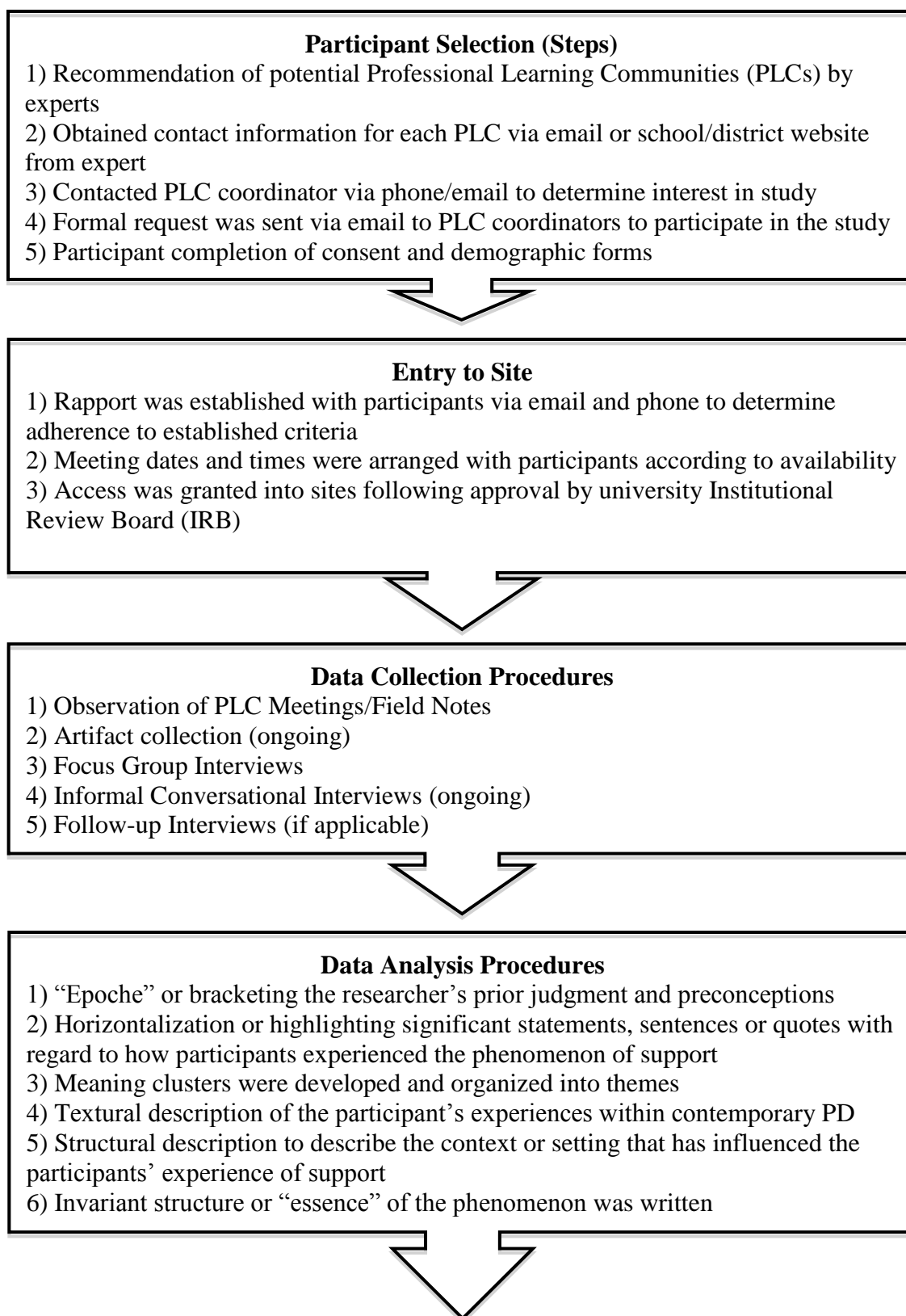


Figure 1. Overall Study Procedures

Phenomenological Design

This study identified how physical education teachers perceived the support mechanisms within PLCs and how those support mechanisms impacted their teaching practice. In particular, a phenomenological research design was used as it describes the “what” and “how” of the lived experiences of individuals in relation to the concept or phenomenon of support (Creswell, 2007; Moustakas, 1994). The use of phenomenology was an appropriate method for this study as it allowed for the reduction of data to develop a composite description of the universal essence of the lived experiences of support mechanisms of all participants (Creswell, 2007).

The philosophical underpinnings of phenomenological study are grounded in the belief that experience itself can be translated into consciousness (Merriam, 2009). To further understand this notion, Creswell (2007) summarized the philosophical perspectives of phenomenological study into four broad areas. First, based on Greek conceptions prior to scientism, “returning to the traditional tasks of philosophy” was a search for wisdom (p. 58). Second, “philosophy without presuppositions” was the suspension of all judgment about reality until it was realized in a specific way (pp. 58-59). Third, “intentionality of the consciousness” was the inextricability linked to a person’s conscious from the reality of an object (p. 59). Lastly, “refusal of the subject-object dichotomy” stated that the reality of an object is only perceived within the meaning of an individual’s experience (p. 59). Therefore, phenomenologists focused on the ways in which phenomena were experienced and interpreted in order to develop a worldview.

The phenomenon of support among physical education teachers participating in PLCs was analyzed from a variety of perspectives in order to draw the essence of the shared experiences of the participants. It is based on the philosophical assumptions of phenomenology and in an effort to understand the deeper levels of support among physical education teachers participating in PLCs, the in-depth interviews served as the primary source of data. According to this approach any preconceived thoughts or ideas that could potentially influence the data, such as prejudices, viewpoints, and assumptions therefore were bracketed, or set aside prior to the interviews. This process of bracketing is called “*epoche*” from the Greek, meaning to refrain from judgment (Merriam, 2009). Bracketing for this study occurred through a written description and disclosure of the researcher’s perspective. According to Creswell (2007), this suspension of beliefs allowed for the consciousness to become heightened to allow for examination of an object of consciousness by clarifying previous experiences, biases, prejudices, and orientations that have shaped the interpretation of identifying the phenomenon of support among physical education teachers in PLCs.

In conclusion, a phenomenological design was employed to allow for understanding of how groups of teachers perceived support mechanisms within a PLC. Often interactions among people are difficult to capture through existing measures, therefore a phenomenological study was an appropriate method for this study as it can provide a complex and detailed understanding of information universally experienced by many individuals (Creswell, 2007). Finally, phenomenology offered a streamlined approach to data collection and provided structure for identifying the mechanisms of support among physical education teachers within PLCs (Creswell, 2007).

Researcher Perspective

I became interested in teachers' professional development (PD) as a result of my own personal experiences as a secondary physical education teacher over the last decade. Throughout my seven year public school teaching career I was involved in numerous PD activities, both mandated by the district administration and also pursued through my own initiative. My aim was to gain more knowledge about teaching physical education primarily through state and national conferences or one-day workshops. My strong belief in the need for PD has always been an important part of my overall professional learning and development as a teacher.

Typically, my personal experiences with PD in the three school districts where I taught were less than positive or effective for my professional growth. On many occasions, the content within PD programs was not related to my needs within the discipline of physical education and too often my learning consisted of passive participation in unrelated subjects with little support or no follow-up. Therefore my curiosity in this area of inquiry has resulted from my own previous teaching experiences, prior coursework in physical education teacher education (PETE) classes, and personal discussions with colleagues.

Most recently, I have experienced working with pre-service teachers in collaborative supervisory groups where students met in small groups to discuss their teaching experiences in an effort to improve upon their practice. The notion of interpersonal relationships and social interactions as a way to influence teaching and learning appealed to me. In addition, my knowledge of contemporary PD practices (communities of practice and professional learning communities) was highly influenced

by other researchers who I had the opportunity with which to work closely in Greeley, CO and Limerick, Ireland. These varied experiences have shaped my vision of PD and have given me a sense of how teachers engage within one another through professional dialogue, active workshops, and informal interactions.

These experiences have interested me in learning more about how physical education teachers are supported as they participate in collaborative and contemporary PD contexts. An understanding of the social aspects of PD may allow for better use of time and resources within schools that provide such opportunities for educators.

Participant Selection

Participants for this study were purposefully selected according to the criteria for a PLC as described by Hord and Tobia (2012). This included being part of a group of teachers that exhibit supportive and shared leadership, shared values and vision, intentional collective learning, supportive conditions, and shared practice. The selection of participants occurred in five steps. First, I constructed a brainstormed list of potential PLCs in the U.S. based on expert recommendations from several physical education professionals familiar with contemporary professional development methods. Next, I obtained the contact information for the coordinators of the potential PLC groups via email or through school/district websites on the Internet. I then informally contacted a representative from each potential PLC by email to provide a brief description of the intended research study and determine the group's ability to meet selection criteria and willingness to be involved. Once each potential PLC group was identified, I sent a formal request via email to each PLC coordinator to verify interest/participation in the study (see Appendix A). Lastly, I asked individual participants within each PLC to complete a

demographic information sheet (see Appendix B) and consent form acknowledging their agreement to participate in the study (see Appendix C).

Participants

Understanding the common experiences of physical education teachers is valuable in determining the effectiveness of contemporary professional development programs in educational contexts, therefore participants for this study were selected with careful consideration to ensure experience with the phenomenon being investigated (Merriam, 2009). A sample of 34 elementary physical education teachers (14 female; 20 male) representing three active PLCs in the inter-mountain west region of the United States (U.S.) were selected as participants for the study. Groups of teachers that met monthly during the school year (August through May) to enhance their teaching practice through participation in a district PLC were eligible to participate in the study. Participants for the study included new and veteran teachers that ranged from 1-31 years of teaching experience (see Table 3). Meeting topics for these groups included sharing best practices for teaching in physical education, development of district physical education standards, dissemination of general information pertaining to physical education, and integration of technology into the curriculum. The following sections describe the characteristics and context of each individual PLCs.

Table 3

Professional Learning Community Demographics

Characteristic	Gender		Educational Level		Years of Teaching Experience		
	Male	Female	Bachelors	Masters	Total	Average	Range
PLC A	5	6	5	6	152.60	13.86	1.5 - 29
PLC B	10	7	8	9	230.00	14.00	4.0 - 31
PLC C	5	1	1	5	60.00	10.00	1.0 - 22

PLC A = Professional Learning Community Group A

PLC B = Professional Learning Community Group B

PLC C = Professional Learning Community Group C

Professional Learning Community A

Eleven elementary physical education teachers (6 female; 5 male) ranging in years of experience from 1.5-29 years comprise PLC A. Six of the members held a Master's degree while the other five had Bachelor's degrees. The group was facilitated by a teacher leader (this person was also a physical education teacher) that periodically rotated to other group members on a voluntary basis. All teachers in the PLC were volunteers and typically met monthly in various gymnasiums throughout the district during after school hours for a total of 15 hours per school year (7.5 in the fall semester and 7.5 in the spring semester). When asked, it was estimated that the group began in 1988 with the primary focus centered on sharing lesson ideas and other instructional strategies to enhance the teaching and development of physical education in their school district of which at the time of writing continues to be their purpose. On various occasions, outside speakers were invited to attend meetings to present new physical education content and at other times the group members traveled to off-campus locations to learn specific activities that could be taught in physical education (i.e. curling center). A sub-committee of the PLC served as a curriculum development group which worked together to make curricular changes that ultimately was brought back to the larger PLC group. One notable aspect of this group was a high level of participation in the state professional physical education organization which has resulted in three past presidents and 10 award winners.

Professional Learning Community B

This PLC began as a collective effort of the local university and elementary physical education teachers in 2006. Prior to 2006, the group described themselves as

lacking structure and direction. An initial Carol M. White PEP grant written by several local university faculty brought the group together with a purpose of starting to change curriculum with the intent of doing what was best for kids in the district. Their journey began with a 3-day retreat in a local national park where physical education teachers worked closely together in creating a new physical education curriculum. During the curriculum construction phase, these teachers would meet on several occasions each month group often in the mornings before school, at someone's house and also on some evenings. Several members described this time as "lots of meetings" and they were initially paid for their efforts. The time that was invested together during these working sessions resulted in a core group that described themselves as being "a family". The group included 17 physical education teachers (7 female; 10 male) and ranged from 4-31 years of experience. The group collectively held nine Master's degrees and eight Bachelor's degrees. After the grant funding ended, these teachers continued to meet monthly and on additional Mondays (for district credit) through participant lead sessions where they discussed different topics and shared best practices with one another.

Professional Learning Community C

This PLC began in the mid-1980s (the exact year was unknown) and currently had a core group of about 15 elementary physical education teachers, 6 (1 female; 5 male) of which were available to participate in this study. Participation in the PLC was voluntary and spanned the entire school year (10 meetings per year) in locations that rotated throughout the district, typically in a variety of gymnasiums taking place during after school hours. The group consisted of one individual with a Bachelor degree and five others holding Master's degrees and was facilitated by a teacher leader who was also an

elementary physical education teacher. The teacher leader described the group as a “care to share” collective where teachers shared best practices and other strategies with colleagues typically of what they were doing in their own gymnasiums. In addition, outside speakers were brought in to disseminate information or share information from the profession. Occasionally a smaller sub group of teachers met once a month to discuss curricular changes and worked to revise curriculum that was shared with the larger PLC group.

