A STUDY OF PROFESSIONAL LEARNING COMMUNITIES IN INTERNATIONAL SCHOOLS IN BANGKOK, THAILAND.

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Dedication

To my parents, as lifetime educators, they would have been proud of my accomplishments. I am pleased to follow in their footsteps.

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Abstract

Teacher collaboration and professional development are crucial components to any school improvement process. In an international school context differences among teachers emerging from culture, language, training, and environment can present a unique view of how teachers collaborate and learn together. The purpose of the study was to determine school administrators' and teachers' perceptions of the maturity level of Professional Learning Communities (PLCs) in selected Thai International Schools. The school staff identified this perception of maturity when they completed the PLC Questionnaire (SPSaLCQ). Research questions included those exploring teacher and administrator perception of PLC as well as comparing perceptions of both groups against teacher experience, gender, number of years as a teacher and school age level they taught. The research study included a mixed method approach used to assess perceptions and to gain deeper understanding of school situations from English-speaking international schools located in Bangkok, Thailand. This study consisted of an electronic, web-based survey and in-person structured interviews. There were a total of 55 schools surveyed. All participants were teachers or administrators at international schools located in Bangkok. Descriptive statistics were used to analyze the responses and determine how the data were formed by different subgroups of the sample. The survey data helped to inform the researcher about the interviews and process. All the analyses were calculated using SSPS.

The research findings indicated that schools could be assessed to measure their maturity as a PLC. Three major findings from the analysis indicated that administrators typically assessed a higher level of maturity than did staff, staff perceived it was administrative structure in place by policy that helped determine implementation of a PLC, and perceptions of PLC maturity do vary according to demographic variables

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Chapter One:

Introduction

In this innovative 21st century teachers and administrators around the world are puzzling over the need to transform schools to best fit the needs of our changing societies. Indeed, how schools should restructure to face the future is a pressing question. Are schools destined to stay the same in structure and staffing or is the outlook for schools one of a new chance for teacher learning and development? Is there a chance for change, where the important concepts of teamwork and shared sense of purpose pervade all individual and collective actions? (Fullan, 1993). Acting as a collaborative organization, learning and growing from within, is seen as one of the only ways for school environments to innovate with enough effectiveness for teachers to make a difference (Senge, 1990). Learning and growing are important and positive traits for a school staff and have become the essential elements of what is known as a Professional Learning Community (PLC)(DuFour, 2007). A Professional Learning Community is a term for the many different ways that teachers work and learn together in a school. A Professional Learning Community is defined by Hord as a school in which the professionals (administrators and teachers) continuously seek and share learning to increase their effectiveness for students, and act on what they learn (2004b).

This study allowed the researcher to determine the maturity, or extent of measurable action, of school faculty in the five areas of determining PLC characteristics. The study used the School Professional Staff as a Learning Community Questionnaire (SPSaLCQ) from SEDL (See Appendix A) to help determine the presence of five

dimensions within the sample population. The five dimensions assessed by the SPSaLCQ were:

- Supportive and shared leadership;
- Shared values and vision;
- Collective learning and application of that learning;
- Shared Personal practice; and
- Supportive conditions (Hord, 2003).

A mixed method, quantitative approach to answer four specific research questions was used for this study. The research questions were:

1. What are administrators' perception of the maturity level of PLCs in selected
   Thai international schools?
2. What are teachers' perception of the maturity level of PLCs in selected Thai international schools?
3. What is the difference between the perceptions of administrators and teachers?
   3a. What are the differences by school?
4. What factors influence the administrators and teachers perceptions of the level of maturity of PLCs in selected Thai international schools?

These levels of maturity were assessed using the aforementioned SPSaLCQ (See Appendix B). This chapter will provide the background of the problem, the purpose of the study, the potential significance of the research, the theoretical framework, the delimitations, and a collection of defined terms.

Rationale and the Problem

Our schools face a myriad of problems as they move in to the 21st century (Elmore, 2000). Although higher technology and more resources can address some program improvements (McLeod, 2008) ultimately it is the teachers who will make the biggest difference. The effectiveness of the teacher is shown to make the biggest difference in the quality and quantity of learning. Education, of course, is a human endeavor. Educational institutions need people who can work together and help each

other build skills and capacity for excellence all throughout individual schools, systems and states or countries. An effective mechanism for increasing teacher collaboration and professional development is the Professional Learning Community. Hord's model of a PLC can display the five dimensions of a PLC through a model that uses terms and processes that would not be new to many people in education. This study sought to address the issue of to what extent school staffs display the five dimensions of Professional Learning Community characteristics, according to Hord. With consideration for the many authors who extol the benefits and successes, thus far, of PLCs in schools and their ability to increase teacher efficacy, and thus, student learning, this research was important to the future of the educational change process immediately and for the long-term. The significance lies not only in the apparent failings of many schools presently, and their inability to succeed with all students, but future ramifications with changing populations and the learning processes of students. This also helps to answer the question, "How can we have a structure in place that can accommodate and lead the way in schools when seeking solutions to how best to educate students?" Certainly Professional Learning Communities can be beneficial to student learning (DuFour, 2007; DoFour, 2003; Fullan, 1995; Hord, 1994).

International schools, which are the focus of this study, are English speaking, most often private, K-12 organizations located outside of their home country. Most predominantly these 'home' countries include the United States but also the United Kingdom, Canada, Australia, France and others. These schools are staffed usually with North American and 'Western' teachers and exist for many purposes. The

original purpose and raison d'être of the schools was to educate the children of United States Mission (Embassy) staff overseas. These schools have since become not only bastions of western thought, culture and education in host cities around the world but also places for the children of business expatriates, members of almost any other government organization from different countries and the children of the host-country wealthy elite. In almost all examples they seek to be effective by sending well educated and prepared students to University, mainly in the United States but also to Europe, Canada and Australia. The area of this study was the city of Bangkok, the political and economic capital of Thailand. In this metropolitan area of an estimated ten million people there are more than seventy international schools of varying type and caliber. All these schools seek to become more effective and design teacher development programs that address current and pressing issues including teacher mentoring programs, teacher retention and school reculturing.

Purpose of the Study

The purpose of the study was to determine school administrators' and teachers' perceptions of the maturity level of Professional Learning Communities (PLCs) in selected Thai International Schools. The maturity of the faculty refers to the increasing number of actions of a staff functioning as a professional learning community, according to the dimensions used by Hord, as the community is established over time. This concept of maturity is germane to both Hord's writings and research of PLCs and is also sometimes noted with other definitions and descriptions of professional learning communities and authors. It is not exclusive to Hord though, and also not prevalent throughout all PLC literature. Faculty includes the administration and professional staff

of teachers who worked at the school. Hord's model of a PLC does not include ancillary building staff such as assistants, secretaries and maintenance personnel. Teachers, those involved primarily in the delivery and assessment of instruction, and administrators, those who lead and manage building programs, resources, and personnel were assessed in this survey. Student learning can be impacted positively by the presence and maturity of a Professional Learning Community in a school (Hord, 2007, DuFour, 2007). As educators who make decisions with the greatest of stakes for our society we have a moral obligation to educate the youngest members with the most effective processes possible. Is the Professional Learning Community structure one mechanism to achieve these types of gains? Teachers and administrators who understand and are able to function and lead as members of Professional Learning Communities are valuable change makers in our educational systems says Fullan (1999).

As the entire field of education has rapidly innovated over the last two decades we have seen a remarkable change in what is considered effective practice (Hargreaves, 2003). As talk of school reform and restructuring evolves, it includes the concept of Professional Learning Communities within the visions of real and sustainable change of teacher practice. Hord (1996) states that the professional development of teachers towards the 'best practices' for increasing student achievement has seen a strong movement towards the creation of Professional Learning Communities. Educational experts Fullan (1993), Marzano (2003) and Grossman & Wineburg (1998), Schmoker (2004), DuFour (2003, 2007), Hord (2007), and Sergiovanni (1992) extol the increasingly effective nature of schools as they take steps to restructure with the times, and become communities of learners. Recent research by McLaughlin & Talbert (2003) found that

"schools constitute an important context for the development of strong professional communities" (p. 9). DuFour evokes a vision of Professional Learning Communities that are a powerful new way of working together which intensely affects the practice of schooling (2004).

Theoretical Framework

The theoretical framework for this study was brought forth from the research of Shirley Hord (2007), whose comprehensive and long-time study of underperforming schools led her on the path to create a model of a learning community. In the course of her work to build a formula for more effective schools, Hord began to notice a pattern in schools that actually made positive changes. Her early research addressed this phenomenon and led to her five dimensions of a Professional Learning Community, which are, in effect, the job-embedded actions of effective teacher and school development. These PLC "Communities of Continuous Inquiry" (Hord 1997b) were operationalized with an emphasis on the dimensions of:

1. Supportive and shared leadership
2. Shared values and vision
3. Collective learning and application
4. Shared personal practice (Peer Review and Observation)
5. Supportive conditions.

Hord (2004) asserts in her book *Learning Together, Leading Together* that there is an absence of an "intensive and well-controlled pattern of research and measurement of Professional Learning Communities" (p. 4). Huffman & Hipp (2003) also suggest that researchers "examine and substantiate the thoroughness of Hord's five dimensional

model" (p. 19). From the research evidence it is difficult to form a concrete analysis of conclusions that correlate actions of a school staff to maturity of a PLC and how those actions were fomented. Many studies help to bolster the claim of a clear structure as being crucial to development of a PLC (Bolam, McMahon, Stoll, Thomas & Wallace, 2005). In schools where this clear structure was apparent it was found that these were coming as a result of schools that were handpicked for development, had recently undergone a crisis, or were schools that have been identified as being underachieving in relation to No Child Left Behind (NCLB) guidelines, thus having a mandated need to change (Hord, 2004). There is really scant data on the empirical link between staff and leader's actions within a building and subsequent maturity of a school community as a PLC under the definitions provided by Hord (1996). Hord used her survey, The School Professional Staff as a Learning Community Questionnaire (SPSaLCQ), to assess the school populations in her first study of PLC schools. This is a well used and reliable survey, as tested by numerous previous studies and a psychometric testing agency. This survey has been accurate in measuring the different parts of a PLC, as Hord and others describe them, and also in credibly determining the size of the community, as defined by Hord. These pieces are discussed much further in Chapter Three.

The 29 schools in this study were located in international schools in the country of Thailand and in the school professional development region known as the East Asia Regional Council of Overseas schools (EARCOS), although not all schools are current members of EARCOS. All schools were identified by membership in the International Schools Association of Thailand (ISAT), an organization to promote international school teacher communication and quality in Thailand.

Limitations and Delimitations

The following is a list of limitations and delimitations that apply to the proposed research:

(1) The proposed research used only one model of a Professional Learning Community, that of author and researcher Shirley Hord.

(2) The sampling method, convenience sampling, allowed for schools in Thailand to be used in the study because of importance of obtaining first hand interviews as follow-ups to surveys, but was inherently limited. For example, convenience sampling does not ensure that the sample was representative of the target population.

(3) The schools in the proposed research were drawn from the EARCOS region. These schools were exclusively private international schools. The populations of such schools ranged in size from 200 to 2400. The results of the proposed research should only apply to populations of similar makeup to that of the sample population.

(4) The study was limited by its reliance on teacher perception of maturity of PLCs. The survey instrument used could only assess teachers' perceptions based on their own behaviors and observation of others' behaviors.

Definition of Terms

The following defined terms are those especially important and relevant to the proposed research:

SEDL: Southwest Educational Developmental Labs. An educational research laboratory located in the southwest of the United States and studying issues in that

region. This is where Shirley Hord, who created the SPSaLCQ worked and sponsored her survey.

Definition of a PLC: According to Hord (2004): A community that continuously seeks and shares learning, and who act on that learning. Their aim is to collaboratively maximize their effectiveness as professionals for the ultimate benefit of student learning. PLC's have the following five attributes:

1. Supportive and shared leadership
2. Shared values and vision
3. Collective learning and its application
4. Shared personal practice (Peer Review and Observation)
5. Supportive conditions

Community: A group comprised of only the professional/certified teachers in a school and its administrators..

International school: A PreK – grade 12, or parts thereof, school with English-language, international style curriculum located outside the United States.

ISAT: International Schools Association of Thailand. An organization dedicated to improving practice and student learning results in member international schools.

EARCOS: East Asia Regional Council of Overseas Schools. The professional development agency for overseas schools in East Asia.

Learning Organization: An organization that continually learns from itself and its members.

Maturity of the faculty: The increasing number of actions of a staff functioning as a professional learning community, according to the dimensions used by Hord, as the community is established over time.

Phase: A description of the level of each school generally by age-grade. Elementary school is primarily ages 6-10, middle schools 11-14, and high school ages generally range from 15-18.

Chapter Two:

Review of the Literature

Introduction

The field of education is undergoing a vast re-culturing in the twenty-first century (Fullan, 2001; Huffman & Hipp, 2003). A study of the literature shows that this era is supported strongly by schools restructuring as Professional Learning Communities (PLCs). The increasingly rapid development towards the use of Professional Learning Communities reflects great changes in our world. As Feldman states, “This is a movement from the age of the individual to the era of community" (2000, p.xiii). Schools are keenly aware of these changes and the need to be proactive in preparing students to meet the needs of society. It is of no surprise that, in our modern world, new ways of approaching learning seem to be required (Bolam, McMahon, Stoll, Thomas & Wallace; 2005). The conceptualization of schools as learning communities is one construct that has proven successful in its early stages of development. Researcher Shirley Hord finds that Professional Learning Communities are fast becoming a staple of K-12 professional development programs (1997a). Data from these communities of learning (Astuto, Clark, Reed, McGree, Fernandez, 1993) show evidence that student achievement can increase when a school staff adjusts to act in the manner of a PLC (DuFour, 2007; Fullan, 1995; Hargreaves, 2003; Hord, 1997b). There is also data to show that school organizations change and mature as PLCs while implementing measures to work collaboratively (Hord, 2004). Peter Senge (2008), in his most recent book, a culmination of decades of study about systems thinking and organizational culture, says that this “collaboration is about

relationships" (p. 233), with collaboration being the key to a school's operations as a Professional Learning Community. Agreeing with this, Carolyn Boyce-Watson (2005) reflects, "A community is a relationship, not a place" (p.359), and this relationship, the Professional Learning Community, does provide a powerful and proven conceptual structure for transforming schools of all types (DuFour, 2007). Daniel Goleman's (2007) research and theory on Social Intelligence uses relationships as the grand design for root interactions and formative perceptions that drive actions in human beings. Martin-Kniep (2007) relates relationship to a learning context:

> Everyone involved in teaching and learning has had moments of deep understanding, insight, innovation, and inspiration. These moments, if unpacked and understood, have the potential to enrich teachers and other practitioners whose lives revolve around schools. Professional Learning Communities are the contexts that cultivate those moments and allow its members to string them together to tell powerful stories. (p. 151)

The use of a Professional Learning Community model would seem natural as a reform measure for education with the inherent collaborative structure and accompanying primary mission to learn continuously and constantly (Hord, 2004). The literature is full of examples of teachers and principals who speak of their Professional Learning Community and how it affects the collaboration values and goals. Yet within the literature, as many of these same authors agree, there is a need to more clearly validate, define, measure and provide empirical evidence for the existence of PLCs and show to what varying extents they are actually present in our schools.

This literature review will synthesize some of the concepts of the Professional Learning Community and provide a review of a range of theories so the reader can

discern the characteristics that drive the Professional Learning Community as a strategy to change school culture and teacher practice. This chapter has three sections and provides the foundations for this study in the context of the school as a Professional Learning Community. The first section identifies the definitions, terminology and authors who have utilized the concepts of Professional Learning Communities. This first section examines the precursors to the PLC movement in schools and also some seminal pieces that have informed practice. The second section reviews how PLCs are operationalized within schools by stating how they contribute to areas such as organization and development, distributed leadership, and increased student achievement. Included is an examination of 'maturity of a PLC' as described in the literature, and other factors that influence the effective development of PLCs in schools including: isolated teachers, adult learning theory, and the process of change. The third section provides an overview of the five dimensions of a Professional Learning Community (Hord, 1997). Those dimensions are:

1. Supportive and shared leadership
2. Shared values and vision
3. Collective learning and application of learning
4. Shared practice (Peer Review and Observation)
5. Supportive conditions

Organizational Learning

Proof of early identification of organizational learning can be found from thousands of years ago in Chinese rice growing societies, one example of the earliest collective societies, which grew and expanded on the combined logic and experience of farmers (Fry, 2004). A Japanese company, Kongo Gumi, which operated for over 1400 years dating back to the year 578 AD also employed many of the tenets of a modern collaborative learning community, which led to such longevity (Hutcheson, 2007). The community ethos of the mega-conglomerate Shell Corporation has been described by longtime head Arie Deguess as one that contributed to learning across the spectrum of the company and led to sustained learning and improvement for all (1997). It is apparent that, in working as a community, an organization can be one of the oldest in the world or one of the biggest, best, or most profitable. This notion is what has advanced the ideal of a learning community as advantageous for teacher development. A study by Shen (2007) found that to participate in an organizational learning opportunity, workers "would need to be willing participants" (p. 187).

Definition of a Professional Learning Community

"Developing Professional Learning Communities appears to hold considerable promise for capacity building in sustainable improvement" (Stoll et al., 2006, p. 221). Currently, scholars reveal varied and widespread definitions of a Professional Learning Community. Many contributors have influenced the organization of PLC models with applications in schools but, according to Garvin, "a clear definition has proved to be elusive over the years" (2000, p.9). In speaking of an elusive definition, Stoll et al.

explain, “the notion, therefore, draws attention to the potential that a range of people based inside and outside a school can mutually enhance each other’s …learning, as well as school development” (p. 223). Hord reveals lengthy processes, which, according to her findings show, “The characteristics of PLCs [has five themes or] dimensions:

1. Supportive and shared leadership

2. Shared values and vision

3. Collective learning and application of learning

4. Shared practice (Peer Review and Observation)

5 Supportive conditions.” (Hord, 2004b, p. 7).

A Professional Learning Community is defined by Hord as a school in which the professionals (administrators and teachers) continuously seek and share learning to increase their effectiveness for students, and act on what they learn (2004b). The following working definition was adopted by Bolam et al. (2005) “An effective Professional Learning Community has the capacity to promote and sustain the learning of all professionals in the school community with the collective purpose of enhancing pupil learning” (p.2). Kilpatrick’s study led to a definition of a Professional Learning Community as, “assumptions, behaviors, beliefs, and attitudes that facilitate continuous learning” (Kilpatrick et al., 2003, p. 5). Still another definition is “a learning community is a place where critical inquiry is practiced by collegial partners who share a common vision and engage in shared decision-making” (Hord, 1994, p. 44).

Martin-Kniep describes the use of a Professional Learning Community in schools and cites eleven different authors who explain the different structures of a PLC (2007). She defines a Professional Learning Community as "Forums in which participants embrace the privilege and responsibility of learning individually and collectively" (2007, p. 4). Hipp & Huffman describe the process as a "reculturing" of a school (2003).

The structures, fundamentals and site specific practices of a Professional Learning Community do not clearly function as one model to all and there is confusion about the concept of collaboration between school contexts and building cultures. Eaker, DuFour and DuFour (2002) explain this as understandable and consider that the "structural and cultural changes required to advance a traditional school on the continuum of becoming a PLC are inherently non-linear and complex" (p. 2). According to Eaker, DuFour & DuFour, the process of using a professional learning community is always accompanied by shared learning and practice among professionals in a school (2002).

Different terminology used in reference to professional learning communities

Reviewing the literature made it clear that there is no universal definition of a PLC and that "it may have shades of interpretation in different contexts" (Bolam et al., p. 131). These contexts can take many forms across differences in schools, countries, cultures, teacher and student populations, and almost any other demographic or physical factors. Although the term Professional Learning Community might solely conjure up visions of a team who learns together, the literature shows that this ideal has taken on different shapes and scenarios.

Theorists and practitioners all evolved different models based on what they observed and practiced in (their) organizations although, at times, their terminology for like-situations is different. In talking about the actions which might set a Professional Learning Community in motion in schools DuFour wrote, “It is not surprising that some educators would express uncertainty regarding terminology” (p. 2). The jargon of PLCs is not necessarily new to the field of education but can become complex and confusing to some. This condition was echoed by others who have examined documentation for Professional Learning Communities, including Hord, who in her study included the caveat, “to keep the language and terminology reasonably understandable to those who are not [knowledgeable]” (Hord, et al., 1999, p. 4). Unfortunately it is found that this is not always the case. For instance, the actions or traits of a PLC are referred to as dimensions by Hord (1996), descriptors (Fullan,1993b; Garvin, 2000), characteristics (DuFour, 2007; Louis and Kruse, 1995) and dispositions (Martin-Kniep, 2008). Some mutual characteristics of programs are revealed with different models, but like terms. One of these is the term “Shared”, used typically in all models for leadership and vision identifiers (Astuto et al., 1993; Eaker, DuFour, & DuFour, 2002; Hord, 1997). Another important characteristic is “what it means to function as a true Professional Learning Community to ensure the success of this timely and potent dynamic force for improving schools” (Eaker, Dufour, & DuFour, 2002, p. 2). These are the actual actions the staff perceives as crucial or inherent to a PLC and therefore focus on to fulfill the identity within the organization. Some terms are not as easily shared, which could be a potential roadblock to successful creation or implementation of a PLC in a school. Early on in her research through SEDL, Hord (1994) expressed a desire to interchange the terms

Professional Learning Community and community of inquiry (Hord, et al,1998) although these terms are not exchanged as freely in later publications. There are many structures of Professional Learning Communities which can be classified under the Senge, DuFour or Hord models. These models assume various names and approaches by different researchers and writers yet all have at least a few of the traits (characteristics, dimensions or descriptors etc.) as the SEDL model. They are all ways of operating with a community ethos in an organization. Differences derive from their sources and philosophy's, e.g. If they are singly focused on improving student performance, if they are important only to school administrators, or if they are centered on a particular country's educational system. Table 1 shows a comparison of eight concepts of school restructuring that resemble PLC models, all with the same goals and a structure that addresses collaborative development, yet many with different structures and terminology.

Table 1- C*omparisons between dimensions of a professional learning community*

Hord (1996)	**Bolam et al (2005)**	**DuFour & Eaker (1998)**	**Kouzes & Posner (1995)**	**Westheimer (1998)**	**Grossman Wineburg Woolworth (2001)**	**Louis, Kruse & Marks, (1996)**	**Fullan (*The Sequel*: *Characteristics of collaborative cultures* 1999)**
Collective learning and application	Shared values and vision	Shared mission, vision, and values	Inspiring a shared vision	Interdependence	Formal identity and norms of interaction	Shared norms and values	Fosters diversity while trust building
Supportive and shared leadership structure	Collective responsibility	Collective Learning & Application of learning	Modeling the way	Interaction/ Participation	Handling conflict	Deprivatistion of practice	Provokes anxiety and contains it
Shared values and vision	Reflective professional inquiry	Collaborative teams	Enabling others to act	Shared interest	Negotiating the essential tension	Reflective dialogue	Engages in knowledge creation
Supportive conditions- Structural arrangements and collegial relationships.	Collaboration, group, individual learning	Action orientation and experimentation	Challenging the process	Concern for individual and minority views	Creating communal responsibility for individual growth	Collaboration	Combines connectedness with openness
Shared personal practice		Continuous improvement	Encouraging the heart	Meaningful relationships		Focus on student learning	Fuses the spiritual, political and intellectual.

Other important factors that influence a Professional Learning Community (ie. private vs. public system, size of student population, geographic context, type of populations served, and organizational learning contexts etc.) are present in situations although not shown by the concepts in Table 1. It is not known if a particular model provides a greater effect in schools with varying demographics. These factors can make a difference in the situational context of a Professional Learning Community. In one study five characteristics identified a Professional Learning Community: shared values and vision, collective responsibility, reflective professional inquiry, and a combination of collaboration and group, as well as individual, learning (Bolam et al., p. 131). This English study demonstrates the already internationalized nature of the term Professional Learning Community. Literature on PLCs can now be found from New Zealand, China, Australia, the United Kingdom, Japan, Canada, the USA and may other countries which helps to show the extraordinarily varied international dynamic of the different models. They also reflect some differences from cultural or historical perspectives and provide for the caveat of cultural awareness that is important to examining different models. This is an area that merits further study as the cultural components of a group dynamic to collaboration can be a main function of effectiveness. Five key leadership concepts (the first three which are closely related to Hord and DuFour's models) are described by authors Kouzes and Posner. They are: Inspiring a shared vision, Modeling the way, Enabling others to act, Challenging the process, and Encouraging the heart (1995).

According to the National Association of Elementary School Principals (NAESP) six characteristics are necessary for a learning community to exist: Leadership, Vision,

Student learning, Adult learning, Data driven decisions, and Community engagement (2002).

Another definition for an organization that learns as a school is: those which pursue common purposes while agreeing to reflect and improve on those purposes for increased efficiency and effectiveness (Lashway, 1998). This is in direct correlation with the roots of the literature on organizational learning and is closely connected to Senge's (1990) positive feedback loops. Westheimer (1998) pointed to five common themes in theories of community: Interdependence, Interaction/participation, Shared interests, Concern for individual and minority views, and Meaningful relationships. Most of these are included in the various theories of Professional Learning Communities and represented heavily in Hord's design.

There are many other characteristics of a Professional Learning Community found through this review of the literature. Astuto et al.(1993) tell us that a Professional Learning Community is characterized by the collaborative work of educators to continuously seek, share, and act on their learning in order to improve their practice for the purpose of improved student outcomes. Wenger (2007) spoke of the passion and human connection that Hord alludes to when he said, "Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (p. 72). Meier (1992) also found similar characteristics of what Hord refers to as the learning community identity. Meier's writing envisions schools with conversant teachers who rely on each other for feedback and are open and accommodating to colleagues who desire to learn from their style or help them to develop their classroom practices (1992).

Tu & Corry (2002) found that a learning community is identified as a "common place where people learn through group activity to define problems affecting them, to decide upon a solution, and to act to achieve the solution. As [teachers in a learning community] progress, they gain new knowledge and skills" (p. 1). Discussing a similar process, Kilpatrick (2003) ventures, "Learning communities [...] not only facilitate the sharing of knowledge, but have the potential to create new knowledge that can be used for the benefit of the community as a whole" (p. 3), and "They are unique because they explicitly use learning as a way of promoting social cohesion and it is apparent that learning communities can be a powerful means of creating and sharing new knowledge" (p. 1).

