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# CO-TEACHER LEARNING IN THE CONTEXT OF PROFESSIONAL LEARNING COMMUNITY

**By**

**Garth Cooper**

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# ABSTRACT

## CO-TEACHER LEARNING IN THE CONTEXT OF PROFESSIONAL LEARNING COMMUNITY

By

Garth Cooper

This dissertation describes a mixed-methodological study undertaken in the spring of 2009, focused on teachers learning about co-teaching in the context of professional learning community. A Professional Learning Community, or PLC, is formed by a small group of educators dedicated to seeking solutions to school problems, or creating positive changes in school environment through collaboration. The members of this particular PLC are responsible for the education of children who qualify for both general education and special education services in Brandnew JH/HS High School and who were, are, or will be in the future assigned to co-taught classrooms.

Prompted by the new Michigan Merit Curriculum (MMC), and charged by the Federal "No Child Left Behind" legislation, the study focuses on how PLC participation can help teachers better understand what elements comprise co-teaching pedagogy and their role in a co-taught classroom.

The study creates opportunities to witness the PLC's ongoing interactions as well as to trace individual teacher's experiences. As PLC members work through a series of activities organized around co-teaching themes, I collected and analyzed data from the following sources: individual interviews with a sub-group of PLC members

before and after the project, recordings and transcripts of meeting discussions, written artifacts produced by the group's members, and field notes from the PLC meetings.

As a qualitative study of teacher learning, the research followed the rigors of ethnographic inquiry including the framing and testing of working hypotheses or inferences about local meaning. Additionally, in an iterative process called grounded theory development, I preceded both inductively and deductively as I collected data, analyzed it, and returned to the field with my questions and inferences further refined and focused. The research also was guided by Vygotsky's mediation and social learning theories and the role these influences played on teacher learning in the group.

The quantitative evaluation tool was designed to give a formative look at the current understanding and experiences the teachers have with PLC. I generated a series of questions, asked in a sample survey format, using an online program for data collection. The general and special education teachers who constituted the membership of the PLC were the respondents to the surveys. The survey was completed prior to the first PLC meeting, after the fifth PLC meeting which was the mid-point of the project, and at the conclusion of the PLC meetings.

The study provided an opportunity to learn about participating teachers' knowledge, comfort, and skill related to co-teaching and how these are expressed and potentially transformed by means of a PLC's professional development activities.

One of my special education colleagues is notorious for doing the minimum required. He takes the support teacher role in every co-teaching assignment and doesn't even want to think about assuming a greater role. When I saw him in the PLC I kind of laughed to myself. I didn't expect much participation from him and I certainly didn't expect him to invest much of himself in the project. At the beginning that is exactly what happened. But after about the third meeting he was excited about the upcoming meetings and was very involved in the discussions. He and one of his collaborating teachers even developed a lesson using parallel teaching and used it in their class. Without the PLC meetings I don't think we would have seen this kind of collaboration from him.

[Post interview, Stallion, April 2009]

This work is dedicated with great love and admiration to my children; Doug, Zack and Becca, as well as Dr. Rui Niu, and all the others who cared about my success and inspired me to complete my studies.

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### What are Co-teaching and Professional Learning Community

### Why Should We Care

Teachers worry about making radical changes in their instructional practice and feel coerced by State and Federal legislation. Often these teachers feel ill-prepared or insufficiently supported to modify their pedagogy in order to help their students succeed. This feeling is intensified when teachers work with students who have special educational needs to meet the requirements of the standard curriculum at their grade level. In the No Child Left Behind models of classroom and instruction, students who need special educational accommodations, both those with learning and emotional disabilities (sometimes co-occurring) characteristics are expected to meet the same curricular standards as general education students. These children, however, are commonly recognized by their teachers as apt to be "left behind." With the push from the NCLB legislation, more and more such children are put in the general education classrooms in search of an inclusive education. In this study I intend to explore the influence of participating in a professional learning community on teachers' knowledge, beliefs, and skills related to co-teaching.

Inclusive education refers to the practice of placing special education students in the same classroom, with the same teacher, and learning the same content knowledge as general education students. Sage (1997) put it this way, "Inclusion implies the existence of only one unified system from the beginning, encompassing all members equitably, without regard for variations in their status" (p. 4). In order to meet this challenge of inclusion, school districts began to pair teachers to form a model that what will be referred to in this study as "co-teaching".

Recently, there have been several educational policies coming to the fore which

have pushed many schools to adopt collaborative teaching methods for instruction, including co-teaching: 1) The "Highly Qualified" requirements of the NCLB (2002) legislation that mandates teachers in self-contained special education classes hold certification in the subject matter being taught. 2) The reauthorization of IDEA (2004), the legislation which governs special education in the U.S., that requires ALL students have access to the general education curriculum. 3) The importance and necessity of all students being prepared to be successful on "high-stakes tests", which for Michigan is the Michigan Merit Exam (MME).

With all of these adding up to more special services needed in general education settings, primarily for students with disabilities, co-teaching has become one of the most frequently used special education models for inclusive classrooms (the National Center on Educational Restructuring and Inclusion, 1995). The main reason is that although research on the outcomes of co-teaching is still at its beginning stage (Weiss & Brigham, 2000; Zigmond, 2003), co-teaching has been viewed as an effective way to ensure that all students would benefit from content instruction taught by a general and a special education teacher in general classroom settings (Klingner, et al., 1998; Kloo & Zigmond, 2008; Rea, et al., 2002; Vaughn, et al., 1998).

Co-teaching refers to the collaborative teaching teams, which are composed of one general classroom teacher and one special education teacher (Kloo & Zigmond, 2008). The two collaborative teachers share responsibilities for planning, teaching, and assessment in the same general class (Fennick and Liddy, 2001).

*Research Question*

In order to teach all children, both regular and special education teachers need to learn how to create a culture of collaboration and an environment where both the academic

and social needs of each child are meet in the classroom. Meanwhile, the teachers also need to learn how to integrate the information about their students' learning strengths and weaknesses into their classroom instruction. Therefore, how to assist these teachers to understand and feel comfortable in a co-teaching relationship at Brandnew JH/HS Schools became the goal so that it could be taken as a window to view how professional development projects such as this can help other districts achieve the same results. In this study, the grand research question became the following: Do teachers improve their knowledge, beliefs, and skill related to co-teaching through participation in a professional learning community? This focus had three sub-questions:

1) Whether and how do teachers participating in PLC gain instructional practice knowledge?;
2) Do the teachers' beliefs regarding co-teaching change through participation in the PLC?;
3) What modifications do the teachers apply in *their own teaching strategies* due to their participation in the PLC?

*Co-Teaching*

In the 1980s and 1990s, there was an increase in the amount of research and the number of articles written related to co-teaching. The catch phrase for the movement to inclusive classrooms was cooperative or collaborative teaching. Co-teaching, as one of the models of collaborative teaching, is viewed as a positive approach in supporting teachers in teaching all children (Bauwens, Hourcade, & Friend, 1989; Pugach & Johnson, 1995; Rice & Zigmond, 1999; White and White, 1992).

Co-teaching studies cover a big range, including research on the effectiveness of a

general education teacher collaborating with a special education teacher in integrating subject area knowledge with special education teaching (Chisholm, 1991; Fennick & Liddy, 2001; Walsh, 1991; West & Sarkees-Wircenski, 1995). Other studies speak on the division of work between a general education teacher and a special education teacher in the same room (Chisholm, 1991; Stainback & Stainback, 1992; White & White, 1992). Some researchers focused on the functions between the two teachers in the same room (Kovic, 1996; Rice & Zigmond, 1999; Trump & Hange, 1996). Finally, there are also studies on how to make the team teaching effective (Friend, Reising, & Cook, 1993; Laycock, Gable & Korinek, 1991; Pugach & Johnson, 1995; Warger & Pugach, 1998).

As stated previously, research on the outcomes of co-teaching is still at its beginning stage (Weiss & Brigham, 2000; Zigmond, 2003), but studies show that certain students' school performances increased when they were co-taught. Klingner and colleagues (1998) found that with co-teachers, the reading achievement scores of students who had special educational accommodations, such as students with disabilities or students at risk, increased significantly after a fall-to-spring semester of co-teaching. Rea, et al. (2002) found that students with disabilities in two 8$^{th}$ grade co-taught classrooms obtained higher course grades in language arts, social studies, math, and science than did those who attended pulled-out programs. Vaughn, et al (1998) also found that co-teaching increased students' social capacities and friendships with other students. These studies demonstrate the significance of student participation in co-taught classrooms and the potential increased effectiveness of instruction in co-teaching.

Theoretically, co-teaching draws on the strengths of both the special education teacher and the general education teacher regarding teaching content, managing classes, and pacing the curriculum as well as engage everyone, including language diverse children,

children with disabilities, and children attending individual educational programs (IEPs) in the learning activities (Kloo & Zigmond, 2008).

Co-teaching can be structured in several different ways, from grade level teams, to content/subject matter teams, to variations of general education teachers partnered with special education teachers – i.e. a grade level general education team all working with one special education teacher. However, the most common configuration of the co-teaching team is when a general education teacher partners with a special education teacher to "combine complementary sets of professional knowledge and skills simultaneously in general education classrooms (Bauwens & Hourcade, 1995, p. xiii).These "complementary skills" reflect the general education teacher being viewed as the content expert and the special education teacher being viewed as the instructional strategies expert. This is the team configuration that was utilized and researched in my dissertation and thus will be the default configuration for discussions in this paper.

Within co-teaching there are five generally accepted models for co-teaching. These are: Station/Center Teaching, Assisted/Support Teaching, Team Teaching, Complimentary teaching, and Parallel Teaching (Burggraf & Sotomayor, 2005; Cook & Friend, 1995). Assisted/Support Teaching is the most traditional model of co-teaching wherein one teacher, typically the general education teacher, assumes responsibility for the majority of the instruction. The second teacher, usually the special education teacher, assumes a supportive role and waits to be called into the instruction by the primary teacher. The Station/Center Teaching model consists of dividing the instructional content into two parts and then has the students move from one station to another with the teacher staying in place and only covering one part of the instruction. Parallel Teaching is a similar model in that the students are divided into equal sized groups, either heterogeneously or by student

competency. The same content is then covered by both the general education and special education teacher within the parallel group they are leading. The Complimentary Teaching model of co-teaching is almost a hybrid between Supportive Teaching wherein one teacher assumes primary responsibility for delivering content, and Team Teaching where both teachers interact simultaneously throughout the lesson. In Complimentary Teaching one teacher instructs while the other teacher models different desired behaviors such as note taking, creating a diagram or organizing materials. Finally, there is the Team Teaching model in which both teachers deliver the instruction in collaboration to all of the students at the same time, and where responsibilities for planning, grading, instructing, and managing the classroom are shared equally. This fits with the prevailing approach to inclusive instruction which states that "all educators are responsible for the education of all children" (Bauwens & Hourcade, p. 48).

*Preparing Teachers for a Collaborative Classroom*

If we follow the prevailing research that suggests there is benefit for students' learning within a co-taught classroom, how then do we prepare teachers for this assignment? There are few, if any, courses taught in teacher preparation schools related to teachers working with another teacher in a collaborative classroom. In addition, even in those situations where inclusivity is a main topic in teacher education classes, many veteran teachers that have not taken college courses in many years are suddenly being asked to work in this new environment.

To bring teachers up to speed on co-teaching districts utilize professional development opportunities. Currently, many districts rely on sending their teachers to one-day workshops on co-teaching. This methodology may work for informing teachers about the components of co-teaching, however, I argue that the most vital element for

creating effective co-teaching teams is in the relationship building and spirit of collaboration between the general and special education teachers. To that end, I propose the most effective model for professional development related to co-teaching would be the use of professional learning communities (PLC).

*PLC Providing Learning Contexts for Co-Teachers*

In the past 30 years, while the number of articles on issues related to professional learning communities has increased, and researchers have found PLC to be one of the best ways to improve teacher learning (Little, 2002), thereby, increasing students' learning outcomes (McLaughlin & Talbert, 2006; Sullivan & Glanz, 2006), the number of articles written related to empirical studies is still limited. The majority of the literature related to PLC is theoretical in nature, but the volume of work, and consistency in the findings offers hope that the use of PLC for teacher learning holds promise (Archinstein, 2002; Beattie, 2002; Ben-Peretz & Silberstein, 2002; Crespo, 2002; Florio-Ruane with deTar, 2001; Grossman et al., 2001; McLaughlin & Talbert, 2001; Niu, 2008; Westheimer, 1998).