Entry to Site

Negotiating access into the research sites was fundamental to this qualitative research study as it was conducted in real life settings (Hastie & Hay, 2012). I established entry into the research site by building rapport with coordinators of the potential PLCs through informal email and telephone conversations. Following a period of informal contact through email communication and telephone conversations I obtained a detailed schedule of dates and times of PLC meetings for each district from the PLC coordinator for the 2012-2013 school year. Next, following approval of the university’s Institutional Review Board (IRB, see Appendix D), I asked permission of each PLC coordinator to attend any or all of the upcoming PLC meetings for the remainder of the school year. Following approval of the PLC coordinators, I travelled by car to each research site. Once at the PLC meeting location, I introduced myself to members of the PLC and asked permission to conduct research by distributing consent forms outlining each participant’s right to volunteer or not and assured participants that the information will remain confidential through the use of pseudonyms for all people and places.

Data Collection

Following approval of the university's IRB, a combination of methods were used to provide a rich description of teachers' perceptions of the nature of support mechanisms within contemporary PD activities. Data sources included: (a) semi-structured focus group interviews, (b) informal conversational interviews, (c) follow-up interviews, (d) field notes from observations of professional development sessions, and (e) collection of artifacts as the result of professional development work.

Interviews

Interviews were conducted with all participants as an appropriate method for data collection in this phenomenological study as it would have been otherwise difficult to observe feelings, behaviors, and interpretations of the participants (Merriam, 2009). . Interviews aimed to explore teachers' perceptions of the nature of support mechanisms within PLCs. Semi-structured formal focus group interviews served as the primary data source for this study. In addition, informal conversational interviews and follow-up interviews were used to gather information regarding the perceptions of support experienced by the participants.

Semi-structured interviews. Semi-structured focus group interviews were used to gather the perceptions of teachers regarding the mechanisms of support within PLCs. Focus group interviews were selected to allow for participants to draw upon and expand on one another's thoughts or comments. Focus group interviews took place at a prearranged location and time that was convenient to the participants (restaurant/bar, district professional development center, and classroom) and on two occasions was following a regularly scheduled PLC meeting. Each PLC participated in one focus group

interview conducted using a predetermined interview guide contained specific questions regarding the nature of support within PLCs (see Appendix E) and ranged from 35-66 minutes in length. The interview guide was developed based on previous understanding of professional development concepts. All members of each focus group were given equal opportunity to speak during interviews and were recorded accordingly. The interviews were conversational and situational (Patton, 2002) and the semi-structured nature of the focus group interviews allowed for additional questions to be asked in response to the participant's emerging responses (Hastie & Hay, 2012). Semi-structured interviews allowed for a conversation to unfold between the researcher and the participants whereas a free flow of dialog developed throughout the interview process. Teachers were able to express themselves freely and the researcher was able to ask clarifying questions when necessary. All focus group interviews were digitally audio-recorded and transcribed verbatim using ExpressScribe software that resulted in 117 pages of transcriptions prior to data analysis.

Informal conversational interviews. In addition to the focus group interviews, informal conversational interviews (Patton, 2002) occurred throughout the data collection process. These interviews allowed for a deeper inquiry about the phenomenon of support and allowed for other pertinent or relevant questions to be asked informally (Merriam, 2009). These informal conversational interviews relied on spontaneity and consisted of open-ended spontaneous questions to gather the perspective from the participants on multiple occasions throughout data collection (Patton, 2002). This method was appropriate as interviews were based on observations of PLC meetings and matched to the individual's circumstances (Patton, 2002). Informal conversational interviews were

not solicited and took place before, during, and after PLC meeting observations, focus group interviews and on other occasions. As the study progressed, the informal conversational interview questions changed over time, and each new interview built on those already done, expanding information that has been identified previously, moving in new directions, and seeking clarification and elaboration from various participants (Patton, 2002). Brief notes were taken during these interviews, immediately after which extensive notes regarding what was discussed were recorded.

Follow-up interviews. Quality interview data involves multiple sessions with participants, therefore follow up interviews were used during the analytic process to clarify and expand participant descriptions (Polkinghorne, 2005). Six follow-up interviews, (3½ hours) were conducted in person, by telephone, or by email and used to draw out additional information from four individual participants. These interviews were used to expand upon or clarify previous comments made during PLC meetings or in focus group interviews. Follow-up interviews were audio recorded and several pages of handwritten notes were made following observations of PLC meetings and focus group interviews with participants to provide additional information. Potential follow-up interview topics can be found in Appendix F.

Field Notes

In addition to interviewing, observation was a major source of data collection allowing for holistic interpretation of the phenomenon being investigated (Merriam, 2009). I observed participants using overt and naturalistic observation methods; therefore they were fully aware of their observation during a minimum of one regularly scheduled PLC meeting held in a restaurant/bar, district professional development center and

classroom (Hastie & Hay, 2012). Descriptive field notes were handwritten into a notebook and taken during seven PLC meetings that each ranged from 1-7 hours. Field notes were recorded in a predesigned template consisting of the meeting date, focus, location, number of PLC members and a diagram of the meeting space in two large columns that included vague notes listed on the left side of the column and more detailed and expanded notes listed respectively in the right hand column. Field notes were recorded from an inconspicuous location to the side of the PLC meetings and in the room among or close to participants on all occasions. The interactions of study participants, the format and structure of the PLC meetings, general content of the meetings (best practices, lesson ideas, administrative information, technology use, etc.) , any instances of both inactive and active participation, how participants engaged with one another and the extent of their engagement was recorded. Due to the nature of the observations and the relatively small size of the PLCs, only those who had agreed to participate were noted. Following each observation, 50 pages of field notes were typewritten and expanded upon to elaborate on any vague comments recorded during the PLC meetings. Field notes ultimately reflected how teachers supported one another through engagement in PLC meetings and how they verbalized and expressed the nature of support as potentially impacting their teaching practice.

Artifacts

Finally, artifacts were collected throughout the study to gain a better understanding of the phenomenon of support. Artifacts are “things” gathered from the study setting that represent some form of communication between and among teachers within the PLC (Merriam, 2009). Artifacts were collected during PLC meetings and any

other contact with study participants to provide an additional point of view to compare with information gathered through observation and interviews. Artifacts for this study included 400 pages of electronic communications and correspondence between teachers (emails), 12 PLC meeting agendas and minutes, four physical education resource notebooks, and access to electronic information/resources (i.e., Dropbox).

Data Analysis

Data analysis procedures specific to the use of a phenomenology research design were employed in this study to identify the support mechanisms experienced by physical education teachers within a PLC. The first step in the data analysis process was to minimize researcher bias by following a process of “epoche” or bracketing prior judgment and preconceptions (Patton, 2002). This was accomplished by disclosing researcher bias through a written description of the researcher’s perspective prior to reading interview transcriptions. Next, data were as inductively analyzed by reading through interview transcripts and highlighting significant statements, sentences or quotes with regard to how participants experienced the phenomenon of support within the PLC. This process is referred to as horizontalization (Creswell, 2007) and allowed for all data to be treated as having equal weight and value during the initial analysis (Merriam, 2009; Patton, 2002). Based on the highlighted participants’ responses to interview transcriptions and field notes, clusters of meaning were developed and organized into themes. Several major themes from the sources were listed in the margins of the transcriptions and field notes.

Following the development of meaning clusters or themes, significant statements were identified and used to write a textural description of the participant’s experiences

within the PLC. The textural portrayal of each theme described the experiences of each participant with relation to their involvement in a PLC while providing content and illustration of their experiences of support, yet not fully describing the essence of support (Patton, 2002). The textural portrayal was written to describe and expound upon the major themes found within the data. Subsequently, a structural description or imaginative variation was written to describe the underlying dynamics of the experience of support inclusive of the context or setting that has influenced the participants (Creswell, 2007; Moustakas, 1994). The structural description accounted for the “how” feelings and thoughts that evoked support from the participants (Moustakas, 1994). Finally, the invariant structure or “essence” of the phenomenon was written to provide a detailed description of the participants’ experiences of support within PLCs (Creswell, 2007). The common experiences of the participants were then reported to describe the overall structure of the support mechanisms and provided a living description of the “what” found during participation in PLCs (Moustakas, 1994).

Trustworthiness

Trustworthiness can be described as “one set of criteria for judging the quality or goodness of qualitative inquiry” (Schwandt, 2007, p. 299). Originally developed by Lincoln and Guba (1985) as naturalistic equivalents to conventional research criteria, four criteria guide quality investigations. The first guideline for qualitative inquiry is credibility, or the assurance that the data are an accurate representation of the context and the respondents’ views (Hastie & Hay, 2012; Schwandt, 2007). Second, transferability refers to the ability of the findings to be generalized from one case to another with enough information that readers can make a decision regarding the appropriateness of the

transfer (Hastie & Hay, 2012; Schwandt, 2007). Third, dependability is the process of the inquiry as logical, traceable, and documented (Schwandt, 2007). Finally confirmability refers to the degree in which the assertions, findings, and interpretations are linked to data in discernable ways (Schwandt, 2007). The elements of trustworthiness of this study will first be generally defined and supported by a description of the specific techniques used to ensure each criteria.

Credibility

Credibility is a naturalist's substitute for internal validity and can be said to have two goals: (a) to carry out inquiry so the findings will be credible and (b) to have findings be approved by constructors of multiple realities (Lincoln & Guba, 1985). Strategies to ensure credibility of this research study included triangulation, expert review, and member checks.

Triangulation. Triangulation refers to the use of protocols or multiple data sources or researchers to check the integrity of all responses (Stake, 1995). This process involves substantiating evidence from several sources to shed light on a theme or perspective (Creswell, 2007). Triangulation for this study included the comparison of multiple data sources (responses to semi-structured focus group interviews, informal conversational interviews, follow-up interviews, observation field notes, and artifacts). First, I conducted multiple types of interviews that were used to provide in depth information regarding the participants' perspectives of support within the PLCs. Next, field notes from observations of PLC meetings held in classrooms, gymnasia or professional development/educational centers were used to capture the interactions of teachers within PLCs and provided a detailed description of how teachers support one

another. Lastly the collection of artifacts is advantageous to the process of triangulation as they were systematically gathered and used to tell their own story independent of interpretations of the participants (Hatch, 2002). I then cross examined all three data sources in order to find similar representations of the mechanisms of support from what was observed in meetings, heard in the interviews and shared among the teachers. Overall the use of multiple data sources promotes credibility of the research as it compensates for the individual limitations of each method (Hastie & Hay, 2012).

Expert review. An expert review was employed within this study to determine the congruency of the findings and interpretations of the data (Merriam, 2009). I called upon the assistance of the expert reviewer to keep myself “honest”, test the steps of the inquiry design, and allowed for an opportunity to clear my mind of emotions or feelings that may cloud any good judgment regarding overall steps of the research process (Lincoln & Guba, 1985). Expert review took place throughout the process of data collection and analysis to determine the plausibility of the findings of the study. Conversations with the expert reviewer throughout the data collection process assisted in data collection and analysis, therefore any comments or suggestions made by the expert reviewer were taken into consideration and informed the data analysis process. The expert reviewer examined the field notes and transcriptions of the interviews to check for clarity and depth of descriptions prior to data analysis. After the review process, the expert reviewer provided feedback on the data collection process, along with recommendations for additional analysis and future collection. Finally, the expert reviewer validated the preliminary findings once initial themes are identified during the data analysis process.

Member checks. Member checks were employed within this research study to determine the plausibility of interview responses and interpretations of the data (Merriam, 2009). Member checking occurred on one occasion during data collection and included participant review of interview transcriptions by each participant to ensure accuracy of the data. Following verbatim transcription of the data, I emailed each member a digital copy of the transcriptions for review. Each participant was then asked to make changes to the document and email all changes directly to me. Any changes requested by the participants were made and all information was added or deleted as a result. Member checking is essential to data credibility and all changes made to interview transcriptions by participants were used for data analysis.

Transferability

Transferability is the extent of the findings of this study to hold up in the same or different context at a future time or “transfer” to another setting (Lincoln & Guba, 1985; Merriam, 2009). Similar to external validity in quantitative studies, qualitative research has the obligation to provide enough detail to enable readers to apply findings to their own situations (Merriam, 2009). Transferability for this study is important as this research design may be applicable to other groups of individuals participating in contemporary professional development in various contexts. The method for establishing transferability of this study was accomplished through writing a rich description of the data.

This phenomenological study relied on the use of rich descriptions to inform the reader of the perceptions of support among physical education teachers participating in PLCs. A rich and thick detailed account of the interactions among teachers within PLCs

based on the data sources and analysis were used to enable for transferability judgments to be made by potential appliers (Lincoln & Guba, 1982). These descriptions captured the essence of the phenomenon of support while increasing transferability by explicitly detailing the living experiences of the participants.