The plan for school reform includes improved students' performance through collaborative leadership and Professional Learning Communities. This includes the vision, direction and focus of the principal, staff collaboration, and redefining the teacher's roles as a definition for their Professional Learning Community (Principals, 2004). While Taylor (2002) discusses the climate of openness that promotes sharing of knowledge, dialogue, inquiry and risk taking and gives constructive feedback to people at all levels (2002). Giselle Martin-Kniep (2008) refers to, "Dispositions of

a. Commitment to understanding
b. Intellectual perseverance
c. Courage and initiative
d. Commitment to reflection
e. Commitment to expertise and
f. Collegiality" (p. 29).

The many contexts, schools and situations these models represent allow for multiple meanings and help to clarify through operationalization, the definition of a PLC. When dimensions are present in different situations and organizations the many vagaries of place, personnel, leadership and training can bring about different outcomes.

Embedding organizational and collaborative learning

As the concept of the learning organization has transferred from the corporate world to the field of education it is important to notice that, without experience in both these areas, it is sometimes hard for people to recognize how polar opposite the two paradigms of business and education stand. Although schools innovate in the same way as the corporate world, they are more resistant to change and that change occurs at a much slower pace (Evans, 2000). Boleman and Deal (2003) feel that to change an organization the leaders have to understand the barriers to change. These barriers are tough to overcome in the area of education and the resultant dynamics of working within such a large, varied, and complex field. The movement of Learning Organizations (Senge, 1990) did start the thrust towards school-based "Communities of learning" (Astuto et al., 1993, p. 14). The literature reveals that there are many differences in these two theories that do not facilitate a simple transposition of their successful operational theories, structures, words or definitions. Astuto et al's school organizations in many ways only vaguely resemble some of the mega-conglomerates about which Senge wrote.

This theory of the learning community emerged from the push to re-culture the business world into learning organizations as viewed by Peter Senge's bestseller on the topic *The Fifth Discipline* (1990). This new organizational model breaks ranks with the

traditional, hierarchical bureaucracy and was necessary for the fast and ever-changing corporate world. Later Senge publications, including *Schools That Learn* (2000) and writings on the issue of systems thinking and organizational learning, gave rise to the credo of a learning organization as envisioned by Senge. They culminated in a place where employees "engaged as teams, developing a shared vision to guide their work, operating collaboratively to produce a better product, and evaluating their output" (2000, p. 1).

Senge's five mental models included his 'fifth discipline' of Systems Thinking, a way to view one's self and ones actions as a smaller part of the complete focus of the system or needs of the greater organization (Senge, 1990). This would only be possible by 'the self' becoming an organic part of the company, a member of the community that learned and grew according to organizational dynamic and not individual benefit (Senge, 1990). Senge's focus on community as the way to drive business organizations forward spurred a popular notion of interest that spilled over into the field of education. At a time when business financial practices and organizational charts were mimicked in schools, some theorists began to feel the philosophy was a natural match for the long presumed community ethos of the school (DuFour & Burnette, 2002; Fullan, 1995; Hord, 1997b; Sergiovanni, 1996). This was a shift of a fundamental nature. Almost twenty years later the literature illustrates a great deal of study showing the implementation of this style but has yet to reveal consistently a powerful connection between the learning community and how to best *create* it. Existing studies in schools also, thus far, fail to show what was presumed to be achieved by the same operational processes as when applied to corporations.

Senge's "communities of practice" (1990, p. 5) became an action phrase which led practitioners to a new configuration for schools. "As Senge's paradigm was explored by educators and shared in educational journals, the label became learning communities" (Hord, 2004b, p.6). "[The learning organization is] where people are continually learning how to learn together" (Senge, 1990, p.3). Most professional learning community researchers cite Senge, and his seminal writings, as influential.

Due to the disconnect between the corporate and education world, Senge's theory needed another medium to make the transition to school-based organizational learning. At the right time in the mid-1990's this medium came about with the work of Richard DuFour. His theory gave directions for teachers and leaders, as he wrote, "[when you] create a professional learning community, focus on learning rather than teaching, work collaboratively, and hold yourself accountable for results" (DuFour, 2004, p. 6). DuFour, Eaker & DuFour are researchers who have spent a large amount of effort and study on the concept of the professional learning community. Their model worked to get schools away from the factory model of the industrial age. A professional, according to them "is someone who expects to remain current as the knowledge base in their specialized field evolves and who keeps up with advanced training to meet this evolution so they remain an expert" (p. 6). When a group of like-minded professionals work together towards capacity building for increasing student learning then the shift towards an organizational wide PLC occurs. "A school becomes a professional learning community only when these educators within it align their practices with PLC concepts" (DuFour, 2004, p.14). DuFour's definition also comes with big ideas and core principles, as he calls them, to give support to the philosophical, and therefore more abstract, parts of the Professional

Learning Community in schools. In establishing his definition, DuFour (2004) listed his 'big ideas' that represent the "core principals of a Professional Learning Community:

1. Ensuring that students learn
2. A culture of collaboration
3. A focus on results" (p. 6).

DuFour's definitions come from his work and application to schools. "The culture of a school- the assumptions, habits, expectations, and beliefs of the school's staff- exists as clearly as the school building itself" (DuFour & Burnette, 2002, p. 27). This construction of meaning in the school helps to internalize the same physical features that are in place to create a PLC, for instance, by coordinating schedules or placing classrooms closer together.

There are few studies found that attempt to measure the extent by which schools operate as Professional Learning Communities by looking at the practices of staff and the perceptions of staff with regard to actions that define a Professional Learning Community (Hord, 2007). There are even fewer, if any, that assess how a staff 'changed' into a PLC or the actions that generated a start towards this form of teacher collaboration. Many items from so many different authors puzzled readers and practitioners.

DuFour's contributions continue to change and meld the literature in the area of PLCs particularly in the clarification of what it means to be a PLC and the connection with philosophy or theory-to-teacher actions.

One of the most widely regarded designs for a Professional Learning Community model comes from Shirley Hord, affiliated with the Southwestern Educational Developmental Labs (SEDL). Hord, while working to improve low performing schools in the southern United States, noticed some trends that emerged as these schools focused on becoming more successful. Hord's work before this included a vast array of studies and writings on improving schools and during this research period she noticed a similarity between schools that were able to 'make a difference'(1997b). What she began to see in practice from effective schools was a "nurturing culture that encouraged a high level of staff collaboration in the effort to understand successful change processes" (p. v).

Hord's early definition of a Professional Learning Community is one of a culture of continuous collective inquiry and ongoing learning in which teachers begin to share in the leadership of the school (1997b). Hord is also considered a seminal influence for the concept in schools. Professor Andy Hargreaves, a noted educational researcher, calls Hord the "Archimedean source point of the triple headed concept, *Professional Learning Community* (Hord & Sommers, 2008, p.x). One phrases that Hord used is Astuto et al's "professional community of learners" (1993) which Hord built upon to design a PLC-like model called "Communities of Continuous Inquiry and Improvement" (Hord, 1997a, p.1). This design helped scholars increase the belief that people as social beings do act in concert as communities and school societies are no exceptions. Astuto et al. (1993) discussed the different types of communities important to schools and Hord melded this description to include four types of communities associated with how humans learn and work together in schools. These four were: the community outside the school gates; the community of those same outsiders when they venture within the school building (such

as a visit by the firemen to a kindergarten class); the entire internal community of a school including parents, staff, students and stakeholders; and the community of learners that work together as a faculty to grow and reflect on better practice (Hord, 1996). Hord's definition of a Professional Learning Community includes only this last definition, the professional staff in each school. This does not include external community members or non-instructional staff such as secretarial or janitorial workers in the school. Some consider it important to a PLC to include students (Martin-Kniep, 2008).

Hord includes only professional staff in her theory because they are both focused on student learning and also engaged in a professional practice that can be collaborative, systemic, and resultant from individual private practices, observed and reflected on by each other (1994). Hord's work is best known for focusing on these skills of collaborative learning and leading, hence her book *Learning Together, Leading Together* (2003), which provided much of the impetus for schools making the leap to inculcate deeper practices into their schools. Hord informed broadly about a PLC definition, "other schools flourish[ed] through democratic leadership and ongoing professional development, and they were called 'Professional Learning Communities'" (2004a, p. 1). These being the only criteria many schools would use to function as PLCs.

Hord's 2002-2004 studies confirm that most of the Professional Learning Community data is still new and there was still a need to "understand how this construct functioned in schools" (2004a, p. 3). Hord also states, "None of the literature provides an explicit step-by-step set of directions or procedures for creating Professional Learning Communities" (1997, p. 43). Although she relates a clear definition in her research and

theory one can clearly see that there is still keen analysis and study to be done to define the creation of Professional Learning Communities.

The foundation of the Hord model, and others is built around a collaborative workspace that provides multiple and continuous forums for teachers to gather, reflect, and exchange ideas and feedback (Wald & Castleburry, 2000).

Influences on Professional Learning Communities in Schools

Operationalization of the PLC Concept in Schools.

How do PLCs operate and appear in concept when they are measured or introduced in a school? Peterson's (1996) research showed that schools can be effective learning communities. Hargreaves (2003) felt that as schools work toward becoming real knowledge communities for all students, the only way for them to accomplish this is by making teaching into a real knowledge profession. The benefit for personnel comes for those who desire to change. Hord (1998) found this outcome in a study about "a staff who collectively searched for ways to become more effective teachers, who valued changing their own knowledge base and skills, and who sought change to accomplish improvement" (p.39). Hord et al's (1998), finding revealed that "the literature is filled with exhortations about the power and desirability of teachers working collaboratively" (p. 2). Yet exhortations do not provide enough data to convince decision makers to move firmly forward in this direction. Professional Learning Communities do seem to provide many of the innovative and evolving best practices for results-oriented change in schools as shown by the literature. Future questions as one delves into the current literature seem to focus on how to provide more hard data on how school staffs sustain themselves as

Professional Learning Communities. Eaker, DuFour & DuFour (1998) prescribe structures of Professional Learning Communities to make up for an absence of sustained professional development efforts that led to real reform. Huffman & Hipp (2003) make it clear that these components of a Professional Learning Community are important for increasing student achievement and building outcomes. Yet, "Is this true for all schools?" is a question that seems provoked by a study of the literature. Also, encouraging educators to take the necessary action to learn how to build on their strengths has been problematic (Hord, 1997a). "Many schools are integrating useful strategies, but little has been documented about their success" (Huffman & Hipp, 2003, p. xv).

Hord's model contains only five dimensions (characteristics) of a PLC that collectively form the model to addresses the concept supporting the theory. The Hord model outlines characteristics of a PLC, such that if they appear, then there is evidence of a PLC. The professional learning component of this is at times regarded differently by others in the field. Speck (1996) more clearly saw a need to include other dynamics as essential to the process as much as Hord's context. Without these he felt any context might be unsuccessful when working with adult learners. Speck's research includes some of the same important components of the work of Cross (1981) in adult learning theory such as control over the learning, non-judgmental supervision, small-group reflection and structured learning experiences. These items are also covered later in the chapter.

To explore the conceptualization of Professional Learning Communities across various school contexts, a clearer description of how Professional Learning Communities operate is needed. Senge's (1990) "mental mode of systems thinking" (p. 331) provides a view such as this. Teachers in isolation not only come to understand more positive ways

in which they is affected by the organization but also similarly shows how their actions ripple through to affect others as well (Senge, 1990). Anecdotally, the actions of teacher staff developers harkens back to many of the same ways of thinking and acting. Change comes from within one's own collaborative group, or one's peers, whose collegial partnerships make up a significant amount of the time that interaction in schools occurs. As one administrator wrote:

> I was not there to teach a group of struggling children. I was there to help Alison change her instruction. Several weeks later she continued the instructional change on her own and sustained her learning by talking with [us], delving into professional texts, and reflecting on her successes and failures just as we did together. (Akhaven, 2005, p.21)

But what is it that makes a Professional Learning Community so effective for teacher development and growth? This is a key element and question of study as practitioners seek to recognize why schools are effective and if the PLC model is a part of their formula for effectiveness of student achievement.

In emphasizing this change for the most crucial participants in the instructional process, the teachers, Elmore (2000) found that participation and collaboration in work increases dedication and contentment among teachers. In schools it is the work of teachers to begin relationship building and collaboration for the good of student achievement although they are supported by principals and parents. The essence of focusing on teachers as change agents (Fullan, 1993) in the Professional Learning Community process is crucial because, "Landscapes are shaped not only by external forces but by the very organisms that inhabit them" (Fulmer, 2000, p. 49). Although teachers are not the only organisms in the construct, their professional development is

what the structure of a PLC most consistently seeks to address. It seems clear that the structure of the PLC is only the means to an end. The actual purpose is the increase in student achievement. The conceptual basis of a PLC only provides a platform to increase instructional efficiency and efficacy. There is consistent agreement from writers in the field that those on the inside, who are leading the real reform efforts to improve student achievement, are in schools with measurable characteristics for learning community practice (Akhaven, 2005; Darling-Hammond, 1995; DuFour, 2007; Fullan, 1999; Garvin, 2000; Schmoker, 2007; Sparks, 2001). These people in the trenches and on the inside are teachers. Schmoker put it simply, "teachers learn best from other teachers" (p. 55). Protheroe's (2004) research has shown that "the benefits of Professional Learning Communities fall into three major categories: support for school improvement efforts, support for teacher development, and impact on student learning" (p. 40). These important goals, all cultivated by a PLC structure, are why many schools work towards this concept. In 2005 a school study on PLCs came to the conclusion that **"**Pupil learning was the foremost concern of people working in PLCs and the more developed a PLC appeared to be, the more positive was the association with two key measures of effectiveness - pupil achievement and professional learning" (Bolam et al., p. 146). Many, if not all, school leaders do figure out what works in their school, and are able to support it when it is effective even if it was a practice not in the yearly school goals or one that originated from the principal's office. Likewise, comparing schools to businesses, Fulmer (2000) claims that "management should make sure that the organization's people are constantly studying the landscape to try to spot new developments that could significantly alter it" (p. 120). Akhavan's (2005) found similar

results with his study and takes it one step further, clarifying that the practice can lead to a climate of interaction. This is where teachers look for more effective practice and scale it up from singular spots to grade levels and then schools, identifying a place where you can make a difference and then finding the answer for how to do it.

Isolated Teachers

The inherent cultures and physical structural features of modern schools are not set up to be a learning organization (Elmore, 2000; Fullan 1995). This speaks of the culture of the professionally disengaged teacher which keeps collaboration at bay while teachers stay independent behind their closed doors. The solitary confinement to the classroom makes for teachers as learners only through individualized reflection and not feedback from other profession-dwellers yet it does provides a comfort zone where the non-collaborating teacher can still refine practice to suit student needs (Elmore, 2000). It is community that propels change to occur in an established model of professional learning (Hord & Sommers, 2007). Lortie's study (1975) refers to the ideal of a teacher in a classroom full of students with the door shut to observers or other teachers. This is more for selfish autonomous ends and neither for the purpose of improving the whole organization, nor one of looking to improve the practices of others through their expertise. A practitioner, Akhaven (2005) relays from experience, "All of us who have taught for any length of time understand how uncomfortable yet exhilarating a collaborative culture can be" (p.21). Studies by Sparks (1989) found that effective schools operate by norms of collegiality and experimentation. This seems to be a sine qua non of effective schools.

Learning Theories

In the field of learning theory the concept of a Professional Learning Community is grounded in the constructivist theory of Jerome Bruner (1996) through the "education of one another… as mutual communities of learners" (p. 81). The later versions of Bruner's theory help to widen his view of community areas of education with a focus on social learning and communities that construct learning together. This fits quite well with Lambert's findings of constructivist leadership as associated with building communities and how their purpose begins to be directed towards school wide goals not individual goals (2003).

This wide lens of social learning is supposed to be what schools are all about but behind the doors, and inside the organizational structures, we find scenarios closer to Frederick Winslow Taylor's 1911 theory that only one system, run by a small group of people, can best arrange the needs of an organization (DuFour & Eaker, 1998). Focusing on each individual and each individual part of the assembly line, this approach had great merit for the mechanistic factory. Deeper studies of organizations, including lately in schools, have taken the focus off isolated improvements and led to a sustained movement towards communities of learning.

The beginnings of the twenty-first century heralds a shift in emphasis from learning with the focus on individuals to learning as a part of a community (Kilpatrick, Barrett, & Jones, 2003). It has become obvious that this approach is much better suited for the knowledge society and organic organizations of today (Fullan, 2005). The theory and model of Professional Learning Communities supply numerous tangential benefits in

the form of increased teacher retention rates, in-place mentoring programs, and more satisfied teachers- important gains for all schools but particularly important to international schools (Grossman, Wineburg, & Woolworth, 2001). These outcomes also help to change the barriers that keep teachers from working together (Joyce & Calhoun, 1996). Throughout history in schools, teacher isolation, lack of time, and the complexity of teaching have presented significant barriers to sustained organizational learning (Lashway, 1997; Lortie, 1975). In turn, these factors all also contribute to teacher isolation.

The process of changing schools

In 1983 the United States educational system was thrown into crisis by the report *A Nation at Risk,* which documented the failings of the nation's schools. In speaking of the school response to this historical flashpoint, Huffman & Hipp (2003) said, "There were few new systemic initiatives or creative advances" (p. xvi). This historical call-to-action report of US education clearly identified poor training of teachers as contributing to the crisis in education. Embedded Professional Learning Community collaboration helps to increase instructional skills and improve strategies for increased student achievement throughout the school community (Sergiovanni, 1996). Thusly, professional communities "enable teachers to learn new practices that engage today's students in learning consistent with the nation's education goals of excellence for all" (McLaughlin & Talbert, 2003, p. 9).

Similarly, in the early twenty-first century, the Federal No Child Left Behind (NCLB) legislation has spurred new reform measures to restructure how schools operate,

as a response to new forms of failing schools. After the early years of NCLB, the National Association of Elementary School Principals stated they believe in the necessity of a principal's ability to implement a learning community ethos and create an excellent school (2002). They came to see that "Professional Learning Communities can play a major role in turning troubled schools around" (Hord, 2004b, p.5). With PLCs, the changes brought about by NCLB might be more profound and, at the very least, more sustainable and accountable for advances in learning. "It is becoming clear that schools can be re-created, made vital, and sustainably renewed not by fiat or command, and not by regulation, but by taking a learning orientation" (Senge et al., 2000, p. 5).

A review by Stoll et al. (2006) found many factors that assist or obstruct the beginnings or sustainability of a Professional learning Community. These included:

Individuals' orientation to change
Group dynamics
School contextual issues
School size
Phase (Elementary, middle or high school)
Location
Particular mix of pupils
History
External influences
Local community
Broader community
Policy decisions
Professional learning infrastructure

This list shows the large number of factors that can affect a Professional Learning Community. These criteria are exclusive of student learning issues, the reasons why PLCs are important and needed to increase teacher effectiveness. It is apparent from the

literature that more detailed studies are needed of schools as Professional Learning Communities. In almost all cases, sustained empirical evidence is lacking. The literature shows the beginnings of a sustained effort to re-culture schools towards a PLC structure. Teachers who are able to recognize the successful site-specific instructional techniques of their colleagues, are the ones who are implementing the basics of a beginning PLC. (DuFour, Eaker, & DuFour, 2005). Continued research will lead to more specific inquiries on the actual incubation point of a PLC in a school system, incorporating measures and actions from not only administration and teachers but at times also from stakeholders and financing groups along with senior leadership. "Educators who understand that their schools are complex interdependent social systems can move their organizations forward," wrote Thorton et al. (2004, p. 222).

Adult Learning Theory

A study about adult learning, which is the operational focus of a PLC, would be incomplete without mention of the influence of theory involved in the phenomenon. Adults (teaching professionals and administrators) working together in a school does not look the same as students involved in learning. Adult learning, the basis for most Professional Learning Communities, must include attention to adult needs and wants (Lieb, 1991). Developing meaning from experience is a key component of adult learning. A self-interpretive view of one's actions will helps combine the need for learning with the needs of the learner and this experience is transformative learning, which is what leads to changing habits and actions (Mezirow, 1991).

Correspondingly, it has become clear to professional development organizers that training must be attuned to the needs of learners and those learners need different processes from K-12 students (Cross, 1981). Adult learners need a much different dynamic in their educative processes than do their students. Freire's work is also important to the theme of adult education. He emphasizes education as an act of both culture and freedom (1998).

A study by Saint (1982) found that adult learning must be job-embedded, developmental, and lead to discovery in order to be successful (1982). The work of Knowles, Holton & Swanson (2005) led to principals of adult education that are exemplified by the type of learning in Professional Learning Communities. Their study of the experience of adults compares with Riley & Roach and the importance adult past experiences have on new learning. The shared contexts of this for teachers in schools with very similar experiences, strengthens this principal. Applied learning and practice is also a hallmark of the same study and Knowles et al. emphasize the importance of being able to immediately use learned skills in the work place as a means of maximizing the learning (2005).

Drago-Severson and Pinto's (2006) research found that there are "other precious school resources [that] influence adult learning options, specifically human resources (i.e. human capital), or the adults in a school and the ways they work together" (p. 130). A major influential factor was the financial resources, which do impact the amount and availability of time and talent for professional learning in schools. Further, in response to this finding Drago-Severson and Pinto establish that making use of collaborative learning among teachers can reduce the need for attendance at expensive professional conferences

and mitigate excessive hiring costs, by retaining teachers who want to work in a supportive community. Importantly, however, "the qualitative results of these collaborative approaches are context-driven and situated in individual school cultures" (p. 132). This situational or in-context parameter continues to present itself across the spectrum of creating a PLC structure in schools and could be a large factor in its measurement and implementation because of each unique context.

Steven Lieb (1991) listed many factors of adult motivation important to learning, including social relationships, external expectations, social welfare, personal advancement and cognitive interest. People learn better when they are motivated to learn by intrinsic needs and desires, not external wants. The Cross Chain-of-Response Model, a diagram which helps us to understand participation of adults in educational activities, was the conceptual framework for a study that focused on the differences in adult education (Cross, 1981) and has led to many of the changes that are now apparent in the delivery of adult services for education, including most of those addressed through collaborative learning efforts, such as the creation of Professional Learning Communities in schools.

Riley & Roach (2006) found that adults use experience as a resource so the starting point for the creation of a PLC would see participating staff in many different locations along the spectrum of experience, not just in teachers' years but also such areas as covered by Hord's five dimensions. In addition, their desire to learn must be as strong as their need to learn. It would be hard to allow them to begin the process of incorporating the five dimensions of a PLC into their practice without providing them with a complete look at the ends so that they can more clearly assess where their own experience and needs might fit. "Allowing the teachers to determine what direction their

professional development will take will greatly increase the success of the teachers in their journey to be lifelong learners" (Trotter, 2006, p. 10). Adults also need to be self-directed in their learning. At this point (in a PLC) they would be near Trotter's ideal of an intuitive learner, another characteristic of adults as learners. At that point they would be able to interpret what forms of learning they needed to fit in to the proper course of action for membership in the PLC. These views of the nature of learners in a PLC might create some difficulties in creating a vision that brings a new look or process to the organization (Trotter, 2006). Trotter's studies found, "For the most effective learning to occur, participation in learning should be voluntary" (p. 11). Lindeman's study, later made into a seminal text on adult learning, found that

> small groups of aspiring adults who desire to keep their minds fresh and vigorous; who begin to learn by confronting pertinent situations; who dig down into the reservoirs of their experience before resorting to texts and secondary facts; who are led in the discussion by teachers who are also searchers after wisdom and not oracles: this constitutes the setting for adult education, the modern quest for life's meaning. (Lindeman, as cited in Trotter, p. 11)

According to Riley and Roach (1996) "at the core of the constructivist approach to staff development is recognition that teachers grow from a relationship with a trusted confidant" (p. 364).

For adult learners, their desire to learn must be as they experience the need to learn so, again from their experiences, it would be hard to allow them to begin the process of the five dimensions of a PLC without providing for them a complete look at

the ends so that they can more clearly assess where their own experience and needs might fit in.

Another characteristic of adults as learners would be for them to be able to self-interpret what forms of learning they needed to fit into the proper course of action for membership in the PLC, and indeed, begin to change and move in this direction. This course of action from adult learning, could be the causative effect for the incubation of a PLC and its subsequent maturity, as those same adult learners reflect, change and grow. Trotter explains how these views of the nature of learners in a PLC might create some difficulties in creating a vision that brings a new look or process to the organization (2006). Fullan (1999) also spoke to the difficulties of learning in a group, "Development in social settings is a complex act" (p. 68). Fullan made the argument that complexity theory provides the means to address adult knowledge learning. Without complexity theory, crafting a PLC in a school might lead to non-sustainable outcomes.

Maturity as an Indicator of a PLC

A key finding throughout the literature is the notion of an organization, staff, or PLC progressing through levels of development including 'maturity'. In a study by Bolam, et al. (2005) it was found that "mature PLC respondents reported a higher, and starter PLCs a lower, percentage of staff involvement in key PLC activities" (p. iv), thereby showing a strong tendency towards a changing nature of a PLC as the model is built into a school. Table 2 shows the classifications of a PLC along with the levels of maturity during a study of multiple schools operating or attempting to re-configure as a Professional Learning Community.

Table 2

Percentage of schools reporting different stages of PLC development

Stage	Primary %	Secondary %
Mature/established	25	15
Developer	57	67
Starter	14	15
Working to re-establish PLC	2	1
No Response	2	1

The results of this study allow us to see the ability of a PLC structure to mature as it takes form within an organization. Ninety-six percent of respondent schools reported that they could classify themselves somewhere along the developmental index, demonstrating their belief in the organic functioning of a PLC organization (Bolam et al., 2005). Analyzed across primary and secondary schools the study results indicate that levels of maturity towards development of a PLC are found to be mainly in the "Developer" to "Mature" categories with an average of twenty percent of schools showing "Mature" and an average of sixty-two percent rated as "Developer." These results show significant configurations of school staffs acting as Professional Learning Communities at different levels of maturity. Themes of another study by Huffman (2003) were identified, using the Hord model, which evolved from initiation to implementation and serve as the critical attributes of each dimension. Huffman used the stages initiation,

implementation, and institutionalization to classify the maturity of the PLC platform within schools. Multiple studies are found in the literature that supports the notion of a PLC maturing during implementation and operation. This is what Garvin (2000) meant when he wrote that "Learning is...releasing human potential" (p. 5). Learning becomes a natural part of being a community, even an extension of the evolutionary process. Martin Kniep (2008) said, "Participants in Professional Learning Communities evolve over time" (p. 133). Thus, we find that maturity, as a component of evolution, does exist in a frame that would allow a Professional Learning Community to mature, even as a component of collective individual maturity or 'learning.' A series of studies by Bolam et al. (2005) found, "a loose positive association between stage of development and the expression of… characteristics of PLCs (p. v). As a school moves beyond the initial stages of recognition, defined roles of members begin to emerge. (Huffman & Hipp 2003). This is another example of the maturity aspect. This growth envisions the organization as an organic entity. Leading and seeing it as a living being demonstrates the way in which it creates its own processes (DeGeus, 1997).