PLC are commonly defined in the research as places where teachers are able to work together on common themes, or goals, share experiences and stories together, solve problems or work on difficult issues, obey common rules, learn from each other, and are able to continue their professional development collectively through sustained interaction (Archinstein, 2002; Beattie, 2002; Ben-Peretz & Silberstein, 2002; Crespo, 2002; Grossman et al., 2001; McLaughlin & Talbert, 2001; Westheimer, 1999). Niu (2008) studied 9 teachers who worked on the topic of how to engage all children in their classroom learning. Her PLC focused on two Chinese children, and how their language and cultural background influenced their learning. In this study, Niu found that after eight PLC sessions her participating teachers gained awareness of cultural differences, obtained skills and

knowledge in involving children from diverse backgrounds in the class activities, as well as, taking what they learned into lesson planning consideration. Crespo (2002) studied a group of teachers who worked in PLC on mathematical content knowledge. The teachers demonstrated significant learning outcomes either through working on mathematical problems or investigating students' mathematical thinking by examining their mathematical work. Other researchers also found PLC to be an effective way to improve teacher learning, thereby, increasing students' learning outcomes (McLaughlin & Talbert, 2006).

This research raised two questions, "What features of Professional Learning Communities foster teacher learning in general?" And "Why would a PLC be the optimum professional development environment for developing a co-teaching relationship between general and special education teachers?"

In answering these questions, I found that Martin-Kniep's (2004) framework best captured the overall general patterns among all the articles related to both PLC and co-teaching. Focusing on the notion of "teachers teaching teachers" and on the experiences the teachers at the Center for the Study of Expertise in Teaching and Learning (CSETL) had, Martin-Kniep (2004) shows the "power of learning communities in stimulating individual learning and organizational change" (pp. 1-2).

CSETL started with 15 teachers in NYC and met 7 full days during the first year and for one week each summer. Most of the teachers had significant expertise in standards-based design, portfolio assessment, or action research. These teachers sought ways that challenged them as adult learners and that helped them grow as teachers. After the study of these teachers' learning experiences, Martin-Kniep argues that teacher professional communities are a means by which teachers break their work isolation and by which teachers foster a collaborative and reflective culture. She describes PLC as "the single most

important factor" in school improvement and enhancement (p. 1; cited in Eastwood & Lewis, 1992, p. 215).

In her writing, Martin-Kniep (2004) argues 1) that PLC provide participating teachers a learning environment that schoolteachers cannot normally experience in their school setting; 2) that PLC foster teacher collaborations and create positive working relationships; 3) that PLC address participating teachers' immediate and long-term needs through effective ways of exchanging ideas and feedback to improve professional practices both for themselves and for their PLC peers; 4) that PLC support participating teachers to know about their colleagues' expertise; 5) that PLC promote participating teachers' rigorous work through teachers' constantly framing and reframing their agendas; and 6) that PLC support teachers and schools from dependence to independence in terms of continued improvement.

As with the Professional Learning Community (PLC) literature, in this review, I examined both theoretical and empirical pieces on Co-teaching, including its definitions, models, and characteristics, to support my answers to the research question.

## Chapter 2: Theoretical Foundation for PLC as Effective Professional Development Tool for Co-Teaching Instruction

*Features of PLC That Foster Teacher Learning*

To understand how PLC foster teacher learning, I first explore the definitions of PLC to provide a general overview of PLC and their common characteristics. After, I provide a comparative lens for viewing co-teaching and its generally accepted characteristics and how they match with PLC features. This should offer a strong argument for why PLC participation can promote co-teacher learning.

*PLC Definition and Teacher Learning*

As early as 1887, F. Tonnies defined communities in his book to be either Gemeinschaft (community) or Gesellschaft (society). He argued that Gemeinschaft exists in one of these three forms: Gemeinschaft by kinship, by place, and of mind (1957). The most commonly used definitions of community today are rooted from the third form of his definition – Gemeinschaft of mind. According to Tonnies, "Gemeinschaft of mind expresses the community of mental life (p. 42)." This kind of community was formed through people sharing a common goal and a common set of values, rather than common bloodline or common habitat. Other researchers and scholars often acknowledged the sharing of common goals and values when defining communities. Later, Thomas Sergiovanni elaborated on Tonnies' definition. Sergiovanni (1993) argued that communities are collections formed by individuals who do activities together by natural will and who are bonded together by their shared ideals and ideas. Sergiovanni (1994) put it this way,

> Community is the tie that binds teachers together in special ways, to something more significant than themselves: shared values and ideals. It lifts teachers to a higher level of self-understanding, commitment, and performance...Community can help teachers be transformed from a collection of "I's" to a collective "we," thus providing them with a unique and enduring sense of identity, belonging, and place. (pp. xiii)

These definitions emphasize that community members are tied together and have "shared values and commitment." The "togetherness" and "sharedness" creates the condition for members to view themselves as a collective "we," rather than a collection of "I's." Group members' shared practices form, explicitly, the "groupness" to its members – the sense of the group as a whole (Grossman, et al., 2001). But what generates this "togetherness" or "sharedness" or "groupness?"

Miriam Ben-Peretz and Moshe Silberstein (2002) modified and extended Sergiovanni's community concept. They defined a teacher learning community as a place where teachers are able to work together, share experiences and stories together, learn from each other, and are able to continue their professional development through sustained interaction. Ben-Peretz and Silberstein's definition is similar to other scholars and researchers who study teacher communities (Beattie, 2002; Crespo, 2002; Grossman et al., 2001; Westheimer, 1999). The common theme across these scholars is that teachers come together based on a similar or common goal. With these goals, teachers share their experiences, obey common rules, and ideally learn from one another.

*General Characteristics of PLC*

Community scholars have been working on the characteristics of PLC and the general tendency shows that when PLC members focus on different topics, it's more likely that PLC convey different characteristics. The point being that if the teachers took an active lead in determining the focus of the PLC they were more invested and exhibited stronger characteristics of PLC. For instance, Crespo worked with a group of elementary math teachers from the same school, met regularly every two or three weeks throughout the year. Crespo's community was designed based on the professional development ideas and materials of Cognitively Guided Instruction (CGI) (Fennema et al., 1996) and on Shifter, et

al.'s Developing, Mathematical and Ideas (DMI) (Shifter, Bastable, & Russell, 1999a; 1999b). Her teacher learning community had two main foci: focusing on students' mathematical work to improve teaching and to encourage more efficient student problem solving; and focusing on exploring mathematical problems unrelated to student work to challenge and extend the teachers' own understanding. The teachers were able to choose the topic to focus on for discussion and during the meetings, this group engaged in activities including mathematical problem solving and analyzing students' work being concordant with the community goal.

That fact that when focused on topics in which they are less invested due to the absence of a common goal or shared beliefs, limiting participant interaction within the community, teacher learning is limited or non-existant (Kazemi & Franke, 2003). The goal of the Kazemi & Franke's (KF) community was to promote teachers' collective inquiry through discussing students' work, but the community activities did not promote collaboration. The KF community used a modified CGI (Cognitively Guided Instruction) (Carpenter, Fennema, Franke, Levi, & Empson, 1999) model of professional development. The teachers of the KF Community taught at the same school and met after school once a month for one year. During the year, the research team (the authors and two university colleagues) chose topics ahead of time for the group. For example, if the topic was triangles, then teachers would bring students' work related to triangles to that meeting of the group. At the beginning of each meeting, participating teachers briefly reflected in writing about the student work they had selected. The facilitator then invited teachers to share their opinions and would record teachers' comments for later revisits. It was hoped that in this way, through conversation, teacher learning would occur. However, because the community activities were limited to the interests of a few, member participation, interaction, and

dialogue were limited which hindered teacher learning.

Generally speaking, community scholars summarize that while some of characteristics may be more apparent in one PLC than another, there are certain characteristics which run across all PLC. I selected the following readings to provide a general demonstration of PLC's characteristics. In describing professional learning communities it is important to look at the work of Hord (1997), and Astuto, Clark, Read, McGree, and Fernandez (1993), this group having defined a professional community of learners as, "a group in which teachers in a school and its administrators seek and share learning and then act on what they learn" (p.1). Hord drew her theories from the work of several researchers, (Klein-Kracht, 1993; Leithwood, Leonard & Sharratt, 1997; Louis, Kruse & Bryk, 1995; Sergiovanni, 1994; and Synder, 1996), of PLC in which she defines five key elements: 1) Shared and supportive leadership 2) Shared values and vision 3) Collective learning and application 4) Supportive conditions 5) Shared personal practice.

These arguments are identical with Westheimer's report as well. Based on negotiated rules, Westheimer argues that the PLC participating teachers share their experiences in order to grow together (Cole, 2004, Wenger, 2003). To support his argument, Westheimer further argues that community is composed of five aspects, 1) the shared beliefs; 2) the interaction and participation; 3) members' interdependence; 4) members' concerns for individual and minority views; and 5) members' meaningful relationships.

The common themes across Astuto, et al.'s and Westheimer's characteristics of PLC are the sharedness and dependency, the supportiveness and meaningful relationships among members, as well as the concerns for the minority views for members. It is because of these basic factors that PLC are viewed as effective contexts for teacher learning and further for students' learning (McLaughlin & Talbert, 2006; Sullivan & Glanz, 2006). However,

considering these basic factors, what do PLC contribute to teacher learning? What do PLC contribute to the field of education? Why do researchers argue that PLC are effective ways in improving teaching practice? In the following section, I take Martin-Kniep's framework as an analytical lens to unpack the contributions that PLC hold for teacher professional development.

*Viewing PLC Literature through Martin-Kniep's Eyes*

Martin-Kniep's summary about the PLC went far beyond the basic features of PLC as mentioned above. Her points of view recognized the essential functions of PLC to teacher learning and to the development of the field of education. In the following, I take Martin-Kniep's perspectives to illustrate why the features of PLC could foster co-teacher learning in the same context.

*PLC Create A Learning Environment that Schools Cannot.*

Researchers have argued that teachers are isolated by their "egg-crate" styled classrooms (Lortie, 1975). Based on community scholars (Crespo, 2002; Farmer, et al., 2003; Grossman, et al., 2001; McLaughlin & Talbert, 2001; Westheimer, 1998, 1999), PLC provides teachers opportunities to participate collectively and interact with one another, which reduced the alienation and isolation of teachers in the schools. With the characteristics of sharing and common purpose, and interdependence but concern for individual opinions, communities provide connectedness for teachers, which is beyond the isolated classroom structures in schools. The sense of "connectedness" among participating teachers themselves is also meaningful in teachers' growth and modifies teachers' beliefs about their place in the community.

Peterson, McCarthey and Elmore (1996) studied three cases related to school

communities, a) team meetings were used for teachers to discuss school routines and procedures; b) teachers used the team time to interact with one another and discussed ways to implement curriculum and to talk about individual students; c) teachers met to discuss students' learning and to give ideas to other staff members about how to help the students. Leiberman, in an interview with Sparks(1999), placed PLC in an educational context when he described professional learning communities as "places in which teachers pursue clear, shared purposes for student learning, engage in collaborative activities to achieve their purposes, and take collective responsibility for students' learning" (p. 53). To this extent, Martin-Kniep (2004) directly argues that PLC provide participating teachers an environment where they are able to ponder issues and questions about both teaching and learning, which is opposite to the typical classroom environment where the teachers have to make immediate decisions and take immediate actions. In most general school settings, classroom teachers often are not provided an environment for professional development that helps teachers increase their knowledge and learning while breaking down the feeling of isolation and encouraging collaboration with their peers.

*PLC Foster Positive Teacher Collaborative Relationships*

Based on Westheimer (1998), professional learning community is defined as a group of teachers who are socially interdependent, have common goals, participate in discussions in order to learn, and share certain practices. In such communities, members explicitly recognize the "groupness" – the sense of the group as a whole (Grossman, et al., 2001). The achievement of "groupness" is through group members' shared practice. Thus, the collaborative relationships keep community members together, fostering mutual learning and satisfying mutual need, which are cited as essential components of community (Scherer, 1972; Selznick, 1992).

Among researchers who are interested in the conceptualization of community, Grossman and colleagues (2001) built a strong case on community bonds based in their empirical research. Grossman and colleagues located their project in a large urban high school where members from history and English departments came together to explore and understand humanities for the purpose of working on an interdisciplinary humanities curriculum. Based on their first 18-month teacher learning data, Grossman and colleagues studied how teachers within a learning community forge the bonds of community, worked through the conflicts of social relationships, and formed the structures needed to sustain relationships. As a result, they mapped a trajectory of evolution of a PLC, including three stages, the Beginning, the Evolving, and the Mature. Grossman and colleagues argued that a mature community is enriched by multiple perspectives: teachers' active participation, having strong interrelationships, and collaboratively working on the community growth.

Similarly, in studying the relationship between the evolution of professional learning communities and their influence on student learning, Louis, et al. (1995) studied five different schools. They identified variability in the development of professional learning community. Their results demonstrated that these communities were distinguished by mature, developing, fragmented, and static. Because of these different characteristics or differences in these communities, different teacher learning outcomes took place. For instance, mature communities took collective responsibility for improving teacher learning and moved forward, while immature ones suffered with only partial participation and high levels of competition among subgroups.

In another study, Westheimer (1998) contrasted two community cases: one community emphasized teachers' individual autonomy and rights; the other defined by a more collective or communal mission and values, and identified vastly different ideologies

and practices in the two communities. Westheimer found that rooted in the different ideologies, teachers participation varied in accordance with their community relationships, which affected the teachers' learning outcomes.