Dependability and Confirmability

Dependability is concerned with the appropriateness of inquiry decisions and methodological changes within the research study or the “process” of the study (Lincoln & Guba 1985). Similarly, the confirmability within this study places emphasis on the “product” or the findings or interpretations of the study (Lincoln & Guba, 1985). Within this study an audit trail was used to verify accountability of the data and to verify both dependability and confirmability criteria.

Audit trail. Finally, an audit trail was kept to document all aspects of the study to authenticate its findings (Merriam, 2009). The audit trail consisted of a running log throughout the research process inclusive of all decisions made with regard to the data collection and analysis processes (Merriam, 2009). In particular, notes were made regarding any changes or modifications to the overall methodology of the study. The purpose of the audit trail was to make it possible for an external auditor to examine the processes of how data were collected and analyzed throughout the study (Guba, 1981). The audit trail included all personal reflections, questions and decisions or any problems, issues or ideas that occur throughout the data collection and data analysis procedures. Furthermore, the audit trail was kept on a personal laptop and external hard drive and was a detailed account of how the study was conducted in order to strengthen the overall dependability and confirmability.

Researcher position. Prior to the process of data analysis, my researcher position or bias was disclosed regarding my personal assumptions, worldview, biases, theoretical orientation and relationship to the study (Merriam, 2009). This is essential within phenomenological research due to the philosophical underpinnings of the research design. In order to increase confirmability within this study the need to bracket my personal assumptions was critical to reduce researcher bias.

Data Representation

The best way to represent these data were in the form of two manuscripts (Chapters IV and V) and a final conclusion chapter (Chapter VI). The first two research questions are addressed in Chapter IV and the third research question is answered in Chapter IV. The final chapter contains the conclusions and is a general summary of findings from both manuscripts that draws conclusions based on all three research questions. In addition, it should be acknowledged that the project was framed in a broader theory of constructivism, however only situated learning theory is represented in the two articles. Representation of data in this manner was purposeful as the research questions warranted examination and explanation requiring multiple manuscripts.

CHAPTER IV

ARTICLE 1: PHYSICAL EDUCATION TEACHERS' PERCEPTIONS OF THE ROLE OF SUPPORT WITHIN CONTEMPORARY PROFESSIONAL DEVELOPMENT

Abstract

The purpose of this study was to explore the role of support mechanisms within professional learning communities (PLCs). Specific research questions were: (a) What are the types of support mechanisms within a PLC? and (b) What do physical education teachers perceive as the nature of support mechanisms within a PLC? Participants included 34 elementary physical education teachers representing three active PLCs in the United States. Data sources included: (a) focus group interviews, (b) field notes, (c) informal conversational interviews, (d) follow-up interviews, and (e) artifacts. Support within PLCs was identified as occurring between people and within the environment. Support between people included interpersonal interactions: personal connections, inclusivity, and helpfulness. Support within the environment included a variety of human and temporal structures: diversity of members and a relaxed atmosphere. Support within PLCs assisted with teachers' professional learning and is one step in building strong societies and contributing to global prosperity.

Keywords: professional development, professional learning communities, teacher professional learning, situated learning theory

Introduction

The need for effective professional development (PD) and systematic investment in the careers of teachers is necessary for building great societies and contributing to global prosperity (Hargreaves & Fullan, 2012). Within the last decade, a surge of modern educational reform initiatives have impacted PD for teachers in several academic disciplines, with physical education being no exception (Bechtel & O'Sullivan, 2006; Ha et al., 2004; Martin et al., 2008). In particular, high expectations for educational performance, the standards movement, and a call for research on teacher learning have resulted in PD as being critical in facilitating learning among teachers (Darling-Hammond, 2000).

A central tenet of most current education reform legislation is the need for ongoing and collaborative models of PD for teachers (Vescio, Ross, & Adams, 2008). Despite proposed recommendations and the number of research efforts in multiple academic disciplines, current implementation of continuing PD in schools continues to reflect antiquated methods (Armour et al., 2009; Garet et al., 2001; Parker et al., 2012). In many cases, school administrators continue to follow a top down approach, mandating one-day workshops that employ traditional methods of PD and are typically removed from the context of teaching (Armour & Yelling, 2007; Garet et al., 2001; Nieto, 2009). Current approaches for delivering PD to physical education teachers often are not individualized to meet the needs of the educator (Armour & Yelling, 2007; Casey, 2012). Thus, there is a need for well-defined PD programs that incorporate content based on educator needs (Borko, 2004; Guskey, 2002).

Substantial funding is often allocated for teacher development through government programs; therefore it is critical to understand what constitutes effective PD (Borko, 2004; Desimone, 2009; Whitcomb et al., 2009). Although an explicit definition of high-quality PD does not currently exist, several generic characteristics include: having high standards, a content focus, being active, providing in-depth learning opportunities for teachers, and ongoing collaboration anchored in improving student achievement (Armour & Yelling, 2004a; Darling-Hammond & McLaughlin, 2011; Garet et al., 2001; Parker et al., 2010; Patton & Parker, 2014). Professional development in physical education must be organized in a manner to engage teachers in active learning opportunities with a clear vision that is monitored and evaluated, allows for capacity building, and encourages future learning (Deglau & O'Sullivan, 2006; Ko et al., 2006; Makopoulou & Armour, 2011b; McCaughtry et al., 2005; Patton et al., 2013). Although these recommendations contradict many traditional forms of PD, they may potentially decrease ineffective practices and attempt to increase the standard of teacher and student learning (Armour & Yelling 2004b; Garet et al., 2001).

DuFour, DuFour, and Eaker (2008) strongly suggest that if schools are to be effective, they must embrace new models of PD to include professional learning communities (PLCs) that place greater emphasis on relationships, shared ideas, and a strong culture--all critical to school improvement. Some argue that the pathway to professionalism lies in the teachers' ability to engage in PLCs (Hord & Tobia, 2012). In this context, teachers have opportunity to work collaboratively with colleagues by developing local knowledge and critically reflecting on theory and research throughout their careers (Cochran-Smith & Lytle, 1999). Based on these recommendations, PLCs as

a form of PD have received greater attention in recent years (Armour et al., 2009; Hargreaves & Fullan, 2012; Watson, 2014; Whitcomb et al., 2009).

Hargreaves and Fullan (2012) further posit that PLCs are one facet in creating systematic change within the teaching profession by investing in “professional capital”. Professional capital encompasses human, social, and decisional capital that can be reinvested by individuals or groups of teachers. These three aspects work symbiotically to assist in the investment of people and the process of achieving greater educational outcomes over prolonged periods of time. The goal of professional capital is to enact equal, higher attaining, and healthy countries where teachers are “complete professionals” (Hargreaves & Fullan, 2012, p. 185). This means teachers are “well-prepared, sufficiently paid, properly supported, continuously learning, collectively responsible and shrewd in their judgments” (Hargreaves & Fullan, 2012, p. 185). Building professional capital takes time and support from all individuals involved in the educational process in order for transformation of the teaching profession to occur.

If professional capital is to be realized through the use of PLCs, then teachers must be supported in their endeavors to engage in collaborative professional learning experiences with colleagues. It has been documented that teachers may resist change to educational practices without the appropriate level of support (Makopoulou & Armour, 2011b). Support can be viewed as a mutual responsibility where interactions are reciprocal between new and veteran teachers, allowing for development of a common understanding among community members (Glazer & Hannafin, 2006). Establishing collaborative and supportive relationships can contribute to the overall development and success of teachers working in PLCs and produce beneficial outcomes (Deglau &

O'Sullivan, 2006; Dufour et al., 2008; Parker et al., 2010; Parker et al., 2012). In particular, collegial support has been found to benefit teaching by supporting understanding of complex concepts and applying theoretical knowledge in the classroom (Madden, 2010). Other types of support such as visiting schools, sharing instructional units, and sharing successes and challenges among a community of learners have been shown to build ownership among teachers; however, it is still uncertain as to how and to what extent this occurs (O'Sullivan & Deglau, 2006).

When teachers work in a safe and supportive environment, they are more likely to take risks, engage in challenging conversations, and attempt new practices that actively engage learners (Whitcomb et al., 2009). Although the need for support within PLCs is apparent, it remains unclear as to how physical education teachers support each other while participating in collaborative and contemporary PD activities. Identification of the support mechanisms within PLCs may potentially contribute to overall investment in professional capital of educators, thus providing systematic changes to the profession of teaching.

Purpose and Research Questions

The need for support has been identified as a critical element of contemporary PD programs in general and physical education contexts; therefore, the purpose of this study was to explore the role of support mechanisms within professional learning communities (PLCs). The research questions guiding this study were: (a) What are the types of support mechanisms within a PLC? and (b) What do physical education teachers perceive as the nature of support mechanisms within a PLC?

Theoretical Framework

This section begins with a detailed description of the theoretical and conceptual frameworks upon which this study is based. Specifically, the theory of situated learning as the theoretical framework and the notion of professional capital as the conceptual framework were discussed.

The use of collaborative methods of PD in physical education has become a growing body of research in recent years, resulting in the need to employ theories that examine the nuances of learning (O’Sullivan, 2007; Parker et al., 2012; Rovegno, 2006; Tannehill et al., 2006). Based on the assumption that professional learning is a social process comprised of meaning, practice, community, and identity, the use of situated learning perspectives is an applicable theoretical approach to seek answers to how teachers are supported in their quest for professional learning (Wenger, 1998, 2009). Wenger (2009) described the interconnectedness of these components to “characterize social participation as a process of learning and knowing” whereas the construction of knowledge is inseparable from the contexts and activities in which it is developed (p. 211).

Central to the notion of situated learning perspectives is the concept of a community of practice (CoP), which has been defined as “any collectivity or group who together contribute to shared or public practices in particular spheres of life” (Kirk & Macdonald, 1998). Communities of practice include a *domain* or shared interest, a *community* that is comprised of a collectivity of individuals that interact regularly, and a *practice* or shared knowledge base (Wenger, 1998). Communities can be found anywhere and are informal, integral, and evolving throughout our lifetimes (Wenger, 2009). For the

purposes of this study, these PLCs exhibited parallel elements to CoPs and therefore were viewed as acting as CoPs.

Learning can be viewed as being situated in the sociocultural practices of a community where relationships between teachers within the PLCs can be defined as “legitimate peripheral participation” (Lave & Wenger, 1991, p. 29). The concept of legitimate peripheral participation is “a way to speak about the relations between newcomers and old-timers, and about activities, identities, artifacts and communities of knowledge and practice” (Lave & Wenger, 1991, p. 29). This concept can take place in all educational contexts where reciprocal interactions or collaborative apprenticeship occurs to support and sustain professional learning (Glazer & Hannafin, 2006). In sum, situated learning perspectives allow for an appropriate theoretical lens to view the relations among new and veteran members of a community and the contexts in which they teach and learn.

Encompassing the elements of a CoP and situated learning theory, Hargreaves and Fullan (2012) suggested the investment in teachers and schools through what they deemed as “professional capital”. Professional capital was inclusive of three components: human, social, and decisional capital. Human capital invested in the knowledge and skills of humans, social capital existed among relations between people; and decisional capital allows for teachers to make discretionary judgments as professionals. Each element played a key role in the overall phenomenon of professional capital and directly related to the social nature and contexts of situated perspectives within professional learning groups of teachers.

Overall the situated perspective within this qualitative study was appropriate to determine the types and nature of support mechanisms within a PLC. The theory and conceptual framework of this study provided a guide for examining the phenomenon of support in PLCs and identified professional learning as constructing meaning through social interactions in the context of professional learning.

Methodology

Participants

Participants for this study included 34 elementary physical education teachers (14 female; 20 male) representing three active PLCs in the inter-mountain west region of the United States. Prior to data collection, a list of potential PLCs based on the criteria for inclusion was generated through expert recommendation. The criteria for inclusion included groups of teachers that exhibited supportive and shared leadership (a teacher leader or facilitator), shared values and vision, intentional collective learning, supportive conditions, and shared practice (Hord & Tobia, 2012). Initial contact was sent via e-mail to the coordinator of eight PLCs to determine eligibility and availability; three PLC groups met the criteria and agreed to participate in the study. Individually, these PLCs were variable with regard to the number of participants, years of teaching experience, and years of participation in the current PLC (see Table 1).

Data Sources

Data sources included; (a) focus group interviews, (b) field notes, (c) informal conversational interviews, (d) individual follow-up interviews, and (e) artifacts.

Focus group interviews. Three focus group interviews served as the primary data source and were conducted in a location convenient to the participants. Interviews ranged

from 35-60 minutes. Interview locations included a reserved section at a restaurant/bar, a meeting room within a district professional development center, and a classroom at a district high school after school hours. These locations were purposefully selected as to reduce noise and distractions during the interviews. Interviews were conducted using a semi-structured approach allowing the participants to freely express their experiences, thoughts, beliefs, and perceptions of the support mechanisms within the PLCs. Focus group interviews took place following a minimum of two observations of each PLC . All focus group interviews were digitally audio-recorded and transcribed verbatim, resulting in 117 pages of transcripts.