Diagram 1.4 shows a view of maturity of actions and people in relation to change over time.

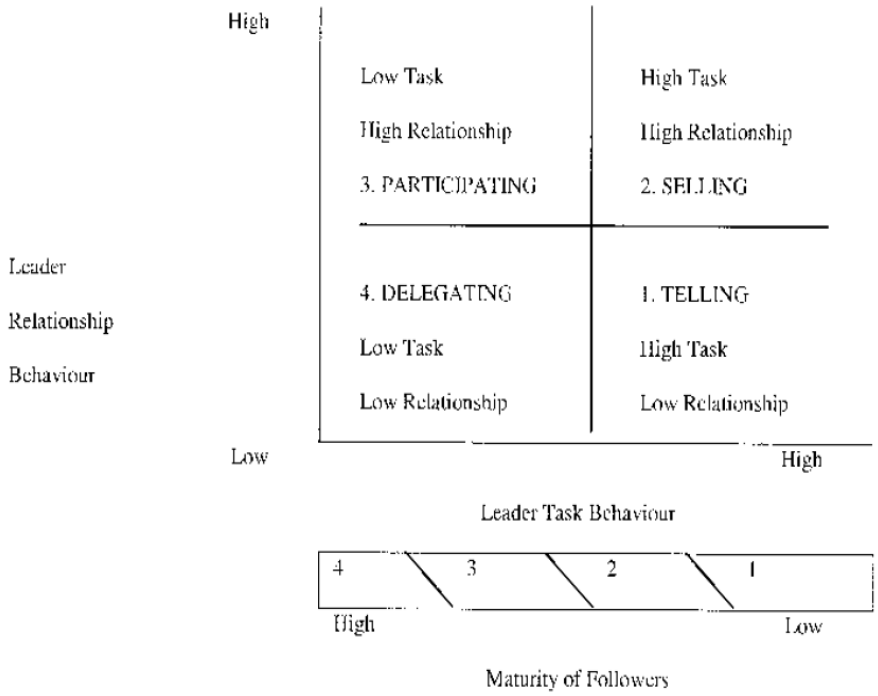


Diagram 1:4 Mulford and Silins

In this schema Mulford and Silins (2003) demonstrate that the low and high relationships, those indicators of community, can develop and change with the maturity of followers in an organization.

Schein (1992) discussed organizations that are "midlife, mature, and declining" (p.313). "These options are limited to the degree to which the culture is, at that stage, a central element of the organization's identity" (p. 313). As Hord identified the changing dimensions of her model there is a focus on the changing nature of a school from non-PLC to PLC. As Shein (1992) said, "After an organization is established it must maintain itself through some kind of continued growth and renewal process" (p.313-314). Again,

here focusing on the change incorporated into the process of a PLC where the existing values and culture play a big part in how the organization is actually able to change (Shein, 1992). As Collins explains in Good to Great, "the biggest deterrent to a *good* organization becoming a *great* organization is that it is good" (2001). For many good is 'good enough' or as far as they care to go, "If it ain't broke, don't fix it" rings true for many schools and is the mantra of long serving teachers who make up the culture and structure of the powerful informal organization. Organizations store learning in their cultures (Kline & Saunders, 1993). One of the reasons change is so difficult is because sometimes stored learning needs to be unlearned before new ways can be processes or learned. The collective capacity of schools to learn, and improve upon this learning, has been based on their collective and stored identity and culture ensuing from unique personnel situations and circumstances over long periods of time. Lieberman (2000) refers to educational collaboratives that are "loose, borderless and flexible, suited to rapid change, organized around the interests and needs of their participants, and building agendas sensitive to their individual and collective development as educators" (p. 221). This might more closely resemble what Hord is trying to ultimately create. To have this cooperative or learning community is to personify the community with the task of learning. De Geus (1997) has discussed this phenomenon within the sphere of the Shell company reflecting on the merits of "seeing a company as a living being means that…it evolves naturally…it is capable of regenerating itself…it can learn as an entity…and it leads to seeing its members as human work community" (p.62). A similar view of a company as a living being is reflected by Lieberman (2000), who spoke of the flexibility of PLC functions, "They can change quickly and invent new structures and activities that

are responsive to their members" (p. 222). Such is a difference between the mechanistic world Dufour (1997) seeks to leave and the organic new world of the PLC.

Fulmer (2000) agreed with this evolution, akin to the learning community, saying, "Some large organizations try to create an internal environment that encourages successful evolution" (p.42). This evolution is found elsewhere and is used in similar studies to validate that maturity can increase extent as Professional Learning Communities change over time and can do it in ways that may or may not be planned or visible.

The Relationship Between Traits of a PLC and PLC Measurements or Maturity

A review of the literature finds much written about the traits, characteristics anddescriptors of a PLC. These correspond in many cases to characteristics of effective teachers or effective schools. What is not as clear-cut from the literature is the direct relationship between the traits and the depth of implementation or maturity of a Professional Learning Community.

Fullan (1999) discussed how PLCs allow teachers to take collective responsibility for student learning. This aspect is certainly missing from the literature about schools today even if only examined by a cursory view of school schedules that separate teachers into individual rooms with groups of students. In the era of independence-minded teachers, there is a distinct declaration of responsibility for grade level or content specific learning. The collective part has not yet fully come into practice. It would be hard for a Calculus teacher to argue that she/he is also partially responsible for a student's shortcoming on a Latin exam. In "balkanized cultures […] teachers either leave each

other alone or are at loggerheads – disagreeing without any inclination…" (Fullan, 1999, p. 33). Fullan talked about the 'black box' of collaborative practice, a term more familiarly connected in education to curricular practice. The black box being the great unknown or the how and why some students learn and others do not, even when effective practices are introduced to all. Fullan connected the term to collaborative practice, identifying with practices that are "superficial" (p. 33), and said the "black box [of collaboration] turns out to contain attractive ingredients, but not much help about how to use them" (p. 33).

Collaboration as a means and end to effectiveness has been a frequent topic of educational musings over the past decades. Alfie Kohn (1992) is an icon of the cooperative nature, extolling the virtues of working together as a means to achieve more than can be achieved through competition. The depth of his research into cooperation in organization and task attainment has led to studies showing the positive effects of cooperation among organizational groups.

Daniel Goleman (2007) has written recently about human's ability to connect at a much deeper emotional level through social relationships. His findings reveal brain patterns and connections that are stimulated in unique ways through social interactions and relationships that actually redefine the means and methods through which humans interrelate with each other. This "emphatic resonance and collective contagion" (p. 42) leads to more satisfying relationships and more productive means with which to achieve collective goals. Other authors have focused on the philosophical traits of organizations such as the values. A question arises if either of these are the real building blocks of PLCs and how can this be better confirmed, if true?

Fulmer (2000) interpreted "key values of this [PLC] type of organization as: External focus, diversity, responsible risk taking, openness and trust" (pp.159-171). It is this sense of trust and spirit of cooperation, so prominent in all the PLC literature, which helps to drive the model in so many different school contexts and situations. It is important to look for places to improve and build upon through genuine and open collaboration. This is the virtuous and leadership oriented aspect of a PLC. Openness and a willingness to work together can propel a change to the culture and climate of a school. When true collegial relationships are built a PLC begins to transform the school (Marzano, 2003). All of these factors have some capacity to change a school ethos and informal structure. In this case it is not Goleman's emotional intelligence nor the values but trust and relationships. Again, questions arise about how these factors might configure the structure that leads to a PLC. Can these traits be confirmed as the important link that aligns a 'typical' staff with the measures that lead to the eventual start and growth as a PLC?

Although feedback is important to the PLC model in this practice, it involves feedback from colleagues and teachers. There is much written about the feel good nature of this type of feedback, but teachers, historically and presently, give more honor and credence to a administrator's feedback that anything else (Eaker, DuFour& DuFour, 2002). Another problem teacher's face with PLCs is that leaders do not automatically know what is right in implementation or action as they seek to improve. There may be many teachers who have a wealth more experience in the classroom than the average administrator and their leadership could provoke problems if the administrators are not PLC savvy. Hord's study of Northland School gave evidence of how "the dimensions of

professional learning communities can assist school already engaged in improvement efforts."(1994). This study provides data on sustaining PLCs but not necessarily creating them, and much of Hord's work, widely used in the field, is based on these types of schools. Her design has proven itself in underperforming schools or those schools with external crisis or conflict (1994).

A Professional Learning Community is characterized by the collaborative work of educators who seek, share, and act on their learning continuously in order to improve their practice for the purpose of improved student outcomes (Astuto et al., 1993). Hord (1997b) claimed this was a "nurturing culture that encouraged a high level of staff collaboration in the effort to understand successful change processes" (p. v), with the emphasis on nurturing for leaders. As she looked at the effects of this model she found "The results of [this] study revealed a new model of school culture and organization that actively supported educational change and improvement" (p. v). These actions exposed "organizations that value change as a means of realizing increased effectiveness" (p.vi).

Hord's Five Dimensions

The factors that Hord (1994) used in her model that led to this increased effectiveness were:

1. Supportive and shared leadership
2. Shared values and vision
3. Collective learning and application of learning
4. Shared practice (Peer Review and Observation)

5. Supportive conditions

Within the confines of a PLC structure the various parts of these dimensions effect and change the strength of the PLC. In some cases, as a community works together, it is difficult to discern where the parameters of one dimension end and the other begins. None of the dimensions are mutually exclusive. Shared practice could look like collective inquiry across situations or among groups of people. Shared leadership can at times be the same as supportive conditions. The perception of how the PLC innovation unfolds can also work to mystify how it is measured or perceived, both internally and externally. These practices, when worked in the classroom, can have a major effect on the development of teachers to improve instruction (Hord & Sommers, 2007). Roberts and Pruitt (2003) found five ways teachers are affected by the learning community. This includes teachers acting as:

a) Colleagues

b) Leaders

c) Learners

d) Pedagogues

e) And in Teacher-parent relationships (pp. 13-14)

Supportive and shared leadership

The results of numerous students of schools by Bolam (2005) led to his comment "it is difficult to see how a Professional Learning Community could develop in a school without the active support of leadership at all levels" (p. 15). A learning community is a culture of inquiry (community of continuous learning) in which teachers begin to share in

the leadership of the school. (Hord, 2007) The potential for the feeling that one's actions are not dictated from above, but rather come as a personal decision is an important part of human motivation. "When we realize that our true self is one of pure potentiality, we align with the power that manifests everything in the universe" (Chopra, 1994, p.1). According to Hawkins (2002), "only an open climate can lead to transformational leadership" (p. 73) this leadership style is what creates Chopra's potential. It is interesting to note that there is not a clear disparity between whether it is teachers or administrators (leaders) who bring the most to this action. Mulford and Silins, (2003) indicate that leadership does play an important role in a PLC. Hord also notes the irony of the importance of a leader in what is supposed to be such a collaborative process (1994). Burns' studies continually show an emphasis on transformational leadership practices as influential and effective to any sort of change in organizations (1978). The literature is not clear about distributed leadership, allowing for leaders to 'share' decisions but not necessarily counting that decision itself (to share) as an important component. Without this singular act from the leader in a school, shared leadership could never evolve. Similar statements can be made about the remaining four dimensions of Hord's model. Does the rise to a PLC, ironically enough, depend on the actions of one leader? Or is this PLC structure 'claimed' as a part of the actions of teachers under a principal leader? For this type of teacher development, the leadership piece is integral. Shared leadership also supports the role of the leader in creating a starting or incubation point for a PLC structure. "Shared leadership presents a multitude of interactions and relationships that build capacity for change' (Huffman & Hipp p.7). The ripple effect can drive change in an organization. Interactions and relationships, dealing with issues on

management and implementation of programs in a school, are what define the leadership capacity. Leadership speaker and organization CEO Warren Bennis (1995) felt, “if leadership models are to change, training is critical or people will remain in the old paradigm where they expect answers from the top (p.36). The role of the supporter and teacher trainer, the role of the leader, is important to growth of a PLC. Shared vision and leadership must permeate to those responsible for educating others, a model is not just implementing a concept.... a school must embrace team leadership (Brown & Shepard, 2000). No longer does this mean it has to come only from the administrator. Once the distributed aspect of leadership comes to the fore, the building leaders can spur greater changes.

It is the job of leaders to begin, and also model, this process of inquiry for learners. In a Professional Learning Community there is a focus on the learning of individuals and groups within it (Kilpatrick, Barrett & Jones, 2003). “You must begin by having learners and then show them how to function in such a way that the organization as a whole can learn” (Kline, 1993, p.8). Poore wrote:

> I have come to realize that the greater the adversity surrounding the school, the more dire the need for - and the greater the opportunity to develop - a well-defined culture within the school. For it is the school's culture which provides the framework from which we and our students make sense of the life and world around us (p 351).

Members of a community of practice are practitioners. They develop a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems—in short a shared practice. This takes time and sustained interaction (Wenger, 2007). It is in this aspect that it becomes important to develop community and not just the parts of good

practice that make up the professional learning. A survey of leaders in a school to ascertain impetus towards collective and collegial learning will help to confirm DuFour's (2007) view that "A school becomes a Professional Learning Community only when the educators within it align their practices with PLC concepts" (p.4). Although the use of quantitative data can parse out the elements of effective practice towards a PLC goal, the vision of achieving this goal, and its ethos within the building, is still primarily a leadership issue. A particular aspect here is the evidence of interpersonal sharing and interaction, particularly in the dimensions of collective learning, shared personal practice and supportive structure. McLaughlin and Talbert's (1993) study found that "teachers define standards for their classroom practice through interaction with other teachers and administrators; and the communities of practice that evolve in the day-to-day work of schooling" (p. 20). This interaction and Community of practice is facilitated through shared leadership models.

Shared values and vision

"As personal visions are communicated, individuals begin to develop a shared vision" (Hord 1997a, p. 29). Hord clearly felt that Shared values are most integral to the thriving nature of a PLC (2004). Lieberman's (2000) research found that teachers who were risk takers and inventive in meeting student needs were, with the same actions, developing Professional Learning Communities within their spheres of influence. Sharing, which was concurrent with being supportive, changed the climate to one of a culture of PLC. This can also support the idea of spontaneous incubation from the actions of the teachers. A multitude of authors, in many different ways, showed that leadership and the abilty to articulate the visions of leading, was a crucial aspect of the formation of

a PLC (Bolam, et al., 2005; DuFour, 2007; Fullan, 1999; Hord, 2004;). Senge (1990) felt that vision was an essential element for a learning organization and many leaders feel that providing a vision is one of the most important parts of their job. Almost all schools promote their vision as a key piece of organizational documentation. And there is good reason why, the culture that is created is a key piece of the successful organizational dynamic. "Our research leaves us optimistic that, for staff to be motivated, they must believe that schools can be transformed" (Huffman & Hipp, 2003, xvii). This belief and transformation can only be possible with a view of what they want to become, ie. their vision. Huffman said, "The central task of the leader is to involve others in creating a shared vision for the organization" (p. 8). If we are to fulfill our mission as microcosms of society, schools that are focusing on shared values and vision are schools certainly on the right track to envision and model themselves as Professional Learning Communities. This style, although not practiced, is not new to education: "Once again the Greeks seemed to know about the basis of good teaching. They knew that it starts with modeling"(Poore, 2005, p. 359). This modeling, this sharing of style and vision, is what a PLC is about. Roberts and Pruitt (2003) conclude that "building professional Learning Communities requires a shift from the paradigm of schools as bureaucracies to a vision of schools as community" (p. 20). This 'vision' is only one aspect of the Hord model's five dimensions but might be the most important when it comes to the building part of a professional Learning Community and not just sustainability or continued development.

Collective learning and application of learning

Huffman (2003) found that for PLC members "Building a Professional Learning Community is difficult due to the many demands on teachers and students" (p. 5). Indeed,

"To develop, nurture and sustain a community of learners means creating a different culture" (p. 5). One way the structure of a PLC makes this easier is through the tact of collective learning and inquiry. When the spirit of inquiry permeates the daily routine, schools are on their way to becoming true learning organizations. (Lashway, 1998)

A key component to learning as a community is that "knowledge must be shared collectively" (Garvin 2000 p. 11), and similar or shared terminology help this to happen. Collective learning, particularly when applied or embedded in real practice, is what can generate the most momentum for teams to be successful and working under the same visions. Clarity of where they are headed helps to design how to get there. Deciding what to learn is another ambiguous realm. Does it really generate from staff or is there direction from administrative building leaders?

"It is important to remind ourselves that collaborative schools are not the most innovative, they are selectively innovative" (Fullan, 1999, p.39). Martin Kniep (2008) described the process as, "involve[d] collaborative discourse in which all participants assume that no one knows or has a complete understanding of any one issue but that, together, the group can attain it…they entail listening to understand and make sense of ideas" (p. 93). DuFour (2004) found that "as a school begins to function as a Professional Learning Community… teachers become aware of the incongruity between commitment to ensure learning for all students and lack of a coordinated strategy to respond when some students do not learn" (p. 7). DuFour, Eaker & DuFour's (2002) work led them to believe that where learning community members have in common their commitment to goals and improvement, in most schools that relates to increased student achievement and efficacy of teachers. And there is much agreement to this. An effective Professional

Learning Community has the capacity to promote and sustain the learning of all professionals in the school community with the collective purpose of enhancing pupil learning (Bolam et al., 2005).

As a school focuses on large scale issues, according to Akhavan (2005), it will find that systemic change is difficult and occurs with careful planning. Allowing staff to choose an area to improve upon together would fit in as a large scale issue. McLaughlin and Talbert (1993) also observed and noticed schools that were continuously learning and developing collectively. One step further made them aware of a connection between their undertakings and the culture of blame or visionless planning that permeated traditional or typical schools. Central to the literature, and provoking motion that is opposite of this visionless planning, is the ideal of the PLC. Garvin (2000) portrayed how this looks inside a PLC, "new knowledge need not materialize by magic, or through sweeping metaphors or grand themes. The roots of learning organizations lie in the gritty realities of practice" (p.17) and this is where the collective nature is the most important. In the literature there is a gap whereby these gritty realities become a PLC. Historically, or in many present cases, they do not. What does make this difference and lead to the creation, sustained effort and eventual maturity of a Professional Learning Community? Akhavan (2003) wrote of the relationship that occurs in a learning community, "Coaching is hard, being coached is equally difficult" (p. 21). The group relationship works on "creating a climate of equality and enabling participants to explore a common ground and listen with empathy" (Martin Kniep, 2008, p. 93). This has good relevance to PLC creation. It is difficult for a principal to give up decision-making responsibility, especially at the expense of the time it takes to fully change trust and shared leadership approaches. Phil

Jackson, ex-coach of the Los Angeles Lakers basketball team realizes the difficulty inherent in changing to a shared decision making model. “System basketball has been replaced by players who want to be the system” (Jackson, 2004, p. 25). At times creating a void in leadership or decision making, enables others to step in, others who don’t always achieve the end goals that had been planned. Jackson’s appeal is for the systems, or collective, approach which was much more effective. “These organizations actively manage the learning process so that is focused and purposeful; learning occurs by design and in pursuit of clearly defined needs, rather than for its own sake” (Garvin 2000, p. 12). In a school that is trying to address the needs of all its students, all of the teachers are needed to make this purposeful learning. Only as a group do these clearly defined needs get established. Speaking of collaboration, Akhaven (2005) said, “We find the time because we have aligned our values and goals with our actions” (p. 22).

Supportive conditions

A key ingredient to Hord’s model is the need for supportive conditions. Elmore (2000) said that “School administrators are products of the organizations they lead” (p. 3). Hord’s study of Northland & Foxdale school (in Learning Together, Leading Together, 2004) showed “how PLC dimensions provide an organizational scheme that can facilitate thinking about change and interpreting change” (p. 83). This pulls the change process or organizational structures, outside of Hord’s dimensions, as possibly contributing to the creation of a professional learning community. Further study might find factors more closely associated with creation of a PLC.

The top-down controlling directives of the bureaucratic model are moving over for the new organic and inclusive Professional Learning Community (Wheatley, 2000). Leaders in a PLC are educators who must allow teachers to share collective responsibility and as progressive leaders they become "Educators who understand that their schools are complex interdependent social systems can move their organizations forward (Thorton, 2004, p. 222). This understanding is what leads to creation of a support system that provokes shared vision, leadership and values. Understanding is a form of trust for these leaders. "Success is only possible if organizational members develop trust and compassion for each other" (Fullan, 1999, p. 37). As schools become learning organizations, however, school personnel become increasingly aware of the need for systemic thinking and the contribution to team learning that can be made by teams such as school councils (Brown & Shepard, 2000). Akhavan (2005) told of a journey through the change process, mentioning all of these things and making clear the need for good leadership to guide them, "We accomplished learning together by knowing what we wanted our classrooms to feel like, visualized ourselves making the change necessary and supported each other to reform our instruction and culture" (p.20). The key is school climate and culture which are supportive of the community's efforts leading to trust and teachers that "can express what they have learned and also what they still need to learn" (p. 21).' There is an emphasis on supportive emotional conditions but as much need is placed in supportive conditions that are physical, such as the class schedule that allows for teacher meeting time or the collaboration that occurs when teachers schedule their own in-service or professional development time. Hargreaves (1994) calls this act of providing only structure without assignment 'contrived collegiality.'

Shared practice

Many leaders frequently sense that people are an organization's most important resource. Yet this truism is not always clearly understood in terms of those communities through which individuals develop and share the capacity to create and use knowledge (Wenger, 1998). When a PLC is in place teachers are more likely to participate in collaborative activities and take collective responsibility for student learning. (Protheroe, 2004) and this is a characteristic of an effective school, "Research shows that collaboration can be a powerful tool for professional development" (CSRI, 2007, p.1). "Sharing knowledge through collaboration is the core business of learning communities" (Kilpatrick, 2003, p. 7) and how this new learning is then shared within the community, and the effect it has on the school population, is what has sustained the movement of Professional Learning Communities (DuFour, 2007). This sustainability of the level of PLC interaction increases as the community of learners grows. The maturity level sustains and grows as the scope of the community increases while a systemic view of the organization shows that increased performance depends on [this] quality of the interactions among its members. (Knutson, Miranda, & Washell, 2005). Schools that commit to collaboration for improvement can transform and progress (Lashway, 1998). The difference is that the Professional Learning Community (PLC) model creates a collective vision for teachers and it is a mechanism for professional development and growth that is supported organizationally and at interpersonal-contact levels. Teachers will not thrive and grow if they remain isolated from their colleagues and are denied access to new ideas and insights that work (DuFour & Burnette, 2002). This design is a radical shift from the idea of a teacher learning in a one-room schoolhouse and involves

the teacher as just important a learner as the students (Adams, et al., 2006). Martin-Kniep (2008) emphasized that, "self-improvement and organizational improvement are deeply connected" (p. 27). Eaker, DuFour & DuFour (2002) believed that "engagement and experience are the best teachers" (p. 27). Wenger (1998) added that in such communities, the locus of engagement in action, interpersonal relations, shared knowledge, and negotiation, hold the key to real transformation which has real effects on people's life. Creating a community of learners necessitates a meaningful rethinking of the leadership role in schools. Learning becomes a collaborative, goal-oriented task rather than a generalized desire to 'stay current' (Lashway, 1998). Practitioners learn through their participation in more specific communities made up of people with whom they interact on a regular basis (Wenger, 1998). It is this shared practice that becomes the means and process for improvement, the PLC is a community of teachers and administrators who help each other to reach the collective goals.

DuFour et al. (2005) believed that this concept reaches far beneath the surface of culture in a school and permeates places that are foundational to the organization, bringing about a sustainability and "deep" conception of one's interdependence (p. 233). DuFour et al. would support the view that as schools develop more of these concepts into action, the degree of maturity of the PLC increases. Wenger (1998) put a familiar face on the aspect of the Professional Learning Community ideal that has been present in schools for decades,

> When you face a problem that stretches your knowledge, you turn to…your real colleagues. They understand the issues you face and will explore new ideas with you. These are the people with whom you can discuss the latest developments in the field and troubleshoot each other's

> [difficulties]. If only you had more time for these kinds of interactions. (p. 1)

Presented as a theory, the PLC is the combination of the five descriptors, which also includes the practice, time, support and theory, and personal impetus. These factors needed together make it a collaborative process. “Teamwork is a nebulous thing” said Jackson (2004, p.1), but compartmenting the descriptors makes the picture of a PLC much clearer in its effects and regards. Here the vibrancy of a Professional Learning Community is transparent, but this is a case of where the whole is only a sum of all the parts. Many schools practice these dimensions to some degree, but it is the ones that refine the model inclusive all its parts that seem to make the real difference and transform into Professional Learning Communities (Hord, 2004). From her study, Wenger (1998) explained it in this way, “Systematically addressing the … dynamic [of] "knowing" that makes a difference in practice requires the participation of people who are fully engaged in the process of creating, refining, communicating, and using knowledge” (p. 1). Questions for future research address the ability to confirm how this ‘systematic-address-of-the-knowing-dynamic’ is apparent in schools and not just rhetorically presumed because parts of the model exist or are said to exist. The absence of hard and empirical data on the real scope of maturity of Professional Learning Communities is one troubling part of their implementation, and use, as real professional development. Yet systematically addressing the kind of dynamic "knowing" that makes a difference in practice requires the participation of people who are fully engaged in the process of creating, refining, communicating, and using knowledge. This maturity really involves the tangibles of a Professional Learning Community. As it becomes more established as

practice, many things change. The isolated feelings teachers experience can be reduced as the collaboration matures in the school (Schmoker, 2004; Fullan, 1993a).