These studies demonstrated a common tendency of mature communities whereby teachers' showed active participations, and strong collaborative relationships. This is identical with the argument by Martin-Kniep (2004), who states that PLC foster teacher collaborations, create positive working relationships, and help teacher retentions.

*PLC Address Teachers' Long-term and Immediate Needs through Effective Ways to Exchanging Ideas and Feedback*

PLC are viewed as one of the strategies that address the participating teachers' long-term and immediate needs. For long-term needs, Peterson, McCarthey, and Elmore (1996) argue that PLC help teachers form both internal and external communications. Within PLC their communications with those who share the same mind-set, discussion problems and issues they care about helps promote both thinking and knowledge acquisition. There are also studies about community focused on university researchers/facilitator helping teachers with subject content knowledge (e.g., Crespo, 2002). For immediate needs, McLaughlin (1994, p. 31) argues that

> not as a special project or scheduled event but as a locally constructed product of an active professional community that is responsive to teachers' immediate professional concerns as well as their professional identity.

Such a community is formed both within and beyond the school (Elmore, 1994). And this formation is not always smooth or without disturbances but meets both short and long term needs of PLC members.

Teachers' communications have to be effective to achieve the above goals. To this point, Achinstein (2002) emphasized conflicts as one of the effective ways for teachers to

exchange their ideas and give feedback, beside the dialogical ways of conversations, on which most of the community studies were based (e.g., Crespo, 2002; Grossman, et al., 2001). Achinstein draws from her own experience in promoting school reform with teachers and parents across Chicago, where she advocated for the necessity of teacher communities within schools and the importance of greater collaboration and collegiality among teachers in order to foster reform. After completing a community literature review, Achinstein argued that, "conflict reflects a more hopeful and healthy future for communities and schools" (p. 2). This is because conflict "offers a context for inquiry, organizational learning, and change" (p. 3). Achinstein viewed conflict as being constructive for communities and schools because conflicts represent the differences in beliefs and practice of teachers. In order to illustrate her argument, Achinstein explored how teacher communities differ in the ways community members dealt with their own conflict, how they collaborate, and how they think about the purposes of schooling in relation to issues of conflict. Through analyzing the clashes over ideology, race, culture, and practices that brought conflicts to teachers with one another in two different teacher professional development communities, Achinstein drew a complex map of the multi- dimensionality of community. She argued that conflicts are powerful learning opportunities for teachers, therefore, the opportunities for teachers to grow and the moment for communities to improve. As PLC researchers make clear almost unanimously, PLC is a place where teachers can feel safe to engage in these constructive conflicts for the good of community learning.

For example, in Crespo's (2002) study which focused on students' math work, teachers' conflicts and collaborations within the community helped the teachers to better understand both their own math content knowledge and their students' mathematical

reasoning with the goal that it be reflected in their teaching. Martin-Kniep (2004) argued that participating teachers take advantage of PLC to exchange ideas and use feedback to improve professional practices both for themselves and for their PLC peers.

*PLC Assist Participating Teachers to Know Their Colleagues' Expertise*

Community scholars agree that teacher professional communities must be built on a foundation of shared beliefs. When Tonnies (1957) defined community, he argued that community was formed through people sharing a common goal and a common set of values. Later, Scherer (1972) also argued that "a 'core of commonness' or communality that includes a collective perspective, agreed-upon definitions, and some agreement about values" (pp. 122-23) is one of the essential factors required in any community. In 1993, Sergiovanni argued that communities were collections formed by individuals who do activities together by natural will and who are bonded together by their shared ideals and ideas. Across these definitions, "shared beliefs" became emphasized. These scholars agreed that teacher learning community was built on shared beliefs. However, it is important to notice that many researchers also emphasized that having only shared beliefs was not enough to form effective communities for teacher learning (Grossman, et al., 2001; Noddings, 1996).

What is more important is that based on the shared beliefs, PLC' members get opportunities to know about their colleagues' expertise. Martin-Kniep (2004) argues that since the routines of teachers are in such an isolated and closed environment that teachers frequently lack information about what their colleagues know and do. PLC provides opportunities for the participants to know who knows what and who is doing what in their instructional practice. In the CSETL project, the teachers used an expertise database to get to know which teachers are experts in which areas. The impact of this is that members can

extract information and knowledge from the expertise of others. As Printy (2008) pointed out, "In addition to refinement of any individual teacher's skills, the learning process enables teachers to draw on and benefit from the collective resources of the community" (Knight, 2002; cited in Printy, 2008, p.190). This is because when PLC members are tied by the norm of sharing, they represent differences: differences of experiences, teaching beliefs, levels, and subjects, personalities, and teaching styles, and member identities (Wenger, 2003), which convey the members' expertise.

*PLC Promote Rigorous Work*

Martin-Kniep (2004) reflected that during the CSETL process its members got to know each other, while they constantly framed and reframed their agendas for rigorous work, they also produced materials for classrooms aligned with standards and excellent pedagogy. School reform efforts have typically been unsuccessful in providing the leadership, professional development, inspiration, and motivation necessary to enable teachers to create a collective effort and shared values for alignment of curriculum instruction, and assessment (Fullan, 1995; Lindle, 1995/1996). It is encouraging to note, that there is research that suggests PLC might be the organizational strategy capable of driving school reform to a more successful conclusion (Dufour & Eaker, 1998; Louis, et al., 1995). The reasons PLC promote rigorous work is also because PLC provide opportunities for participating teachers to do self-reflections. Martin-Kniep (2004) argued that the CSETL also provided opportunities for the participating teachers to share, present, and reflect on their own and others' ideas and work. The participating teachers used their presentations as opportunities to test their own thinking and to seek feedback from their colleagues outside the PLC. The teachers' self-reflections promote teacher learning and further the change of their practice (Niu, 2008).

From Dependence to Interdependence

Martin-Kniep (2004) believed PLC are essential in supporting teacher' and schools' continued improvement. School leaders continue to face the daunting challenge of developing individual staff members' capacity to engage in meaningful reform to benefit student achievement. With this in mind, Dufour and Eaker (1998) stated, "The most promising strategy for sustained, substantive school improvement is developing the ability of school personnel to function as professional learning communities" (p. xi). The phrase professional learning communities (PLC) emerged from organizational theory and has been linked to Senge's (1990) description of a learning organization in which "people continually expand their capacity to create desired results, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free..." (p. 3).

Dufour and Eaker (1998, p. 25) stated,

> What separates a learning community from an ordinary school is the collective commitment to guiding principles that articulate what the people in the school believe and what they seek to create. Furthermore, these guiding principles are not just articulated by those in positions of leadership, even more important, they are embedded in the hearts and minds of people throughout the school.

Further as argued by Martin-Kniep (2004) that without PLC, schools have to exclusively rely on external experts and resources, which is on the one hand, expensive, and on the other, not as effective in terms of teacher professional development.

All of the elements discussed above answer the question of why using PLC for professional development of co-teaching is an effective method. In the next section I will review the literature on co-teaching so that the common threads between effective co-teaching and PLC begin to emerge.

*Co-Teaching: Promoting Students' Learning in the General Education Classroom*

In chapter one I outlined the framework of what constitutes co-teaching. For example, the various models of co-teaching that are generally accepted practices in the field. In order to fully answer the second question raised in the first part of the paper – why a PLC is the optimum professional development environment for developing a co-teaching relationship between general and special education teachers, based on the literature, I provide a basic understanding of what are the characteristics of a co-teaching relationship. This goes beyond how it may be configured and how it manifests itself in current school structures. My goal in this section is to give a summary review of the literature related to the characteristics of co-teaching and then finish with what the literature suggests about the use of PLC to foster co-teacher relationships.

*The Characteristics of Good Co-teaching*

The definition of what constitutes the characteristics of co-teaching is a blending of writing from researchers involved with inclusive classrooms (Villas & Thousand, 2004), and the literature related to cooperative learning (Johnson & Johnson, 1999, Burggraf & Sotomayor, 2005, Bauwens & Hourcade, 1995, 2002). Co-teaching reflects: 1) Teachers' efforts to agree upon common goals and collectively taking responsibility for achieving those goals, such as alignment of curriculum and redesign of instructional practices. 2) Teachers sharing the belief that each teacher brings unique and necessary skills to the team and that all children can learn. 3) Co-teachers also have to be willing to shift their role within the team between teacher and student, expert and novice, and distributor and receiver of knowledge for the sake of collaboration. 4) Co-teachers must be willing to be flexible, accommodating, tolerant, willing to engage in substantive dialogue, and even to subjugate their egos when necessary in order to exchange ideas and receive constructive feedback. 5)

They must be willing to "be active in seeking out or developing, implementing, and evaluating new and more effective procedures (Bauwens & Hourcade, 1995, p. 8), in essence, striving for improvement. 6) Finally, the co-teachers' willingness to overcome institutional barriers such as "non-supportive administration, legal aspects of special education, paperwork, time, scheduling and workload" (Burggraf & Sotomayor, 2005, p. 1).

*PLC Are the Optimum Professional Development Environment for Co-Teaching Relationship (See Table 1)*

I found that the summarized characteristics of co-teaching are very close to the general characteristics of PLC, although they situate themselves in different social contexts. Most of the PLC are held out of the general classroom setting where co-teaching occurs. However, because of the similarities between the features of co-teaching and those of the PLC, the PLC contexts are able to incubate the development of co-teaching relationships. Meanwhile, because of the differences between the features of the co-teaching and those of the PLC, the PLC settings become a supportive environment for fostering the development of co-teaching relationships. In the following, anchored on Martin-Kniep's six perspectives (although not in the same order as in the previous section), I provide evidence for the above argument.

***a)** PLC Foster Positive Teacher Collaborative Relationships: Vital for Co-teaching*

As stated in the literature, relationships among the PLC members are very important to successful teacher learning in community. This is true in the development of good co-teaching teams as well. Co-teachers agree upon common goals and collectively take responsibility for achieving these goals. The nature of their relationship shows the need for working and being together, but it is not automatic that the relationship will evolve into one of collaboration (Bauwens & Hourcade, 1995; Burggraf & Sotomayor, 2005; Cook &

Friend, 1995). PLC foster positive teacher collaborative relationships, which reinforce PLC members' responsibilities for pursuing the members' mutual learning and satisfying the members' mutual needs (Scherer, 1972; Selznick, 1992). Because of this mutually connected relationship, PLC members explicitly recognize the "groupness," "wholeness," "togetherness," or "sharedness." In this paper, the co-teachers are team teaching members. They share their teaching workload and responsibilities at the same time. Co-teachers need such "sharedness" or "togetherness" to work effectively. In this model, simply taking collective responsibility does not guarantee the collaborative relationship which is needed, but which can be fostered in PLC.

**b)** *PLC Address Teachers' Long-term or Immediate Needs through Exchanging Ideas and Feedback to Improve Professional Practice: Needed to Improve Co-Teaching Practice*

Co-teachers have the need of exchanging ideas and receiving constructive feedback from one another to address their immediate or long-term needs. For the purpose of such exchange of ideas and feedback, co-teachers have to be open, flexible, and accommodating to their partners' words and actions (Johnson & Johnson, 1999, Burggraf & Sotomayor, 2005, Bauwens & Hourcade, 1995, 2002). However, there are uncertainties that might affect the co-teachers ability to do so, such as, did the co-teaching setting provide an open, flexible, and accommodating atmosphere? Whether the co-teachers created the norm of exchanging ideas or feedback? If the co-teachers formed the kind of personal bond necessary to look after each other's teaching responsibilities collaboratively? If the answers to these questions are NO, the co-teachers' ideas and feedback channels are blocked.

However, as argued previously, the PLC are able to address the participating teachers' long-term and immediate needs through various ways of communication, including giving PLC members opportunities to receive others' ideas and feedback through

conversations (e.g., Grossman, et al., 2001), argument (e.g., Crespo, 2002), or conflicts (e.g., Achinstein, 2001). This is because the PLC fosters a positive and constructive environment for its participants' learning. The PLC teachers come to view themselves as non-subjugated to their egos and allow themselves to receive others' ideas or feedback. The PLC members see themselves as equal in the relationship and interdependent within the community which could promote the co-teachers' collaborative relationship and can help co-teachers to be open in exchanging ideas and feedback.

c) *PLC Support Teachers Knowing About Their Colleagues' Expertise: Foundational for Co-Teachers*

Co-teachers believe that they each bring unique and necessary skills and knowledge to the team. But this is a very broad expression, believed more by faith than proof. How can the co-teachers really know about their partners' expertise in a general classroom setting? When do traditional school structures provide general education and special education teachers the opportunity to learn about each others' expertise? The PLC can help to solve this problem. As cited before, Martin-Kniep (2004) had her CSETL teachers use an expertise database to show who knows what and in which area.

Based on the PLC studies, PLC provide the participating teachers the opportunity to express and negotiate learning through working with one another's different expertise. Grossman and his colleagues (2001) argue that offering different views based on a members' expertise contributes to the growth of PLC. It is important to "remember that communication and reflection are the keys to successful co-teaching relationships (Dieker, 2006, p. 1). It seems that knowing about one another's expertise is critical in collaborative work, yet, without participation in the PLC setting, when might the teachers have an opportunity to experience each others expertise?