Field notes. Descriptive field notes were taken during observations of seven PLC meetings; observed meetings ranged from 1-7 hours. Interactions of the participants, the format and structure of the PLC meetings, general content of the meetings, instances of inactive and active participation, and participant level of engagement were recorded. Field notes were used to corroborate responses from focus group interviews during data analysis.

Informal conversational interviews. In addition to the focus group interviews, informal conversational interviews (Patton, 2002) occurred throughout the data collection process. These interviews were spontaneous and allowed for a deeper inquiry about the phenomenon of support with the PLCs (Merriam, 2009). Non-solicited informal conversational interviews, totaling approximately 1.5 hours and ranging from 5-20 minutes took place on occasions before, during, and after PLC meeting observations, focus group interviews, or other informal gatherings of the participants and the researcher (i.e., at professional conferences, during meals, or during social gatherings such as a

retirement party). Brief notes were taken during these interviews and recorded immediately after the interviews.

Follow-up interviews. Quality interview data involves multiple sessions with participants; therefore, follow-up interviews were scheduled during the analytic process to clarify and expand participant descriptions (Polkinghorne, 2005). Six follow-up interviews with four individual members of each PLC consisted of a total of 3½ hours and occurred in person (informal settings such as at a coffee shop or restaurant) or via phone on several occasions throughout the data collection process. These discussions were used to draw out additional information from the participants and expand upon or clarify previous comments from three focus group interviews.

Artifacts. Artifacts were collected to provide an additional point of view to compare with information gathered through observation and interviews. Artifacts for this study included correspondence between teachers (electronic and written), PD meeting agendas and minutes, and access to web-based lesson resources.

Data Analysis

Data were analyzed inductively using a six-step process specific to phenomenological research (Creswell, 2007). The first step was to bracket the researcher's prior judgment and preconceptions through disclosure of a researcher perspective. Next, significant statements, sentences, or quotes with regard to how participants experienced the phenomenon of support were highlighted. Third, clusters of meaning were developed and organized into two broad themes to reflect the types of support perceived by the teachers within the PLCs. Following the construction of meaning clusters, the fourth step included writing a textural description to further explain

the participants' experiences. This process consisted of using significant statements to draw out sub-themes that described the common experiences of the participants with regard to the structure of the support mechanisms within the PLCs. The fifth step included writing a structural description that described the context or setting of each PLC that influenced the participants' experience of support. Finally, the last step was to write the invariant structure or the "essence of the phenomenon" (Creswell, 2007, p. 62)

Trustworthiness

Trustworthiness was established through four techniques. First, triangulation of multiple data sources served to confirm the data. Next, a member check was conducted by emailing each participant a copy of the verbatim transcription of interview data from his/her respective focus group to determine plausibility of interview responses (Merriam, 2009). An expert review was employed during the data analysis phase to determine the congruency of the findings and interpretations of the study (Merriam, 2009). The expert reviewer had over 30 years of experience in the field and was familiar with the process of qualitative research methods. Finally, an audit trail was kept throughout the study and included interview notes, observational field notes, and interactions with participants to make it possible to examine the processes of how data were collected and analyzed (Guba, 1981).

Results

As a result of data analysis, two distinct types of support mechanisms and the associated nature of each were identified as contributing to these teachers' professional learning. Support mechanisms were perceived as occurring between people and within the environment.

Support Between People

Physical education teachers perceived support mechanisms within their PLCs as being manifested between people. Support between people related to instances of meaningful interpersonal relationships perceived by the participants that assisted with the teaching practice of PLC members. These interactions resulted in developing personal connections, inclusivity, and helpfulness among members.

Personal connection. Interactions between teachers lead to developing personal connections in the groups ultimately resulting in supportive conditions within the PLCs. Teachers expressed the importance of building personal relationships and connections in the PLC as a way to ultimately feel comfortable when asking for teaching assistance or resources. One teacher described this type of support, “After you get to know each other, you feel more comfortable to say, ‘Hey, how do you do this?’” (FG B) while another teacher expanded,

I mean it goes back to the community building and like Walter said, ‘building that relationship [and] feeling that comfort to say you know, can you help me with this?’ Before, everybody was kind of on their own little island and we would come in and well we wouldn't do much. (FG B)

The teachers were interested in one another’s personal lives, which allowed for them to make connections with others in the group who had similar interests or responsibilities outside of school. It was not uncommon for teachers to share personal information or stories with other members of the group during meetings. These meaningful exchanges lead to strong personal connections between these teachers, and resulted in familiarity within the group as observed during one PLC meeting,

Members of the PLC appeared to be excited to see one another and immediately engaged in small talk and catching up right away after settling in around the table at the start of the meeting. Tina shared pictures with the group from a wedding

that she recently attended and explained that the bride and groom had a photo booth for the guests. Following Tina's sharing, Katie then revealed with everyone that she ran the Mountain 10K running race the previous weekend. They all immediately congratulated her on running. (field notes, 5/29/13)

Developing a personal connection within the PLC supported individuals in their professional growth throughout their careers. One teacher commented, "There is absolutely no way I don't think I would still be in the district without this group" (FG B), while two other members of the PLCs agreed by saying, "I think it really comes back to the relationships because even if we don't feel like coming on a particular day we do because of the relationships" (FG B) and "it's a nice balance between professionalism and friendship, so that's what I really enjoy" (FG A). In addition, support from others through personal connections increased the professional participation of several PLC members. One teacher commented, "when we go to an event and we go together we stick together, like if we go to a national convention" (FG A) while another said,

I would say we go to the different conventions and you can just tell other districts have a lot of issues as with a sense of getting this collaboration. If we go to conventions, I'll sit with these guys. Whereas you go to, you notice other districts, those PE teachers they won't even talk to each other. (FG C)

Inclusivity. Members of the PLCs expressed the nature of support as being inclusive where new and existing members felt welcome. The collegial and open nature of the PLCs supported the professional learning of its members as it allowed for apprenticeship and mentoring relationships to naturally develop between new and veteran teachers. Despite previous experiences, teachers engaged in mutually beneficial and reciprocal relationships that assisted with finding answers to their own questions.

Overall, the existing members expressed a purposeful need and desire to include new members in the PLCs and make them feel part of the group. When asked specifically

how the group would receive newcomers, the teachers commented, “more brains the better. [We are] a very welcoming group” (FG A), and “we are all super open to new people. I mean anytime we have new teachers we are like, what do you need?” (FG B). This supportive nature allowed veteran teachers to provide assistance to new teachers when necessary.

Reciprocal learning occurred inadvertently and instinctively between members of the group when interacting with one another. In particular, novice teachers would often seek out veteran teachers for assistance or advice with regard to general teaching practices. In response to being sought out by a novice teacher, one veteran teacher commented on her experience, “I learned just as much when Noah sought me out, I learned just as much from him as he did from me about kindergarteners” (FG A) and “I think we are very receptive, again we are all open to anybody, new teachers come in with vibrant and fresh ideas and we can get something from them” (FG C).

The welcoming nature of the PLCs allowed for the free exchange of ideas that ultimately lead to professional growth within the group. The teachers described the inclusive aspects of the PLC by saying, “the new people [that] come in will see that we've got a warm relationship; that we are a team; that we are cohesive; and we are supportive” (FG B). Newer members in the group validated the openness and welcoming nature that lead to inclusivity among the group. One new teacher described his experiences,

I can speak to that because I mean this is my first year and I have never felt like uninvolved or uninvited. It was just very welcoming, just very like informal, like, ‘hey you got a good idea like let's hear it because everybody can benefit from it’. (FG C)

Helpfulness. Support was exhibited through helpfulness between physical education teachers by exchanging emails, providing opportunities to observe one another,

and assisting with general teaching functions. Helpfulness existed within the PLCs when teachers shared ideas, resources, and best practices during meetings to contribute to learning within the group. Furthermore, participation within the PLC afforded opportunities for members to reduce the feeling of isolation by calling upon other teachers for help when they felt alone. One teacher commented on the benefits of receiving help from his colleagues by stating,

I taught at a private school in my first year and it was [only] me. They [school administration] said, 'here is your budget, do whatever you want'. I was right out of college and it was great, except that I had so many flops every day and I didn't know who to turn to. What I have here is in two minutes I can ask somebody [in the PLC] and they would be like here you go, it was such a huge relief. (FG C)

The use of email was often used among PLC members outside of meetings as a method of requesting and providing help to one another. One teacher stated, "[when someone needs something on email, they send that out and somebody is there to help them]" (FG C) while another said, "they'll [PLC members] get back to you and tell you what you need to know or if they don't know they'll help you go somewhere else to go find it" (FG C). The following email correspondence between teachers gives testament to the support provided to garner resources for teaching,

Email 1 (question): Hey, one other favor. Can you put a clean version of the Hey Baby Dirty Dancing new song on [the CD] or are you already done?

Email 2 (response): I'll try looking for both of those tonight.

Observing colleagues or asking for help from other teachers was often self-initiated as one teacher indicated, "It is perfectly safe to walk in and say I don't know how to do this, will you show me?" (FG B). The openness to observing others and the learning that occurred is described,

Again, I don't know how open other first year teachers are, but I love observing other PE teachers to see how they do with behavior management and other activities. I watched these two guys, and it was not even a question. It was, 'oh yeah come in whenever you want. Just let me know and I will adjust everything as needed'. That is also beneficial; I feel like I learn a lot when I watch. (FG C)

The teachers relied on one another for information in order to develop their own classes, and they were not concerned about ownership of activities. One teacher said, "I would say we cheat, borrow, and steal as much as we can from each other" (FG A), and another stated, "It's never been [with us like when] you go to college, [there] it's like write your own stuff and don't plagiarize. With us it's plagiarize everything" (FG C).

The teachers also chose their own content for PLC meetings and presented information to one another. Two members from one group shared, ". . . we did start having two people present activities at each meeting just to share their favorite activity or a fitness focus or something" (FG B) and "then we share out, we share our activities at the meetings and everybody has an opportunity and we plan it so that everybody has a chance to share or people ask and say can somebody share this at the next meeting?" (FG B). Agenda items from one of the PLC groups highlighted the open opportunities for teachers to share idea with others,

P.E. Meeting for April 8 - Springfield Elementary

3:45 - 4:15 Field Day ideas

4:15 - 4:40 Matt Carter from the city will speak on the upcoming Lion's Club Relay as well as the Central Classic 5K Walk or Run on Saturday, May 18th

4:40 - 5:05 Nontraditional Activities: Please share an activity that you have used that meets your physical education standards in a unique way.

5:05 - 5:15 Open Discussion

The amount of professional learning that took place through interactions and by sharing ideas and resources was unprecedented. In particular, one member commented, "I think probably 90% of all of my professional learning comes from the people in this

room. Like everybody said earlier, I value their opinions and I value them as a resource and I value them as people . . .” (FG A).

Support within the Environment

A second type of support was perceived by the teachers as occurring within the environment and exhibited through a variety of human and temporal structures. The diversity of PLC members reflected the human structures and temporal structures were manifested through a relaxed atmosphere. Each of these support mechanisms contributed to the overall professional learning of teachers.

Diversity of members. Diversity of the members within the PLCs allowed for veteran and new teachers to work together to support and provide opportunities to learn with and from one another. Diversity within the groups ranged in the number of years of teaching experience, knowledge and skill sets, and teaching styles. Despite the years of experience possessed by each member, all teachers were regarded as able to contribute equally to the group. Groups were described as having “everybody from 20-year teachers to first year teachers. We all pull from each other because we are doing the same thing” (FG C) and one veteran teacher added, “old to young, you know it is so refreshing to me to hear new ideas” (FG A).

The diversity within the groups allowed for teachers to support each other’s learning by providing opportunities to draw from the strengths and skills of one another. One teacher commented on the skills of the individuals in her PLC, “there are several teachers in our group who have a lot to offer” (FG B). Teachers with different backgrounds comprised the groups, which were seen as a support and resource for other teachers, “well, like Gary is passionate about brain stuff so he was the front runner on the

brain energizer and we knew that was a natural place [for him to share] . . .” (FG B).

Once the teachers recognized the strengths of other members, they would purposefully seek each other out,

I think the other thing that is really unique is that every single person in here has a different background that we can draw from and you know. Like Dierdra was a dance educator before she became a PE teacher, so anytime I need dance stuff I go to her. Cathy is great with the brain and neurokinesiology and things like that so I mean just everybody has this huge array of backgrounds that we can pull from when we need any type of resource. (FG A)

These differences were seen as strengths and celebrated. One teacher commented, “[The group is] super diverse. I went and observed him and him (pointing to two other group members) on the same day and they were the complete opposite side of the spectrum” (FG C). Observing each other allowed for members to make connections to their own instruction and develop their personal teaching style.

Relaxed atmosphere. The teachers developed a relaxed atmosphere by using small talk and humor. These aspects lead to camaraderie and ability for teachers to express themselves freely in their own environment, which in turn broke down barriers and allowed for teachers to relax together. The meetings were described as being relaxed, not to be confused with being unproductive. One teacher made this point by saying, “I tell you what, it’s relaxed but it’s um intense” (FG C) while another teacher agreed, “It’s not sit and listen to one person talk, we are very at home with [each other]. We still want your norms and your protocols as far as running smooth meetings, but it’s laid back (FG B).