Summary

This review of the literature has found that there are data on what makes a school effective and that Professional Learning Communities proposes a way to add to this data. The process leads to a staff that collectively learns and grows together to meet goals. Hord's (2004) explanation of a lack of good measurements of learning communities and a need for sustained study of the dimensions of a Professional Learning Communities in many different types of schools is repeated throughout her work (2004, 2004a, 2004b,). Even choosing to validate any of these above-mentioned PLC definitions could prove elusive to a researcher not able to look outside a broad array of schools and systems. There is overwhelming evidence of a need for more measurement and study in this area. The growth and success so far is driven by a demand for more data, sound data- hence the study focusing on empirical validation of many of these claims. The literature is lacking in this area. Ellinger, Yang and Ellinger (2000) referred to this when they said "if firms [like schools] are to create learning organizations by focusing on the implementation of practices and processes that promote learning at the individual, team, and organizational levels, the linkages to improved organizational performance must be more firmly established" (p. 2). There exists throughout the literature a frequent and desperate need for more studies and data on the actual operationalization, measurement, and presence of a Professional Learning Community in schools. "Rhetoric on learning organizations is plentiful, thoughtful research is harder to find" (Lashway, 1997, p.2). Bolam (2005) and

fellow researchers feel that serious consideration should be given to the possibility of commissioning and carrying out further research and development work.

Additionally, although her research is at the cutting edge of informing new models and sustaining her own, Hord (2004a) rendered the current research inadequate stating "…yet PLCs still lack the credibility that comes from substantial research" (p. 4). In reality, there are few actual empirical studies that show this truth to be evident. Anecdotal and natural assessments arrive from many districts but indicators of similar jargon, approaches, processes and formula across the main conceptualizations or theories from the discussed researchers and writers, while substantial, do not prove the operationalization of the concepts. "Although PLCs have common characteristics and adopt similar processes, the practical implications for developing a PLC can only be understood and worked out in the specific conditions – like phase, size and location – of particular contexts and settings" (Bolam, 2005, p.i). Hord's (2004a) clear articulation of Professional Learning Community studies indicates "[her work] represents just the beginning of what must be an intensive and well-controlled pattern of research and measurement of Professional Learning Communities (p. 4).

Chapter 3

Methodology

Introduction

This chapter describes the research design used in the study, explains the process used to identify the research population sample, identifies and explains the instrument to be used during the research, describes the methods of data collection, and describes the process of the analysis of data. The purpose of the study was to determine school administrators' and teachers' perceptions of the maturity level of Professional Learning Communities (PLCs) in selected Thai International Schools. This perception of maturity was discerned by each staff member's participation in the School Professional Staff as a Learning Community Questionnaire (SPSaLCQ), which was reproduced with the permission of SEDL (See Appendix B). This measurement of maturity, or extent of measurable action at schools, helped to answer the questions:

1. What are administrators' perceptions of the maturity level of PLCs in selected
   Thai international schools?
2. What are teachers' perceptions of the maturity level of PLCs in selected Thai international schools?
3. What is the difference between the perceptions of administrators and teachers?
   3a. What are the differences by school?
4. What factors influence the administrators and teachers perceptions of the level of maturity of PLCs in selected Thai international schools?

Research Design

This study used a sequential mixed-methods design (Creswell, 2003) to assess a series of measures using both quantitative and qualitative analysis. This approach to data collection allowed for a deeper understanding of participant perception in a Professional

Learning Community. Qualitative interviews as a follow-up also allowed for greater understanding of the quantitative data. Demographic data were obtained from the sample population (See Appendix C). The first part of the exploratory study was an electronic survey (See Appendix D). The electronic survey maximized efficiency of distribution and allowed for faster data collection. All International Schools Association of Thailand (ISAT) international schools in the area of Bangkok use electronic mediums as their main means of communication and thus facilitated the survey dissemination and data collection. The analyzed electronic survey data about teacher perceptions of the maturity of their staff as a learning community gave direction to the next step of the sequential study. The nine follow up interviews (See Appendix E) did allow for observations to be made about practices which help the growth of PLCs and show differences in perception between administrators and teachers. These data also informed the study as to additional factors that contribute to the practice of PLCs in the participating schools. This study sought to explore the factors that contribute to a school's high level of maturity as a Professional Learning Community, as shown by the SPSaLCQ. The intent of this study was to gather information about school administrators' and teachers' perceptions of a Professional Learning Community from a sample of schools in Bangkok.

Research Population

The staffs selected for this study came from K-12 international schools located in Bangkok, Thailand during the spring of 2010 (See Appendix G). Creswell (2003) refers researchers to the availability of sampling frames. For this single stage sampling procedure the population is derived from the publication *2009-2010 Directory, International School Association of Thailand* which listed names of all the international

schools in Bangkok along with a description and contact information. This list included all K-12 schools. Schools that were examined were drawn from this list and given the opportunity to participate. Participants included teachers and administrators at the school, and excluded para-professionals, teaching assistants or other staff in the school that performed only clerical or office tasks.

Sample Selection

This section explains how the total number of participants was selected. There were 77 total schools listed in Bangkok in February of 2010. A subset of this group includes schools that contained only elementary, middle and high schools, of which there were 57 schools. The rest (stand alone or separate kindergarten or preschools) were not included in this study as there was the absence of an 'international school' identity or English language as an emphasis in the school staff population, which were criteria for this study. Within each of the included schools were elementary, middle and high school divisions for an approximate total of over 150 separate divisions/schools. This population included an administrative sample of approximately 150 principals and assistant principals and a teaching population that ranged between 1,000 and 1,500. These administrators and teachers each had the opportunity to take part in the survey, based on the willingness of their school head to participate.

ISAT schools identified for the study were sent an email by the researcher between March 18, 2010 and May 11, 2010. This email included an invitation to participate in the survey and a link to the survey for the school head or principal to examine the survey and obtain additional information about the study (See Appendix H). The participating administrator or school head was the contact point in each school,

identified either from the school website and the ISAT list of schools and school administrators. These contacts at each school could then forward the email to all qualifying staff who were then able to click on the link, take the survey and have their responses electronically recorded. A second reminder was sent to the same pool of 53 schools within two weeks of the first invitation. Included in this email was an introduction from the researcher, a link to the survey (See Appendix I). All efforts were made to include member schools from the initial sample population. A gentle reminder to school heads and staff was subsequently sent out. Included in this gentle reminder was a notice from the researcher to the potential study participants encouraging them to participate in the survey (See Appendix J) .

After the second invitation and two gentle reminders a total of 28 schools had responded to the email or the survey. A total of six schools contacted the researcher by email response to indicate they would not participate in the survey. Another 19 schools did not respond to the email prompts or to the survey link.

Of the 28 schools a total of 609 respondents started the electronic survey. This number included 539 teachers and 49 administrators. Table 3 shows the responses received and the percentage of total by responding date.

Table 3.

Emails to Study Participants March –May 2010	Number of responses to Electronic survey	Percentage of Total Response
First notice, first round (March 18-25)	17	2
Second notice, first round (April 15-20)	380	62
Second notice, second round (April 26-29)	542	89
Third notice (May 3)	587	96
Fourth notice (May 11)	602	99
Final total responses	609	100

The results of the initial survey were collected and analyzed, and follow up emails were sent to select schools that had scores in a higher, medium or lower category. Three schools were identified and selected from responses by the administrator as willing to participate in the follow-up interview process. One administrator and two teachers each in a higher scoring school, a mid-range scoring school, and a lower scoring school were then contacted for an arranged interview, on site at their school (See Appendix K). These interviews used a protocol based on questions by Shirley Hord. The questions were later refined by Huffman and Hipp (2003) and gained further information about factors that pertained to the levels of maturity shown by their staff as a PLC. These three schools were visited during the last week in May and first week of June, 2010. At each school, an administrator and two teachers were interviewed by the researcher

separately to obtain qualitative data on the school staff and actions as a PLC. The interviews were digitally recorded and then transcribed by the researcher. These interviews did further address the research questions and the role of teachers and principals in contributing to the maturity of the school as a learning community, as perceived by those same staff.

Research Instrument

Providing details about the actual survey instrument is an important part of rigorous data collection (Creswell, 2003). The survey instrument used in this study was the School Professional Staff as a Learning Community Questionnaire. The survey was reproduced with permission from Southwest Educational Developmental Labs (SEDL). The SPSaLCQ is commonly used to assess a staff as a professional learning community and measures the maturity of the staff as they perceive their actions when they act in accordance with norms of behavior considered contributing to the construct of a PLC (Hord, 1996). With the use of this instrument, maturity of the faculty refers to the increasing number of actions of staff as they function as a professional learning community. These actions are according to the five dimensions used by Hord (2004) as the community is established over time. The dimensions are:

1. Supportive and shared leadership
2. Shared values and vision
3. Collective learning and application
4. Shared personal practice (Peer Review and Observation)
5. Supportive conditions

Each of these dimensions is further parsed into descriptors (see Dimensions below) that are the actual actions staff engage in as a teaching and learning community.

As the community develops, these actions are seen among greater numbers of staff and each is also seen with more frequency. Absence of these dimensions, and subsequent descriptors that define each dimension, is an indicator of a lower level of maturity of staff as a Professional Learning Community. Hord's theory is that the maturity level is connected to these descriptors and dimensions and can be measured by their presence.

This study does not attempt to test Hord's theory but rather use the instrument to measure school staff as a Professional Learning Community. This concept of maturity is a large facet of Hord's work at SEDL and inclusive of both Hord's writings and research on PLCs. Hord gained a conceptualization of a professional learning community (Meehan et al, 1997) and the SPSaLCQ instrument, while working at SEDL. The Hord instrument is one of the most reliable and valid measure of the existence of a professional learning community construct in schools due to its psychometric testing by the Appalachian labs (Meehan et al, 1997). According to Meehan, Orletsky & Sattes, "The instrument appears useful as a screening, filtering, or measuring device to assess the maturity of a school's professional staff" (1997, p. 15). With regard to the SPSaLCQ, a variety of papers have been written that addressed the reliability and validity measures for this survey in the past. According to LaRocco (2007); Hord, Meehan, Orletsky, and Sattes (1999) indicated that the survey "was a useful gauge of staffs' perceptions of their school as a learning community", as the alpha reliability coefficients were .94 for the full group and from .62 to .95 for the individual schools in LaRocco's survey. According to Cowley (In Meehan et al., 1999), the alpha statistic for the Hord scale ranged from .75 to .96; these scores were considerably higher than the alternative Guskey scale, implying that Hord's scale is preferable, and supporting this study's choice of scale.

Content validity for the instrument is supported throughout the literature, and through multiple uses from SEDL and Hord, who piloted the instrument, and Appalachian Labs testing.

A pilot test from Meehan, et al:

> "The reliability was measured by Alpha for internal consistency and by the stability (test-retest) method. Content validity was assessed in its development and reviewing phases. Concurrent validity was assessed through the parallel administration of a school climate instrument. Construct validity was measured two ways: by the "known group" method and exploratory factor analysis" (1997, p. iv).

This pilot examined faculties in 21 schools where N= 690. The study proved that the instrument was reliable and valid for use as a measure of school staffs as a Professional Learning Community. Meehan, et al. relate that,

> "The pilot test… was very positive. The Alpha reliabilities for the items in the five major areas were +.84, +.68, +.82, +.78. and +.83 in order, while the Alpha reliabilities for the total of 17 items was +.92 in the pilot test. The test-retest reliabilities…were +.94, +.86. +.73, +.86, and +.78 for the items in the five major areas and +.94 for all 17 items together" (1997, p. 6).

Discerning concurrent validity, Meehan et al, and the AEL correlated Hord's SPSaLCQ with a similar 10-item school climate instrument, during the same pilot, finding that the correlation "in the subsample was .75, which is significant at the .001 level" (1997, p. 38). In their conclusion Meehan, et al. state,

> "Therefore,…we conclude that it does differentiate among the schools on its five major dimensions and total score. Also, we conclude that the instrument differentiates the schools on its five dimensions and total score when the schools are grouped into the three levels of elementary, middle/junior high, and high school. [This]…Hord instrument does measure and differentiate school faculties in terms of their "maturity" as a professional learning community" (1997, p. 43).

A thorough analysis of the development of the instrument and the validation can be

found by looking at the Meehan et al. or Hord et al. references.

In the SPSaLCQ there are 17 items under the five separate dimensions of a Professional Learning Community. Each statement is titled and contains a short descriptor of staff action. Each is also accompanied by three statements matching maturity levels of five (high), three (middle), and one (low) on a Likert scale. The remaining numbers on the Likert scale; four (high/middle) and two (middle/low), give opportunity for the participant to indicate their perception falls 'in between' the levels stated in writing. Statements on the School Professional Staff as a Learning Community Questionnaire, by dimension, are shown in the below:

Dimension 1: Supportive and shared leadership.
School administrators participate democratically with teachers sharing power, authority, and decision making.

a) **High:** Although there are some legal and fiscal decisions required of the principal, school administrators consistently involve the staff in discussing and making decisions about most school issues.
Middle: Administrators invite advice and counsel from the staff and then make decisions themselves.
Low: Administrators never share information with the staff nor provide opportunities to be involved in decision making.

b) **High**: Administrators involve the entire staff.
Middle: Administrators involve a small committee, council, or team of staff.
Low: Administrators do not involve staff.

Dimension 2: Shared values and vision
Staff shares visions for school improvement that have an undeviating focus on student learning, and are consistently referenced for the staff's work.

a) **High:** Visions for improvement are discussed by the entire staff such that consensus and a shared vision results.
Middle: Visions for improvement are not thoroughly explored; some staff agree and others do not.
Low: Visions for improvement held by the staff are widely divergent

b) **High:** Visions for improvement are always focused on students, and learning and teaching.
Middle: Visions for improvement are sometimes focused on students and teaching and learning.
Low: Visions for improvement do not target students and teaching and learning.

c) **High:** Visions for improvement target high quality learning experiences for all students.
Middle: Visions for improvement address quality learning experiences in terms of students' abilities.
Low: Visions for improvement do not include concerns about the quality of learning experiences.

Dimension 3: Collective learning and application of that learning.
Staff's collective learning and application of the learnings (taking action) create high intellectual learning tasks and solutions to address student needs.

a) **High:** The entire staff meets to discuss issues, share information, and learn from and with each other.
Middle: Subgroups of the staff meet to discuss issues, share information, and learn with and from each other.
Low: Individuals randomly discuss issues, share information, and learn with and from each other.

b) **High:** The staff meets regularly and frequently on substantive student-centered educational issues.
Middle: The staff meets occasionally on substantive student-centered educational issues.
Low: The staff never meets to consider substantive educational issues.

c) **High:** The staff discusses the quality of their teaching and students learning.
Middle: The staff does not often discuss their instructional practices nor its influence on student learning.
Low: The staff basically discusses non-teaching and non-learning issues.

d) **High:** The staff, based on their learnings, makes and implements plans that address students' needs, more effective teaching, and more successful student learning.
Middle: The staff occasionally acts on their learnings and makes and implements plans to improve teaching and learning.
Low: The staff does not act on their learning.

e) **High:** The staff debriefs and assesses the impact of their actions and makes revisions**.**
Middle: The staff frequently assesses their actions and seldom makes revisions based on the results.
Low: The staff does not assess their work**.**

Dimension 4: Shared practice (Peer Review and Observation)
Peers review and give feedback based on observing each other's classroom behavior in order to increase individual and organizational capacity.

a) ***High:*** Staff regularly and frequently visit and observe each other's classroom teaching.
Middle: Staff occasionally visit and observe each other's teaching.
Low: Staff never visit their peers' classrooms.

b) ***High:*** Staff provide feedback to each other about teaching and learning based on their classroom observations.
Middle: Staff discuss non-teaching issues after classroom observations.
Low: Staff do not interact after classroom observations.

Dimension 5: Supportive conditions
School conditions and capacities support the staff's arrangements as a professional learning organization.

a) **High***:* Time is arranged and committed for whole staff interactions
Middle: Time is arranged but frequently the staff fails to meet
Low: Staff cannot arrange time for interacting

***b*)** **High**: The size, structure, and arrangements of the school facilitate staff proximity and interaction.
Middle: Considering the size, structure, and arrangements of the school, the staff are working to maximize interactions.
Low: The staff takes no action to manage the facility and personnel for interaction.

c) **High**: A variety of processes and procedures are used to encourage staff communication.
Middle: A single communication method exists and is sometimes used to share information.
Low: Communication devices are not given attention.

d) **High**: Trust and openness characterize all the staff
Middle*:* Some of the staff are trusting and open.
Low: Trust and openness do not exist among the staff.

e) **High**: Caring, collaborative, and productive relationships exist among all the staff.
Middle*:* collaboration are inconsistently demonstrated among the staff

Low*:* Staff are isolated and work alone at their task.

For a pilot test of the electronic version of the SPSaLQC, the sample group consisted of a school staff at an elementary school with 47 teachers who were sent the email containing a link to the survey. The school has had varied opportunities for professional development of collegial roles and professional learning communities but none has been mandatory and not all staff have been involved in the characteristics of a Professional Learning Community awareness that make up the Hord/SEDL model dimensions. The survey was forwarded to the email box of the site administrator, with instructions, and then the administrator forwarded the survey to the staff through the schools intranet. The survey was attempted by 26 teachers with 24 completing it in full. This was a rate of return of 51%. From these results descriptive statistics were obtained using SSPS. The possible range of overall scores was from 17 to 85. The range for the pilot test was from 46 to 69, indicating some difference in teacher perception of level of Professional Learning Community characteristics in their school. The overall mean was 58.

Coefficient alpha was calculated for each of the subscales based on the pilot test results for this study. The alpha score was .58 for shared decision making, .37 for shared vision, .89 for collective learning, .85 for peer review, and .31 for the structure for a PLC. Since alphas of greater than .70 are generally seen as indicative of reliable data (Pallant, 2007), three of the five scales exhibit adequate internal consistency reliability by this measure, while shared decision making and the structure for a PLC are not.

Development of Research Instrument

Also granted by SEDL was a request of the researcher to modify the 'paper and pencil' medium so that the survey could distributed electronically and the results could be collected and partially analyzed using the same means. The survey was electronically reproduced in format and design using an electronic online survey platform. The online version questions resemble, word-for-word, the paper copy of the survey, thus protecting the integrity of the instrument. Changing the medium was challenging and complex in order to accurately reflect the organization of the instrument's information and respect the integrity of the research lab that created and owns the rights to the instrument

Although various terms are used to describe the characteristics associated with the operationalization of a professional learning community Hord chooses to use the term "dimensions" to define the five separate elements of her PLC conceptualization. Furthermore, she parses each dimension into descriptors which encompass and correspond to exemplary practice on the one side of a continuum to antithetical practices on the other (2004, p. 16). Her dimensions of a PLC include: Supportive and shared leadership, shared values and vision, collective learning and application of that learning, supportive conditions, and shared personal practice (Hord, 2003). Each dimension comprises one section of the survey. The 17 descriptors of staff action that are listed on the instrument under each of the five dimension categories then provide the basis for school staff to illustrate their perception of extent of learning community practices in evidence within their school.

Also included in the survey was a section on demographics which ask participants their gender, age range, range of years as a teacher or administrator

combined, school phase or age range of students in the school(ES,MS,HS) and role of the participant in the school, teacher or administrator. This data was used to compare perceptions about maturity of a PLC with background of the teachers as a group or subset.

The SPSaLCQ, used to assess the staff as a professional learning community, measured in turn the maturity of the staff as they perceive their actions as they act in accordance with norms of behavior considered to contribute to the construct of a PLC.

Method of Data Collection

This research study employed an electronic survey with a sequential interview follow up with selected participants.

With the electronic survey online site all responses were viewed using the secure server and were saved and stored on the host site. After analyzing the data sets from schools, overall scores for all schools and for each dimension of a PLC, both within each school division and overall, were calculated using SPSS software. Within the study of Professional Learning Communities in schools, it was important to note the actions or characteristics in the organization that compelled the increase or maturity level as a Professional Learning Community. Examining the data scores allowed for identifying which schools score highest overall towards perception of maturity of a Professional Learning Communities. Three schools, one each of those scoring in 'high, medium, and low' according to returns, were contacted for follow-up interviews consisting of questions with an administrator and two professional staff members (teachers) in reference to their knowledge of actions that might have led to the achieved scores on the

SPSaLCQ survey. Administrators or principals were contacted through responses from initial survey links to the school head, and they further helped to identify follow-up interviewees. As the information and participation was beneficial to the school's knowledge of improvement as a professional faculty, those chosen did help to explain and describe how improvements are a daily part of the staff's activities.

Data Analysis

The main statistical procedure in the study was a mixed methods analysis. To conduct a qualitative analysis, it was necessary to determine thematic relationships from the non-quantitative responses to interview questions, grouping responses into applicable categories with other like responses. The categories can change throughout the data analysis procedure, as the researcher learns from the data. After the qualitative data were grouped into respective categories, the researcher then interpreted the meaning of the categories with regard to the study at large. Data were coded into categorical variables that were then analyzed by quantitative means. Once the qualitative data was recoded into a variety of categories, it was possible to analyze these variables, and their relationships to the quantitative variables, numerically. This was necessary in order to conduct a mixed methods analysis because it is not mixed unless qualitative and quantitative variables are included in this same model.

These data were analyzed by individual components and collectively. Next, follow up questions about theses perceptions yielded good qualitative data to assist in the explanation of the data and perceptions. A complete data analysis mimicked the approach used in past tests in schools with this instrument originally produced by the

Appalachian Regional Education Laboratory (AEL) and the Southwest Educational Developmental Labs (SEDL).

Analysis of data began with the data from the schools collectively and was also compartmentalized into American-style division at each school; elementary, middle, or high school. The analyses included descriptive statistics, coefficients and effect size. Data were collected by individual schools so that it could be compared by American-style division breakdown (ES, MS, HS) and so that results could be disaggregated into usable data which addressed the research questions. Demographic data included: role as teacher or administrator, age of staff, and number of years teaching experience, gender, and age range of pupils at the individual school. These data sets were compared to levels of perceived maturity of staff to glean descriptive statistics. Information about sub-groups were then used to compare perceptions of maturity of staff between the groups. Of particular focus were the differences between divisions or elementary, middle, and high schools. Teacher and administrator perception of school staff as a professional learning community and the relationship between these two groups were important to determining the way specific actions were viewed as contributing or not contributing to the school as a Professional Learning Community. This leadership component helped to determine actions that are over or under emphasized from the perspective of these two groups, as noted by the descriptors and dimensions of the PLC. In a similar way, the sub-categories of the demographic data (e.g. age, gender) were valuable to compare group perceptions of a PLC within the same building. These relationships helped to develop ideas and actions that can lead to understandings that are useful to helping develop a PLC in a school. All the analyses used the SPSS statistical analysis software package. All the descriptive

statistics from the five dimensions and for the 17 individual instrument descriptor items and the total score were comprehensively computed. Next, those same descriptive statistics were then computed by school level: elementary, middle, and high school. This research focused on the empirical evidence that will typify an international school as a PLC.

Summary

Chapter 3 explained the methodology used in this study to assess the demographic data and study variables and also answer the research questions. The mixed methods analysis allowed the researcher to determine the maturity level of faculty in the five areas of PLC while also incorporating qualitative data from staff to explore the subject further. The chapter included details about the origins of the SPSaLCQ, its validity measures, how the sample was obtained, and how the data were collected. This chapter also discussed the research questions, further details on mixed methods analysis, and the variables used for study. Chapter 4 addresses the data analysis and the results of the study.

Chapter 4: Results

This chapter contains the results of the analysis procedures performed on the data collected from the study population. In this chapter, the researcher will also discuss the statistical designs and tests used and will provide the descriptive statistics of the data gathered, including the means, medians, modes and standard deviations. The chapter will also explain how these descriptive statistics help answer the research questions.

Research Questions

1. What are administrators' perceptions of the maturity level of PLCs in selected
   Thai international schools?
2. What are teachers' perceptions of the maturity level of PLCs in selected Thai international schools?
3. What is the difference between the perceptions of administrators and teachers?
   3a. What are the differences by school?
4. What factors influence the administrators and teachers perceptions of the level of maturity of PLCs in selected Thai international schools?

Data Collection

The participants of the study were teachers and administrators from approximately 55 international schools in Bangkok, which provide education at the elementary, middle school and high school levels. An invitation to participate was sent to the teachers and administrators of these schools and a total of 609 responses were gathered from all the schools which were invited to participate in the study. The teachers and administrators of these schools who were interested in participating were asked to complete the School Professional Staff as a Learning Community Questionnaire (SPSaLCQ) which is generally used to assess the staff as a Professional Learning

Community. At the same time, it measures the increasing number of actions of the school staff as they function as a professional learning community. In this way, the survey instrument is able to assess the maturity of a school's PLC structure and culture in terms the perceptions of the staff members, in this case, the teachers and administrators.

Methods of Analysis

The frequency of the responses to each of the survey questions was tabulated in order to generate descriptive statistics for the data. This allowed the researcher to compare the perceptions of the teachers and administrators based on their mean scores and standard deviations. It also allowed the researcher to compare perceptions of the teachers and administrators according to other classifications such as levels taught, age or gender. These comparisons will be made according to the individual items or descriptors in the SPSaLCQ and according to the five dimensions of PLC maturity, as specified by Hord (1996).

Results of the Analysis

Table 1 includes statistics that provide an overall picture of the study population. The data shown include information on how the study population is distributed in terms of gender, age, role in the school and division or level where the participant works (elementary, middle or high school).