**d)** *PLC Promote Rigorous Work: Co-Teachers Need to Do Rigorous Work as Well*

Co-teachers need to seek out or develop, implement, and evaluate new and more effective procedures in their own teaching contexts. Even with co-teachers' working with another teacher in one classroom, because of traditional school structures the co-teachers still work in an isolated environment where usually teachers feel hardened for changes (Lortie, 1975). However, research suggests that PLC might be the organizational strategy which is best able to drive school reform to a more successful conclusion (Dufour & Eaker, 1998; Louis & Kruse, 1995).

In terms of doing rigorous work, as mentioned by the studies, PLC can support teachers in doing so because PLC are able to provide opportunities for participating teachers to do self-reflections (Niu, 2008). Self-reflections help PLC members see teaching situations more clearly and help teachers see their own practice more clearly, which leads to a higher standard of work.

Co-teachers need institutional support for working towards rigorous ends (Bauwens & Hourcade, 1995). However, most educational institutions are incapable of supporting this ambition. Modifying existing curricula and traditional pedagogy whereby creating an environment where two co-teachers have an opportunity to engage in rigorous work is difficult within restructuring many of the current school structures. This restructuring of schools, while at the same time providing educational programs, has been compared to trying to repair the wing of a 747 while it is in full flight (Donaldson, 1993).

**e)** *PLC help Teachers Grow from Dependence to Interdependence*

Co-teachers need to learn to improve their teaching practice. In the learning process, co-teachers also need to shift their role within their team, in the classroom, and in other settings for the sake of the collaboration. Often, the general education teacher comes into

the partnership as the subject matter expert while the special education teacher is seen as having instructional delivery expertise. The teachers need to move from relying on the other to provide only their area of expertise and move towards bridging their skills together. The role changes do not mean that the co-teachers become independent team members in terms of professional development and aiming for continued improvement of their individual skills. Instead, PLC support teachers' and schools' continued improvement (Martin-Kniep, 2004) as a community. PLC are also responsible for members continually developing their capacity to create their own desired results (Senge, 1990). This continued co-improvement and the capacity expansion of the team developed in a PLC are what co-teachers need to promote student outcomes.

f) *PLC Create a Learning Environment That Schools Cannot: Co-Teaching Needs This Environment for Success*

As argued earlier, co-teachers have constraints within their teaching world in terms of collaboration, idea and feedback exchange, knowing their partner's expertise, doing rigorous work, and self-growth. The reason for all the constraints is that co-teachers do not have a learning environment in their traditional school settings the same as the one created by PLC. This is also because inside the "egg-crate" style classrooms (Lortie, 1975), co-teachers are not able to form the same interdependent relationship as they would participating in a PLC setting. Within this environment, the co-teachers' sharing becomes narrowed within the two-person world, which is cut off from the resources outside the "egg-crate." However, in the setting of PLC, when teachers share and discuss about any topics, more ideas and perspectives were brought together. Therefore, PLC are viewed as places where participating teachers are able to obtain clear, shared purposes for both teaching and student learning outcomes (Sparks, 1999). Martin-Kniep (2004) also argued

that in general school settings, classroom teachers cannot get PLC type of environment where their knowledge and thinking can expand. Dewey (1938, 1997) argued that real learning comes from experience (Also see Rosaen & Florio-Ruane, 2007). PLC provide such learning through experiential moments for the participating teachers. This is the environment that co-teachers cannot get from other professional development models. Lord (1994) argues that teachers need a place to learn together, ask questions to one another, try different things together, in other words, a space like a PLC. Co-teachers are teachers who need whatever the other teachers need, but at the same time, because of the collaborative nature of their work, co-teachers need a more supportive environment than any other teachers.

It is fair to say that traditional professional development programs provide some allure for teachers and school districts because they come with lower expectations for teacher learning, require less physical and emotional investment from all of the participants, and depend upon less financial support from school districts. However, while PLC participation makes greater demands in all of these areas, it also offers the benefit of fostering a feeling of community within a school that might be used in the future to the school's advantage for other activities. It is vital that "training must continue on an ongoing basis if the implemented change is to continue successfully" (Bauwens & Hourcade, 1995, p. 191).

**Table 1: Matching Features of PLC and Features of Co-Teaching**

| Characteristics of PLC | Characteristics of Co-Teaching |
|---|---|
| PLC foster positive teacher collaborative relationships; | Co-teachers agree upon common goals and collectively take responsibility for achieving those goals; |
| PLC addresses teachers' long-term and immediate needs through exchanging ideas and feedback to improve professional practice; | Co-teachers must be willing to be flexible, accommodating, tolerant, willing to engage in substantive dialogue, and even to subjugate their egos when necessary in order to exchange ideas and receive constructive feedback; |
| PLC support teachers knowing about their colleagues' expertise; | Sharing the belief that each teacher brings unique and necessary skills to the team and that all children can learn; |
| PLC promotes rigorous work; | Co-teachers seek out or develop, implement, and evaluate new and more effective procedures; |
| PLC help teachers grow from dependence to interdependence; | Co-teachers need to be willing to shift their role within the team between teacher and student, expert and novice, distributor and receiver of knowledge for the sake of collaboration; |
| PLC create a learning environment that schools cannot. | Co-teachers are willing to overcome institutional barriers. |

Given the literature on PLC reviewed in this paper, as well as the overview of co-teaching literature, the successful marriage of these two concepts seems self-evident and the worthiness of their pursuit unmistakable.

## Chapter 3

## Research in PLC: Data Collection and Analysis

In this dissertation research, I used mixed methodology, including both qualitative and quantitative data collection, analysis, and summary. In terms of a qualitative research method, I used case study methodology because it allowed me to gain an in-depth understanding of PLC members' verbal and written reflections on their participation in the meeting sessions. Through observations, note-taking and interviews I reflected on their social interactions with other members that fostered an environment for improved understanding of co-teaching, co-teaching models, their increased comfort level with co-teaching, and their modified co-teaching strategies.

Teachers' learning in this PLC was dynamic and meaning focused, so the research was designed to gather anecdotal and discourse data using multiple qualitative techniques including field notes, audio-taped interviews (pre- and post, as well as a follow-up interview, Appendix A), and both audio- and videotaped group meeting conversations as well as written artifacts, such as emails, articles and activity sheets, both from the participating teachers and from the PLC meetings.

In terms of quantitative methods, PLC teachers participated in a set of recurring online surveys, focused on teacher experiences including what the teachers thought about their PLC learning, the relationship between their PLC learning and their co-teaching team relationship, and their co-teaching practice. Also, how he or she sees the problem of delivering instruction using a co-teaching model, what s/he learned and valued about co-teaching. The survey questions can be found in Appendix B. The teachers had to complete the recurring online survey prior to our first PLC meeting, after the fifth session which represented the mid-point of our time together, and at the conclusion of the scheduled

PLC meetings. The purposes for the online survey were to monitor the change of the participating teachers' confidence level with co-teaching, and gauge changes in their knowledge, skill, and practice. Thus, the quantitative data from the online survey set up a foundation and background for the qualitative data that aimed to dig into what the participating teachers learned.

*Purpose of the Study*

The PLC is an environment in which opportunities were created for research on teacher learning and conceptual change. The purpose of this research was to document the PLC activities and the member teachers' actions, reactions, and reflections on their learning activities regarding how to improve their co-teaching capacities. From this perspective, this dissertation study combines the fields of teacher learning in groups and studies of co-teaching practice together. This combination provides information gathered in our authentic PLC setting about how the participating teachers thought, internalized and acted upon the designed activities. Meanwhile, it represented how the individual teachers explored the issues they were interested in learning more about regarding co-teaching. Therefore, the PLC became a site where I was able to study the processes unfolding in ongoing participating teachers' interactions related to co-teaching.

*Design of the PLC*

This teacher learning community provided opportunities for the participating teachers to enhance their co-teaching practices, thereafter apply their knowledge and experiences of the learning to their co-teaching relationships and co-teaching assignments. When I was planning the PLC, I planned to set it up differently from traditional PLCs. Traditionally, professional developers design their professional development activities, plans or curriculum based on the developer's view of what needed to be learned and/or what

the developer decided the teachers were interested to learn. For this PLC, I wanted the participating teachers to have input regarding what to learn, what they were interested in exploring. However, too much freedom might prove divergent from our final goal so I needed to strike a balance between member driven activities and facilitator driven ones. Different perspectives may lead to different understandings about what we wanted to achieve through the professional development opportunity. I realized that while I wanted to minimize my influence, to a large degree, on the activities within the PLC, I still had a responsibility to "establish a rationale for learning (Printy, 2008). As Printy stated,

> The expectations communicated by school leaders are critical influences on teachers' participation in communities of practice, motivating them generally and cuing them that learning is required to attain the vision for the instructional program.
>
> (Printy, 2008, p.216)

Based on the preliminary findings from the pre-interviews, I noticed that the teachers needed more knowledge and skills about co-teaching. Most of the teachers reported having very little knowledge about the various co-teaching models. Some actually seemed surprised to learn that there were co-teaching models beyond the supportive one found in traditional co-taught classrooms. Using this information, I designed the activities in the first few sessions to focus on the introduction of the co-teaching models. Infusing the theme of co-teaching in all of our early PLC activities provided a fixed structure to our meetings. It was important to guide them through this early process as the majority had not been exposed to this information before and had little context for understanding the concepts or how to apply them in the classroom.

I also arranged for a nationally known speaker on co-teaching to facilitate the activity during one of our full day PLC meetings. The speaker, Dr. Rebecca Hines, typically presents to audiences of 300-500, but on this day, March 29, 2009, she presented only for

the 24 members of our PLC. This gave our members a unique and invaluable opportunity to learn about how co-teaching is being done in other communities and to ask questions of an "expert" in the field.

However, I did not want to take the freedom away from the teachers or subjugate their authority as PLC members. I understood that each teacher had his/her own interest in learning about the topics. Some of the teachers seemed drawn to one particular model or another, while other teachers saw a hierarchy in the models and started to envision ways to move through the various models in a progression (Field notes, PLC meeting, February 23, 2009). Therefore, I carefully designed the meetings so that there would be limited guided activities which set the frame for the teachers to enjoy their freedom and explore deeper the co-teaching issues that interested them imost. In this way, my design was both tightly structured yet open-ended. This design provided the teachers with clear goals and a solid framework where guided learning within our PLC occurred collectively. Enraptured by our collective goal and within the PLC framework, the teachers took ownership of their interests and decided either individually or with their colleagues what they wanted to explore more as well as how to explore it further. This provided the teachers opportunities to learn from experts and from one another collectively about co-teaching, meanwhile, focusing on what they individually wanted to learn.

*Whole Group Activities*

I began my focused activities on the topic of differentiated instruction and a review of learning styles. After that the whole group immersed itself into the models of co-teaching. These two topics were the framework for study in this PLC. Most of the discussions in group centered on differentiated instruction and the co-teaching models. One activity that I utilized on three separate occasions in our PLC was applying the models of co-teaching to

one common lesson. The members divided into five small groups, each being assigned a different model of co-teaching. Then the groups were all given the same lesson, Once it was a 7th grade social studies lesson, then an 8th grade math lesson, and the last time it was a 9th grade American history lesson. Each group used their assigned model of co-teaching to design a lesson, define the roles of the co-teachers, describe the instructional framework and detail the way that differentiated instruction would be utilized in their lesson based on their assigned model of co-teaching.

When the small groups had finished designing a lesson based on the assigned model of co-teaching, the lessons were reviewed as a whole group. The idea was to determine if what was designed matched the whole group's perceptions of the co-teaching models. According to several conversations I had with PLC members after these sessions, this activity was revelatory in that it clearly demonstrated how any model of co-teaching could be applied to virtually any lesson (Field Notes, April 14 and May 8). The PLC members also found this exercise to be purposeful in delineating the differences between the co-teaching models. Beyond that, these discussions not only helped to solidify common understanding of the models of co-teaching and how they worked in the classroom, they also helped us foster the characteristics of a PLC.

*Small Group and Individual Activity*

As these two concepts, differentiated instruction and models of co-teaching, began to take solid structure in the minds of the PLC members, we moved into more activities that encouraged small group and individual investigation; Topics like planning, assessment, classroom rules, grading policies, etc. The PLC members moved between the main topics (differentiated instruction, co-teaching) and the ancillary topics (assessment, planning, etc.) based on their interests and needs. For a more detailed activity design, please see Appendix

C.

Because of this design, I noticed that our study group soon developed into a PLC as defined by the literature. I also found that the participating teachers' learning expanded through our PLC activities. Evidence for this can be found in the next two chapters. Chapter 4 provides data to support that our study group met the standards of a PLC and Chapter 5 documents what the teachers reported they learned giving credence to the theory that PLC is an effective method for co-teacher learning. With both chapters, the data were drawn from various sources to provide evidence for the answers to my research questions.

*Outline of PLC Activities*

The PLC started its activities in the Spring Semester of 2009 and its members met bi-weekly. One session each month was scheduled for an entire school day while the other was a half day session. In total there were 10 PLC meetings for a total of 45 hours (Appendix C). The meetings were designed in series to address several themes. The first meeting was designed to establish the foundation for our PLC. We discussed our goals and objectives and worked to establish norms for our group.