Teachers socialized with each other by sharing humor in their own environment that was void of students and administrators. As one participant stated, “I think we take things really serious but then at the same time we sometimes throw out some jokes

because it is time for us to socialize and a time for us to be us in our own environment” (FG A). Several teachers commented on the importance of having a sense of humor and being able to poke fun at one another, “I know it sounds stupid, but that’s why it works. You have to have some kind of humor; you have to have some kind of ability to bust somebody” (FG C) and “oh yeah, it is always so good to see each other and give each other crap and make fun of each other” (FG B). Joking between teachers was a bonding mechanism that led to support for teachers to ask for strategies from other PLC members with regard to teaching. One teacher described these interactions as,

I think all of us being able to say what we need or what we need help with. We kind of address those immediately first and then like being able to joke and being able to tell each other what we need like if it is something simple as; ‘Hey, you know I am teaching kindergarten unit and my kindergarteners are completely out of control. What are some strategies that you use?’; that absolutely helped me out. (FG A)

The relaxed atmosphere of the groups provided teachers with a safe place to learn and engage with other professionals in a positive and meaningful manner. One teacher indicated, “I think that a key word is we feel safe with each other” (FG B). Teachers felt as though the relaxed nature of the group supported their ability to interact with each other. One teacher described her experiences as,

It’s not walking on eggshells. You go to some of these other meetings and you sit and listen to one person talk and you sit there like this [demonstrating a bored look]. I feel bad wiggling and I am a wiggler and I am ADD. (FG B)

Discussion

In an effort to help define the character and content of contemporary PD programs, this study explored the role of support mechanisms within PLCs. Teachers within this study participated in contemporary PD in the form of PLCs that allowed them to support one another. These supports existed by working in small collaborative groups

that continuously sought out and shared learning thus acting upon their collaborations (Collins & O'Brien, 2011). Two distinct types of support were found within these PLCs: support between people and support within the environment; both were necessary for creating the conditions for professional learning.

The nature of this support fostered opportunities for individuals to develop relationships in situated and social contexts, leading to increased knowledge through social interactions (Lave & Wenger, 1991; Wenger, 2009). The social nature of the PLCs was analogous to commonly accepted characteristics of CoPs and other contemporary PD (Deglau & O'Sullivan, 2006; Hammerness et al., 2005; McCaughtry et al., 2005; Parker et al., 2012; Patton & Griffin, 2008), allowing for new and veteran members to construct knowledge through social interactions within the groups (Lave & Wenger, 1991). These findings strengthen the need for the provision of social learning opportunities within PD environment to assist teachers with their professional growth and learning (Hargreaves & Fullan, 2012; Hord & Tobia, 2012; Lave & Wenger, 1991).

Undoubtedly there is responsibility for teachers to receive support when participating in professional and staff development (Joyce & Calhoun, 2010). Previous research highlights collaborative and contemporary models of PD as necessary to transform and improve the quality of schools (DuFour et al., 2008; Hargreaves & Fullan, 2012). Participants within these PLCs identified several support mechanisms (personal connections, inclusivity, helpfulness, diversity of members, and relaxed atmosphere) that were closely linked to their continued growth and development as physical educators. These types of support resulted from both purposeful planning and incidental occurrences within PLC meetings. In addition, these groups were given the time and meeting space by

their respective districts that allowed for self-direction of their professional learning. These findings support the notion that PD in physical education contexts must “be conceptualized and conducted in a manner that empowers while supporting the development of personal and professional relationships” (Parker et al., 2010, p. 355).

In particular, support between people occurred as a result of developing personal connections from spending time together in and outside of PLC meetings. These levels of comfort lead to familiarity among PLC members, which supported teachers to seek one another out when needing assistance with their teaching practice. Feeling comfortable with others was paramount for these teachers as it contributed to a greater interest and deeper connection to their personal practice.

These PLCs also exhibited a naturally occurring inclusive nature toward new members of the group. The addition of new members at various times throughout the PLC’s existence inevitably changed the dynamic of the groups from year to year; however, the changes were embraced and allowed for teachers to regularly learn new ideas and gain guidance from others (Glazer & Hannafin, 2006). Although not explicit, inclusivity lead to mentoring between new and veteran teachers, which has been found to produce positive outcomes related to teacher change in collaborative learning environments (Martin et al., 2008; Patton et al, 2005).

Often expressed as instinctive, helpfulness characterized the relationships shared by group members. The natural free flow of ideas and exchange of resources permitted teachers to share best practices and other teaching innovations. Helpfulness was considered a mutual responsibility between new and veteran members when reciprocally interacting to develop a common understanding in the community (Glazer & Hannafin,

2006). Teachers reported on several occasions that a majority of their professional learning came from other individuals within their PLCs, a strong example of how teachers grounded learning in their own practice by bringing in their own experiences from classrooms into staff development (Putnam & Borko, 2000).

Findings associated with the nature of support within the environment strengthened the need for PD meeting places to be welcoming spaces for teachers to challenge their learning. The situated nature of the learning allowed for teachers to meet with and learn from one another due to the diversity of the PLCs and the relaxed atmosphere. In particular, these teachers exemplified the concept of legitimate peripheral participation by developing relationships between new and veteran teachers within the PLC groups (Lave & Wenger, 1991). The diversity of the members (i.e., new and veteran teachers) often benefitted from one another's perspectives with regard to teaching and other professional endeavors. Newer teachers often relied on the expertise of veteran teachers and veteran teachers welcomed new ideas and fresh perspectives from their younger counterparts (Glazer & Hannafin, 2006). Furthermore, individuals often volunteered or sought out colleagues to assist with sharing content or assessment ideas. The relaxed atmosphere of the PLCs was at times incidental and also purposefully created by the teachers allowing for free exchange of ideas in a place where they felt comfortable and safe without risk of judgment or criticism. Humorous and candid exchanges among participants during meetings broke down barriers between members, allowing for teachers to exchange ideas or ask for help from others.

Conclusions

The power of support within PLCs and other contemporary forms of PD cannot be overlooked. Physical education teachers within this study identified their own learning needs and the resulting support mechanisms were both incidental and purposeful. This investigation provides a glimpse of how support within collaborative forms of PD ultimately contributed to the professional learning and growth of teachers. It is known that the development of support within PLCs takes time and effort; however, the impact on teachers' professional learning is invaluable. Support has long been identified as being critical to the professional learning of teachers, thus the question remains: how do we begin to implement changes to educational policy that allows for time and circumstance for teachers to develop support mechanisms within contemporary PD? Enacting change by supporting teachers in their quest for professional knowledge through PLCs is one small step in the right direction in creating meaningful PD that will contribute to teachers' professional learning and ultimately enhance student learning.

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Table 4

Characteristics of Professional Learning Communities

Characteristics	PLC A	PLC B	PLC C
Gender			
Male	5	10	5
Female	6	7	1
Teaching Experience	Total: 152 years	Total: 230 years	Total: 60 years
	Average: 14 years	Average 14 years	Average: 10 years
	Range: 1-29 years	Range: 4-31 years	Range: 1-22 years

PLC A = Professional Learning Community Group A

PLC B = Professional Learning Community Group B

PLC C = Professional Learning Community Group C

CHAPTER V

ARTICLE 2: PHYSICAL EDUCATION TEACHERS' PERCEPTIONS OF THE IMPACT OF SUPPORT MECHANISMS WITHIN CONTEMPORARY PROFESSIONAL DEVELOPMENT ON TEACHING PRACTICES

Abstract

The purpose of this study was to explore the role of support mechanisms within professional learning communities (PLCs). The research question guiding this study was: How do physical education teachers view support mechanisms within PLCs as impacting their practice? Participants included 34 elementary physical education teachers representing three active PLCs in the inter-mountain west region of the United States. Data sources included: (a) field notes, (b) focus group interviews, (c) informal conversational interviews, (d) follow-up interviews, and (e) artifacts. The teaching practice of physical education teachers was impacted in two ways: (a) through enhanced curriculum and instruction and (b) teacher empowerment. Support mechanisms enhanced the curriculum and instruction of the teachers through the development of curriculum guides and implementation of teaching strategies and best practices within classes. In addition, teachers were empowered to take risks and reported having an increased sense of confidence regarding their teaching.

Introduction

High expectations for educational performance worldwide have resulted in professional development (PD) being critical in facilitating learning among teachers (Darling-Hammond, 2000). In particular, government led initiatives and educational reform mandates at the international, national, and local levels have “engendered the creation and imposition of performance and standards-driven practices” among educators (Casey, 2012). These lofty expectations typically plagued with increased pressure and demands on teachers, often require ongoing and collaborative models of PD for teachers (Vescio et al., 2008).

The use of contemporary or alternative methods of PD to initiate professional learning among educators has received considerable attention in recent years (Hargreaves & Fullan, 2012; Watson, 2014; Whitcomb et al., 2009). Newer models of PD place greater emphasis on relationships, shared ideas, and a strong culture as compared with traditional methods (DuFour et al., 2008). In this context, teachers work collaboratively with colleagues in professional learning communities (PLCs) and/or communities of practice (CoPs) by developing local knowledge and critically reflecting on theory and research throughout their careers (Cochran-Smith & Lytle, 1999; Hord & Tobia, 2012). According to Vescio et al. (2008), PLCs are based on two assumptions: knowledge is situated in the day-to-day experience of teachers and active engagement in learning will increase professional knowledge and enhance learning.

Despite recommendations to implement contemporary methods of PD in schools, current practices in general and physical education continue to reflect outdated methods (Armour et al., 2009; Garet et al., 2001; Parker et al., 2012). Unfortunately no explicit

definition exists to describe what high quality PD looks like, therefore in many cases, top down approaches and one-day workshops outside of the context of teaching using traditional methods of PD are still followed by school administrators (Armour & Yelling, 2007; Casey, 2012; Garet et al., 2001; Nieto, 2009). In order to engage teachers in potentially high-quality PD, a paradigm shift which embodies active and in-depth learning opportunities that include collaboration, high standards, and content focus all anchored in improving student achievement is needed (Armour & Yelling, 2004a; Darling-Hammond & McLaughlin, 2011; Garet et al., 2001; Parker et al., 2010; Patton & Parker, 2014).

Professional learning communities have been identified as one way to create systematic change within the teaching profession by investing in a concept called “professional capital” (Hargreaves & Fullan, 2012). Professional capital includes the following elements: human capital (education of individuals), social capital (relationships between people), and decisional capital (discretionary judgments) which may contribute to achieving greater educational outcomes over prolonged periods of time. Investment in the professional capital of individuals or groups might result in teachers being “well-prepared, sufficiently paid, properly supported, continuously learning, collectively responsible and shrewd in their judgments” (Hargreaves & Fullan, 2012, p. 185). To achieve professional capital through the use of PLCs, teachers must be supported in their endeavors to engage in collaborative professional learning experiences with colleagues that ultimately impacts their own learning and teaching practice (Hargreaves & Fullan, 2012).

Collaborative and supportive relationships within PLCs have been found to produce positive outcomes when contributing to the overall development and success of teachers (Deglau & O'Sullivan, 2006; Parker et al., 2010; Parker et al., 2012). Support for teachers is most effective when situated in everyday experiences and can be viewed as a mutual responsibility where interactions are reciprocal between new and veteran teachers, allowing for development of a common understanding among community members (Author, in review; Glazer & Hannafin, 2006). Support can be found in several forms (i.e., sharing instructional units, successes and challenges among community of learners) and has shown to build ownership among teachers (Author, in review; O'Sullivan & Deglau, 2006).

Reports of impact as the result of PD have largely been limited to perceptions of change in teacher practice and perceptions of student learning by teachers (Vescio et al., 2008). Furthermore, improvements to student learning through the use of collaborative PD have only begun to be identified in physical education (Hunuk, Ince, & Tannehill, 2012). Improvements to teaching practice and student learning have potential to develop as a result of contemporary PD, therefore understanding the role of support in this endeavor may be one way to accomplish change in educational contexts.

The supportive structures embedded within collaborative PD have resulted in professional learning and growth to occur and have been linked to positive effects on teaching practice. Despite these initial findings based on a limited number of studies, a gap still remains as to how support specifically impacts the practice of physical education teachers. Identification of the impact of support mechanisms on teaching practice may

provide insight into the potential benefits of participating in PLCs as a form of contemporary PD.

Purpose and Research Questions

The use of contemporary methods of PD has become increasingly prevalent within educational contexts in recent years; therefore, the purpose of this study was to explore the role of support mechanisms within professional learning communities (PLCs). This investigation is part of a larger study aimed at determining the perceptions of teachers with regard to support while participating in contemporary PD, particularly in the form of PLCs. The specific research question guiding this study was: How do physical education teachers view support mechanisms within a PLC as impacting their practice?