Table 4:1

Frequency Distribution of Study Participants (n = 609)

	Frequency	Percentage
Gender		
Female	368	60.43
Male	232	38.10
No response	9	1.47
Age		
19 or under	5	.82
20 – 29	104	17.08
30 – 39	203	33.33
40 – 49	189	31.03
50 – 59	78	12.81
60 – 69	26	4.27
70 – 79	0	0.00
No response	4	.66
Primary role in the building		
Teacher	539	88.50
Administrator	49	8.05
No response	21	3.45
Number of combined years as a teacher/administrator		
0 – 5	66	10.84
6 – 10	140	23.00
11 – 15	193	31.70
16 – 20	101	16.58
21 – 25	60	9.85
Greater than 25	48	7.88
No response	1	.16
School Section/Division/Age		
Elementary	235	38.59
Middle School	182	29.89
High School	192	31.52

The information compiled in Table 4:2 shows the descriptive statistics of the responses of the entire study population for each individual item in the survey instrument and the five dimensions of PLC maturity as conceptualized by Hord. The analysis mainly utilizes the mean scores of the respondents, because it provides information regarding the perceptions of the respondents regarding the PLC maturity levels of their schools. Comparisons were made between the groups based on these mean scores. The minimum, maximum and standard deviation values are extraneous to the analysis, but are included in the reported results as part of the descriptive statistics of the data. The data collected indicate that the maturity ratings for the five dimensions and for the seventeen individual items fall somewhere between mid-level maturity and middle-low maturity. This is evidenced since the five dimensions most of the mean scores are only in the middle level of the range of scores *(D1 Mean = 6.46, D2 Mean = 10.22, D3 Mean = 16.77, D4 Mean =5.72, D5 Mean =12.46)*. The same conclusion is derived from the mean scores of the individual items, wherein the highest mean score is a higher than 3 *(D2Q9 Mean = 3.52*) and the lowest mean score is higher than 2 *(D5Q20 Mean = 2.36)*.

Table 4:2

Descriptive Statistics for Individual Questions and Five Dimensions

	N	Min	Max	Mean	Std. Deviation
D1	591	2.00	10.00	6.46	1.74030
D1Q6	589	1.00	5.00	3.28	.89288
D1Q7	587	1.00	5.00	3.21	.93377
D2	579	3.00	15.00	10.22	2.79731
D2Q8	572	1.00	5.00	3.36	.91198
D2Q9	575	1.00	5.00	3.52	.98895
D2Q10	574	1.00	5.00	3.42	1.02365
D3	575	5.00	25.00	16.77	4.44205
D3Q11	570	1.00	5.00	3.27	.96548
D3Q12	571	1.00	5.00	3.35	.99545
D3Q13	570	1.00	5.00	3.42	.97905
D3Q14	572	1.00	5.00	3.47	.96411
D3Q15	571	1.00	5.00	3.36	1.01287
D4	575	2.00	10.00	5.72	2.01760
D4Q16	571	1.00	5.00	2.87	.99134
D4Q17	571	1.00	5.00	2.88	1.11925
D5	572	5.00	25.00	12.46	4.64243
D5Q18	556	1.00	5.00	2.44	.98207
D5Q19	554	1.00	5.00	2.65	1.04116
D5Q20	554	1.00	5.00	2.36	1.01912
D5Q21	554	1.00	5.00	2.73	.96926
D5Q22	555	1.00	5.00	2.65	1.01519

The survey instrument was also checked for reliability using coefficient values. Table 4:3, shown below, summarizes the coefficient alpha values for the entire survey instrument, as well as the alpha values for the individual dimensions as measured by the

survey instrument. The results of the coefficient alpha values test indicate that the values are all higher than the minimum required value of .70 to ascertain reliability. This indicates that the survey instrument used is a reliable measure of the data needed for this study.

Table 4:3

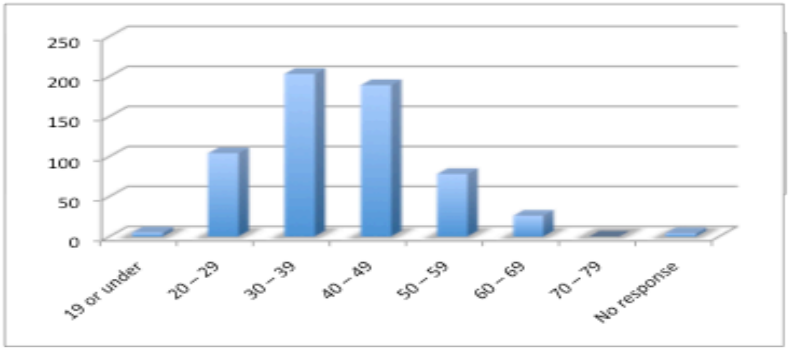
Coefficient Alpha Values for Survey Instrument and Dimensions

	Coefficient alpha value
Survey Instrument	.96
Dimension 1	.83
Dimension 2	.91
Dimension 3	.93
Dimension 4	.90
Dimension 5	.86

The rest of the analysis is devoted to the differences in respondents' perception of PLC maturity levels of their respective schools in terms of their age, gender, the position they hold in the school, and the academic level wherein they spend most of their time. Graph A shows the respondents by age group distribution.

Graph A - Age Distribution of Respondents

19 or under	5
20 – 29	104
30 – 39	203
40 – 49	189
50 – 59	78
60 – 69	26
70 – 79	0
No response	4



The analysis is broken down by dimension, in order to allow for a more detailed analysis. The result of the descriptive analysis for the first dimension, which is Supportive and Shared Leadership, is shown below in Tables 4:4 to 4:7.

Table 4:4 compiles the participants' responses regarding the maturity level of the first dimension based on their ages. From the information shown below, it can be

concluded that the respondents within the 60 – 69 age group gave the lowest rating for this dimension and its individual descriptors *(D1 Mean = 5.88, Item D1Q6 Mean = 2.96, Item D1Q7 Mean = 2.92)*. The respondents within this age group gave their schools a middle/low rating for Supportive and Shared Leadership, which indicates that they perceive that while the administrators occasionally ask for their input when making decisions for the school community, it is ultimately the administration that makes the decisions for the school. The group that gave the highest maturity ratings belonged to the 20 – 29 age group, which can lead to the conclusion that the respondents in this age group feel like they have a greater measure of control over decision making in their schools *(D1 Mean = 6.656, Item D1Q6 Mean = 3.36, Item D1Q7 Mean = 3.36)*.

Table 4:4

Descriptive Statistics for Dimension 1 (by Age)

	D1		D1Q6		D1Q7	
	Min	Max	Min	Max	Min	Max
Range						
19 & Under	4.00	8.00	2.00	5.00	1.00	4.00
20 – 29	2.00	10.00	1.00	5.00	1.00	5.00
30 – 39	2.00	10.00	1.00	5.00	1.00	5.00
40 – 49	2.00	10.00	1.00	5.00	1.00	5.00
50 – 59	2.00	10.00	1.00	5.00	1.00	5.00
60 – 69	3.00	8.00	2.00	4.00	1.00	4.00
Mean						
19 & Under	6.20		3.60		2.60	
20 – 29	6.65		3.36		3.36	
30 – 39	6.60		3.36		3.27	
40 – 49	6.37		3.24		3.16	
50 – 59	6.32		3.18		3.14	
60 – 69	5.88		2.96		2.92	
Std. Deviation						
19 & Under	1.48324		1.14018		1.14018	
20 – 29	1.80542		.82232		.99300	
30 – 39	1.58501		.83032		.83612	
40 – 49	1.87466		.99841		.96576	
50 – 59	1.69224		.84397		.96200	
60 – 69	1.58955		.78951		.90921	

Table 4:5 looks at the different perceptions of the participants for the first dimension based on their gender. The information shown below indicates that while both genders gave their schools a mid-level maturity rating for Supportive and Shared Leadership, the mean scores of the female respondents are higher than those of the male

respondents. This can lead to the conclusion that females feel that they play a greater role in the decision making process for their schools as compared to the males *(Female D1 Mean = 6.48, Item D1Q6 Mean = 3.29, Item D1Q7 mean = 3.22)*.

Table 4:5

Descriptive Statistics for Dimension 1 (by Gender)

	D1		D1Q6		D1Q7	
	Min	Max	Min	Max	Min	Max
Range						
Female	2.00	10.00	1.00	5.00	1.00	5.00
Male	2.00	10.00	1.00	5.00	1.00	5.00
Mean						
Female	6.48		3.29		3.22	
Male	6.37		3.23		3.16	
Std. Deviation						
Female	1.79114		.89745		.97470	
Male	1.66488		.88955		.87197	

Table 4:6 shows the results of the comparative analysis of the perceptions of the respondents regarding the maturity level of the first dimension in their schools based on the position they hold in the schools. The data below indicates that administrators gave their schools a maturity rating of high/middle, with their mean scores for this dimension and the items under it closer to 4 than to 3 *(Administrators D1 Mean = 7.41, Item D1 Q6 Mean = 3.70, Item D1 Q7 Mean = 3.70)*. In contrast, the teachers only gave their respective schools a mid-level maturity rating *(Teachers D1 Mean = 6.35, Item D1Q6 Mean = 3.22, Item D1Q7 Mean = 3.15)*.

Table 4:6

Descriptive Statistics for Dimension 1 (by Position)

	D1		D1Q6		D1Q7	
	Min	Max	Min	Max	Min	Max
Range						
Teacher	2.00	10.00	1.00	5.00	1.00	5.00
Administrator	2.00	10.00	2.00	5.00	1.00	5.00
Mean						
Teacher	6.35		3.22		3.15	
Administrator	7.41		3.70		3.70	
Std. Deviation						
Teacher	1.69016		.86593		.90840	
Administrator	1.94426		1.09074		.98841	

The last analysis for the dimension of Supportive and Shared Leadership looked at their ratings based on the levels where they spent the most of their time. The data in Table 4:7 shows that while all of the groups gave similar mid-level maturity ratings for their schools, the respondents in the high school levels gave the lowest ratings *(HS D1 Mean = 6.20, Item D1Q6 Mean = 3.19, Item D1Q7 Mean = 3.13)*, while those in the middle schools gave the highest ratings *(MS D1 Mean = 6.68, Item D1Q6 Mean = 3.38, Item D1Q7 Mean = 3.29)*.

Table 4:7

Descriptive Statistics for Dimension 1 (by Level)

	D1		D1Q6		D1Q7	
	Min	Max	Min	Max	Min	Max
Range						
Elementary	2.00	10.00	1.00	5.00	1.00	5.00
Middle School	2.00	10.00	1.00	5.00	1.00	5.00
High School	2.00	10.00	1.00	5.00	1.00	5.00
Mean						
Elementary	6.51		3.31		3.22	
Middle School	6.68		3.38		3.29	
High School	6.20		3.13		3.13	
Std. Deviation						
Elementary	1.68920		.85770		.92289	
Middle School	1.61123		.86959		.88587	
High School	1.90239		.94994		.99366	

The second set of descriptive analysis compares the perceptions of the respondents using the same categories as those mentioned for the first dimension. The second dimension is Shared Values and Vision and the results for this dimension are shown below in Tables 4:8 to 4:11. Based on their age groupings, it is concluded that those respondents between the ages of 30 and 39 gave the highest ratings for this dimension and its individual descriptors *(D2 Mean = 10.51, D2Q8 Mean = 3.41, D2Q9 Mean = 3.62, D2Q10 Mean = 3.58)*, while those in the 19 and under age group gave their schools the lowest ratings *(D2 Mean = 8.40, D2Q8 Mean = 3.00, D2Q9 Mean = 2.80, D2Q10 Mean = 2.60)*. This information is shown below in Table 4:8.

Table 4:8

Descriptive Statistics for Dimension 2 (by Age)

	D2		D2Q8		D2Q9		D2Q10	
	Min	Max	Min	Max	Min	Max	Min	Max
Range								
19 & Under	6.00	12.00	2.00	4.00	2.00	4.00	2.00	4.00
20 – 29	3.00	15.00	1.00	5.00	1.00	5.00	1.00	5.00
30 – 39	3.00	15.00	1.00	5.00	1.00	5.00	1.00	5.00
40 – 49	3.00	15.00	1.00	5.00	1.00	5.00	1.00	5.00
50 – 59	5.00	15.00	2.00	5.00	2.00	5.00	1.00	5.00
60 – 69	4.00	15.00	1.00	5.00	1.00	5.00	1.00	5.00
Mean								
19 & Under	8.40		3.00		2.80		2.60	
20 – 29	10.10		3.39		3.43		3.30	
30 – 39	10.51		3.41		3.62		3.58	
40 – 49	10.07		3.34		3.50		3.38	
50 – 59	10.26		3.39		3.53		3.38	
60 – 69	9.80		3.04		3.44		3.32	
Std. Deviation								
19 & Under	2.50998		1.00000		.83666		.89443	
20 – 29	2.34850		.78213		.89873		.89234	
30 – 39	2.83294		.91903		1.03525		1.02276	
40 – 49	2.87994		.93289		.97009		.98414	
50 – 59	2.84431		.91887		.94916		1.16124	
60 – 69	2.84312		1.01980		1.04403		1.02956	

Similar to the results for the Supportive and Shared Leadership dimension, the results of the respondents for D2 and D2Q8, according to their gender again indicate that females gave their respective schools a higher rating compared to the males. In the case of the individual descriptors, the male respondents gave their schools a higher rating

compared to the females for D2Q9 *(Females Mean = 3.50, Males Mean = 3.53)* and D2Q10 *(Females Mean = 3.40, Males Mean = 3.41)*. Both genders gave their schools a mid-level maturity rating. This information is found in Table 4:9.

Table 4:9

Descriptive Statistics for Dimension 2 (by Gender)

	D2		D2Q8		D2Q9		D2Q10	
	Min	Max	Min	Max	Min	Max	Min	Max
Range								
Female	3.00	15.00	1.00	5.00	1.00	5.00	1.00	5.00
Male	3.00	15.00	1.00	5.00	1.00	5.00	1.00	5.00
Mean								
Female	10.21		3.39		3.50		3.40	
Male	10.14		3.29		3.53		3.41	
Std. Deviation								
Female	2.87869		.93257		1.03007		1.06153	
Male	2.64950		.87151		.91949		.95421	

The data shown in Table 4:10 help in comparing the perceptions of the teachers and administrators of the maturity level of the second dimension of PLCs in their schools. The results shown below indicate that similar to the first dimension, the administrators once again gave their schools high/middle rating as compared to the mid-level maturity rating given by the teachers.

Table 4:10

Descriptive Statistics for Dimension 2 (by Position)

	D2		D2Q8		D2Q9		D2Q10	
	Min	Max	Min	Max	Min	Max	Min	Max
Range								
Teacher	3.00	15.00	1.00	5.00	1.00	5.00	1.00	5.00
Administrator	5.00	15.00	2.00	5.00	2.00	5.00	1.00	5.00
Mean								
Teacher	10.07		3.31		3.48		3.37	
Administrator	12.10		4.00		4.13		3.97	
Std. Deviation								
Teacher	2.73141		.88675		.96923		1.00026	
Administrator	2.65186		.84327		.88465		1.08503	

The last analysis for this dimension shows a comparison of the perceptions of the respondents based on the level where they spend the most of their time. The results again show that those working in the high school levels gave their schools a lower rating in terms of the maturity of Shared Vision and Values. The data in Table 4:11 also show that except for D2Q8 *(Elementary D2Q8 Mean = 3.40, Middle School D2Q8 Mean = 3.44)*, the respondents from the elementary levels gave their schools a higher rating for the individual descriptors than those working in the middle school levels.

Table 4:11

Descriptive Statistics for Dimension 2 (by Level)

	D2		D2Q8		D2Q9		D2Q10	
	Min	Max	Min	Max	Min	Max	Min	Max
Range								
Elementary	3.00	15.00	1.00	5.00	1.00	5.00	1.00	5.00
Mid. School	3.00	15.00	1.00	5.00	1.00	5.00	1.00	5.00
High School	3.00	15.00	1.00	5.00	1.00	5.00	1.00	5.00
Mean								
Elementary	10.38		3.40		3.59		3.47	
Mid. School	10.36		3.44		3.56		3.46	
High School	9.94		3.27		3.42		3.33	
Std. Deviation								
Elementary	2.76446		.88798		.99596		1.02152	
Mid. School	2.66179		.86153		.92453		.96978	
High School	2.94913		.97074		1.02829		1.08098	

The third dimension deals with Collective Learning and Application of that Learning. As with the first two dimensions the perceptions of the respondents were once again compared based on their groupings of age, gender, position occupied in the school and the level where they spent the most of their career. The first comparison dealt with the differences in the perceptions of the respondents based on their age. From the information shown in Tables 4:12 and 4:13, it can be concluded that the respondents gave their schools a mid-level maturity rating for this dimension and for the individual descriptors classified under it. For the overall dimension, the respondents aged 50-59 gave the highest ratings *(D3 Mean = 16.98)* while those in the 19 and under age group gave their schools the lowest ratings *(D3 Mean = 14.20)*. For all the individual

descriptors under this dimension, the lowest ratings came from the respondents in the 19 and under age group. For D3Q11, the highest ratings were from the 40 – 49 age group *(D3Q11 Mean = 3.31)* and for D3Q12, the highest ratings were given by the respondents in the 20 – 29 age group *(D3Q12 Mean = 3.41)*.

Table 4:12

Descriptive Statistics for Dimension 3 (by Age)

	D3		D3Q11		D3Q12	
	Min	Max	Min	Max	Min	Max
Range						
19 & Under	11.00	20.00	2.00	4.00	2.00	4.00
20 – 29	5.00	25.00	1.00	5.00	1.00	5.00
30 – 39	5.00	25.00	1.00	5.00	1.00	5.00
40 – 49	5.00	25.00	1.00	5.00	1.00	5.00
50 – 59	6.00	25.00	1.00	5.00	1.00	5.00
60 – 69	6.00	25.00	1.00	5.00	1.00	5.00
Mean						
19 & Under	14.20		2.80		2.80	
20 – 29	16.61		3.21		3.41	
30 – 39	16.89		3.29		3.39	
40 – 49	16.87		3.31		3.35	
50 – 59	16.98		3.28		3.30	
60 – 69	15.60		2.88		3.12	
Std. Deviation						
19 & Under	3.56371		.83666		.83666	
20 – 29	3.97829		.88280		.87896	
30 – 39	4.50948		1.00522		.98071	
40 – 49	4.52974		.95073		.99842	
50 – 59	4.31369		.94391		1.05232	
60 – 69	4.69929		1.05357		1.20139	

For the three remaining descriptors classified under the third dimension, the highest ratings came from those in the 50 – 59 age group *(D3Q13 Mean = 3.49, D3Q14 Mean = 3.56)*, except in the case of D3Q15, where the highest ratings came from those in the 30 – 39 age group *(D3Q15 Mean = 3.40)*.

Table 4:13

Descriptive Statistics for Dimension 3 (by Age)

	D3Q13		D3Q14		D3Q15	
	Min	Max	Min	Max	Min	Max
Range						
19 & Under	2.00	4.00	2.00	4.00	2.00	4.00
20 – 29	1.00	5.00	1.00	5.00	1.00	5.00
30 – 39	1.00	5.00	1.00	5.00	1.00	5.00
40 – 49	1.00	5.00	1.00	5.00	1.00	5.00
50 – 59	1.00	5.00	1.00	5.00	1.00	5.00
60 – 69	1.00	5.00	1.00	5.00	1.00	5.00
Mean						
19 & Under	3.00		2.80		2.80	
20 – 29	3.34		3.35		3.32	
30 – 39	3.46		3.53		3.40	
40 – 49	3.45		3.49		3.38	
50 – 59	3.49		3.56		3.38	
60 – 69	3.16		3.28		3.16	
Std. Deviation						
19 & Under	1.000		.83666		.83666	
20 – 29	.89071		.89254		.93439	
30 – 39	1.00924		.96813		.99511	
40 – 49	.95694		.97009		1.05215	
50 – 59	1.00503		.96198		1.02527	
60 – 69	.98658		.97980		1.02794	

Based on the results comparing the perceptions of the respondents regarding the third dimension according to their gender, it can be concluded that the female respondents gave their schools a higher rating compared to the male respondents. The ratings given by the respondents for this dimension indicate that the PLCs of the schools surveyed exhibited only mid-level maturity for the third dimension, which is Collective Learning and Application of that Learning. This information is summarized in Tables 4:14 and 4:15.

Table 4:14

Descriptive Statistics for Dimension 3 (by Gender)

	D3		D3Q11		D3Q12	
	Min	Max	Min	Max	Min	Max
Range						
Female	5.00	25.00	1.00	5.00	1.00	5.00
Male	5.00	25.00	1.00	5.00	1.00	5.00
Mean						
Female	16.88		3.26		3.39	
Male	16.48		3.24		3.26	
Std. Deviation						
Female	4.39203		.96039		.98939	
Male	4.50529		.97083		.99611	

Table 4:15

Descriptive Statistics for Dimension 3 (by Gender)

	D3Q13		D3Q14		D3Q15	
	Min	Max	Min	Max	Min	Max
Range						
Female	1.00	5.00	1.00	5.00	1.00	5.00
Male	1.00	5.00	1.00	5.00	1.00	5.00
Mean						
Female	3.45		3.49		3.38	
Male	3.35		3.42		3.31	
Std. Deviation						
Female	.98427		.98151		1.01346	
Male	.96857		.93485		1.01473	

Just like the first and second dimensions, the administrators gave higher ratings for the third dimension in comparison to the teachers. The ratings given by the administrators equated to high/middle maturity *(D3 Mean = 19.54, D3Q11 Mean = 3.82, D3Q12 Mean = 3.86, D3Q13 Mean = 3.97, D3Q14 Mean = 3.97, D3Q15 Mean = 3.89)*, while the ratings given by the teachers ranked the PLCs of their schools only at mid-level maturity *(D3 Mean = 16.51, D3Q11 Mean = 3.20, D3Q12 Mean = 3.30, D3Q13 Mean = 3.37, D3Q14 Mean = 3.43, D3Q15 Mean = 3.32)*. This information is summarized in Tables 4:16 and 4:17.

Table 4:16

Descriptive Statistics for Dimension 3 (by Position)

	D3		D3Q11		D3Q12	
	Min	Max	Min	Max	Min	Max
Range						
Teacher	5.00	25.00	1.00	5.00	1.00	5.00
Administrator	8.00	25.00	1.00	5.00	1.00	5.00
Mean						
Teacher	16.51		3.20		3.30	
Administrator	19.54		3.82		3.86	
Std. Deviation						
Teacher	4.35103		.94399		.96813	
Administrator	4.64139		1.03932		1.08748	

Table 4:17

Descriptive Statistics for Dimension 3 (by Position)

	D3Q13		D3Q14		D3Q15	
	Min	Max	Min	Max	Min	Max
Range						
Teacher	1.00	5.00	1.00	5.00	1.00	5.00
Administrator	2.00	5.00	2.00	5.00	1.00	5.00
Mean						
Teacher	3.37		3.43		3.32	
Administrator	3.97		3.97		3.89	
Std. Deviation						
Teacher	.97335		.95923		1.00072	
Administrator	.95427		.93069		1.07968	

In the comparison of the responses according to the levels where the spent the most of their careers the respondents who worked in the high school levels gave the lowest ratings for their schools' PLC maturity levels *(D3 Mean = 16.20, D3Q11 Mean = 3.13, D3Q12 Mean = 3.22, D3Q13 Mean = 3.32, D3Q14 Mean = 3.41, D3Q15 Mean = 3.25)*. The respondents from the elementary levels gave the highest ratings for D3 *(Mean = 17.06)*, D3Q12 *(Mean = 3.43)*, D3Q13 *(Mean = 3.49)* and D3Q15 *(Mean = 3.42)*. The respondents from the middle school levels gave the highest ratings for D3Q11 *(Mean = 3.34)* and D3Q14 *(Mean = 3.52)*. This information is summarized in Tables 4:18 and 4:19

Table 4:18

Descriptive Statistics for Dimension 3 (by Level)

	D3		D3Q11		D3Q12	
	Min	Max	Min	Max	Min	Max
Range						
Elementary	5.00	25.00	1.00	5.00	1.00	5.00
Mid. School	5.00	25.00	1.00	5.00	1.00	5.00
High School	5.00	25.00	1.00	5.00	1.00	5.00
Mean						
Elementary	17.06		3.32		3.43	
Mid. School	17.05		3.34		3.33	
High School	16.20		3.13		3.22	
Std. Deviation						
Elementary	4.39594		.95189		1.01897	
Mid. School	4.16291		.97102		.90776	
High School	4.75342		.97393		1.04447	

Table 4:19

Descriptive Statistics for Dimension 3 (by Level)

	D3Q13		D3Q14		D3Q15	
	Min	Max	Min	Max	Min	Max
Range						
Elementary	1.00	5.00	1.00	5.00	1.00	5.00
Mid. School	1.00	5.00	1.00	5.00	1.00	5.00
High School	1.00	5.00	1.00	5.00	1.00	5.00
Mean						
Elementary	3.49		3.51		3.42	
Mid. School	3.45		3.52		3.41	
High School	3.32		3.41		3.25	
Std. Deviation						
Elementary	.96428		.92100		.98203	
Mid. School	.90318		.90211		.93127	
High School	1.06606		1.07368		1.12704	

The information shown in Tables 4:20 to 4:23 summarizes the differing perceptions of the respondents for the fourth dimension, or Peer Review and Observation. Based on the results displayed in Table 4:20, the highest ratings came from the respondents aged 19 and under for D4 and the attributes classified under this dimension *(D4 Mean = 7.80, D4Q16 Mean = 3.60, D4Q17 Mean = 4.20)*. Based on these scores, the respondents aged 19 and under gave a rating of high/middle for this dimension. The lowest ratings came from the respondents aged 20 – 29, who gave a mid-level maturity rating for D4 and D4Q16 *(D4 = 4.70 and D4Q16 Mean = 2.93),* and the respondents aged 60 – 69 who also gave a mid-level maturity rating for D4Q17 *(D4Q17 Mean = 2.80)*

Table 4:20

Descriptive Statistics for Dimension 4 (by Age)

	D4		D4Q16		D4Q17	
	Min	Max	Min	Max	Min	Max
Range						
19 & Under	4.00	10.00	2.00	5.00	2.00	5.00
20 – 29	2.00	10.00	1.00	5.00	1.00	5.00
30 – 39	2.00	10.00	1.00	5.00	1.00	5.00
40 – 49	2.00	10.00	1.00	5.00	1.00	5.00
50 – 59	2.00	10.00	1.00	5.00	1.00	5.00
60 – 69	2.00	10.00	1.00	5.00	1.00	5.00
Mean						
19 & Under	7.80		3.60		4.20	
20 – 29	4.70		2.93		2.97	
30 – 39	5.92		3.08		3.12	
40 – 49	5.90		3.20		3.15	
50 – 59	6.13		3.30		3.20	
60 – 69	5.80		3.07		2.80	
Std. Deviation						
19 & Under	2.38747		1.14018		1.30384	
20 – 29	3.05065		1.16537		1.23044	
30 – 39	2.34336		.96850		1.09339	
40 – 49	2.44340		.95041		1.07475	
50 – 59	2.26871		.85266		1.07870	
60 – 69	2.11696		.97665		1.09615	

The results shown below in Table 4:21 indicate that while both gender groups gave a mid-level maturity rating for their respective schools, it is the female respondents who gave higher ratings to their schools for Peer Review and Observation *(D4 Mean* =

5.78, D4Q16 Mean = 3.21, D4Q17 Mean = 3.13) as compared to the males *(D4 Mean = 5.74, D4Q16 Mean = 3.02, D4Q17 Mean = 3.09)*.