This was followed by an introduction to the current research related to co-teaching. We examined the five commonly accepted models for co-teaching and worked within our community to understand the characteristics of each model and how they manifest themselves in the classroom. Our theme for this series was one of learning and knowledge gathering. We ventured into what is a relatively unknown arena in educational pedagogy for most of these PLC participants. Using the structures of co-teaching methodology established in previous research as a framework for learning, the PLC members began to direct their own learning and knowledge acquisition. This was reflected in my research design model (Appendix D).

After creating a shared understanding of the co-teaching models, our next series of meetings were designed so that the teachers could begin to consider how they might utilize the models for better teaching. The teachers were given collaboration time, in order to create a lesson or lessons, to work with a collaborating teacher using the various models of co-teaching. Focusing on a theme of collective learning, the teachers tried out their new knowledge within the PLC by demonstrating what a lesson could like in their co-taught classroom. This activity gave the teachers a chance to demonstrate in a concrete way their understanding of how the models would manifest in their lessons. It also presented the PLC members with a chance to dialogue about what they saw demonstrated by other members of the group. This helped push their thinking and understanding to a deeper level and enriched the learning of the entire PLC.

In approaching me about facilitating the district's professional development efforts related to co-teaching, it was conveyed that what the Brandnew JH/HS teachers sought was a sophisticated and inquiry-based learning process. The traditional physically isolated, "one-shot" professional development design could not meet the learning needs of these teachers. Through my doctoral studies in educational administration and my experience in the school district as Section 504 coordinator and special education representative, I had accumulated an expansive knowledge related to special education. I also had several opportunities at the university level and within the school district, to gain knowledge and experience with professional learning communities. Given my experience with PLC, combined with the teachers' desire for more in-depth learning, it was by the district's administration that a learning community would best fit the needs of the group. As those first meeting activities were beginning to bear out, the PLC was indeed an effective framework for learning.

The next theme we explored in our series of PLC meetings was amalgamation. Amalgamation is the mixing or blending of different elements. After establishing a collective understanding within the PLC of what constitutes co-teaching and then working through together what that would look like in the classroom, it was time to find out what the theories related to co-teaching look like in other settings. It was at this time that I backed off of the structured activities and allowed the teachers to pursue their interests within the framework of our PLC and in the context of learning the co-teaching models.

Finally we addressed the theme of preparation. The PLC participants worked to prepare themselves for implementation of what they had learned. They designed lessons for sure, but even more importantly they created a mindset of collaboration for effective teaching.

Focusing on these themes, I designed the PLC activities in a series of authentic experiences of literature, theory, practice, and community as follows:

(1) studying the basic features and variations of co-teaching and the fundamental differences between the various models;

(2) exploring how these models would look in Brandnew JH/HS classroooms;

(3) merging our PLC understandings with "experts" from the field; and

(4) preparing to implement what the PLC members learned.

As the participants engaged in these activities, I gathered data in several forms—interviews, participant observations, and collection and analysis of documents and taped recordings of meeting discourse.

*Research Site*

The Brandnew JH/HS School District is located in the western portion of what was just five years ago the fastest growing county in Michigan, indeed, one of the fastest

growing counties in the United States. This one-time rural farming community had become what most would call a "bedroom community;" that is a town in which people live but most drive some distance to their work in one of the larger cities about 30-40 minutes away. Unfortunately, much like many of the towns in Michigan, Brandnew JH/HS has begun to feel the pain of the demise of the auto industry. Several long standing businesses such as the Big Boy restaurant have recently shuttered their doors. Talk that the Honda car manufacturer would establish a factory in the town has all but died, and two Japanese owned manufacturing companies have not delivered the economic growth they originally promised when they came to town ten years ago.

Every school building in the district stands on one central ground, nestled in a cocoon of learning surrounded by a forest of living. In a budget cutting move last year, the district consolidated five school buildings down to four. Like many school districts, Brandnew JH/HS Community Schools no longer offers neighborhood schools but instead has configured its buildings by grades. It now consists of a K-2 building, a third through fifth grade building, a sixth through eighth grade building, and the 9th-12th grade high school. The school buildings surround the inner sanctum of the playgrounds, as well as the football, soccer, baseball, and softball fields.

The school complex serves the village of Brandnew JH/HS, but the school district also includes several other, smaller townships and covers 116 square miles with a combined population of approximately 15,000. It remains mostly rural and sparsely populated, with any population growth congregating in a few housing developments throughout the area. The school district provides bussing for approximately 60% of the student population, and travels over a cumulative 2,400 miles (School Report, 2008) on a typical school day.

*Brandnew JH/HS Co-Teaching Policy*

The school district provides the perfect backdrop for this research project, beyond its demographics which makes it typical of so many districts in Michigan, as they have just recently made a commitment to move almost exclusively to co-teaching as a means for providing special education services. As stated before, the NCLB legislation along with the state mandated curriculum were the major impetus for this change in services, and Brandnew JH/HS has committed to this transformation sooner than many districts in the state.

Central Office administration, along with the building principals, has led the call for the increase in co-teaching. Given this movement, it was the teachers who asked for professional development to better understand co-teaching and how it most effectively could be utilized in the classroom. It was the combined desire of administration and teachers to establish an informed foundation for the co-teaching model that brought about the creation of this PLC project.

*Brandnew JH/HS Co-Teaching Characteristics*

There are many unique challenges to effective co-teaching. The creation of professional collaboration and collegiality has already been established in this paper as vital to the success of the co-teaching team. Adding an extra dimension to this situation is that in Brandnew JH/HS, there is no established policy or agreement for the creation of co-teaching teams. There is no compatibility test to make sure that the collaborating teachers' personalities or pedagogies match. Until the creation of this PLC, there had been no concerted effort to educate either the general or special education teachers in the "art" of co-teaching.

Beyond this, some special education teachers are assigned to only one general education teacher and only one subject matter. In other cases, special education teachers

may co-teach with a different general education teacher each hour. Each of these teaching assignments in the latter case would require the special education teacher to work with multiple curricula as well.

*Accessing the Research Site*

Having spent eight years as an administrator in the Brandnew JH/HS school district I was able to create a level of trust with the staff and an appreciation from the administration for the knowledge I would bring to a project such as the co-teaching PLC. I was approached at the end of the 2007/2008 school year by the high school administration and the district's special education director to help design and facilitate this project. Given that I no longer serve in any supervisory capacity in this district, the teachers had no incentive to grant me any additional authority beyond that afforded through professional courtesy. In this study I established with the group members from the start of the project that my role was as facilitator of PLC activities, observer of member interactions and discourses, and a researcher of possible teacher changes, but never as supervisor. I would also occasionally serve as just another member of the PLC. For example, when I would join in with a group during small group discussions or when we had a guest speaker, Dr. Hines', visit our PLC.

Every district in Livingston County, of which Brandnew JH/HS Community Schools is a part, made a commitment to providing professional development to their teachers related to co-teaching this year. Each school district approached the project differently, but all of the other school districts in the county took a more traditional approach. For example, they decided to focus on one-day seminars and disjointed efforts at information gathering, such as, seeking out "experts" from outside their districts to impart co-teaching knowledge on their staff. The philosophy in Brandnew JH/HS was to enrich the learning with outside

resources but to focus knowledge creation within the context of the learning community. Thus my role as PLC facilitator was born, and I was enlisted to lead the project.

*Selection of Participants*

The PLC members were confronted with the challenge that all other teachers face from the implementation of NCLB. These teachers are increasingly being assigned into the role of co-teaching, often forced into this situation, confused about how to work together effectively, about what roles each of them should play in their co-teaching relationship, and what each needs to do to teach all children successfully (Hassell, 2007; Protheroe, 2004; Villa, 2008).

Originally I envisioned bringing in co-teaching pairs from the junior and senior high schools. This wasn't quite as tidy an endeavor because as previously mentioned many of the special education teachers were assigned to more than one general education teacher in the course of their work day.

In addition, I met with some resistance from the junior high school administrator who was not as sold on the value of co-teaching as a method for special education instruction and thus was not as encouraging with his staff to participate. Because one of the main characteristics of a successful PLC is the participants sharing of common goals, values, and norms, it wouldn't benefit the project if any member felt coerced into participation. The teachers had to come voluntarily of their own desire to gain more knowledge and competency in co-teaching methodology. This led to a situation where we had a couple of special education teachers who wanted to participate, though their general education collaborating teacher did not. So while I expected co-teacher pairs to participate together several teachers whose partners did not want to participate chose not to attend our PLC, although some did because they desired to learn. The teachers all volunteered because of

their interest in gaining knowledge and competency in co-teaching. In the end, the PLC was comprised of 12 general education and 12 special education teachers, though not a perfect one-to-one marriage of current or potential co-teaching teams. Among them, 18 (75%) were females and 6 (25%) males. These teachers had one to more than 19 years of teaching experience, including 1 teacher (4%) who taught between one and three years; 9 (36%) who taught 4-8 years, 6 (24%) who taught 9-12 years and 9 (36%) with more than thirteen years of teaching experience. This means our participants covered the range from novice teachers to very experienced teachers. Of all the participants, 15 teachers reported that they had co-teaching experience, while 9 teachers reported they did not. The unequal experience of the teachers provided us various data sets as well as challenges. However, the differences in the years of teaching and co-teaching reduced the bias possibly shown in our data. I believe the breadth of the research data collection and analysis allowed me to answer my research questions.

*Data Collection Tools - Survey*

The survey was given prior to the start of the PLC to gather baseline data, and then the participants were asked to complete the survey after the fifth PLC meeting which marked the mid-point of our time together. Then they completed the survey a final time after our last PLC meeting. The hope was that the participants' responses to the survey questions would demonstrate changes in knowledge, skills, and beliefs related to co-teaching as a result of participation in the PLC.

For most of the questions on the survey, respondents were given a range of possible responses using a Likert scale. The Likert (1932) scale, also known as a summative scale, is used so that responses can be summed up numerically and charted more readily to show growth. The scale is designed with a range of answers, typically an odd number of

possible responses, usually set up from one extreme, "strongly agree" to the other "strongly disagree." While the scale makes it much easier to track collective responses, offers ease of completion, and simplicity of data collection, there are some drawbacks to this instrument as well. By allowing for a neutral response, many respondents will hesitate to choose one of the extreme positions and skew all data to the center. Respondents can also fall into a pattern of positive or negative responses once they have begun without giving the question thorough thought. The fact that responses are usually easily understood and data so conveniently collected far outweighs the potential negative "side effects."

*Interviews*

Interviews took place in the conference room located within the student services office at the high school. Originally I planned to choose six special education and six general education teachers from the PLC membership to be interviewed. In the end, four special education and four general education teachers (See Appendix F) volunteered to be interviewed. The teachers were purposely chosen for the interviews based on their demographics in the hopes of getting a good cross-section of teacher certifications, teacher age, co-teaching experience, and gender. The interviews were one hour; however, in some cases where the teacher did not have a one hour block, a second interview session was scheduled and in other cases the interviews took longer. The teachers were asked specific, predetermined questions about their knowledge, beliefs, and perceived skills related to co-teaching. The teachers also were asked to commit to a follow up interview if I found some relevant pieces of information missing or if I needed clarification on notes I had taken in previous interviews. Several of these extra follow-up interviews occurred approximately one week after the final interviews.

The post-PLC interviews allowed me to follow up on the teachers' interpretations of

completed activities/learning and to analyze their responses for changes in knowledge, beliefs, and skills related to co-teaching. The questions sought to demonstrate different dispositions and behaviors related to co-teaching after teacher participation in the PLC. When changes were evident, the follow up interview provided an opportunity to question the teachers about the changes. For example, "Are you more encouraged to be in a co-teaching setting now?" or "Has your belief about the effectiveness of co-teaching changed?"

In a qualitative research study it is important to use "member checking" because much of the data analysis could be influenced by interpretation. A member check, which is sometimes called informant feedback, is a strategy used to improve the accuracy, credibility and validity of a study. The researcher manages the member check by giving all or part of the study back to the members who check the authenticity of the work and validates the interpretation proffered by the researcher. Allowing members to check the accuracy helps to ward off the potential of the researcher putting forth a one-sided account. It also serves to address concerns about whether the researcher has spent sufficient time engaged in the research site. Member check blurs the line between interviewer and interviewee and creates a relationship in the interview that might allow the researcher to gain knowledge beyond the surface of the question asked (Tanggaard, 2008).

I found myself doing frequent "member checks" in order to keep my data organized and ensure that I was attributing statements to the correct member of the PLC. This was particularly true for data collected in field notes. Many times these were recorded with brief notations as they occurred and then expounded upon immediately following the meeting. When these interactions or quotations were referenced in this document, I felt it was imperative that I clarify the accuracy of my account with the PLC member.