Theoretical Framework

Situated learning perspectives when applied to various forms of contemporary PD, served as an appropriate theoretical perspective to view teachers participating in their day-to-day environments and within contexts that they taught and learned (Vescio et al., 2008). The professional learning of teachers can be viewed as a social process comprised of meaning, practice, community, and identity (Wenger, 1998, 2009). One type of social process identified for learning is a community of practice (CoP) or “any collectivity or group who together contribute to shared or public practices in particular spheres of life” (Kirk & Macdonald, 1998, p. 380). The concept of a CoP was central to the situated learning perspectives, ultimately emphasizing learning as a social practice within social settings.

Although not originally sought out for their status as a CoP, the PLCs represented within this study were regarded as possessing similar characteristics of CoPs due to their sociocultural and situated nature of learning. These PLCs each contained a *domain*, or shared interest, a *community*, or collectivity of individuals interacting regularly, and *practice* or shared knowledge base (Wenger, 1998); commonly associated with accepted characteristics of CoPs.

The concept of “legitimate peripheral participation” as described by Lave and Wenger (1991) was a way to describe the relations between all members within a community and reflects interactions among new and veteran members, the activities, identities, and artifacts that contribute to the development of knowledge and practice. This concept took place in all educational contexts and can be found in places where collaborative apprenticeship supports and sustains professional learning (Glazer & Hannafin, 2006).

Situated learning perspectives have recently begun to assist with examining the distinct characteristics of teaching and learning in educational research. Due to the inseparable nature of learning from the contexts in which learning occurs, situated perspectives have been used to investigate the collaborative work of teachers when engaging in PD activities (Parker et al., 2010; Whitcomb et al., 2009). Therefore, the application of situated learning perspectives to contemporary PD provides an appropriate lens to examine how elementary physical education teachers perceive support within PLCs as impacting their teaching practice.

Methodology

Participants

Elementary physical education teachers (14 female; 20 male; $N = 34$) participating in three active PLCs in the inter-mountain west region of the United States were included in this study. Initially, eight PLCs that met criteria of groups of teachers that exhibited supportive and shared leadership, shared values and vision, intentional collective learning, supportive conditions, and shared practice (Hord & Tobia, 2012) were contacted via e-mail to determine eligibility and availability. Although all groups met the study criteria, three PLCs agreed to participate. Each varied with respect to the number of participants, years of teaching experience, and years of participation in the current PLC (see Table 1). All institutional review board procedures were followed.

Data Sources

Data sources included: (a) focus group interviews, (b) field notes, (c) informal conversational interviews, and (d) individual follow-up interviews, and e) artifacts.

Focus group interviews. The primary data source consisted of three focus group interviews which ranged from 35-60 minutes. These interviews were conducted in a location convenient to the participants. Locations varied from a reserved section at a restaurant/bar, a meeting room within a district professional development center, to a classroom at a district high school after school hours. The purposeful selections of these locations were chosen to accommodate all participants while reducing noise and distractions. The focus group interviews were semi-structured and took place following observations of PLC groups. All interviews were digitally audio-recorded and resulted in 107 pages of data transcribed verbatim.

Field notes. Descriptive field notes were taken during all PLC meetings (range 1-7 hours per meeting). Interactions of the participants, the format and structure of the PLC meetings, general content of the meetings, instances of inactive and active participation, and participant level of engagement were recorded by hand at the site of the observations. The field notes were used during data analysis to corroborate responses from focus group interviews.

Informal conversational interviews. In an effort to inquire deeper about the impact of support within the PLCs on teaching practice, several informal conversational interviews occurred throughout the data collection process (Patton, 2002). The interviews were not solicited and took place on spontaneous occasions before, during, and after PLC meeting observations, focus group interviews, or other informal gatherings of the participants and the researcher (i.e., at professional conferences, during meals, or during social gatherings such as a retirement party). Informal conversational interviews ranged from 5-20 minutes and brief notes were collected in a notebook and expanded upon where necessary.

Follow-up interviews. Follow-up interviews were scheduled during the analytic process to clarify and expand participant descriptions (Polkinghorne, 2005). Six follow-up interviews occurred in person (coffee shop and restaurant) or via phone. Discussions totaled 3½ (four total individuals represented each PLC) and were used expand upon or clarify previous comments from the three focus group interviews or draw out additional information from the participants.

Artifacts. Correspondence between teachers (electronic and written), PD meeting agendas and minutes, and access to web-based lesson resources were artifacts for this

study. The artifacts collected provided an additional vantage point to compare to information gathered through observation and interviews.

Data Analysis

A six-step process specific to phenomenological research was used to analyze the data (Creswell, 2007). The first step was to bracket the researcher's prior judgment and preconceptions through disclosure of a researcher perspective through a process of epoche, where personal prejudices, viewpoints and assumptions are made aware (Merriam, 2009). Next, significant statements, sentences, or quotes were highlighted with regard to how participants experienced the phenomenon of support impacting their teaching practice. Third, meaning clusters were developed and organized into two broad themes to reflect how teachers perceived support within the PLCs as impacting their teaching practice. The fourth step included writing a textural description using significant statements to describe sub-themes that highlighted the common experiences of the participants relating to the impact of support on teaching practice. A structural description was then written to describe the context or setting that influenced the participants' experience of support. Finally, the invariant structure or the "essence of the phenomenon" was written.

Trustworthiness

Four techniques were used to establish trustworthiness within this study. First, data were confirmed through triangulation of multiple data sources (focus group interviews, field notes, informal conversational interviews, individual follow-up interviews, and artifacts). Second, following the verbatim transcription of interview data, a member check was conducted by emailing each participant a copy from his/her

respective focus group to determine plausibility of interview responses and several edits were made to the data based on the requests of the participants (Merriam, 2009). Third, the second author verified congruency of the findings and interpretations of the study by serving as an expert review (Merriam, 2009). Lastly, a detailed account of interview notes, observational field notes, and interactions with participants were recorded in an audit trail to make it possible to examine the processes of how data were collected and analyzed (Guba, 1981).

Results

Two distinct levels of impact on teaching practice identified by the participants were: (a) enhanced curriculum and instruction and (b) teacher empowerment.

Enhanced Curriculum

and Instruction

Support within the PLCs impacted the practice of teachers by allowing teachers to collaborate thus enhancing curriculum and instruction in their respective physical education programs. Teachers worked alongside each other to develop purposeful and meaningful curriculum guides for existing physical education programs based on a collectivity of resources within the PLCs. The personal connections (see companion paper for details about this construct; Author, in review) between teachers within the groups lead to sharing information, resources, and best practices in order to develop and integrate information into curriculum guides. In particular, the development of curriculum guides and sharing of instructional practices was encouraged by peers during PLC meetings.

Enhanced curriculum. The support developed within the groups allowed for the more complete and personalized development and use of curriculum guides. Creation of the curriculum guides was an arduous yet diligent task taken on by PLC members which were used as a standard for new and existing teachers. Personal development and ownership was important to members of the PLCs as they regularly met to develop and construct meaningful guides; some funded through external grants and others through their school districts. The curriculum guides were an important by-product of these PLCs as they offered structure for the teachers' practice especially when teaching in isolation. The teachers were proud of their curricular work and strived to maintain a level of high performance among group members. One group member stated, "I'm like, wow, we lived through that [curriculum development] for 6 years. We did it; it's meaningful; [and] it's what's best for kids" (FG B). Another member added,

I didn't realize it at the time until now we are like what 8 years in that we are the best practice research we have already lived it, we've done it, we implemented it and its working. The problem is the fight for it and keeping it continuing. (FG B)

Curriculum guides were updated on a regular basis and regarded as necessary for staying current in the field at both the district and state level. One teacher highlighted the importance of staying up-to-date with national initiatives within the profession, "We have since redone it to align with the new comprehensive health and physical education standards. So now it includes the health concepts as well as the physical education concepts K-8" (FG A). Members from another PLC worked to update their existing curriculum guide as part of an ongoing effort to reflect recent district changes as observed during a collaborative meeting,

Trevor and Mark then began to discuss a plan of attack for continuing work on the [curriculum] document. They worked together to build units of study within the

curriculum guide. (Researcher note: Last year they worked on assessments together so they had previous experience with the document in the past.) During this process they referred to several books and other documents they brought with them to help with the development of the units of study for the curriculum. (field notes, 3/20/13)

Using the curriculum guides was important to these teachers as they felt they could teach in a variety of different settings through support from a common document. One teacher explained, “Like I said, ‘I think I can go anywhere and do my thing if I have this little book’” (FG B) while another PLC member agreed, “Take this little Bible. I mean I went to another country and taught, but even going to Costa Rica I felt so comfortable and I am like, ‘ok I will go to this classroom and I don't speak Spanish’” (FG B).

The curriculum guides were important to assist new teachers in providing structure within their programs. As a new teacher, the use of a curriculum guide was paramount for providing assistance and direction within the district. Several teachers commented on the importance of having a curriculum guide to assist with their planning and overall teaching when they were new,

This pacing [curriculum] guide I have to say when I first came I had nothing. I taught in Clear County for a while so I had their whole program that I could use, but as far as Andrew elementary school I didn't and so the planning and the pacing guides really put depth and breadth. We are doing the same thing because children go from one school to the next and that was really huge. Otherwise it felt to me like you know a little bit less. I mean I could have been just teaching whatever and there wasn't a pattern and I needed that substance. That [curriculum guide] was a big thing and they gave posters and we could follow it and you could go in and know they are going to do soccer in the fall and [fitness] testing . . . (FG A)

Teachers commented on the importance and helpfulness of having a curriculum guide they could refer to when teaching. The curriculum guides acted as a basis for structure and guidance for developing content and lesson planning. The curriculum guides

contributed to a greater sense of personal competency for teachers as compared with a general lack of direction that some teachers faced without one. One teacher mentioned,

Like young teachers... I mean, I so wish somebody would have handed me a curriculum guide and said whatever you need just call me. My principal said so whatever you want when he hired me and I was like ‘um, could you be more specific?’ (laughter) He was like, here is the book the last guy was using and you know feel free to do what you need to do. That was just so unsettling. (FG B)

While another teacher described the importance of providing assistance to new teachers through a curriculum guide,

Jeff is so excited because he has wanted to join [the PLC] and he has been calling me a ton during this interview process. I said, ‘you know congratulations we will get you all taken care of [because] we have a curriculum guide and everybody will [help you].’ (FG B)

Instruction. Support within the PLCs allow not only for the acquisition of curriculum knowledge through curriculum guides, but the implementation of new ideas into their own classes. Some was through the ideas shared at meetings and others through observation of colleagues to gain more knowledge regarding teaching styles.

Opportunities for sharing, implementing, and observing teaching strategies of other members were enhanced through the participation within the PLCs.

Teachers described how PLC members were given opportunity to present activities to each other during meetings, “Then we always, we did start having two people present activities at each meeting just to share you know their favorite activity or a fitness focus or something” (FG B) and “I think there are a lot of resources I think which is a big thing, cause like they said I mean we will talk about two or three activities and you can go back the next day and use them” (FG C). Furthermore, these teachers were purposeful regarding what they shared as they chose activities that benefitted others by meeting their needs and those of their students. One teacher commented on what she and others hope to

receive from PLC meetings, “Oh but that's what teachers want, they want stuff they can use with their kids” (FG B). Another teacher described the advantage of the shared and open meeting format to gain additional ideas for his own teaching,

You know you usually pay money to go to conferences and stuff like that, but we have these (PLC meetings) once a month it opens up the floor for free to get all these different ideas. You can just bring [ideas] and [say] like ‘hey guys I am doing a gymnastics unit and I am teaching this and somebody will have it you know what I mean so that is always beneficial.’ (FG C)

The diversity in the PLCs (see companion paper for details about this construct; Author, in review) allowed for teachers to draw from the expertise of others in the group. Sharing best practices in meetings allowed for teachers to gain knowledge from their peers that they would have not had a chance to learn otherwise. One PLC member expressed the importance of being able to work with a variety of others in order to gain insight in their own teaching, “[We meet with] everybody from 20-year teachers to first year teachers [and] we all pull from each other because we are all doing the same thing” (FG C). Several teachers possessed unique skills and abilities that benefitted others in the group. One teacher discussed how differences of skills in the PLC allowed for a broader view of instruction,

I have no expertise in football, not to mention I am not a real fan, but Jason V. did some little game you can play to teach us a little bit about it and for me it was huge because I had zero experience and no background knowledge whatsoever. He did basic things about catching, throwing, and low pattern and they were just really easy. That is one concrete example of how I could learn from someone else that I have no knowledge there whatsoever. (FG A)

Similarly another teacher shared, “Same thing goes for Lauren with soccer, she goes out there and shows us four or five activities; it's real simple stuff, but you never thought to do it that way” (FG A).

Teachers regularly gained new ideas and activities that could be immediately implemented in their classes. One teacher shared, “It’s a chance to get together with other people and say ‘here is something I have been doing that has been fun and here is something that, oh my gosh and get some help with . . .’” (FG A) while another added, “like a teacher will come up and say I have been doing this activity and the kids love it just do it” (FG C).