Table 4:21 *Descriptive Statistics for Dimension 4 (by Gender)*

	D4		D4Q16		D4Q17	
	Min	Max	Min	Max	Min	Max
Range						
Female	2.00	10.00	1.00	5.00	1.00	5.00
Male	2.00	10.00	1.00	5.00	1.00	5.00
Mean						
Female	5.78		3.21		3.13	
Male	5.74		3.02		3.09	
Std. Deviation						
Female	2.61708		.99934		1.10797	
Male	2.35900		.95664		1.12654	

In comparing the mean scores for the teachers and administrators for the maturity levels of their PLCs in terms of Peer Review and Observation, it was found that while both groups gave their respective schools a middle/low rating, the scores given by the administrators were higher *(D4 Mean = 5.86, D4Q16 Mean = 3.37, D4Q17 Mean = 3.27)*, compared to the teachers *(D4 Mean = 5.73, D4Q16 Mean = 3.11, D4Q17 Mean = 3.10)*. This information is summarized in Table 4:22

Table 4:22

Descriptive Statistics for Dimension 4 (by Position)

	D4		D4Q16		D4Q17	
	Min	Max	Min	Max	Min	Max
Range						
Teacher	2.00	10.00	1.00	5.00	1.00	5.00
Administrator	2.00	10.00	1.00	5.00	1.00	5.00
Mean						
Teacher	5.73		3.11		3.10	
Administrator	5.86		3.37		3.27	
Std. Deviation						
Teacher	2.51888		.99663		1.12952	
Administrator	2.72778		.84760		1.00157	

As seen in the information summarized in Table 4:23, the respondents gave their schools a mid-level maturity rating for the fourth dimension and the attributes classified under it. The highest rating for D4 came from the respondents who worked in the middle school levels *(Mean = 5.86),* while the lowest came from those who worked in the high school levels *(Mean = 5.69)*. For D4Q16, the highest scores came from those who worked in the elementary levels *(Mean = 3.17)*, while the highest scores came from those who worked in the middle school levels *(Mean = 3.09)*. For D4Q17, the highest scores came from those respondents who worked in the high school levels *(Mean = 3.25)*, while the lowest scores came from those who worked in the middle school levels *(Mean = 3.03)*.

Table 4:23

Descriptive Statistics for Dimension 4 (by Level)

	D4		D4Q16		D4Q17	
	Min	Max	Min	Max	Min	Max
Range						
Elementary	2.00	10.00	1.00	5.00	1.00	5.00
Middle School	2.00	10.00	1.00	5.00	1.00	5.00
High School	2.00	10.00	1.00	5.00	1.00	5.00
Mean						
Elementary	5.74		3.17		3.05	
Middle School	5.86		3.09		3.03	
High School	5.69		3.12		3.25	
Std. Deviation						
Elementary	2.53292		1.01928		1.10673	
Middle School	2.23423		.90743		1.04588	
High School	2.75141		1.02321		1.18521	

The last dimension to be discussed, or the fifth dimension, deals with Supportive Conditions. For this dimension, the respondents aged 19 and under gave the highest ratings for the PLCs of their schools *(D5 Mean = 21.20, D5Q18 Mean = 4.40, D5Q19 Mean = 4.00, D5Q20 Mean = 4.60, D5Q21 Mean = 3.80 and D5Q22 Mean = 4.40)*. These scores gave their schools a high/middle maturity rating. The lowest scores, or a mid-level maturity rating, for D5 *(Mean = 13.21)* and D5Q18 *(Mean = 3.44)* came from the respondents aged 20 – 29. Those aged 30 – 39 gave the lowest ratings for D5Q20 *(Mean = 3.53),* equivalent to a high/middle maturity rating, while those aged 60 – 69 gave the lowest ratings for D5Q19 *(Mean = 3.11)*, D5Q21 *(Mean = 3.00)* and D5Q22

(Mean = 3.03). These scores translate to a mid-level maturity rating for PLCs. This information is shown below in Tables 4:24 and 4:25.

Table 4:24

Descriptive Statistics for Dimension 5 (by Age)

	D5		D5Q18		D5Q19	
	Min	Max	Min	Max	Min	Max
Range						
19 & Under	17.00	25.00	3.00	4.00	3.00	4.00
20 – 29	5.00	25.00	1.00	5.00	1.00	5.00
30 – 39	5.00	25.00	1.00	5.00	1.00	5.00
40 – 49	5.00	25.00	1.00	5.00	1.00	5.00
50 – 59	5.00	25.00	1.00	5.00	1.00	5.00
60 – 69	5.00	23.00	1.00	5.00	1.00	5.00
Mean						
19 & Under	21.20		4.40		4.00	
20 – 29	13.21		3.44		3.11	
30 – 39	15.52		3.49		3.39	
40 – 49	15.83		3.57		3.32	
50 – 59	16.03		3.65		3.55	
60 – 69	15.42		3.69		3.11	
Std. Deviation						
19 & Under	2.86356		.54772		1.00000	
20 – 29	8.16335		1.17764		1.19886	
30 – 39	6.04208		.92310		.98418	
40 – 49	6.08692		.95166		.97072	
50 – 59	3.12570		.95110		1.06326	
60 – 69	5.73532		.92819		1.03255	

Table 4:25

Descriptive Statistics for Dimension 5 (by Age)

	D5Q20		D5Q21		D5Q22	
	Min	Max	Min	Max	Min	Max
Range						
19 & Under	4.00	5.00	3.00	5.00	4.00	5.00
20 – 29	1.00	5.00	1.00	5.00	1.00	5.00
30 – 39	1.00	5.00	1.00	5.00	1.00	5.00
40 – 49	1.00	5.00	1.00	5.00	1.00	5.00
50 – 59	1.00	5.00	1.00	5.00	1.00	5.00
60 – 69	1.00	5.00	1.00	5.00	1.00	5.00
Mean						
19 & Under	4.60		3.80		4.40	
20 – 29	3.59		3.24		3.29	
30 – 39	3.53		3.18		3.26	
40 – 49	3.67		3.33		3.43	
50 – 59	3.76		3.22		3.29	
60 – 69	3.57		3.00		3.03	
Std. Deviation						
19 & Under	.54772		.83666		.54772	
20 – 29	1.11529		1.12430		1.17683	
30 – 39	1.01893		.97718		.96670	
40 – 49	.99530		.84862		.97379	
50 – 59	.98537		1.07357		1.03962	
60 – 69	.90213		.89443		.99923	

Tables 4:26 and 4:27 show the comparison of the mean scores of the respondents for the fifth dimension based on their gender. The results indicate that for the fifth dimension and the attributes classified under it under supportive conditions, the female respondents gave higher ratings *(D5 Mean = 15.45, D5Q18 Mean = 3.55, D5Q19 Mean = 3.39, D5Q20 Mean = 3.63, D5Q21 Mean = 3.27, D5Q22 Mean = 3.34)* compared to

the male respondents *(D5 Mean = 15.25, D5Q18 Mean = 3.52, D5Q19 Mean = 3.24, D5Q20 Mean = 3.61, D5Q21 Mean = 3.19, D5Q22 Mean = 3.30)*. The respondents from both genders gave their PLCs a mid-level maturity rating, except for the attributes D5Q18 and D5Q20, where the PLCs were rated as having high/middle maturity.

Table 4:26

Descriptive Statistics for Dimension 5 (by Gender)

	D5		D5Q18		D5Q19	
	Min	Max	Min	Max	Min	Max
Range						
Female	5.00	25.00	1.00	5.00	1.00	5.00
Male	2.00	10.00	1.00	5.00	1.00	5.00
Mean						
Female	15.45		3.55		3.39	
Male	15.25		3.52		3.24	
Std. Deviation						
Female	6.60904		.94739		1.01915	
Male	6.26048		1.02149		1.04728	

Table 4:27

Descriptive Statistics for Dimension 5 (by Gender)

	D5Q20		D5Q21		D5Q22	
	Min	Max	Min	Max	Min	Max
Range						
Female	1.00	5.00	1.00	5.00	1.00	5.00
Male	1.00	5.00	1.00	5.00	1.00	5.00
Mean						
Female	3.63		3.27		3.34	
Male	3.61		3.19		3.30	
Std. Deviation						
Female	1.02244		1.00245		1.03073	
Male	1.02016		.91424		.99411	

As with the previous dimensions, the administrators gave higher ratings for their PLCs *(D5 Mean = 15.52, D5Q18 Mean = 3.66, D5Q19 Mean = 3.49, D5Q20 Mean = 3.94, D5Q21 Mean = 3.37, D5Q22 Mean = 3.37)* compared to the teachers *(D5 Mean = 15.28, D5Q18 Mean = 3.53, D5Q19 Mean = 3.31, D5Q20 Mean = 3.59, D5Q21 Mean = 3.23, D5Q22 Mean = 3.32)*. For both groups, the scores range from mid-level maturity ratings for D5, D5Q19, D5Q21 and D5Q22 to high/middle maturity ratings for D5Q18 and

D5Q20 under Supportive Conditions. This information is displayed in Tables 4:28 and 4:29.

Table 4:28

Descriptive Statistics for Dimension 5 (by Position)

	D5		D5Q18		D5Q19	
	Min	Max	Min	Max	Min	Max
Range						
Teacher	5.00	25.00	1.00	5.00	1.00	5.00
Administrator	5.00	20.00	1.00	5.00	1.00	5.00
Mean						
Teacher	15.28		3.53		3.31	
Administrator	15.52		3.66		3.49	
Std. Deviation						
Teacher	6.50336		.99068		1.05406	
Administrator	6.98957		.93095		.90272	

Table 4:29

Descriptive Statistics for Dimension 5 (by Position)

	D5Q20		D5Q21		D5Q22	
	Min	Max	Min	Max	Min	Max
Range						
Teacher	1.00	5.00	1.00	5.00	1.00	5.00
Administrator	1.00	5.00	1.00	5.00	1.00	5.00
Mean						
Teacher	3.59		3.23		3.32	
Administrator	3.94		3.37		3.37	
Std. Deviation						
Teacher	1.04008		.98980		1.02668	
Administrator	.79308		.93725		1.0348	

The last comparison for this descriptor looks at the difference in the perceptions of the respondents regarding the maturity level of the PLCs of their schools through supportive conditions based on the academic levels where they spent the most of their careers. The highest ratings came from the respondents who worked in the high school levels *(D5 Mean = 15.84, D5Q18 Mean = 3.81, D5Q19 Mean = 3.60, D5Q20 Mean = 3.94, D5Q21 Mean = 3.43, D5Q22 Mean = 3.55)*. They gave their PLCs a high/middle maturity rating, except in the case of D5Q21, where the rating was mid-level maturity. The lowest scores came from the respondents who worked in the middle school levels *(D5 Mean = 15.13, D5Q18 Mean = 3.38, D5Q19 Mean = 3.20, D5Q20 Mean = 3.46, D5Q21 Mean = 3.10, D5Q22 Mean = 3.16)*. They gave their PLCs a mid-level maturity rating for Supportive Conditions. This data is summarized in Tables 4:30 and 4:31.

Table 4:30 *Descriptive Statistics for Dimension 5 (by Level)*

	D5		D5Q18		D5Q19	
	Min	Max	Min	Max	Min	Max
Range						
Elementary	5.00	25.00	1.00	5.00	1.00	5.00
Mid. School	5.00	25.00	1.00	5.00	1.00	5.00
High School	5.00	25.00	1.00	5.00	1.00	5.00
Mean						
Elementary	15.23		3.44		3.22	
Mid. School	15.13		3.38		3.20	
High School	15.84		3.81		3.60	
Std. Deviation						
Elementary	6.16676		.98088		1.00377	
Mid. School	6.17778		.95361		1.02156	
High School	7.10446		.95548		1.06016	

Table 4:31

Descriptive Statistics for Dimension 5 (by Level)

	D5Q20		D5Q21		D5Q22	
	Min	Max	Min	Max	Min	Max
Range						
Elementary	1.00	5.00	1.00	5.00	1.00	5.00
Mid. School	1.00	5.00	1.00	5.00	1.00	5.00
High School	1.00	5.00	1.00	5.00	1.00	5.00
Mean						
Elementary	3.49		3.20		3.26	
Mid. School	3.46		3.10		3.16	
High School	3.94		3.43		3.57	
Std. Deviation						
Elementary	1.02028		.98382		1.02571	
Mid. School	1.10542		1.05197		1.05967	
High School	.87502		.85996		.92557	

Tables 4:32 to 4:35 contain compiled information regarding the mean scores of the respondents segregated according to the schools where they worked. Based on the information summarized in these tables, the data shows that the mean scores of the various schools were higher for dimensions 2 and 3. The mean scores for the individual descriptors under these dimensions were given scores of 3 to 4 by the respondents. This indicates a rating of mid-level maturity to high/middle maturity. For dimensions 1, 4 and 5, the mean scores ranged from 2 to 3, indicating low/middle to mid-level maturity. The data also shows that while these three dimensions were given approximately the same

range of ratings, the scores for dimension 1 were higher compared to those of the ratings for dimension 4 and 5.

Table 4:32

Mean Scores of the Respondents Grouped by Collector Schools (Dimension 1 and 4)

School	D1	D1Q6	D1Q7	D4	D4Q16	D4Q17
School 1	6.75	3.37	3.37	5.62	2.75	2.87
School 2	6.33	3.83	2.50	6.50	3.00	3.50
School 3	7.02	3.55	3.46	5.36	2.68	2.68
School 4	6.47	3.27	3.27	5.63	2.89	2.81
School 5	6.77	3.42	3.35	5.70	2.89	2.81
School 6	5.97	3.10	3.18	5.92	3.02	3.05
School 7	6.16	3.10	3.06	6.10	2.96	3.13
School 8	5.92	3.00	2.92	5.75	2.91	2.83
School 9	7.60	3.60	4.00	4.80	2.20	2.60
School 10	6.03	3.10	2.92	5.76	2.88	2.88
School 11	6.07	3.07	3.00	6.15	2.92	3.23
School 12	6.00	3.00	3.00	5.66	2.75	2.91
School 13	6.04	2.95	3.09	6.27	3.13	3.21
School 14	6.81	3.54	3.27	5.18	2.36	2.81
School 15	6.92	3.64	3.28	4.64	2.35	2.28
School 16	6.05	3.11	2.94	5.64	3.00	2.82
School 17	6.41	3.29	3.11	6.47	3.17	3.29
School 18	6.50	3.25	3.25	6.27	3.09	3.18
School 19	6.53	3.38	3.15	5.91	2.83	3.08
School 20	5.60	2.80	2.80	7.80	3.80	4.00
School 21	6.25	3.25	3.00	5.00	2.75	2.25
School 22	6.78	3.42	3.35	4.53	2.15	2.38
School 23	6.45	3.18	3.27	4.81	2.63	2.18
School 24	6.80	3.50	3.30	5.85	2.80	3.05
School 25	6.00	3.00	3.00	5.00	3.00	2.71
School 26	7.00	3.75	3.25	6.75	3.37	3.37
School 27	6.77	3.33	3.44	5.22	2.72	2.50

Table 4:33

Mean Scores of the Respondents Grouped by Collector Schools (Dimension 2)

School	D2	D2Q8	D2Q9	D2Q10
School 1	9.62	3.25	3.00	3.37
School 2	9.16	3.33	3.16	2.66
School 3	10.84	3.65	3.65	3.52
School 4	10.48	3.35	3.68	3.57
School 5	10.74	3.45	3.70	3.58
School 6	9.74	3.39	3.42	3.18
School 7	9.56	3.21	3.34	3.33
School 8	9.66	3.08	3.41	3.16
School 9	11.20	3.60	4.00	3.60
School 10	9.73	3.12	3.46	3.26
School 11	10.15	3.30	3.46	3.38
School 12	9.75	3.50	3.16	3.08
School 13	9.13	3.00	3.04	3.09
School 14	10.27	3.36	3.55	3.36
School 15	11.42	3.71	3.71	4.0
School 16	10.17	3.17	3.47	3.52
School 17	9.05	3.25	3.25	3.12
School 18	10.18	3.36	3.45	3.36
School 19	9.50	3.25	3.16	3.08
School 20	8.40	2.80	2.80	2.80
School 21	10.00	3.25	3.25	3.50
School 22	11.42	3.85	3.78	3.78
School 23	11.27	3.72	3.81	3.72
School 24	10.45	3.45	3.60	3.57
School 25	11.87	3.62	4.37	3.87
School 26	10.25	3.25	3.62	3.37
School 27	10.38	3.41	3.77	3.58

Table 4:34

Mean Scores of the Respondents Grouped by Collector Schools (Dimension 3)

School	D3	D3Q11	D3Q12	D3Q13	D3Q14	D3Q15
School 1	14.75	3.57	3.25	3.00	2.75	2.62
School 2	14.83	3.00	2.83	2.83	3.16	3.00
School 3	17.63	3.50	3.61	3.53	3.67	3.47
School 4	16.60	3.15	3.29	3.43	3.49	3.44
School 5	17.37	3.33	3.43	3.46	3.60	3.53
School 6	16.07	3.02	3.24	3.39	3.57	3.34
School 7	16.06	3.10	3.13	3.30	3.43	3.20
School 8	18.00	3.41	3.41	3.66	3.75	3.75
School 9	16.60	3.20	3.50	3.40	3.60	3.60
School 10	17.15	3.38	3.38	3.57	3.46	3.34
School 11	16.38	3.38	3.23	3.25	3.53	3.23
School 12	16.66	3.25	3.33	3.66	3.25	3.16
School 13	15.18	2.97	3.16	3.14	3.02	2.95
School 14	16.00	3.27	3.36	3.18	3.27	3.20
School 15	18.50	3.69	3.78	3.85	3.71	3.71
School 16	15.52	3.17	3.11	3.23	3.23	2.76
School 17	16.47	3.29	3.17	3.29	3.35	3.35
School 18	16.54	3.18	3.36	3.18	3.54	3.27
School 19	15.66	3.08	3.08	3.25	3.16	3.08
School 20	14.40	2.40	3.00	3.00	3.00	3.00
School 21	16.50	3.50	3.25	3.25	3.25	3.25
School 22	17.53	3.53	3.61	3.61	3.46	3.30
School 23	18.27	3.27	3.54	3.63	3.81	4.0
School 24	18.20	3.60	3.65	3.60	3.70	3.65
School 25	19.00	3.50	4.00	3.87	3.75	3.87
School 26	15.87	3.12	3.12	3.12	3.25	3.25
School 27	18.38	3.55	3.55	3.94	3.88	3.64

Table 4:35

Mean Scores of the Respondents Grouped by Collector Schools (Dimension 5)

School	D5	D5Q18	D5Q19	D5Q20	D5Q21	D5Q22
School 1	12.87	2.25	2.71	2.25	3.12	2.87
School 2	13.50	2.66	3.00	2.50	2.83	2.50
School 3	11.81	2.36	2.40	2.18	2.50	2.36
School 4	12.21	2.39	2.69	2.19	2.84	2.72
School 5	11.98	2.32	2.63	2.30	2.59	2.59
School 6	12.47	2.71	2.94	2.52	2.94	2.64
School 7	12.53	2.48	2.53	2.51	2.65	2.86
School 8	13.83	2.83	2.75	2.41	3.00	2.83
School 9	11.20	2.40	2.40	2.00	2.20	2.20
School 10	12.38	2.38	2.53	2.16	2.80	2.69
School 11	12.00	2.50	2.75	2.50	2.58	2.66
School 12	12.91	2.50	2.75	2.58	2.66	2.41
School 13	14.16	2.88	2.90	2.58	2.95	2.90
School 14	12.27	2.40	2.36	2.18	2.72	2.81
School 15	11.07	2.21	2.28	2.28	2.14	2.14
School 16	12.70	2.29	2.47	2.47	2.88	2.58
School 17	13.75	2.62	2.75	2.43	2.93	3.0
School 18	11.00	2.10	2.70	2.44	2.60	2.77
School 19	14.00	2.58	2.83	2.91	3.00	2.66
School 20	17.20	3.20	3.60	3.00	3.60	3.80
School 21	15.00	2.50	3.00	3.00	3.25	3.25
School 22	11.53	2.15	2.23	2.15	2.53	2.46
School 23	12.54	2.60	2.70	2.80	2.80	2.90
School 24	11.95	2.20	2.65	2.20	2.55	2.35
School 25	9.37	1.71	2.28	2.00	2.42	2.28
School 26	15.25	3.00	2.87	3.00	3.12	3.25
School 27	11.58	2.05	2.41	2.05	2.52	2.52

Summary

The purpose of the quantitative part of the study was to determine the maturity levels of the PLCs of selected Thai international schools based on the perceptions of teachers and administration members. These perceptions were gathered using a survey instrument called the School Professional Staff as a Learning Community Questionnaire (SPSaLCQ). The data were analyzed using quantitative means. The quantitative analysis made use of descriptive statistics to compare the perceptions of the study population as a whole, and was divided according to the categories of age, gender, position held in the school and level where the spent they most time. Focus is given to the mean scores of the participants in comparing their perceptions, while minimum, maximum and standard deviation values were also included as part of the descriptive statistics. On the whole the aggregate study population gave maturity ratings ranging from middle/low to mid-level maturity for the PLCs of their respective schools. The data were also broken down into groups and analyzed according to each dimension and the individual descriptors that are classified under the five main dimensions, as conceptualized by Hord. The results of the analysis found that for the first dimension, which is Supportive and Shared Leadership, the highest scores were given by those in the 20 – 29 age group, the female respondents, those who belonged to the administration, and those working in the middle school levels. For the second dimension, which is Shared Values and Vision, the highest scores came from those aged 30 – 39, the female respondents, those who worked as administrators, and those who worked in the elementary levels. For the third dimension, which is Collective Learning and Application of that Learning, the highest scores came from those respondents aged 50 – 59, the female respondents, the administrators and elementary

school teachers. For the fourth dimension, which is Shared Personal Practice, the highest scores came from those aged 19 and under, the female respondents, the administrators and those who worked in the middle school levels. For the fifth and last dimension, which is Supportive Conditions, the highest ratings came from those aged 19 and under, the females and the administrators. In the fifth dimension the High school teachers had the highest score by phase. The last set of comparisons looked at the differences in the respondents' perceptions of maturity in the PLCs of their respective schools. Based on this categorization, it was found that the respondents gave middle to high/middle maturity ratings for the second and third dimensions, while giving low/middle to middle maturity ratings for the first, fourth and fifth dimensions.

Follow-up Interviews of PLC Schools

To understand the factors that affect teachers and administrators perceptions on the level of maturity of PLCs in their respective schools, three International Schools were selected for follow-up interviews consisting of questions with an administrator and two professional staff members (teachers) in reference to their knowledge of actions that might have led to the achieved scores on the SPSaLCQ survey. These schools were selected among those schools that were classified as high, medium, and low levels of PLC based on the results of the survey. The follow up interviews did allow for observations to be made about practices that help the growth of PLCs. A content analysis was used to analyze the qualitative data and classify emerging themes based on the responses of the teachers and administrator for each school. The number of participants for each level of schools limits further analysis particularly comparing the responses of the administrators and teachers. For the three schools combined there were nine

participants. Each school rated three interviewees and in both thematic and sub-categories there responses were tabulated out of nine respondents making up one hundred percent of participants.

Data revealed thematic categories that articulate the factors influencing the perceptions of teachers and administrators in the level of maturity of PLC in their respective schools. Table 4:36 shows the factors influencing the high perception of a Professional Learning Community. Thematic category 1 revealed eight elements where the well-defined policies of a PLC, co-creation and co-ownership of the vision, provision of regular venue for professional discussion, and opportunity to participate in the decision making process were highly valued features in the school such that administrator and teachers perceived their school as high in the SPSaLCQ survey. An administrator stressed:

> "…basically everything is clear and documented. This school is well documented with policies. The vision is as stated, everyone want the best for students. I can't say anyone has a different vision, they can't work here if they do."

When asked about shared and distributed leadership, Teacher 2 emphasized that the policies have been implemented well because academic stakeholders co-created and co-owned the vision such that translated policies were genuinely implemented in the school. Teacher 2 said:

> "We have a feeling of ownership in what happens here. We are concerned for the future, not just for the short term. We are involved in the decisions and when we carry out the decisions it holds significance for us."

While majority of the participants indicated that provisions for professional discussion are a salient feature in perceiving the high maturity of PLC implementation in

their school, they also indicated that these regular discussions provided them genuine opportunity to participate in the decision-making process.

Table 4:36

Thematic Category #1: Factors Influencing High Perception of a PLC

Elements of a Thematic Category	# of Participants to Offer this Experience
Policies are well-defined	3
Vision(s) are created and owned by administrators and professional staff	3
Provisions of regular venue for discussion	3
Opportunity to participate in decision-making process	5
Trust among self and others	3
Valued and Trusted Leadership	2
Flexibility to implement own teaching methods and practices	2
Shared passion on collaborative teaching practice	2

Sub-theme 1: Formation of work Committee as Mechanism to Invoke Participation.

It is evident that a part of the policies and the support structure provided to professional staff, formation of work committees in the school invoked academic stakeholders' participation in the decision-making process. Teacher 1 said:

> "We have school development committees which operates with the intention of developing the school and improve learning. Those committees are made up of stakeholders. Our administration is letting us take our own course in making changes. One example is the reporting system. The admin says they will honor the process as far as how administration trusts teachers."

Both teachers and administrator considered that the organized committee offers an opportunity to tackle issues concerning students' learning and allows professional sharing among teachers and administrators. The administrator said:

"…one example here are work groups set up. We have plans with a top-down structure. Working party groups will address most of the issues that come up. Anyone who is interested can sign up and take on that shared roles."

The perspective of teachers suggested that these development committees promoted camaraderie among teachers that enable them to effectively function in their teaching profession.