From the start of the project, despite my multiple roles, I always maintained the role of a researcher who carefully considered what teachers might learn in PLC, how they might learn it, and what PLC participation might teach our profession. My methodological framework was based on the work of other ethnographers of teacher education study groups (e.g. Florio-Ruane with deTar, 2001; Florio-Ruane and Raphael, 2005; Raphael, et al., 2001).

The analysis of data in this study is both inductive and deductive. Sometimes my inquiry began with a broader question that narrowed its focus, while at other times I began with a specific focus that expanded into a broader exploration. For example, I began with researching teachers' knowledge of co-teaching, but that narrowed into analyzing their knowledge of more specific concepts such as, co-planning, collaborative instruction, co-management of classroom discipline and collaborative communication. The analysis was influenced by the data as I collected and reviewed it, my research question, and the theoretical frameworks and prior research related to my study. Thus I had some initial hunches and predictions but I remained open to change and willing to reject or refine them as I gained more experience through my role as participant observer and ethnographic researcher. This approach is called the "discovery of grounded theory" by Glaser and Strauss (1967). It means that the assertions or theoretical claims I make are grounded in my work with people doing normal activities and making local meaning of them. For this reason, grounded theory development is continuously open to revision, refinement, and change in response to ongoing analysis, subsequent data collection, and checking out ideas with the participants. The research analysis applies the constant comparative method (Glaser & Strauss, 1967), triangulation of evidence from diverse data sources, and the interpretations of certain events through a personal narrative. (Erickson, 1986; Freebody,

2003).

Along with a broader "grounded theory" approach to the research, there are also very distinct elements of "social theory" at play here which will be reflected in this study. In response to these socially generated components, I am drawing from Lev Vygotsky (1978) who argued that higher order of thinking originates in human social interactions, which are conducted through artificial means- "the mediation." The use of the mediation, such as artifacts (activity sheets, email communications), tools (PLC activities), and symbol systems, affects how humans communicate with one another as well as how humans think, constitute and develop their intellectual capacities (Cole, 1996). Based on Vygotsky's theory, these "mediations" had an impact on the PLC member's interactions and affected the learning which occurred. These "mediations" most certainly affected any possible changes in teachers' beliefs about co-teaching, as well as, their perception about their own skill acquisition within the community.

According to Vygotsky's "mediation" theory, the artifacts, tools, and symbol systems, utilized inside learning communities, initiate teachers' social interactions with other members that involve higher order thinking in their community. The prompts stimulate, inspire, mediate, trigger, and affect teachers' willingness to collaborate, cooperate and construct relationships, or could conversely hinder these actions. In this study the interactions were affected by how teachers think, what beliefs they had about co-teaching and learning, how they perceived their relationship with other PLC members, as well as, what skills they worked to acquire. Further, teachers' interactions aroused from these "mediations" impacted how much they could contribute to a PLC and what they gained from PLC participation.

A qualitative research study provides for collection and analysis of data for the

purpose of gaining insights to events that is not possible using other types of research (Gay, 1996). Just as important is that this type of study also affords the researcher the opportunity to witness first-hand how members make sense of their learning, experiences, and structures of the world, and involves fieldwork in which the researcher goes to the people, setting, or institution to observe/record behavior in its natural setting (Merriam, 1998). This approach provided me the opportunities to observe, record and report on the "mediations" that were included in the PLC. This was critical given the synergy of a PLC and the emphasis on dialogue and interaction between members. Built on the work that had been done for the analysis of the research data set where I listened/ watched, transcribed, coded, and categorized both tapes and the field database, I followed the categories that were designed for coding the data developed from the study's theoretical stance, its questions, and analyses of the pre-/post-interviews, pre-/midpoint/post-PLC online surveys, and preliminary field data – a) teachers' reports on or their actions showed the key elements of building the study group into a PLC, such as the PLC environment, teachers' interdependent relationship, etc. b) teachers' knowledge and skill change (e.g. their understandings of co-teaching and its models); c) teachers' comfort levels with co-teaching (e.g., the change of their confidence levels); and d) teachers' co-teaching practice change (e.g. teachers report what and how they modified their co-teaching practices in their co-teaching settings with their current or future teaching partner/s). Writing the field notes was also a part of the analysis process.

As I developed the detailed field notes, I also recorded my ideas, hunches, comments, and questions, then I returned to data analysis to check claims, find supporting evidence, or modify claims based on further checking of the data. It is during this process that triangulation of evidence was formed, as was clarifying my analytic categories so that they reflected both my researcher perspectives and the perspectives of the participants. The

data used for the next two chapters were parts of the data analyzed based on the above analytical stance. Since the data set is complicated and enormous, in each chapter, I further specified the data source. But in both chapters, I used mainly the constant comparative method (Glaser & Strauss, 1967), triangulation of evidence from diverse data sources, and my field notes (Erickson, 1986; Freebody, 2003) for analysis.

Consistency of Data Collection

To help ensure the consistency of data collection, I held ten PLC sessions at the pace of twice a month with an online survey, including the teachers' reflections, three times throughout the process. This provided the participating teachers time and opportunity to internalize what they learned and then bring new issues or concerns back to our meetings. Meanwhile, in an effort to reduce the effects of research bias, I involved multiple data sources, such as interviews, field notes, online survey, etc. Totally, I had five 6-hour full day sessions and five 3-hour half day sessions, together 45 hours of work; field notes from the 45-hour work; audio and video transcriptions for this 45-hour work; 65 online self-reflection surveys; and pre-/post-interview data. At the end, 19 teachers (79.1%, more than two thirds of the participants) participated through the entire length of our project helping to maintain the consistency of the data. The data set presents multiple and varied sources, which ensured trustworthiness of the data as well (Al-Jammal & Parkany, 2003; Auerbach & Silverstein, 2003).

## Chapter 4: Meeting the Standards of a Professional Learning Community

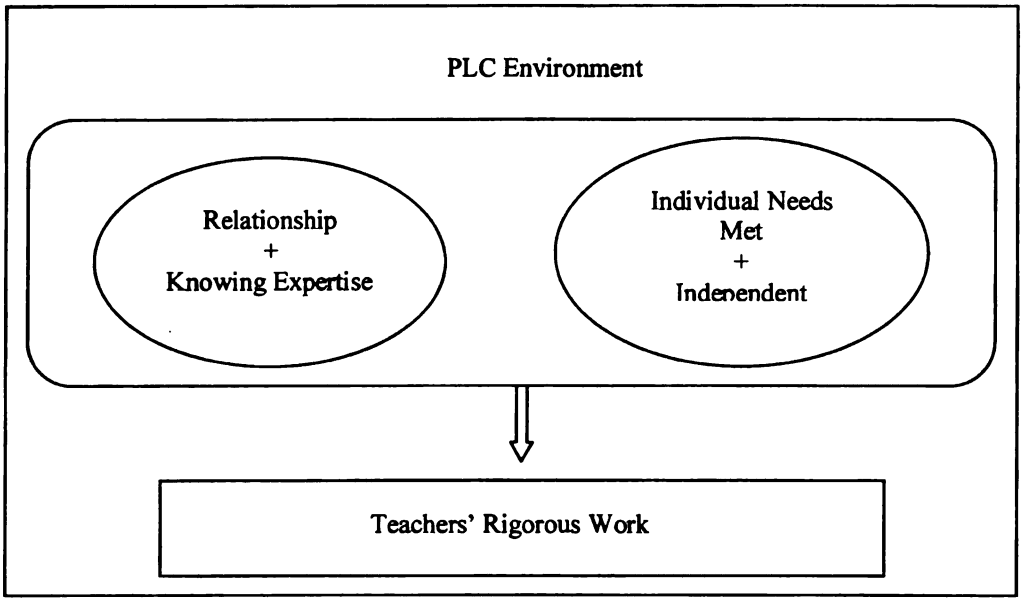
How to help teachers build their study groups or school improvement teams into a PLC has become the big topic in PLC research (Archinstein, 2002; Beattie, 2002; Ben-Peretz & Silberstein, 2002; Crespo, 2002; Florio-Ruane with deTar, 2001; Grossman et al., 2001; McLaughlin & Talbert, 2001; Niu, 2008; Westheimer, 1998). In order to determine if our group's efforts would indicate the development of a professional learning community I paid particular attention to, and collected data around, the commonly accepted characteristics of a PLC. In the review of literature I presented the summaries of the proposed PLC characteristics cited by different PLC researchers. In my research, I found that Martin-Kniep's work not only covered the common themes of the PLC, but also went far beyond the basic features of PLC that most researchers had settled for in their studies (See Literature Review Chapter #2 for details). In the following, I will take Martin-Kniep's viewpoint as an analytical lens anchored on the data I collected, to explain why our teacher study group was indeed a professional learning community.

As mentioned in the Literature Review Chapter, Martin-Kniep's summary of the characteristics of a PLC is constructed from six different aspects: 1) PLCs create a learning environment that schools cannot; 2) PLCs Foster Positive Teacher Collaborative Relationships; 3) PLCs Address Teachers' Long-term and Immediate Needs through Effective Ways to Exchanging Ideas and Feedback; 4) PLCs Assist Participating Teachers to Knowing Their Colleagues' Expertise; 5) PLCs Promote Rigorous Work; and 6) PLCs support teachers to move from being dependent to independent.

Further, the reason that I chose Martin-Kniep's aspects as an analytical stance is because if we look carefully and closely at Martin-Kniep's framework, we will find that the six aspects are interconnected and affect one another. I will explain this way: the unique

PLC environment provides opportunities for the participating teachers to work with one another in this regime. This construct further paves the path for the teachers to know each other better. They learn about their peers' expertise and knowledge specialization for further collaboration. At the same time, knowing each other better often improves the relationships among the participating teachers, which builds a sound foundation for further collaboration. Meanwhile, within this arena, individual teachers get more opportunities to further their professional development mostly by sharing their individual viewpoints and exchanging feedback, suggestions, and comments. Their colleagues' responses and their exchanges of information within the group further strengthen their own knowledge base of co-teaching and assist the teachers to be more independent in their decision-making. When all the elements combine within this supporting environment, the participating teachers are more likely to move towards more rigorous work. I illustrate further about my point in the following chart:

Chart 1: Interconnected Elements within a PLC




Based on the illustrations of the interconnected elements of a PLC, pulling the research data together, in the following, I will explain why our teacher study group developed into a PLC around the co-teaching topic.

*Data*

Data selected for this section are those that demonstrate 1) teachers' feeling changes towards the environment they worked in; 2) the changes related to teacher relationships within the community; 3) increases in teachers' knowledge about their colleagues' expertise; 4) how their individual needs were met; 5) teachers demonstrating more interdependence; as well as 6) teachers engaged in rigorous work. Consequently, the selected data came from our 1) PLC meetings; 2) field notes; 3) teacher ongoing online reports; 4) teachers' pre-/ post-interview data; and a focused exit interview about how the participating teachers regard the study group.

As mentioned before in the Methodology chapter, all the data were coded based on the research question and sub-questions. To support this chapter, the data selected were

coded based on the same six categories from Martin Kniep's framework that are mentioned above. Then the coded data were analyzed for the purposes of demonstrating if our study group met the criteria of a PLC. Meanwhile, I tried to find the interrelationships among the PLC aspects to search for connecting factors that may weave through the various aspects and bind them even tighter. Afterwards, a synthesizing discussion section explains how the data support the interconnectedness among the aspects within our PLC.

*PLCs Create a Learning Environment not Naturally Occurring in Schools.*

In the data analysis process, I first paid attention to how the learning environment evolved in the group. Quickly it became apparent the participating teachers appreciated the opportunities they were being given to work, talk and share together. Based on the pre-interview data, none of the eight focus teachers (respondents) ever mentioned collaboration with other teachers. Even when they were asked about their co-teaching experience, the answers I got were all about their own teaching practices.

They focused on how the experience had impacted them or described what their experiences were, but none of them mentioned anything about the interaction with a collaborating teacher. It seems that the teachers have been so isolated by their "egg-crate" style teaching environment as Lortie (1975) described it that even with another teacher in the room they focused on their own circumstance.

When asked in the pre-interviews about whether other teachers had shared their co-teaching experiences with them, six of the respondents said things like, "no" "not really" or "never." Cane said, "I think most teachers are afraid to talk about co-teaching for fear their conversation might indicate interest in being assigned to a co-taught classroom" (Pre-interview, Cane, February, 2009). For the respondents who had indicated that they had previous co-teaching experience, they were asked if they had shared their experiences with

others. Again their responses mostly fell in the "no" category. Stallion responded, "There wasn't much to talk about because I mostly sat at the back of the room" (Pre-interview, Stallion, February, 2009).