After establishing personal connections within the group (see companion paper for details about this construct; Author, in review) teachers felt comfortable seeking others out to watch them teach. Several teachers explained their interest with learning more about classroom management, “I went to see Robert just to see how he runs his class. I just went and watched during my planning time. Things like that, if you get to know people you feel comfortable emailing all the time you know” (FG B) and,

I remember watching Cathy. I think I handle chaos really well, but she is like the master. The kids are under control; they are doing what they are supposed, to but there is stuff going on like everywhere. She is just happy and [her] kids are happy. (FG A)

Participation in the PLCs allowed for teachers to reach out to other physical education teachers within the school district to observe classes, ultimately contributing to changes in their own teaching style. Teachers believed the opportunity to observe or see others teach assisted with developing their own teaching style. One teacher mentioned,

I think it is a little bit of both because they get the indirect support by the person that is the teacher leader that will send a new person to different people to see different teaching styles so they will go see Jen at Wyben and see how to put the teaching in the students hands or they'll go you know see Lauren and see Dawn and Christine and Colleen and see these people teach so they get a greater understanding of all the different kind of teaching styles that are out there and it just helps them mold their own, where as if we didn't meet, nobody would know how who taught what or how they taught, things like that so I think that is one of the indirect ways that they get support is through that mentoring process where

they get to see all these different people teach. And they are directly supported when they come to the meetings I think as we referred to earlier. (FG A)

Teachers were excited when others used their ideas as one teacher expressed when hearing about one of the lessons he shared during a PLC meeting being implemented in another school,

Exactly, so for someone to come back who is not a PE teacher and say this person at this school is implementing your ideas and they got this idea from you, I was kind of like cool I am glad someone else is using it and you know it is working for someone else and that teacher's students are excited about it. (FG C)

Teacher Empowerment

Support within the PLCs lead to a sense of empowerment among these teachers through increased risk taking and confidence. Working with others and sharing the same interests and struggles positively impacted their work. Risk taking allowed for trying out new class activities and taking on professional roles. Increased confidence occurred through feeling of competence from possessing content knowledge and effective teaching strategies. Teachers openly expressed their feelings of support from working alongside others as, “just teacher empowerment I think as a whole” (FG B).

Risk taking. Support from the PLCs provided teachers an increased ability and desire to take risks, which ultimately impacted their teaching practice. Teachers were encouraged to try out new ideas or challenge each other's teaching by challenging the status quo and going beyond what was typical or comfortable in their jobs. As a result of working in the PLCs teachers challenged their own teaching to take “initiative” (FG B) and “take a little bit more risk teaching wise” (FG B). Teachers were also challenged to think outside the box, “I think that exactly you are trying different things and you are willing to step out” (FG B). One teacher spoke about how the PLC motivated her, “This

is where I compare myself to others to see what they are doing to see if I am on the right track. [I ask myself] am I totally in left field and did I miss the boat on a particular thing [that] I should be doing [that] they are all doing? ” (FG A).

Furthermore teachers influenced one another’s professional growth and development by seeking out additional teaching certifications or participating in leadership roles within professional organizations. One teacher shared his sentiments regarding a peer’s challenge toward him to take a risk, “I know someone [colleague] in this district encouraged us to go to national board [an independent, nonprofit organization formed to advance the quality of teaching by developing professional standards]” (FG C) and another teacher stated with pride, “so honestly if these people pass we will have the largest nationally board certified people in the state as a district” (FG C).

Teachers also recognized the importance of staying effective and current in the field. Support within this group contributed to teachers wanting and willing to learn and try new things as a result of participation in the PLCs. One teacher expressed her excitement regarding colleagues that were close to retirement by saying, “But you know when people like that are willing to do new things and stay engaged until they retire that’s a good sign” (FG B).

Confidence. Teachers within the PLCs described having an increased sense of confidence as a result of support from others in the groups. Confidence resulted from helpfulness (see companion paper for details about this construct; Author, in review) and ranged from feeling competent with specific managerial tasks to doing what was right for children. One teacher commented on the importance of the PLC in contributing to her confidence,

I am thinking a big part of the support is empowerment. We are empowering teachers to be able to do their jobs well and be confident in what they are doing . . . it's just empowering to give teachers tools and training and you know relationships that make them feel competent and remind us. When we all get together we remind each other 'you are doing a great thing and kids need what you are doing and you are doing the best you can to meet that need'. Teachers need that and nobody in our buildings is doing that for us and nobody in our districts is doing that for us; we are doing that for us. (FG B)

Teachers expressed a feeling of confidence from support between people in the groups as one teacher indicated, "And then it's good too because I feel like we are really good at celebrating each other. Hey you know he did this, this person did this, you know great job keep it up, you know that's always encouraging to hear too and keeps it motivated I guess" (FG C). This support reassured teachers while working with students as another teacher shared, "I just feel much more confident and sure of what I am doing and what I am doing is right for kids" (FG B).

These interactions resulted in teachers feeling appreciated and lead to "positive peer pressure" (FG A) where one teacher stated, "It inspires me to be at a higher standard" (FG A). Overall teachers felt as though their teaching was impacted positively from their increased confidence. As one teacher said, "I mean I just feel more confident in expectations too and the kids and management" (FG B). Working in the PLC contributed to individuals finding what works for them as a result of interactions in the group. This was noted by another teacher in the group, "I think it has eliminated fears so you can teach what you are good at" (FG B).

Discussion

This study investigated how elementary physical education teachers viewed support mechanisms within a PLC as impacting their practice. In an effort to fully describe their experiences of support within the PLCs, teachers reported specific

instances and other intermediary factors that ultimately impacted their teaching practice. Findings indicated that elementary physical education teachers identified the impact of support on their practice as occurring on two levels: tangible and intangible.

Tangible impact resulted in enhanced curriculum and instruction through the development of visible artifacts (e.g., curriculum guides) and the observable implementation of teaching strategies and best practices within classes. Implementation of specific content and the choice of tasks by teachers were highly influenced by the curriculum guide and sharing of best practices. This type of impact directly impacted the teachers by providing specific outcomes and goals for teaching as well as applicable tasks.

Support intangibly impacted teachers by empowering them to take risks that lead to an increased sense of confidence with regard to their teaching practice. Teachers in the groups had opportunity to interact with others which validated their thoughts about their own teaching. They felt comfortable to take risks with regard to their teaching knowing that they were making the right choices for their students. Confidence among the group of teachers allowed for a greater sense of ability and assisted teachers with elements of teaching such as personal motivation and classroom management. Professional development opportunities that are situated in collaborative and collegial learning environments and allow for reflective teaching are more effective than traditional methods of PD (Whitcomb et al., 2009). In particular, the situated nature of the PLCs represented in this study possessed “central features of high-quality professional development and initial evidence that professional development with these characteristics can be effective in improving teaching practice and student learning” (Whitcomb et al.,

2009, p. 208). The situated context and active engagement in the PLCs resulted in increased professional knowledge and changes to teaching practice that might potentially enhance student learning (O'Sullivan & Deglau, 2006; Patton et al., 2013; Vescio et al., 2008).

These teachers participated in PLCs that embodied a “supportive climate in which teachers know that their views are encouraged and valued” (O'Sullivan & Deglau, 2006, p. 446). Therefore the use of a PLC as a method of contemporary PD was effective in breaking down barriers and providing opportunities for teachers to be supported in their endeavors to learn from and with each other. Similar to the findings of Parker et al. (2012), these groups exhibited characteristics akin to an authentic CoP, thus reducing isolation among teachers where teachers learned with and from each other within the group. The support mechanisms within the PLCs positively impacted teaching practices of these participants through curriculum and instruction as well as contributing to teacher empowerment.

Participants in this study reported changes occurring to their teaching practice as a result of support within PLCs. Although some instances were reported with regard to specific aspects of their teaching practice (i.e., classroom management), still other general changes to practice were described. These findings are congruent with other similar studies of self-reported data of teachers about the impact of participation in PLCs on teaching practice (Vescio et al., 2008).

The development of curriculum was directly impacted by the support within these PLCs. Teachers developed curriculum together by drawing on collective experiences and content knowledge of one another. Gaining support of other teachers in this endeavor was

imperative to the development and implementation of curriculum in the teachers' respective schools (Parker et al., 2010).

Teachers within this study had meaningful control of the content presented or discussed within PLC meetings and shared ideas whereas they learned from each other (O'Sullivan & Deglau, 2006). Opportunity for these teachers to present instructional strategies and best practices with others during PLC meetings contributed to the overall professional growth of teachers. In particular, the shared information (i.e., teaching strategies and best practices) were often implemented in classes as a result of experiencing new ideas from colleagues at the PLC meetings.

Teachers expressed a sense of empowerment regarding their teaching as a result of working in the PLCs and took initiative for their own learning. This finding reinforced the idea that "teachers should be empowered and treated as professionals and leaders" as a principle of effective PD (O'Sullivan & Deglau, 2006). Furthermore, Parker et al. (2010) found similar effects from teachers working within a CoP with respect to teacher empowerment which had implications for capacity building and continued learning. When teachers become empowered they enact what Hargreaves and Fullan (2012) describe as decisional capital. This capacity for teachers to make decisions regarding their own learning communities or other aspects of school governance, also known as teacher authority, has been linked to making decisions regarding their own learning which can ultimately improve students' learning (Vescio et al., 2008).

Participation in the PLCs contributed to teachers taking risks within their classes. Whitcomb et al. (2009) highlighted the importance of a supportive environment as contributing to risk taking that push teachers to attempt new practices. Challenging the

status quo and thinking outside the box were specific instances in which teachers would take risk in their classes. In the case of these teachers, risk taking was pervasive among group members with respect to their own teaching.

Participants expressed a sense of increased self-confidence with respect to their teaching. Self-confidence was a direct result of helpfulness, being celebrated by others and an awareness of doing what was right for students. Overall the confidence experienced by the teachers allowed for teachers to understand their strengths and weaknesses and ultimately allowed for developing lessons that were appropriate for the needs of the learners.

Conclusions

High demands for educational performance and increased use of contemporary forms of PD in schools have resulted in a paradigm shift in how the professional learning of teachers is conducted and researched. The situated and social nature of the PLCs allowed for teachers to learn with and from each other which impacted the teaching practice of group members in both tangible and intangible ways. These levels resulted in a strong relationship to exist between enhanced curriculum and instruction and teacher empowerment. Development of curriculum guides and opportunities for collaboration and observation gave teachers the tools they needed to effectively conduct their classes. In addition, teachers felt a sense of empowerment and took risks that also allowed for impact to their teaching. In this study when support was present the teachers reported a stronger ability to implement changes to their teaching practices. Although this investigation provided insight into the ways in which support mechanisms impacted the practice of teachers, what still remains a mystery is whether the tangible results

influenced the intangible or vice versa. Furthermore, if these types of impacts exist independently of each other, can changes to teaching practice still occur? Further exploration is needed to identify specific instances of how the professional learning of teachers impacts student learning. Once identified, these instances may contribute to investment in the professional capital of teachers and ultimately increase gains in student achievement.

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Table 5

Characteristics of Professional Learning Communities

Characteristics	PLC A	PLC B	PLC C
Gender			
Male	5	10	5
Female	6	7	1
Teaching Experience	Total: 152 years	Total: 230 years	Total: 60 years
	Average: 14 years	Average 14 years	Average: 10 years
	Range: 1-29 years	Range: 4-31 years	Range: 1-22 years

PLC A = Professional Learning Community Group A

PLC B = Professional Learning Community Group B

PLC C = Professional Learning Community Group C

CHAPTER VI

CONCLUSIONS

This investigation provided insight as to how physical education teachers perceived the role of support mechanisms in contemporary PD and the resulting impact on their teaching practice. The collaborative method of PD in the form of PLCs allowed physical education teachers within this study to receive support from colleagues through both purposeful and incidental interactions that inevitably lead to their professional learning. In particular, the support mechanisms occurred between people (personal connections, inclusivity, and helpfulness) and within the environment (diversity of members and relaxed atmosphere) and impacted teaching practice in tangible and intangible ways.

The sociocultural environments of these PLCs were inseparable from the participants; therefore the application of situated learning perspectives as a unit of analysis was appropriate to explore the phenomenon of support among PLC members in this study (Lave, 1988; Rovegno, 2006). As a form of constructivism, situated learning perspectives allowed for an in-depth view of how teachers were supported and how knowledge was constructed over time. The relationships within the PLCs closely resembled those of CoPs and as Rogoff (1990) indicated it is the relations between individuals within groups that are at the core of situated learning perspectives.

These teachers described the support mechanisms between people as being humanistic and allowed for group members to develop deep relationships that ultimately

allowed teachers to learn with and from each other. Similar to the recommendations of Duncombe and Armour (2004), these types of support led to teachers observing one another and sharing best practices that were essential to their overall development. The strong interpersonal interactions and the situated nature of learning within the PLCs (Lave & Wenger, 1991) resulted in the majority of professional learning to be influenced by other members in the group. Free exchanges of information through these social interactions lead to “bonding” among PLC members thus validating previous findings related to the benefits of collaborative PD (Atencio, Jess, & Dewar, 2012).