Table 4:37

Sub-thematic Category #1: Formation of work or task Committees as a Mechanism to Invoke Participation

Elements of a Thematic Category	# of Participants to Offer this Experience
Offers opportunity to tackle issues concerning students' learning	4
Allow professional sharing	3
Promote camaraderie	2

One example among professional staff that was conducive to establishing a PLC in a school was the formation of school policy development committees. In one particular case it was an anti-bullying committee, which met to make policy to help students. Intra-school work teams such as these were mentioned at all three of the schools chosen for interviews and is a common factor of teacher and administrator participation in schools. School teachers and one administrator interviewed stated they practiced the dimensions of working as a PLC through initiatives on group work devoted to solving school issues such as, in the case above, curbing school bullies. Based on the administrator and teachers responses, working together to create a policy on bullying helps to eliminate

cultural and professional gaps between and among teachers and administrators and enhances participation of teachers to school-wide affairs. By bringing issues to be solved in common to the table, cultures and value systems could also have a chance to be discussed by the group. These helped participants to better understand each other and thus work together more effectively. Collaborative learning of all sorts, an anti-bullying initiative is one example, happens when there is opportunity for every teacher to be heard without being judged for his or her opinion. Teacher 1 explained the circumstance as:

> "As a staff we have this anti-bullying initiative for our school. We all discuss this together. We have noticed this is an issue so together there has been collaborative learning. More of it (collaboration) takes place at a department level and we look at how we can make a difference by examining student work. Staff uses what they have learned by opening ourselves up for public criticism within the group. We also talk about assessment and how assessment is used and we look for ways to improve."

According to the perspective of the teachers, this type of all-school initiative promotes an environment conducive for professional sharing. In effect, the self-confidence among teachers increases which improves motivation to further their participation in the implementation of the PLC dimensions. Table 4:38 summarizes the identified result of the school wide initiatives.

Table 4:38

Sub-thematic Category #2: Initiative on addressing school-wide issues as a collaborative group hastens the PLC implementation

Elements of a Thematic Category	# of Participants to Offer this Experience
Eliminates cultural and professional gaps	3
Enhances participation of teachers	3
Promotes a school environment conducive for professional sharing	2
Heightens self-confidence among teachers	2

The administrator and teachers in the school where the level of maturity of PLCs is in the medium category considered the absence of well-defined policies and initiatives that direct teachers' action as the most influencing factors on their perception of the level of maturity of a PLC. Teacher 1 noted that although characteristics of PLCs are seen in the school, these were done informally with no vivid directions from the management. Teacher 1 said:

> "There should be a process but there isn't. You can get some money. There is no encouragement here to improve."

Teacher 2 also shared same experience and emphasized the uncertainties encountered in events that require professional advice from colleagues. Teacher 2 narrated this circumstance:

> "Nobody is responsible for improving teacher practice. We do have a vague ad-hoc observation thing going on. But if I teach Econ., No one can give me feedback on it."

Further, both teacher 1 and teacher 2 recognized that, other than the absence of well-defined policies and initiatives that guide teachers on the implementation of a PLC, the school also lacks policies that encourage teachers' participation. There is also laxity among leaders to invoke anything that resembles a PLC requirement. Teacher 2 observed that the school environment has adopted some of the characteristics of a PLC school yet it is something not regularly practiced. Teacher 2 said:

> "We don't have a lot of hours so it is good. We check each other's time table and if you are free we just talk."

A theme also emerged that while teachers thought most issues have to be addressed by the administration in order for a PLC to function in the school, resulting in the ability to rate the school to at least a medium level of maturity, an administrator claimed that the maturity of the PLC implementation was the result of the differences of individual values which only the professional staff can address, the opposite of what teachers thought. This was only one comment. Table 4:39 summarize the results.

Table 4:39

Thematic Category #2: Factors Influencing Medium Perception on PLC

Elements of a Thematic Category	# of Participants to Offer this Experience
Absence of well-defined policies and initiatives that direct teachers' action	3
Less policies that encourage teachers' participation	2
Laxity of the leaders to invoke a PLC requirement	2
Meetings are centered on addressing school-wide issues	1
Individual belief on values	1

Sub-thematic Category #3: Policies Institutionalize a PLC Structure and Culture.

Based on the revealing factors, which affect the perception of teachers and administrators towards the level of maturity of a PLC in their school, the participants indicated that the policies contribute to the implementation and consequently the institutionalization of the PLC dimensions.

In some cases, both administrator and teachers perceived that it is through policies that a Professional Learning Community can be institutionalized in the school because it balances the high turnover of professional staff and leadership. They indicated that policies on structure mandate all new staff to comply with the necessary activities or steps geared towards the achievement of the PLC dimensions. The administrator narrated that collective learning experience, for instance, require process consultation among colleagues yet staff retention impede this requirement. The administrator explained:

> "…they applied what they learned and there was a lot of consultation in the process. These things work well when the staff stay put, if they leave every year it is hard. Both teachers and administrators generate collective learning. Teachers can collaborate together. Teachers observe good or best practice in other classrooms or other schools. So they see what works best. Very often we send lists of PD to staff, we have a very good budget, but we push them to contribute".

Further, combined responses from the administrator and teachers indicated that the trust among teachers and the subsequent culture of a PLC in the school are sustained through sound policies towards professional learning. Teacher 1 associated these policies as a mechanism that bridges the cultural gaps among teachers.

Table 4:40

Sub-thematic Category #3: Policies Institutionalize a PLC

Elements of a Thematic Category	# of Participants to Offer this Experience
Policies on PLCs balance the high turnover of staff and leadership	5
Trust among teachers indicates a conducive environment for a PLC	2
Culture of the school is sustained through sound policies on PLCs	2
Policies can bridge cultural gaps among teachers	1

The teachers and the administrator in schools who reported a low level of PLC maturity identified seven elements as factors influencing their perceptions. Table 4:41 shows that a lack of teachers' empowerment, inappropriateness of a PLC in an Asian culture, high turnover of staff, and cultural differences of teachers were seen as features within their school that impede the growth of a Professional Learning Community.

Both teachers and administrators agreed that teachers' empowerment is less felt in their school. The decision resides at the top of administration even on student learning issues. This comment was observed even among the administrators. The administrator verbatim said:

> "In setting the vision they are like party whips, final decision makers, often they do the ultimate communication with discipline and things with parents".

The issue on teacher empowerment was also perceived as a western concept that is inappropriate in Thailand with its strong Asian culture. The older teachers, who held the Thai values, have difficulties coping with the requirement of a PLC, which has concepts that derive from the Western education system. Similarly, Teacher 2 noted a

circumstance which demonstrates the differences of culture as barrier of PLC implementation:

> "Culturally , there are some teachers who don't speak up, because they don't understand the… some teachers are surprised when they see us debate things, some cultures get nervous from the western view of arguing your case and remaining friends the next day."

When asked about the achievement of the PLC dimensions in the school, the teachers noted that differences in culture among staff affect all PLC dimensions. For instance, Asian teachers are less participative in shared decision making compared to Western teachers who demonstrated assertiveness in group discussions. Teacher 1 narrated this circumstance:

> "Teachers yes and no [sic] have an opportunity to voice their views. It depends on how 'hot' the issue is. They will listen and then dish it out in an email or something. It is more for Asians to be quiet at first. Asians let it slide at first, for westerners it's, let hit that [task or goal] and get on it."

Furthermore, the combined responses of teachers and administrators indicated that academic stakeholders are not prepared to implement all the dimensions of PLC. Some have the perception that racial discrimination is prevalent which impedes teachers with Asian cultural heritage from participating in the process. Although Asian teachers conveyed their interest in helping to implement a professional learning community, the top-down approach of the school management remains an impediment to teachers by limiting their participation in their teaching roles. In effect, collective learning between and among teachers is not achieved.

Table 4:41

Thematic Category #3: Factors Influencing a Low Perception on the formation of a PLC

Elements of a Thematic Category	# of Participants to Offer this Experience
Lacks of teacher empowerment	3
The PLC is viewed as Western concept and not culturally appropriate for implementation	3
High turn over of staff affects the sustainable implementation of PLC	4
Culture differences of teachers affects teacher relationships	3
Decisions reside at the management level	6
Views that teachers are entrusted to teach and not to encroach on administrative affairs	2
Differing views on the mission and vision of the school	2

Summary

The purpose of this study was to determine the maturity levels of the PLCs of selected Thai international schools based on the perceptions of teachers and administration members. These perceptions were gathered using a survey instrument called the School Professional Staff as a Learning Community Questionnaire (SPSaLCQ) and by conducting interviews with selected participants. The data were analyzed using both quantitative and qualitative means.

The qualitative analysis made use of the content analysis to identify the emerging themes generated from the responses of the administrators and teachers in selected PLC schools rated with high, medium, and low levels of PLC maturity. The responses were codified such that themes are categorized as factors influencing the administrator's and teacher's perception of the levels of PLC maturity. Each of the participants conveyed

their ideas; however, these may not necessarily be the ideas of other participants involved in the interview. To determine the most relevant element of the thematic category, the frequency of responses among the participants were then considered. The results of the content analysis revealed that well-defined policies on professional learning communities were consistently perceived as the most influential factor in perceiving the high, medium, and low maturity of a PLC. High maturity PLC schools have policies on the proper formation of development committees and school-wide collaborative initiatives to invoke academic stakeholders' participation in the development process. These in turn thus facilitated the achievement of the PLC dimensions on shared and distributed leadership, shared decision-making, collective learning and application of learning, supportive structure, and peer review and observation.

The administrators' and teachers' responses from lower level maturity PLCs suggest that policies help to institutionalize the PLC dimensions since these policies direct teacher actions. Participation of professional staff in the implementation of a Professional Learning Community is dependent on the policies and the will of the administration. The policies of a PLC also help to balance the high turnover of staff that can result from cultural differences of teachers.

Teacher empowerment is resultant from policies that provide opportunities for teachers to participate in shared and distributed leadership, shared decision-making, collective learning and application of learning, supportive structure, and peer review and observation. In some cases data revealed that administrators and teachers from low level maturity PLC schools perceived a Professional Learning Community as a Western concept that the Thai professional staff have a difficulty of coping with as a school place

structure. Policies that bridge the cultural gaps among teachers and administrators can empower teachers to participate in the implementation of a PLC.

Chapter 5

Summary, Review, Discussion of Research Questions, and Recommendations.

Introduction

This chapter includes (a) summary of the purpose of the study, (b) significance and rationale of the study, (c) review of procedures, (d) discussion of the conclusion, (e) recommendations for schools seeking to develop their collaborative capacity, and (f) suggestions for further research. These recommendations and suggestions are generated from data collected and analyzed from the study population. In this chapter, the researcher presents the implications of the current study to the educational practices of International Schools in Bangkok, Thailand. These practices would be of importance to schoolteachers and administrators seeking to establish or improve professional learning communities in their schools.

Summary of the Purpose

The primary purpose of this study was to determine school administrators' and teachers' perception of the school staff as a Professional Learning Community using the School Professional Staff as a Learning Community Questionnaire (SPSaLCQ) instrument. The perceptions of school administrators and teachers were examined within the five subgroups of a Professional learning Community (PLC) according to author Shirley Hord, whose framework and theories on PLCs in schools are recognized as effective means for schools to improve their professional practice. Hord (2004) writes that (SPSaLCQ) data are examined for their relevance to understanding how professional learning communities can be built (p. 18).

Significance and Rationale of the Study

This is one of the first studies of international schools operating as Professional Learning Communities. The study results demonstrate ways in which school staff's view their schools as a collaborative and processional environment and identify actions they emphasize to improve their professional practice. It also identifies characteristics that seem most apparent in international schools. The study provides data on how schools can best focus their energies to improve their professional capacity and help teachers and administrators work together to become a more effective learning community. By focusing on the results of the study in respect to the five dimensions of professional learning provided by Hord, this research offers compelling feedback on how to re-culture and restructure international schools to improve teacher and administrator professional capacity.

Review of Procedures

Participants were surveyed electronically to identify school practices that made their Bangkok, Thailand international schools mature as Professional Learning Communities. The researcher used the data from this study to answer the following research questions:

1. What are administrators' perception of the maturity level of PLCs in selected
   Thai international schools?
2. What are teachers' perception of the maturity level of PLCs in selected Thai international schools?
3. What is the difference between the perceptions of administrators and teachers?
   3a. What are the differences by school?
4. What factors influence the administrators and teachers perceptions of the level of maturity of PLCs in selected Thai international schools?

Follow up interviews were conducted to determine how perceptions both supported the survey data and gave an account of actions that supported the maturity of a Professional Learning Community.

The researcher investigated the perceptions of teachers and administrators regarding the maturity of their schools' professional learning communities (PLCs). As such, a sequential mixed method of analysis was used in order to determine the perceptions and the differences between and among the teachers and administrators in selected Thai international schools. The teachers and administrators of these schools provided consent to participate in the study and were asked to complete the electronically formatted School Professional Staff as a Learning Community Questionnaire (SPSaLCQ). This instrument is used to assess the maturity of the staff as a Professional Learning Community. The study was completed during April and May of the year 2010. The populations surveyed were teachers and administrative staff at 55 international schools. Of the 55, 29 schools responded and included a total of over 600 participants. The SPSaLCQ also measures the increasing number of actions of the school staff as they function as a Professional Learning Community. This questionnaire assesses the maturity of schools as PLCs as measured by the data. However, this instrument has a limitation in providing in-depth understanding of the factors that influence these perceptions of schools as PLCs. Therefore, the researcher conducted follow-up interviews to discover themes that are relevant in determining factors influencing administrator and teacher perceptions in order to support the quantitative data and to better explain the results of the survey responses. In the follow up interviews, nine participants were chosen, three each, an administrator and two teaching staff, from three separate schools.

Discussion of Research Questions

The results of the study can be analyzed in terms of the research questions, and overall in relation to emergent themes from the data. In relation to questions 1 & 2 we find that the highest perceptions of levels of maturity of schools as PLCs were consistently noted from the group of administrators. This may imply that Hord's Professional Learning Community dimensions are less realized as applied practices amongst the groups of teachers, but noticed more clearly by administrators. Administrators do have a wider view of the systems thinking (Senge, 1990) but it is teachers who undertake the actions that define the professional learning community. As administrators, building leaders might realize the greater depth of the community aspect of teachers working together to learn, which could be an important aspect of development for teachers. This perspective does give these managers the capacity to try to implement policies that are helpful to collaborative efforts by staff. Indeed it is the teachers who are the majority stakeholders involved in the group decisions that lead to the implementation of a PLC. Teachers are directly involved and responsible for the teaching, learning and assessment process in schools and thus this gives them the precise obligation to take leadership roles, to make and contribute to decisions, and to choose what to learn and how to apply that subsequent learning to the workplace. In turn, these actions also allow the teacher to demand support for these obligations and take responsibility for the necessary responsibility to observe and reflect with peers in their teaching practices. Data remain favorable for administrators when looking at the results of the study and how different roles perceive the maturity of all these actions while engaged as a PLC.

Research Question 3 addresses the differences in the administrator's and teacher's perceptions on the level of maturity of a PLC. Data further indicated that policies on PLCs appear to be somewhat restrictively implemented among administrators who, in most schools, possess organizational power to overrule the decisions of the majority of stakeholders, particularly the teaching staff. Most times, this is done in conjunction with a tacit approval of staff. Teachers do have understandings about what is 'best for the organization, even if it is a slower process, could be looked at as more work, and they can understand it is also not just about what is best for them as an individual. The survey results do confirm the data generated from the follow-up interviews which suggest that the factors influencing perceptions on the level of maturity are the well defined, institutionalized policies and practices of a PLC. It is also realized that this institutionalized culture genuinely accounts for the participation of the teaching staff in the practice of Hord's five dimensions (1996).

Analysis of data for Question 4 indicate that perceptions on the five PLC dimensions do vary according to demographic variables such as age, gender, position held in the school and level (elementary, middle or high school) where participants spent most of their work time. This is significant because it is supported by the breadth and depth of literature on Professional Learning Communities in schools and now similarly shown by international schools and those in the cohort of schools comprised in ISAT in the Bangkok capital. A review of the study data indicates that the demographic variables do have some degree of effect on the perceptions of the professional staff. Again, data clearly shows how this question directly addresses research questions four. As such, a review of the data also shows that age groups influence the dimensions of a PLC.

Characteristics of supportive and shared leadership actions score the highest in respondent age group 20-29, shared values and vision was highest among ages 30 – 39, collective learning and application of that learning was highest among ages 50 – 59 and support for peer observation was most likely to be scored highest in the age group of 50-59 years. This implies some need for practices that address age and other demographic variables based on these dimensions. The new practices could be based on characteristics of teachers as they become more experienced or as indicated by increasing number of years as a teacher. The dimensions of leadership, establishing vision, collaborative learning, and helping peers (respectively, from the Hord dimensions) could be the focus of school improvement as schools move towards more collaborative teaming and as teachers mature in the profession. Since teachers in the 20-29 age groups do not score high in peer observation, this practice could be emphasized for this age group. Likewise, the age groups 50-59 scores lower in distributed leadership and some practices might be focused on making a change for this group. Question Four gained importance through the follow-up survey questions and the data thus provided gleaned very specific and meaningful areas of meaning to provide answers to the question and support the quantitative data.

The quantitative survey results provide data that accurately constituted the participants' full involvement in the implementation of PLC practices. To support and help validate this data a qualitative interview from participants at three schools also allowed for the emergence of a thematic study of a school as a PLC. The follow-up interviews allowed the researcher to reveal more actions and perceptions that determine the maturity of a school as a Professional Learning Community. Data were analyzed to

reveal that elements of the thematic categories identified from interview responses establish that well-defined policies on these communities do shape the subsequent dimensions and staff actions of a PLC according to Hord's assertion. Thus the claim that administrative actions are a significant factor in the maturity level of a PLC is supported.

The components of a PLC that are instituted as policy in a school, seen in the study as a supportive structure, was also identified as a mechanism that ensures the institutionalization of a Professional Learning Community. This embedded structure is such that even a high turnover of staff cannot affect the implementation of the community of learners. Interview data reveal that teachers felt it is the policies and mandates of the school and administration that led teachers to follow supportive structure polices that enriched the evidence of a mature Professional Learning Community. Institutionalizing this concept, structure or culture, by tacit virtue of policy, was the elemental factor of teachers and administrators in perceiving a medium level of Professional Learning Community maturity. It is evident that the absence of such PLC policies is perceived to be associated with a low level of maturity in a school. Analyzing policy data from participating schools reveals that this policy making is a precept of administrative duty. The survey data do allow for us to see how administrators do rate their staff, and thus their school, higher in maturity as a PLC than do their teachers. This finding was consistent throughout the schools represented in the survey.

Conclusions

On the basis of the study results, the study affirms that school organizations change and mature as PLCs when implementing measures to work collaboratively and across the five dimensions (Hord, 2004). The high level maturity PLCs demonstrated

strong evidence of all five dimensions and a positive association with the effects of a Professional Learning Community among professionals. This was true regardless of role as an administrator or a member of the teaching staff.

Although the present study has identified high, medium, and low levels of possible staff-as-a professional-learning-community maturity, all levels of a PLC recorded from schools in the study identified the influence of leaders in the scope of creating a Professional Learning Community. Administrators consistently perceived a high maturity level of their staff and school as a Professional learning Community while teachers perceived somewhat the opposite, i.e. more scores on the medium to medium-low maturity level. Even with a greater 'sight' of the system- what Senge (1991) calls systems thinking- there would still be a need for teachers to have a greater understanding of the PLC, as indicated by administrators. There is a clear manifestation from the data on a weak relationship between the administrators and teaching staff and a subsequent low maturity perception by staff of a PLC. For a true PLC to function, issues on positive relationships between staff must be resolved. This is indicated by the two-way presence of trust, talking about a shared vision to give credence to improvement initiatives in the school, and developing a fondness for working together, not just as teachers, but also teachers and administrators as collaborators.

Finally, the study findings demonstrated that there is difficulty in defining the required collaboration for a school to function as PLC. Data reveal that culture differences impede the building of good camaraderie among professional staff. Similarly, it was noted that the model of Hord (2004) on the workings of a PLC may not necessarily be applicable in all international schools. This may be attributed to the assertion which

suggests that changes are inherently non-linear and complex (Eaker, DuFour and DuFour, 2002; Fullan,1999) with complexity always being a strong situational aspect of international schools and their manifestations as unique organizations.

Recommendations

The present study uses the model of Hord's (2004) Professional Learning Community to assess the maturity of the selected population of 55 international schools in Bangkok, Thailand. Based on the results of the study, it is clear that the Hord (2004) model may not necessarily hold true in the culture of Thai international schools. It is therefore recommended to conduct similar studies using other models of a Professional Learning Community that are sensitive to culture differences among professional staffs.

It is clear that teaching staff feel a sense of institutionalization of policy that lends itself to the formation of Professional Learning Communities. Aspects of leadership that help to clarify how decisions are made, who makes decisions, and why decisions for schools are implemented would be beneficial to scaling up practices of PLCs that make a difference in the effectiveness of schools. A study that looks at these factors, and to what magnitude they are present in international schools, would be helpful to provide more data on this crucial point that was revealed about teachers relying on policy to be a change agent for increasing PLC actions.

Although there is no indication that Hord's model is insensitive to cultural differences further studies will help to assert that culture might be an additional variable to establishing a PLC. Other models, including some that are variations on Hord's work include: Huffman and Hipp (2003), DuFour and Eaker (1998), Bolam, et al.(2005),

Kouzes & Posner (1995), Grossman, Wineburg & Woolworth (2001) Louis, Kruse & Marks (1996), and Fullan (1999).

While a number of the indicators show that gender differences do rate as integral to staff feelings on maturity of PLCs, there has not been a study that incorporates these two variables while assessing the ability of the staff to function as a collaborative team. While leadership studies do note significant differences in gender relations and task completion, among other organizational factors (Northouse, 2006), a review of literature in these areas, with an emphasis on decision making from a gender perspective as related to policies inherent to PLC practice, might provide suitable direction for implementing more effective team practices and applications for schools and school staffs. A cultural component of gender and leadership could also supply tangential information for cross-cultural roles such as international school contexts.

Although the present study provided data that explain the differences of the perceptions of administrators and teachers, there remains the need to understand the dynamics of their collaboration. It is collaborative work that defines the functionality of a Professional Learning Community. It is therefore recommended to conduct a case study, or a series of case studies, to document clearly the process of change in an international school and to understand better the culture of the school and its effect on building an enabling environment for a Professional Learning Community.

It is further suggested to pursue the aspects of culture that exist among members of staff, not just those particular to inter-cultural awareness issues present in international schools, but rather the facets of culture that are found in the characteristics of persons as they collaborate and come into contact and professional capacity with each other in an

organization. This study shows that the cultural components of individuals within an organization take precedence in establishing good working relationships and the ability to learn from-and-with colleagues, a key principle of the practice of effective Professional Learning Communities.

Finally, the results of the present study can be used for strategic planning particularly for schools that have set goals to increase their capacity or become more mature as a community of learners. The gaps of administrator and teacher perceptions on the level of maturity of a Professional Learning Community can work to guide administrators to formulate a policy that enhances these PLC dimensions as defined by Hord (2004). Although most schools do actively seek to improve their professional capability, few actually achieve a consistent pattern of enhancement. As a practitioner in many schools it is clear that there is always need for improvement in education. As Senge was referenced in the opening paragraphs of this paper, acting as a collaborative organization that learns and grows from within is seen as one of the only ways to change and innovate with enough effectiveness to have teachers make a difference in our school environment (1990). It cannot be said that increased collaboration, communication, sharing of leadership and vision, and application of learning *might* make for a better school; indeed these are the only things that have *ever* improved schools.

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Appendices

Appendix A
Permission to Use the SPSaLCQ

ADVANCING RESEARCH
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To: James Gerhard (Licensee)
International School Yangon, Myanmar
4250 Rangoon Place
Dept. of State (Rangoon)
Washington, DC 20189-4250

From: Nancy Reynolds
Information Associate
Information Resource Center
SEDL
4700 Mueller Blvd.
Austin, TX 78723

Subject: License Agreement to reprint and distribute SEDL materials

Date: February 1, 2008; revised February 19, 2009 and March 11, 2010

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Thank you, again, for your interest in using SEDL's SPSLCQ. If you have questions, please contact me at 512-391-6548 or by e-mail at nancy.reynolds@sedl.org.

Sincerely,

Nancy Reynolds for SEDL

Date signed

Agreed and accepted:

Signature: James H. Gerhard

10 March 2010
Date signed

Printed Name: James H. Gerhard

Appendix B

SPSaLCQ Paper version

School Professional Staff as Learning Community

Directions: This questionnaire concerns your perceptions about your school staff as a learning organization. There are no right or wrong responses. Please consider where you believe your school is in its development of each of the five numbered descriptors shown in bold-faced type on the left. Each sub-item has a five-point scale. On each scale, circle the number that best represents the degree to which you feel your school has developed.

Date: _____

Name:_____

School: _____

1. School administrators participate democratically with teachers sharing power, authority, and decision making.

1 a

5 — 4 — 3 — 2 — 1

5: Although there are some legal and fiscal decisions required of the principal, school administrators consistently involve the staff in discussing and making decisions about most school issues.

3: Administrators invite advice and counsel from the staff and then make decisions themselves.

1: Administrators never share information with the staff nor provide opportunities to be involved in decision making.

1 b

5 — 4 — 3 — 2 — 1

5: Administrators involve the entire staff.

3: Administrators involve a small committee, council, or team of staff.

1: Administrators do not involve any staff.

---

2. Staff shares visions for school improvement that have an undeviating focus on student learning, and are consistently referenced for the staff's work.

2 a

5 — 4 — 3 — 2 — 1

5: Visions for improvement are discussed by the entire staff such that consensus and a shared vision results.

3: Visions for improvement are not thoroughly explored; some staff agree and others do not.

1: Visions for improvement held by the staff are widely divergent.

2 b

5 — 4 — 3 — 2 — 1

5: Visions for improvement are always focused on students, and learning and teaching.

3: Visions for improvement are sometimes focused on students and teaching and learning.

1: Visions for improvement do not target students and teaching and learning.

2 c

5 — 4 — 3 — 2 — 1

5: Visions for improvement target high quality learning experiences for all students.

3: Visions for improvement address quality learning experiences in terms of students' abilities.