In the two cases where conversations had taken place with other teachers who had co-teaching experience, the respondents indicated that the conversations were typically superficial. One said that her conversation contained just "bits and pieces" (Pre-interview, Cheli, February 2009) about the experience but nothing along the lines of a formal discussion with useful information or tips. For another respondent, the experience of hearing from other teachers about their co-teaching experience was much more negative. The Dutchman stated regarding these conversations:

> Mostly they were about the negative experiences and the things that aren't working. It would be nice to hear from more people who have been co-teaching successfully and how they make it work.
>
> [Pre-Interview, Dutchman, February, 2009]

Interestingly, when I was analyzing the post-interview data, I noticed that almost every one of these same focus co-teachers (7 of 8) reported that they appreciated the collaborating environment in which our PLC operated, that they learned from collaborating with their peers, and that they brought what they learned from our PLC to their classroom co-teaching practices. In the post-interview, Dutchman commented on the opportunities he had at our PLC,

> We had plenty of opportunities to share as large and small groups what we are all "experts" in. Other PD I have experienced allowed for short amounts of time to share ...so it was almost pointless to share in the small groups because the large groups couldn't hear. In this opportunity we all had the opportunity to share.
>
> [Post-Interview, Dutchman, April, 2009]

As Dutchman indicated, our PLC provided the participating teachers the opportunities to

interact with one another and collectively work on their learning. This is an environment where this sort of interaction does not naturally occur. The normal school setting does not provide this type of repetitive meeting time for sharing ideas and collaborating with other teachers. These characteristics demonstrate that our PLC is also aligned with the standards of a learning community as researched and reported by community scholars and researchers other than Martin-Kniep as well (See Crespo, 2002; Farmer, et al., 2003; Grossman, et al., 2001; McLaughlin & Talbert, 2001; Westheimer, 1998, 1999).

The development of a learning environment that is separate from the normal construct of the school day and its impact on the participating teachers are highlighted by Maxie's post-interview report. Maxie commented that our PLC provided an opportunity that promoted relationship building through which the teachers worked together, and which their normal school setting was not able to provide to them.

> We spent time talking with each other during our conversations and were able to hear how different teachers, who teach different subjects and even at different schools, approach and implement co-teaching, which we cannot get at our school.
>
> [Post-Interview, Maxie, April, 2009]

The focus group's reports are similar in terms of how our PLC environment helped them to share their opinions with others in the group, how our PLC strengthened the connectedness among the teachers, and how the PLC broke down the isolated classroom walls to make their learning meaningful. It was in this collaborative environment of our PLC that the teachers had the opportunity to work together beyond what the school settings can generally provide to teachers.

It seems that our PLC environment played an important role in the teachers' learning. In the following, based on the data, I illustrate how the teachers reported that our PLC fostered their collaborative relationships within the PLC.

*PLC Foster Positive Teacher Collaborative Relationships*

Professional Learning Community researchers argue that one of the key characteristics of teacher learning communities is that the participants form an interdependently collaborative relationship among its members (see Westheimer, 1999). As Grossman and colleagues (2001) argue, in the learning communities, teachers have a clear sense of the group as a whole. They further argue that the achievement of "groupness" is through group members' shared practice (Scherer, 1972; Selznick, 1992). In my follow-up individual interviews, all the focus group teachers reported that they shared and learned from one another inside our PLC. Meanwhile, they developed their interdependent relationship with one another as well.

Dutchman commented on our PLC thusly:

> Teachers share personal experiences with one another and that may trigger similar issues in their own teaching lives. An example is during our current PLC, a CT (co-teacher) group has shared how they go about note taking with a low group of students academically and motivationally. It encouraged me to try the same with my very similar group of middle school students. We share with and learn from each other often.
>
> [Follow-up PLC Interview, Dutchman, May, 2009]

Dutchman learned from the sharing of the teachers in the group. His learning was influenced by his experience working within a small group setting during a PLC meeting. Dutchman also reported that he shares with and learns from the others in the PLC group often. Reflecting back to Dutchman's responses in the previous section where he was disappointed with the conversations he had with other teachers who had co-taught, it seems clear that he was encouraged by the interdependent relationships within the PLC.

Dutchman was not alone in his comments regarding the member relationships within the group. Sera's comments illuminate how our PLC reinforced the sense of sharing and being interdependent between her co-teacher and herself – within the co-teaching pair.

> The meetings have fostered positive teacher collaboration between my co-teacher..., and me. ... and it has helped us become more aware of the roles we have played in working together. Through this, we have been able to analyze our activity and redirect our actions in ways that will bring about better results for our students and a more pro-active use of our time when working and planning together.
>
> [Follow-Up PLC Interview, Sera, May, 2009]

Sera's comments were advanced in illustrating the collaborative relationship among the PLC members and how the group discussions impacted the relationship of her co-teaching team. Her co-teacher and Sera became more interdependent in sharing their time, work and teaching roles. They not only formed a collaboration work relationship within our PLC, but also applied their relationship in their general classroom teaching practice. Sera had commented in her pre-interview that her co-teacher took mostly a supportive role (Pre-interview, Sera, February 2009). Her comments suggest that she and her co-teaching partner had formed a tighter relationship or bond between them which is significant in the development of a PLC (Grossman, et al., 2001). In our post-interview data, all the focus group teachers reported a greater sense of sharing and interdependence as well.

Nivka's comments on our PLC are typical among the post-interview reports. He said,

> I felt like this PLC experience was a terrific forum for having important conversations with peers. I have never been at a workshop or PD where we had such extensive time for conversing and learning together.
>
> [Post-Interview, Nivka, April, 2009]

Nivka's comments about having conversations together and learning together indicated the "groupness" or the interdependent relationship among the members.

The positive teacher collaborative relationship that had developed with the PLC meetings was also revealed by the changes in their responses to the online survey. I compared the three survey answers, the Pre-PLC, the Mid-PLC, and the Exit PLC survey

and found that as our PLC sessions progressed, more participating teachers reported that they felt more comfortable working with their co-teacher. This change indicated that the participants were more willingly to face the challenge of their collaborative work relationships. Meanwhile, they were more willing to build interdependent relationships with other teachers as they stated a greater willingness for more co-teaching assignments in the future. For this, Cheli's words could be taken as an example. She said,

> ...I would say I feel more positive. I do think that I would like to try a greater variety of co-teaching models next year and also encourage other teachers to do the same.
>
> [Post-Interview, Cheli, April, 2009]

The following table indicates this change in their willingness to be co-teachers in the future.

Table 2: Teachers Willing to Be Assigned to More Co-Teaching Sessions

| | Pre-PLC | Mid-PLC | Exit-PLC |
|---|---|---|---|
| **Strongly Agree** | 4% | 22% | 33% |
| **Mostly Agree** | 8% | 33% | 29% |
| **Agree** | 8% | 11% | 14% |
| **Neutral** | 42% | 6% | 19% |
| **Disagree** | 33% | 22% | 5% |
| **Mostly Disagree** | 4% | 0% | 0% |
| **Strongly Disagree** | 0% | 6% | 0% |

From the table, I found that at our Pre-PLC survey, 42% of the teachers held a neutral attitude towards co-teaching, while another 37% of the teachers were adamant about not wanting to co-teach. In fact, only 20% of the 24 teachers who took the survey were willing to co-teach in the future. However, the percentages had already begun to change when we got to the mid-PLC survey. At the end of our PLC, the percentage had drastically changed as 76% of those surveyed indicated that they would be in favor of future co-teaching assignments. Only one respondent marked "Disagree" when asked if they would be willing to co-teach in the future. I view this change as very significant as a result of the positive relationships the teachers created within our PLC.

The degree of being interdependent and the ways of sharing are important factors in determining whether a study group is a PLC or not. The members of our group began asking each other for teaching tips, instructional strategies, suggestions for lesson planning, etc. Within small group activities every member made contributions and appeared engaged in the work being done. From these interactions with one another, our PLC demonstrated an

enriched experience through multiple perspectives: teachers' active participation, having strong interrelationships, and collaboratively working on the community growth, which indicated that our PLC was a mature PLC (See Grossman, et al., 2001). Our community took collective responsibility for improving teacher learning and moved forward.

Based on the PLC data that I collected, I observed that our PLC members shared their ideas, issues, questions, and comments. More importantly, I found that the teachers' sharing and being interdependent addressed the teachers' long held reservations about co-teaching. In the following, I categorized the data through the theme of how our PLC members reported that their long-term and immediate needs were addressed.

*PLC Address Teachers' Long-term and Immediate Needs through Effective Ways to Exchanging Ideas and Feedback*

Literature argues that PLC encourages teachers who share the same goals to come together to discuss, learn, and problem-solve together. This addresses both the long-term goals and the immediate needs of the participants (Peterson, McCarthey, & Elmore, 1996). For our long-term goal, every one of our PLC members understood that we had targeted improvement of co-teaching practices in the classroom settings. While some raised concerns that their co-teaching partner was not part of the PLC group, most discussed the fact at our first meetings that they were glad to get more scholarly information regarding the concept of co-teaching (Field notes, PLC meeting February 23, 2009). One teacher said during a small group discussion, "I worried that the district believed if they put two teachers in a room they could just automatically co-teach (audio-taped notes, PLC meeting, March 8, 2009).

Whether we addressed individual teachers' long-term and immediate needs, responses to the survey questions provided some evidence. The answer to the question, "In

my opinion, co-teaching will allow me to take more instructional risks and offer a wider variety of learning opportunities for the students," would indicate whether the teachers felt our PLC activities helped meet their teaching goals. In this case, the teacher was demonstrating a willingness to try different teaching activities and different student groupings during work time. After I compared the Pre-PLC, the Mid-PLC and the Exit-PLC survey data, I found that more teachers agreed that co-teaching will allow them to take instructional risks. In the following, I provide a table to compare the data and illustrate what I meant by "an increased number of the teachers.

Table 3: Teachers Willingness to Take Instructional Risks and Offer A Wider Variety of Learning Opportunities for Their Students

| | **Pre-PLC** | **Mid-PLC** | **Exit-PLC** |
|---|---|---|---|
| **Strongly Agree** | 8% | 42% | 33% |
| **Mostly Agree** | 8% | 21% | 52% |
| **Agree** | 17% | 32% | 10% |
| **Neutral** | 42% | 0% | 5% |
| **Disagree** | 25% | 0% | 0% |
| **Mostly Disagree** | 0% | 5% | 0% |
| **Strongly Disagree** | 0% | 0% | 0% |

Table 3 denotes that only 33% of the teachers who responded to the Pre-survey were at some level of agreement with the idea that co-teaching would allow them to take instructional risks and offer a wider variety of learning for students. Another 42% were neutral, most likely because they didn't know enough about co-teaching to draw that

conclusion. However, when the teachers did their Mid-PLC and their Exit-PLC, the percentage in agreement increased dramatically. In both surveys, 95% of the teachers "Agree," "Mostly Agree," or "Strongly Agree." Although both the Mid-PLC and the Exit-PLC showed high percentage of teachers (95%) in these three categories, there is still a difference shown between the Mid- and Exit surveys. At the Mid- survey, only 63% of the teachers Mostly or Strongly Agreed, but by the time of the Exit- survey, the number increased to 85%.Our Follow-up data also demonstrated that our PLC addressed the teachers' long-term goal of learning from one another. Stallion commented about his experiences as,

> Our discussions in the PLC were great. We spent some time talking about topics not only on task, but we also spent a lot of time sharing ideas and learning from each other. I know that I feel better prepared as a teacher after exchanging ideas.
>
> [Follow-Up Interview, Stallion, May, 2009]

Sera's comments on our PLC echoed Stallion, but provided a thicker description of the function of our PLC.

> During small group working times, members were also able to consider options available for implementing new methodologies, discuss possible outcomes, benefits, drawbacks, etc. of each method. Then small groups shared their findings with the larger group which allowed further discussion and feedback for utilizing in professional practice.
>
> [Follow-Up Interview, Sera, May 2009]

The above quoted data suggests that our PLC addressed both the long-term goals and the immediate needs of the teachers when the teachers worked together on the issues they cared about and on the improvement of their co-teaching skills. The following selected data provided further proof for how our PLC addressed individual participants' needs.

Tivo was one of the more proactive participants. His comments on what he and his partner did illustrated how they got their immediate needs taken care of within our PLC.

We are now developing a co-teacher planning guide to assist in the efforts

> of teaching. It (participation in the PLC) fostered a proposal idea for an individualized Program of Instruction for students easily distracted in the classroom (ADHD, etc.). Unfortunately, funds are not available to implement the program. (I am researching Grant Opportunities to fund the proposal.)
>
> [Follow-Up Interview, Tivo, May, 2009]

To Tivo and his partner, the current need is to develop the planning guide to help the students who are easily distracted in the class. His words suggest that our PLC helped spur this idea and pushed them toward this effort.

Many of the participating teachers had indicated that they felt unsure and unfulfilled in their current co-teaching situation (Field notes, PLC meeting, February 23, 2009). They needed a solution to their short term dilemma. Our PLC pulled the teachers together to discuss problems and issues that most immediately affected them to help promote knowledge acquisition together. Our PLC also addressed the immediate needs of the participating teachers by assisting them with their current situations, i.e. classroom instruction, projects, lesson plans, or funding proposals. As McLaughlin (1994) argued, any active professional community was responsive to teachers' immediate professional concerns and our PLC was just that.

As for meeting the needs of the teachers' long-term goals, Sera summed it up best when she said,

> I enjoyed attending the PLC sessions with a teacher I will be working with next year. We were able to have numerous discussions and have several plans for how we want to do things next year.
>
> [Post-interview, Sera, April 2009]

One of the benefits of sharing concerns and addressing issues together was that our PLC participants also reported that they knew their colleagues' expertise better. In the following, I will reinforce the idea that our study group was a PLC by providing findings related to how our PLC assisted its members to learn about the others' expertise.