The inclusion of newcomers within each of these groups reinforced the notion of legitimate peripheral participation as a concept of situated learning theory. These teachers moved from being new members of the PLCs to accepted and contributing members of the group. In particular, new and veteran teachers learned with and from each other.

The diversity of the members and relaxed atmosphere of the PLCs contributed to a supportive environment where teachers felt comfortable to exchange ideas with one another without risk or judgment. Analogous to the notion of reciprocal interactions (Glazer & Hannafin, 2006), new and veteran teachers learned from one another and drew from the strengths and skills of other colleagues. Interactions between novice and veteran teachers contributed to professional learning when working with peers rather than through individual problem solving. This concept, also known as the zone of proximal development, allowed for teachers to learn with the help of others rather than in isolation (Bransford et al., 2005). The relaxed, yet productive atmosphere was developed through camaraderie and sharing jokes with each other that assisted in breaking down barriers between teachers. Many described the “laid back” environment of the PLCs as a place

where they felt comfortable and safe to openly express themselves in their own space. These teachers created the atmosphere of the PLCs through their own interactions and selection of meeting spaces.

The support mechanisms identified in this study impacted the teaching practice of PLC members in both tangible and intangible ways. The tangible aspects included enhanced curriculum and instruction through self-developed curriculum guides and observable changes to their current teaching practices (Parker et al., 2010). In addition to the tangible aspects, these teachers also reported a sense of empowerment where they were challenged to take risks and increase their self-confidence when teaching. The identification of the personal learning needs of PLC members allowed for teachers to become empowered to take control of their own learning (Vescio et al., 2008). Although the two types of impact on the teaching practice of these teachers were reported as being independent of each other, the two aspects may potentially have a reciprocal influence on one another.

Similar to the notion professional capital, teachers within this study had authority and were in control of their own professional learning, which resulted in positive outcomes (Hargreaves & Fullan, 2012). Affording teachers opportunity to work alongside one another in social contexts with appropriate support is beneficial to the professional learning of teachers. In an attempt to contribute to the professional capital of teachers, we must begin to implement changes to educational policy that allows for time and circumstance for educators to develop support mechanisms within contemporary PD. Providing teachers the necessary tools in their quest for meaningful PD is one small step

in the right direction of contributing to the professional learning of teachers and impacting student learning.

As mentioned, changes to educational policy with respect to PD may need to occur. We know that mandating the use of collaborative forms of PD does not work, however collaborative PD is effective (Atencio, Jess, & Dewar, 2012). Therefore, educational policy that supports teachers at the local (building) level to develop PLCs and other forms of collaborative PD might be effective when compared with other mandates. As a result, policy makers must look to at new ways of affecting their thinking regarding educational policy.

If teachers are to grow, develop, and learn from one another in small collaborative groups, is it possible to create a culture within schools that rival traditional top down approaches to PD and allow for teachers to take a leadership role and ownership for their own professional learning? Additional research is needed with respect to teacher change as a result of smaller, meaningful, and collaborative professional learning groups. Recognizing that support structures must occur between people and also be apparent in the environment could be the first step in empowering teachers to implement curriculum and associated instructional practices.

Overall, the role of support within the PLCs was not only apparent but important to the professional learning of these teachers and ultimately their teaching practice. Groups within this study benefitted from the structures within the PLCs and were internally supported through meaningful PD that contributed to their overall learning and growth. Although the findings of this study were generally positive with respect to growth and development of these teachers, further investigation is necessary to determine

the knowledge sets that teachers bring to the PLCs and how teachers deal with instances of conflict, problem solving or negativity within groups.

The support mechanisms that existed within these PLCs had several implications for the future implementation of PD for physical education teachers in schools. In most cases, support was purposefully and thoughtfully constructed within the groups, therefore, school administrators and teachers must allow for the creation and development of support to occur within collaborative PD opportunities. If school administration can create appropriate time and spaces for teachers to work collaboratively, then teachers may begin to implement best practices and, thus, impact the learning of students. Furthermore, empowering teachers to take control of their own learning contributes to meaningful professional learning and could have a strong impact on student learning.

The use of contemporary methods of PD such as PLCs holds future merit for the professional learning of teachers. These groups consisted of dedicated teachers working together that were willing to make changes to their teaching. The types of support (between people and within the environment) were developed internally among group members. The unique combination of these support mechanisms lead to distinct impact on teaching practices. This means the support structures within the PLCs assisted in the growth and development of these teachers and was exclusively developed by its members. It is evident that teachers possess the necessary skills and knowledge to assist one another with their own professional learning and growth, therefore it is time teachers are given opportunities to support one another in their quest for professional capital and

realize their own potential through developing long term and informal networks in their own environments.

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APPENDIX A

INITIAL EMAIL TO PARTICIPANTS

INITIAL EMAIL TO PARTICIPANTS

Dear Professional Learning Community Coordinator:

My name is Erica Pratt and I am a doctoral student at the University of Northern Colorado in the Sport and Exercise Science department. I am sending you this message to inquire about your potential participation in a research study regarding the use of Professional Learning Communities (PLCs) as a means for professional development (PD) in physical education. I am interested in learning more about your PLC and I would like to speak with members of your group regarding their experiences and perceptions of how they are supported during PD. I am interested in observing a minimum of one regularly scheduled PLC meeting followed by an interview of the teachers in a focus group format, lasting no more than 60-90 minutes in a location and time convenient to the teachers and if necessary, potential follow-up interviews in person or via phone will be used to allow for PLC members to expand upon or clarify previous comments.

Additionally, I plan to collect any artifacts (e.g., communications such as correspondence between teachers (electronic or written), lesson planning documents, teacher journals, PLC meeting agendas and minutes, or any other documentation regarding participation in professional development activities) throughout the study. The participation of yourself and members of your PLC would be greatly appreciated and may potentially allow for reflection and personal growth among members of the group. Please reply to this email if your PLC has any interest in participating in this study. If you have any questions or require more information please feel free to contact me (Erica Pratt) via email at erica.pratt@unco.edu or phone at 970.XXX.XXXX.

Thank you for your time and I look forward to working with you.

Erica Pratt
University of Northern Colorado

APPENDIX B

DEMOGRAPHIC INFORMATION SHEET

DEMOGRAPHIC INFORMATION SHEET

What is your gender? ___Male ___Female

What is your current education level? _____

What level do you teach? _____

How many years have you been teaching physical education? _____ years

How many years have you been a part of this current professional learning community
(PLC)? _____ years

In what year of your teaching career did you join this current PLC? _____

APPENDIX C

CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH



CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
UNIVERSITY OF NORTHERN COLORADO

Project Title: Physical Education Teachers' Perceptions of the Role of Support Mechanisms within Contemporary Professional Development
Researcher: Erica A. Pratt, M.S., School of Sport and Exercise Science
Phone: (970) XXXX-XXXX
E-mail: erica.pratt@unco.edu
Research Advisor: Melissa Parker, Ph.D., School of Sport and Exercise Science
Phone: (970)-XXX-XXXX
E-mail: missy.parker@unco.edu

Dear Participant:

I am conducting a research study to investigate the role of support mechanisms among physical education teachers within Professional Learning Communities (PLCs). Specifically, your perceptions and experiences of support within an established PLC and its impact on your teaching practice will be explored. The information in this form is designed to help you decide whether or not you wish to participate. You are being asked to participate because you are a professional member of an established PLC that has attempted to help promote learning; therefore, your input is of considerable value. Your participation may actually allow for continued professional growth.

If you agree, you will be: (a) observed during a minimum of one PLC meeting, (b) asked to participate in a focus group interview that will last approximately 60-90 minutes and a potential follow-up interview in person or via phone, and (c) provide artifacts such as: correspondence between yourself and other members of the PLC (electronic or written), lesson planning documents, teacher journals, PLC meeting agendas and minutes, or any other documentation regarding participation in professional development activities. All interviews will be held in a location convenient to you and will be audiotaped and transcribed verbatim. All artifacts will be collected and stored in a secure location accessible only to the researcher and the research advisor. A copy of the transcribed interviews and initial findings will be sent for you to read via email on two occasions to confirm the accuracy of the content; you also may request additions, deletions, or changes in this material.

At the end of the project, I would be happy to share the data with you at your request. I will take every precaution in order to protect your confidentiality. This includes the use of pseudonyms, coding data and choosing an appropriate and secure storage mechanism

that will prevent unauthorized access to the data. All interview material including consent forms, audio recordings, verbatim transcriptions, consent forms, and any other identifying information will be stored in a locked file cabinet in my office (Gunter Hall 2680) in the School of Sport and Exercise Science at the University of Northern Colorado. Only my research advisor and I will have access to the file cabinet and all data will be destroyed three years from completion of the study.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having had an opportunity to ask any questions, please sign below if you would like to participate in this research. A copy of this form will be given to you to retain for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Office of Sponsored Programs, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-2161.

Subject's Signature

Date

Researcher's Signature

Date

Erica Pratt (970) XXX-XXXX

APPENDIX D
INSTITUTIONAL REVIEW BOARD APPROVAL

UNIVERSITY of
NORTHERN COLORADO



Institutional Review Board

DATE: March 31, 2013

TO: Erica Pratt

FROM: University of Northern Colorado (UNCO) IRB

PROJECT TITLE: [435454-3] Physical Education Teachers' Perceptions of the Role of Support Mechanisms within Contemporary Professional Development

SUBMISSION TYPE: Amendment/Modification

ACTION: APPROVAL/VERIFICATION OF EXEMPT STATUS

DECISION DATE: March 31, 2013

Thank you for your submission of Amendment/Modification materials for this project. The University of Northern Colorado (UNCO) IRB approves this project and verifies its status as EXEMPT according to federal IRB regulations.

Erica -

Thank you for your thoroughness in providing revisions with the addition of your informational conversations as data sources.

Your amendment/modification has been approved. Best wishes with your data collection and dissertation research.

Sincerely,

Dr. Stellino

We will retain a copy of this correspondence within our records for a duration of 4 years.

If you have any questions, please contact Sherry May at 970-351-1910 or Sherry.May@unco.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Northern Colorado (UNCO) IRB's records.

APPENDIX E

POTENTIAL SEMI-STRUCTURED FOCUS GROUP
INTERVIEW GUIDE

POTENTIAL SEMI-STRUCTURED FOCUS GROUP
INTERVIEW GUIDE

1. Can you tell me a bit about this PLC?
 - a. What is the purpose?
 - b. How often do you meet?
 - c. Who attends?
 - d. How did this group start?
 - e. How long has this group existed?
 - f. How is it funded?
 - g. Who leads this group? Has it always been the same person?
2. What does a typical PLC meeting looks like?
 - a. Where do you meet?
 - b. How long do the meetings last?
 - c. What incentives are provided at the meeting?
 - d. What type of an atmosphere is created?
3. What are the most important aspects of being a part of this group?
 - a. How does this PLC differ from other groups you have been involved with?
 - b. What is unique about being part of this PLC?
 - c. What are the benefits of being part of this group?
 - d. What are the drawbacks?
4. Suppose I became a new member of this group, how would current members in the group react to me when I joined?
 - a. What are some things I should be aware of coming into the group?
 - b. How will this group contribute to my professional growth?
 - c. In what ways will I be supported within this group?
5. How do you learn best?
 - a. Can you provide examples of activities that contribute to your learning?
 - b. How has this group supported you to learn?
 - c. What are some examples of this support?
 - d. Where has this support come from?
6. How is support developed within this group?
 - a. What are the specific activities you engage in?
 - b. Does this support develop over time?
 - c. What other factors contribute to the development of support?
7. Is support a direct or indirect result of participation in the group?
 - a. Please explain.

8. Who facilitates the development of support in the PLC?
 - a. How is this accomplished?
 - b. How are you supported by colleagues within the group?
 - c. How do you offer support to your colleagues within the group?
 - d. How has support been maintained over time?
9. How has the support in this group impacted what you do in your classes?
 - a. How has it contributed to your development of knowledge and skills necessary for your teaching?
 - b. How has it impacted the quantity and quality of your relationships while you teach?
 - c. How has it impacted your ability to make judgment calls when faced with decisions in your classes?
10. Can you describe any other examples of how being part of this group has impacted or influenced your teaching?
 - a. What have been the mandates that impact your teaching?
 - b. What makes the change to your teaching possible?
 - c. Why did it occur?
11. What else can you tell me about your participation within this group?

APPENDIX F

POTENTIAL FOLLOW-UP INTERVIEW TOPICS

POTENTIAL FOLLOW-UP INTERVIEW TOPICS

1. Can you please provide additional information related to the structure or design of the professional learning community (PLC)?
2. Can you please provide additional information specifically related to the development of support within the PLC?
3. Can you provide additional information regarding the impact of support from this PLC and the impact on your teaching practice?
4. Can you please expound upon the concept or idea (to be specified) that was not fully explained during the focus group interview?
5. Can you please clarify what you meant when you explained the concept or idea (to be specified) within the focus group?