1: Visions for improvement do not include concerns about the quality of learning experiences.

3. Staff's collective learning and application of the learnings (taking action) create high intellectual learning tasks and solutions to address student needs.

	5	4	3	2	1
3a	The entire staff meets to discuss issues, share information, and learn with and from each other.		Subgroups of the staff meet to discuss issues, share information, and learn with and from each other.		Individuals randomly discuss issues, share information, and learn with and from each other.
3b	The staff meets regularly and frequently on substantive student-centered educational issues.		The staff meets occasionally on substantive student-centered educational issues.		The staff never meets to consider substantive educational issues.
3c	The staff discusses the quality of their teaching and students' learning.		The staff does not often discuss their instructional practices nor its influence on student learning.		The staff basically discusses non-teaching and non-learning issues.
3d	The staff, based on their learnings, makes and implements plans that address students' needs, more effective teaching, and more successful student learning.		The staff occasionally acts on their learnings and makes and implements plans to improve teaching and learning.		The staff does not act on their learning.
3e	The staff debriefs and assesses the impact of their actions and makes revisions.		The staff infrequently assesses their actions and seldom makes revisions based on the results.		The staff does not assess their work.

4. Peers review and give feedback based on observing each other's classroom behaviors in order to increase individual and organizational capacity.

	5	4	3	2	1
4a	Staff regularly and frequently visit and observe each other's classroom teaching.		Staff occasionally visit and observe each other's teaching.		Staff never visit their peers' classrooms.
4b	Staff provide feedback to each other about teaching and learning based on their classroom observations.		Staff discuss non-teaching issues after classroom observations.		Staff do not interact after classroom observations.

5. School conditions and capacities support the staff's arrangement as a professional learning organization.

	5	4	3	2	1
5a	Time is arranged and committed for whole staff interactions.		Time is arranged but frequently the staff fails to meet.		Staff cannot arrange time for interacting.
5b	The size, structure, and arrangements of the school facilitate staff proximity and interaction.		Considering the size, structure, and arrangements of the school, the staff are working to maximize interaction.		The staff takes no action to manage the facility and personnel for interaction.
5c	A variety of processes and procedures are used to encourage staff communication. A single communication method exists and is sometimes used to share information.		Communication devices are not given attention.		Trust and openness characterize all the staff.
5d	Some of the staff are trusting and open.		Trust and openness do not exist among the staff.		Caring, collaborative, and productive relationships exist among all the staff.
5e	Caring and collaboration are inconsistently demonstrated among the staff.		Staff are isolated and work alone at their task.		

SOUTHWEST EDUCATIONAL DEVELOPMENT LABORATORY
Building Knowledge to Support Learning

*Hord, Shirley M. (1996). Austin, TX: Southwest Educational Development Laboratory.

Appendix C
Demographic Questions

March 2010 Master SPSaLCQ

1. Introduction

This survey, THE SCHOOL PROFESSIONAL STAFF AS A LEARNING COMMUNITY QUESTIONNAIRE (Copyright SEDL, Austin, TX.) is used to gauge teacher and administrator perception of their school as a Professional Learning Community. Please begin with the following short section to help collect demographic research information. Thank you for your participation.

1. Gender

☐ Female ☐ Male

2. Please mark your age range:

☐ 19 or under ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ 60-69 ☐ 70-79

3. Describe your primary role in the building:

☐ Teacher ☐ Administrator

4. What is the number of your combined years as a teacher and/or administrator?

☐ 0-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ Greater than 25

5. At which school section, division or age level do you spend most of your time? (Please choose only one).

☐ Elementary School (Primary School) ☐ Middle School (Junior high or Junior school,11-14 year-olds) ☐ High School (Secondary School, 15-19 year-olds)

Appendix D
School Professional Staff as a Learning Community Questionnaire

March 2010 Master SPSaLCQ

2. Introduction to survey questions

Directions: This survey concerns your perceptions about your school staff as a learning organization. There are no right or wrong responses. Please consider where you believe your school is in its development of each of the five numbered descriptors shown in bold at the top of each section. Each sub-item has a five-point scale. On each scale, mark the number that best represents the degree to which you feel your school has developed. The numbers 1 - 3 - 5 have specific characteristics or actions listed in sentence form. The numbers 2 and 4 fall in between the others. You should read the statements and mark where on the 1-2-3-4-5 scale you perceive your response ranks. (SPSaLCQ, Copyright SEDL, Austin, TX.)

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3. Shared decision making

School administrators participate democratically with teachers sharing power, authority, and decision making.

(SPSaLCQ, Copyright SEDL, Austin, TX.)

1. .

	Although there are some legal and fiscal decisions required of the principal, school administrators consistently involve the staff in discussing and making decisions about most school issues.	<---Between--->	Administrators invite advice and counsel from the staff and then make decisions themselves.	<---Between--->	Administrators never share information with the staff nor provide opportunities to be involved in decision making
Mark one answer	○	○	○	○	○

2. .

	Administrators involve the entire staff	<---Between--->	Administrators involve a small comittee, council, or team of staff	<---Between--->	Administrators do not involve any staff
Mark one answer	○	○	○	○	○

March 2010 Master SPSaLCQ

4. Shared vision

Staff shares visions for school improvement that have an undeviating focus on student learning, and are consistently referenced for the staff's work.

1. .

	Visions for improvement are discussed by the entire staff such that consensus and a shared vision results	<---Between--->	Visions for improvement are not thoroughly explored; some staff agree and others do not	<---Between--->	Visions for improvement held by the staff are widely divergent
Mark one answer	○	○	○	○	○

2. .

	Visions for improvement are always focused on students, and learning and teaching	<---Between--->	Visions for improvement are sometimes focused on students and teaching and learning.	<---Between--->	Visions for improvement do not target students and teaching and learning
Mark one answer	○	○	○	○	○

3. .

	Visions for improvement target high quality learning experiences for all students.	<---Between--->	Visions for improvement address quality learning experiences in terms of students' abilities	<---Between--->	Visions for improvement do not include concerns about the quality of learning experiences
Mark one answer	○	○	○	○	○

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5. Collective Learning

Staff's collective learning and application of the learnings (taking action) create high intellectual learning tasks and solutions to address student needs.

(SPSaLCQ, Copyright SEDL, Austin, TX.)

1. .

	The entire staff meets to discuss issues, share information, and learn with and from each other.	<---Between--->	Subgroups of staff meet to discuss issues, share information, and learn with and from each other	<---Between--->	Individuals randomly discuss issues, share information, and learn with and from each other
Mark one answer	○	○	○	○	○

2. .

	The staff meets regularly and frequently on substantive student-centered educational issues	<---Between--->	The staff meets occasionally on substantive student-centered educational issues.	<---Between--->	The staff never meets to consider substantive educational issues
Mark one answer	○	○	○	○	○

3. .

	The staff discusses the quality of their teaching and students' learning	<---Between--->	The staff does not often discuss their instructional practices nor its influence on student learning	<---Between--->	The staff basically discusses non-teaching and non-learning issues
Mark one answer	○	○	○	○	○

4. .

	The staff, based on their learnings, makes and implements plans that address students' needs, more effective teaching, and more successful student learning.	<---Between--->	The staff occasionally acts on their learnings and makes and implements plans to improve teaching and learning.	<---Between--->	The staff does not act on their learning
Mark one answer	○	○	○	○	○

5. .

	The staff debriefs and assesses the impact of their actions and makes revisions.	<---Between--->	The staff infrequently assesses their actions and seldom makes revisions based on the results	<---Between--->	The staff does not assess their work
Mark one answer	○	○	○	○	○

March 2010 Master SPSaLCQ

6. Peer review and observation

Peers review and give feedback based on observing each other's classroom behaviors in order to increase individual and organizational capacity.
(SPSaLCQ, Copyright SEDL, Austin, TX.)

1. .

	Staff regularly and frequently visit and observe each other's classroom teaching.	<---Between--->	Staff occassionally visit and observe each other's teaching	<---Between--->	Staff never visit their peers' classrooms
Mark one answer	○	○	○	○	○

2. .

	Staff provide feedback to each other about teaching and learning based on their observations	<---Between--->	Staff discuss non-teaching issues after observations	<---Between--->	Staff do not interact after observations
Mark one answer	○	○	○	○	○

March 2010 Master SPSaLCQ

7. Supportive structure

Conditions and capacities support the school's arrangement as a professional learning organization. (SPSaLCQ, Copyright SEDL, Austin, TX.)

1. .

	Time is arranged and committed for whole staff interactions	<---Between--->	Time is arranged but frequently the staff fails to meet	<---Between--->	Staff cannot arrange time for interacting
Mark one answer	○	○	○	○	○

2. .

	The site, structure and arrangement of the staff facilitate proximity and interaction	<---Between--->	While the facility and school membership are large, the staff are working to maximize existing arrangements for interaction.	<---Between--->	The staff takes no action to manage the facility and personnel for interaction.
Mark one answer	○	○	○	○	○

3. .

	A variety of processes and procedures are used to encourage staff communication.	<---Between--->	A single communication devise exists and is sometimes used to share information.	<---Between--->	Communication devises are not given attention.
Mark one answer	○	○	○	○	○

4. .

	Trust and openess to feedback and learning characterize all the staff.	<---Between--->	Some of the staff are trusting and open to learning from other staff.	<---Between--->	Trust does not exist among the staff.
Mark one answer	○	○	○	○	○

5. .

	Caring, collaborative, and productive relationships exist among all the staff.	<---Between--->	Caring and collaboration are inconsistently demonstrated among the staff.	<---Between--->	Staff are isolated and work alone at their tasks.
Mark one answer	○	○	○	○	○

Appendix E

Interview Guide and Semi-structured Interview Questions

Considerations for the Primary Investigator while Conducting the Interviews

1. Use the interview questions as they are written, following the language and structure of the questions.

2. Make introductions at the beginning of the interview time, remind participants about the survey at their school, and the results. State again the purpose of the study. Include the information about recording answers to interview questions and remind the participant that interview results will be treated with confidentiality. Names or identifying characteristics will not be revealed.

3. Ask the questions as they are written, and in the proper order. Do not bias responses.

4. Give respondents appropriate time to think about their answers, as they wish.

5. There are acceptable follow-up questions to help probe deeper for information, some of these are:
    a. Could you clarify?
    b. Is there an example that you could share?
    c. Please tell me more.
    d. Why is it you feel this way?

6. Let the respondent give his or her own information and his or her own anecdotal record.

7. Listen closely for meaningful details and information that relates to the purpose of the study.

8. Be genuine in approach and interest and use appropriately comfortable and responsive body language.

9. Allow the participant to decline a question or come back to it as a matter of follow up, if he or she wishes.

Semi-structured Interview Questions

Qualitative, follow-up teacher interview questions. Adapted from Huffman & Hipp (2003) Reculturing schools as professional learning communities. Lanham, Maryland, Scarecrow Education pp. 18-19.

Assumptions for the follow-up interview include

HML measurement on most PLC dimensions

Alignment of staff as a PLC, based on measurement.

Does your school follow a model of a PLC or has the staff received training as a PLC?

Does your staff refer to themselves as a PLC?

Descriptor

Shared and distributed leadership

1. Who are the leaders in your school?

2. What do they do that makes them leaders?
3. What can you say has influenced or contributed to your school's shared and supportive leadership style?
3. Tell me how decisions get made. About what and by whom?

Give an example of a recent decision.

Explain specific actions, words, or steps taken.

Shared values and vision.

1. How did your school's values and vision get created? Was it a recent process? A group process?

2. What would staff say is important about the work they do here?

Probes:

How do you know?

How is it reflected in the school? Classroom? Students?

3. What common vision does the staff share? What differences in vision might the staff have? Can you give an example? (of both)

4. How have these visions for the school changed?

5. What can you say has influenced or contributed to your schools shared values and vision. Explain specific actions, words or steps taken.

.

<u>Collective learning and application of that learning.</u>

1. Give an example of a way the staff at your school has learned collectively?

2. What common learning was this and how did it occur?

3. How do staff members determine what they want to learn?

In what ways do staff use what they have learned?

<u>Supportive conditions.</u>

1. How do teachers have time to plan and collaborate together?

2. Can you give some examples of times the entire staff comes together to learn?

3. How do staff members determine what they want to learn?

4. During all staff or team meetings, do teachers have a great opportunity to voice their opinions or views?

5. Do teachers ever fail to speak up or speak out at all school meetings because they do not trust others?

Peer review and observation

1. What is an example of collaborative teaching practices at your school?

2. Who is responsible for improving teacher practice at your school? Is this successful? Effective?

3. How do teachers talk with peers to improve instructional practice?

4. Do peers speak to you about your instructional practice? How often?

5. Have you recently visited a colleagues classroom and given them feedback?
6. Has anyone on the staff ever visited your class? What feedback did they give you?

Qualitative, follow-up Administrator interview questions. Adapted from Huffman & Hipp (2003) Reculturing schools as professional learning communities. Lanham, Maryland, Scarecrow Education pp. 18-19.

Assumptions for the follow-up interview include

High measurement on most PLC dimensions

Alignment of staff as a PLC, based on measurement.

Does your school follow a model of a PLC or has the staff received training as a PLC?

Have they been trained or cultivated as a PLC by administration?

Do your staff refer to themselves as a PLC?

Descriptor

Shared and distributed leadership

1. Who are the leaders in your school?

2. What do they do that makes them leaders?

3. What can you say has influenced or contributed to your shared and supportive leadership style?

4. Tell me how decisions get made. About what and by whom?

5. Can you give an example of a recent decision. Explain specific actions, words, or steps taken.

<u>Shared values and vision.</u>

1. How did your school's values and vision get created?
2. Was it a recent process? A group process? Was it generated by administration?

3. What would staff say is important about the work they do here?

Probes:

How do you know?

How is it reflected in the school? Classroom? Students?

4. What common vision does the staff share? What differences in vision might the staff have?

Are these differences because of administration or teacher views?

Can you give an example? (of both)

5. How have these visions for the school changed?

6. What can you say has influenced or contributed to your schools shared values and vision.
7. Explain specific actions, words or steps taken.

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<u>Collective learning and application of that learning.</u>

1. Give an example of a way the staff at your school has learned collectively?

2. Has collective learning been generated by administration or teachers?

3. What common learning was this and how did it occur?

4. How do staff members or administration determine what they want to learn?

5. In what ways does staff use what they have learned?

Supportive conditions.

1. How do teachers have time to plan and collaborate together?

2. Can you give some examples of times the entire staff comes together to learn?

3. How do staff members determine what they want to learn?

4. How do staff determine who will teach them new methods or information?

5. During all staff or team meetings, do teachers have a great opportunity to voice their opinions or views?

6. Do teachers ever fail to speak up or speak out at all school meetings because they do not trust others? (If yes, do they not trust administrators or teachers)

Peer review and observation

1. What is an example of a collaborative teaching practice at your school?

2. Who is responsible for improving teacher practice at your school? Where does this responsibility come from? Is this successful? Effective?

3. How do teachers talk with peers to improve instructional practice?

4. How do staff speak to you about your instructional practice? How often?

5. Have you recently visited a teachers classroom and given them feedback?

6. Have you encouraged them to visit and give feedback?

Appendix F

List of Bangkok International Schools

Name of School	Curriculum	Students	*Divisions	Teachers	Administrators
1. American School of Bangkok	USA	700	EMH	90	5
2. Anglo Singapore International School	UK	250	EM	25	3
3. Ascot International School	UK	300	PU	27	2
4. Bangkok Christian International l	USA	270	EMH	21	3
5. Bangkok Grace International School	USA	350	EMH	54	3
6. Bangkok Patana School	UK/ IB	2127	EMH	210	9
7. Bangkok Prep School	Int/UK	400	PU	65	5
8. Bromsgrove International School	UK	500	PU	78	5
9. Charter International School	UK	100	PU	16	1
10. Concordian International School	Int./IB	400	EMH	42	4
11. Ekamai International School	USA	1185	EMH	114	6
12. ELC Family of Schools	Canadian	200	EMH	21	1
13. Garden International School	Int/UK	510	EMH	55	2
14. Grace International School	USA	500	EMH	65	3
15. Harrow International School	UK	1200	PU	116	7
16. Heathfield International School	UK	200	PU	23	2
17. International Community School	USA	1100	EMH	140	6
18. International Pioneers School	UK	360	PU	24	1
19. International School Bangkok	USA	1840	EMH	185	9
20. Keera-Pat International School	USA	250	EMH	30	2
21. Kevalee International School	USA	100	EMH	18	1
22. Kincaid International School	USA	400	EMH	46	3
23. KIS International School	USA	450	EMH	50	6

24. Korean International School of BKK	Korean	160	EMH	20	1
25. Lycee Francais International de BKK	French	780	EMH	60	3
26. Meta International School	USA	65	EMH	9	1
27. Modern International School of BKK	UK	530	PS	50	2
28. New International School of Thailand	Int./IB	1392	EMH	120	6
29. New Sathorn International School	USA	250	EMH	30	3
30. Niva International School	USA	330	EMH	30	3
31. Pan Asia International School	USA	350	EMH	40	1
32. Ramkhamhaeng Advent Int. School	USA	650	EMH	80	2
33. Rasami International School	UK	250	PS	20	1
34. RC International School	UK	150	PS	16	1
35. Redeemer International School	USA	200	EMH	18	2
36. Regent's School	USA	600	EMH	50	2
37. Ruamrudee International School	USA	1700	EMH	185	7
38. Saint John Mary International School	USA	750	EMH	80	5
39. Saint John's International School	USA/UK	400	EMH	50	4
40. Shrewsbury International School	UK	1350	PS	150	6
41. Siam International School	USA/IB	250	EMH	28	2
42. Singapore International School	Singapore	200	EMH	25	2
43. St. Andrews International School	UK	500	PS	45	1
44. St. George's International School	UK	100	PS	16	1
45. St. Stephen's International School	UK	450	PS	58	1
46. Swiss School	German	220	PS	25	2
47. Thai Sikh International School	UK	900	PS	80	3
48. Thai-Chinese International School	USA	500	EMH	60	6
49. Traill International School	UK	250	PS	30	2
50. Trinity International School	USA	250	EMH	30	2

51. TTIS/ The British School of Bangkok	UK	215	PS	20	1
52. Wells International School/ Thonglor	USA	350	EM	25	2
53. Wells International School/ On Nut	USA	650	EMH	55	3

Appendix G
Invitation to Participate in the Study

March 10, 2010

Dear School Head or Principal,

As part of a doctoral study at the University of Minnesota, I am conducting a survey on International schoolteachers' perceptions of their staff as a Professional Learning Community. The goal of this study is to measure teacher perceptions in order to learn more about how Professional Learning Communities are present in international schools.

As a member school of the International Schools Association of Thailand (ISAT) you can participate in this study. The East Asia Regional Conference of Overseas Schools (EARCOS) is also encouraging member schools to participate in this study. Further support also comes from the Office of Overseas schools, which has encouraged and recognized this study as compelling and important to the future of International Schools.

This is one of the first studies measuring the extent of Professional Learning Communities in International schools. The online survey format creates an efficient and easy way to collect data.

How to Participate: Teachers in your school can participate by accessing an electronic link and completing a short online survey. All responses are anonymous and confidential. This is a simple and effective way to both help with data-gathering of effective practice in international schools and get some compelling data on practice in your own school.

Your school's participation is invaluable. If you agree to participate I will forward a second email and I will include my own introduction and explanation. You only have to forward the email to all professional staff, whose responses are then recorded anonymously through the online survey site. This is a simple and effective way to gather data.

Thank you for your consideration and assistance.

Jim Gerhard
MS/HS Principal
International School Yangon, Myanmar
University of Minnesota Doctoral Candidate

Appendix H

Requests and follow up emails to Participate for Principal or Heads of School

Dear School Head of Principal,

I am very excited that a number of Bangkok Schools have thus far indicated that they will participate in this important study. Developing sound data to improve our schools is an important facet of leadership. The concept of Professional Learning Communities is a proven way for our schools to become better, yet very little data has previously been available.

If you allow for your school to participate in this research study, you may simply forward this email on to your staff. My letter of introduction and explanation, which includes the link to the anonymous, short survey, is enclosed in the email.

Thank you for your time and assistance.

Jim Gerhard
MS/HS Principal
International School Yangon, Myanmar
University of Minnesota Doctoral Candidate

Attached email:

Dear International School Colleague,

I am conducting a research project at the University of Minnesota on perceptions of Professional Learning Communities (PLCs) in international schools in Bangkok. The goal is to explore how PLCs function as a part of our organization and to measure the perception to which they are evident in our schools. Your School Head has graciously agreed to have your school participate. Your help is appreciated. The data collection is anonymous and comes from a short online survey with seventeen question answered on a five-point scale from Strongly Agree to Strongly Disagree.

Please click on the link below to begin the survey.

Thank you for your support.

Sincerely,

Jim Gerhard
MS/HS Principal
International School Yangon, Myanmar
University of Minnesota Doctoral Candidate

Follow up email to school heads to remind them of the study

Dear School Head,

This is a gentle reminder that this important study needs your schools input to be successful. The quality of our data does depend on the quantity of data we can collect. Your help is greatly appreciated. Please peruse the link and survey yourself to recognize the ease and care for how this important data is collected. Please refer back to the earlier email for more information.

Sincere appreciations for your time and consideration.

Jim Gerhard
MS/HS Principal
International School Yangon, Myanmar
University of Minnesota Doctoral Candidate

Second Reminder to Participants

Greetings again School Head,

I am writing to thank for your school's participation in this study on professional Learning Communities. So far many of the international schools in Bangkok have become involved. I am grateful for your help with the study.
The quality of data often relies on the quantity of data received. We seek to have valid and reliable data from international schools and high participation rates is a sure way towards accomplishing this process.

It would be appreciative if you were to send a further gentle reminder to your staff to prompt them to click on and complete the survey. We want to make sure your school is well represented. The most important element of this data collection for now is return rate not necessarily sample size.
Sincere thanks for your continued support.

Jim Gerhard

PS: Below is a short reminder you can forward to your staff to make this an easy task!

Short Reminder for School Head to Forward:

Greetings again International School Colleagues,

A big thanks to those of you who have taken the time to complete this short survey. The data collected is very valuable and will go far towards giving valid information that can be used to improve our schools. As you know, the topic of Professional Learning Communities is one that is at the forefront of many of our professional development conversations. We have had a great response to our survey but your input is still needed.

If you have not yet completed the survey, I would ask that you consider doing so at this time.
You can have a great sense of satisfaction towards contributing your perception towards the study and exploration of Professional Learning Communities in our schools.

Please click on the attached link to complete the survey,
Thank you for your continued help and support,

Sincerely,

Jim Gerhard
MS/HS Principal
International School Yangon, Myanmar
University of Minnesota Doctoral Candidate

Appendix I
Informed Consent for Survey Participants

Dear Survey Respondent,

As part of a research project at the University of Minnesota, Twin Cities, I am conducting a survey of administrator and professional staff perception of their school staff as a Professional Learning Community. The goal is to discover more about how Professional learning Community structures are present in schools.

I would appreciate your time of a few minutes to complete a simple and short electronic survey. All responses are anonymous and all information is confidential. I anticipate over fifty schools participating in the study and no school or individual will be identified. Collecting information on how well our schools collaborate and develop professionally has great benefit to international education reform and improvement.
No risk is anticipated in the study outside of the normal risks associated with your typical duties.

Your receiving this link indicates your School Superintendent or director supports your efforts to help provide your perceptions on how well teachers in our schools work together. By clicking on and following the link below, you give consent for your data to be included in the study.

Your views are valuable and I appreciate your time and assistance.

Jim Gerhard
MS/HS Principal
International School Yangon, Myanmar
University of Minnesota Doctoral Candidate

Appendix J
Informed Consent for Interview Participants

Department of Educational Policy and Administration
College of Human Development
University of Minnesota, Twin Cities

Administration and Professional Staff Perception of the International School as a Professional Learning Community (PLC).

Dear Interview Participant,

You have been invited to participate in a follow up study involving international school teachers in Bangkok, Thailand. You were selected based on your school's participation in the recent online survey about Professional Learning Communities. The Institutional Review Board (IRB) at the University of Minnesota requires that all study participants provide informed consent before participating in any type of research. Please examine the following information. Your participation in the interview signals your consent to participate. Thank you.

Purpose of the Study and Background Information:

The purpose of this study is to measure the individual administration and professional staff perception of the school staff as a Professional Learning Community with regard to the five dimensions of a Professional Learning Community and to explore the factors that contribute to a school's functioning as a PLC.

Procedures:

The research process for this study began with an online survey completed by international teachers in over fifty schools in Bangkok, Thailand. The purpose was to collect data on administrator and professional staff perceptions of their schools as Professional Learning Communities. The second step of this study involves a further in-depth exploration of administrator and teacher views of Professional learning Communities in their schools. If you agree to this study you will be interviewed and be asked a series of pre-determined, mostly open-ended questions.

Benefits and Risks of the Study:

Benefits include an expanded appreciation for international education and improved knowledge of the components of Professional Learning Communities in our international schools. There are no risks to this study or interviews outside of the normal risks associated with your typical work duties.

Compensation:

No compensation will be awarded for participating in this study.

Confidentiality:

All interviewees will be assured of confidentiality of both their identity and their school and workplace identity. The records for this study will be kept private. Upon any publication of results, no information will be provided that any similar identities can be discerned. Our records for this study will be kept secured and only the researchers will have access to the results and study records. Written records of the interviews will be destroyed within a reasonable time after publication of the study.

Voluntary Nature of the Study:

Participation in this study is voluntary. Any decision you make to participate will not affect your current or future relations with your school. If you decide to participate, you are free not to answer any questions or withdraw at any time with our affecting your relationships with those schools.

Contacts and Questions:

James (Jim) Gerhard is the researcher conducting this study. You may ask any questions fo the researcher now. If you have questions later, you may contact the researcher in Yangon, Myanmar at gerh0042@umn.edu You may also contact the Dissertation Advisor to Jim Gerhard, Dr. Neal Nickerson at the University of Minnesota. Dr. Nickerson's email is nicke001@umn.edu and his telephone number in Minneapolis is (612) 624-0815.

Should you have any concerns or questions regarding this study and would like to talk to someone other than the researcher, please contact the Research Subject's Advocate Line, D528 Mayo, 420 Delaware Street SE Minneapolis, Minnesota 55455. Telephone (612) 625-1650.