*PLC Assist Participating Teachers to Knowing Their Colleagues' Expertise*

As I presented in the literature review chapter, since the routines of teachers are in such an isolated and closed environment, teachers frequently lack information about what their colleagues know and do, but PLC participation provides opportunities for the participants to know their colleagues' expertise (Martin-Kniep, 2004). This is one of the critical factors of any PLC. In our PLC, the teachers presented their different experiences, teaching beliefs, levels, and subjects, personalities, and teaching styles, which are important factors of a community as Wenger (2003) argued. These factors of a community convey the members' expertise.

During the study, I noticed that through participation in our PLC activities, discussions, and sharing, the teachers reported that they knew their partners better and knew their peers better. Cheli's words about working with the teachers from other buildings and other grades provided us a general view of how our study group helped the teachers to know about their peers.

> It was also helpful that there were teachers who were already co-teaching in the PLC because they had a different perspective. I have never been involved with a teacher training that gave us as much opportunity to interact with our peers. I think we learned a lot together, including knowing about our peers.
>
> [Post-Interview, Cheli, April, 2009]

Cheli's words demonstrated that our study group provided the opportunities for its participants to know their peers expertise and get a glimpse into their peers' perspectives on educational issues.

Besides the Post-Interview data, in our Follow-Up Interview, the participating teachers also commented on how our study group assisted them to know more about their peers. Dutchman's words are both evident and reflective. He said,

Being with different levels of teachers and numbers of years of teaching

> was great. Each teacher brought in a unique vision of the CT experience. I have been CT for 7 years so I feel that I have more of an expertise than others. I see that I was not right in that view. I have been teaching with the same teacher for about 5 of those years so we have a great routine, however, I found that I may also be "stuck in a rut" and with my partner, I could have tried many new techniques. Hearing from others is refreshing.
> [Follow-Up Interview, Dutchman, May, 2009]

It is clear that Dutchman not only knew his peers better, but also knew about his co-teacher better. More importantly, his words conveyed that if he did not have the experience with our study group, he may not have been able to realize the capacities that his co-teachers had. Also, he gained greater perspective on his own teaching practice. Thus, our study group provided opportunities to know their partners and their peers' expertise better.

Nivka simply said that "I gained insight into my team teacher's knowledge of strategies that can be used to aid struggling students" [Follow-Up Interview, Nivka, May, 2009]. Although Nivka only said one sentence, he clearly conveyed the meaning of knowing his team teacher's strategies and expertise better.

These data selections provided evidence for the fact that our study group reached another standard of being a PLC. Therefore, although emphasizing collective work, community members' individual concerns and views are also important to the development of community and the growth of community members (Grossman, et al., 2001; McLaughlin & Talbert, 2003; Westheimer, 1998). Researchers agreed that individual expertise is both inevitable and beneficial to the growth of a community (Furman, 1998; Selznick, 1992). In the following, I will discuss how this study group is a PLC from its efforts of promoting rigorous work of its members.

*PLC Promote Rigorous Work*

Research documents that PLCs promote rigorous work because they provide opportunities for participating teachers to do self-reflections (Martin-Kniep, 2004). The

teachers' self-reflections promote teacher learning and further the change of their practice (Niu, 2008). This self reflection can be seen in my previous quotation from Dutchman.

From the data, I found several places where the teachers reported their belief changes and their practice changes based on their self-reflections, discussions, sharing, and commenting inside our study group. These illustrated that our study group had developed into a PLC. First, the teachers' rigorous work was shown through analyzing the recurring online survey. The teachers' beliefs and confidences about whether co-teaching has the potential for meeting the needs of all students changed over our PLC sessions. In the following, I used another Table to demonstrate the changes over the time.

Table 4: Teachers' Beliefs in Co-Teaching Has the Potential for Meeting the Needs of All Students.

| | Pre-PLC | Mid-PLC | Exit-PLC |
|---|---|---|---|
| **Strongly Agree** | 8% | 26% | 24% |
| **Mostly Agree** | 8% | 53% | 52% |
| **Agree** | 12% | 16% | 24% |
| **Neutral** | 38% | 0% | 0% |
| **Disagree** | 12% | 5% | 0% |
| **Mostly Disagree** | 21% | 0% | 0% |
| **Strongly Disagree** | 0% | 0% | 0% |

The Pre-PLC survey data demonstrated that the participating teachers' beliefs varied greatly, yet still indicated a lack of confidence is this idea as 71% either "Disagreed" or "Neutral" with the majority of this group responding "neutral." However, at the Mid-PLC survey, 95% of the teachers already believed that using what they learned about co-teaching could help all students learn and by the end of the PLC 100% of the teachers surveyed agreed to some level. Based on the data analyses, it was apparent that teachers had more confidence because they experienced new learning within our PLC which prompted to try new teaching methods in their classroom. The challenges that I designed for our PLC teacher learning and the active learning methods our teachers used in their classrooms were designed to help the teachers achieve more rigorous standards in their teaching. Most of the teachers indicated in the Pre-interviews that they were only familiar with the supportive model of co-teaching. After the second meeting they were introduced to five models of co-teaching and by the end

of the PLC they were clearly confident that the use of all the models would improve learning for all students. The teachers were consistently challenged at each meeting to identify the various models of co-teaching and how they could be implemented in the classroom. This rigorous approach paid dividends as evidenced in the following.

For instance, Sera at her Follow-Up Interview described the rigor of one activity within the PLC,

> Our small group was certainly challenged on the day we worked with implementing multiple learning style presentation and station learning. In our small group activity we were asked to create a social studies lesson using learning stations which utilized various learning styles. We were challenged to become creative in our activities, while considering stated lesson objectives, multiple styles of learning, and the presence of multiple levels of learners.
>
> [Follow-Up Interview, Sera, May, 2009]

Sera's words described how the participating teachers worked hard towards learning about co-teaching within our PLC. The purpose of challenging the teachers within our PLC was to foster a rigorous working environment that would foster teacher learning, and increase the depth of their understanding, in a format that should ensure long term benefit from participation in the PLC. As a result, our PLC teachers brought what they learned and practiced inside our PLC to their teaching. Dutchman's words in his Follow-Up Interview suggested he perceived this increased rigor. Dutchman said,

> The students have more hands-on activities and are required to become more involved in the lesson instead of "just" taking notes. They may be asked to participate orally with the note taking. Also, teachers are asked to plan more. Maybe that's where the "rigorous" comes in. Teachers need to plan together and collaborate more. It takes time.
>
> [Follow-Up Interview, Dutchman, May, 2009]

The conversations with Dutchman showed there were changes happening in his co-teaching classroom after he participated in our PLC. The students were no longer "just" taking notes.

They changed to active learning, which was more rigorous than their passive note-taking learning styles before. The teachers planned together and collaborated more with more time, which showed more rigorous work as well.

The knowledge that teachers learned and brought to their classrooms empowered the teachers to have more expertise in their own co-teaching classrooms. In their co-teaching practices, teachers were willing to try various strategies they acquired, which provided the teachers the opportunities to be more independent in both decision-making and in teaching practice. Next, the data illustrates our study group met the standard for a PLC due to the members reporting that they became more independent after they participated in our PLC.

*PLC Members Grow From Dependence to Interdependence*

Dufour and Eakes (1998) argue that the existence of a PLC requires the collective commitment to what the participants believe and what they seek to create. Furthermore, these guiding principles, they say, are embedded in the hearts and minds of the participants. Taking a group of individuals and helping them create an atmosphere of collaboration wherein they have this collective commitment, requires they go through stages of dependence and interdependence. Based on the data, I found that the members of our study group grew from dependence to more interdependence over the time of our project, which further indicated that our study group met the standard for a PLC.

When the focused teachers were asked about becoming more interdependent, they shared their thoughts with illustrations of why they felt they were more interdependent in their thinking and effort now. Stallion, in his Follow-Up Interview described his feeling as

> Usually we listen to some "expert" tell us how to do our jobs better. In this PLC, we were decision-makers. We helped each other understand how to do our jobs better within our own setting ... After listening to Maxie talk about how she and her co-teacher structure their lessons so that both are

> involved right from the beginning, I decided to talk with my co-teacher about our classes. She had the same thought.
>
> [Follow-Up Interview, Stallion, May, 2009]

Stallion's words were significant at two different layers. First, most of the time, he, along with others, waited for someone who was believed to know better to tell them what to do and how to do their jobs. Second, after their participation in our PLC, he felt that he had the capacity to make decisions himself and help others in the group. This was a huge jump from being dependent on some "expert" to being interdependent in sharing one's own knowledge.

Along this line, Sera's words reinforced the theme of our PLC members becoming more interdependent than before. Sera said,

> ... and through this PLC we are gaining a better understanding of what we need to change in our thinking and planning in order to best help reach those students without relying on a special education teacher's "hand-held assistance." In gaining a better understanding of differentiated instruction, we can become more pro-active in our planning from the very start.
>
> [Follow-Up Interview, Sera, May, 2009]

When Sera mentioned that she better understood what she and her co-teacher needed to change, she indicated that she and her partner had already become more interdependent in thought about planning and teaching. Especially, when she suggested that she and her co-teacher would be more proactive together, it further indicated that the team had become more interdependent.

The Post-Interview data also demonstrated the change in the teachers from being dependent to interdependent. Some focus teachers' interview answers went beyond just being interdependent as they were pursuing a leadership role after participating in our PLC.

Martin-Kniep (2004) argued that without PLC, schools have to exclusively rely on

external experts and resources, which is on the one hand, expensive, and on the other, not as effective in terms of teacher professional development. Here based on the data from our PLC, the teachers started to rely on themselves on decision-making, problem-solving and knowledge acquiring.

*Conclusion*

The research data suggested that our teacher study group was a PLC because it set up a supportive, fostering, and non-threatening learning environment that the normal school setting could not provide. Within this learning environment, the participating teachers shared their concerns and worked on the issues and problems they faced both in the long-term, as well as, their immediate needs. The interactive process within the PLC among the teachers assisted the participants to build an interdependent relationship. This process of sharing and working together illuminated each member's expertise and provided opportunities for the other participants to learn about their colleagues. Some of the teachers even reported that building on their interrelationship and the acquisition of the skills, strategies and knowledge they would take a leadership role later in their school settings. As a result of this process, within this learning environment, the teachers aimed at more rigorous work.

## Chapter 5 : Modifications in Knowledge, Beliefs and Skills

While Little (2002) argues that since PLC discourses or materials are de-contextualized portraits of what happened in the classrooms, participating teachers' classroom practice remains unclear through these discourses, but studies on the effects of teacher learning within the context of PLC showed both teacher knowledge growth and teaching practice improvement.

*Modifications*

Starting with our first PLC meeting I designed the activities to activate this element of social interaction theory. We began with an exercise wherein each participant was asked to make a short list (3-5), of meeting norms that they would like the group to embrace for our PLC. Some of the suggestions were: 1) Start all meetings on time. 2) Have an agenda and follow it. 3) Encourage everyone's participation, but monitor each speaker's "airtime" so that no one dominated the conversation. 4) Keep the meeting activities focused and purposeful.

Once everyone had completed their lists members volunteered their answers and we considered them as a group. We narrowed the list of meeting norms down to 8 general expectations that we held for our PLC meetings and for the interactions of the members. This list of 8 meeting norms was written onto a poster sized paper which was then laminated and posted at each meeting.

The next activity involved having the members creating a short list (3-5), of goals that the teacher had for themselves, their students or the school in general for the year. Again, volunteers from the group shared their goals and we put this on the board in front of the group. After everyone had finished sharing, we went through the list one at a time and

after each goal I asked the members to indicate if they had put the same goal on their list. The first goal that had been offered was for their students to be academically successful. When I asked the group to raise their hand if they had the same goal on their list, every teacher in the room raised their hand. As the PLC members looked about the room you could tell this was a very poignant moment. The power of seeing that individually they all had the same goal for student success raised their awareness that we were in this together. The discussion that followed reinforced this idea of holding common goals and objectives.

These two activities may seem somewhat trivial on the surface, but the impact they made on establishing the group as a professional learning community was powerful. At this point of that first meeting, the atmosphere in the room and attitude of the teachers could be best described as reserved and cautious (Field notes, February 8, 2009). Then I made this comment to the group, "what your responses tell me is that student success is not a general education goal or a special education goal, it is a communal goal" (Audio-tape, PLC meeting, February 8, 2009). There were smiles and excited "chatter" amongst all of the PLC members. Next I made this statement, "Knowing we all share this 'common goal' is so significant because co-teaching is not a general education strategy, or a special education strategy, it is a communal education strategy" (Audiotape, PLC meeting, February 8, 2009). I let that idea hang in the air for a moment as the group became very quiet and reflective. After approximately 60 seconds of silence I suggested we take a break and one could easily sense the "buzz" of excitement as the connection had been made between our common goals and co-teaching (Field notes, February 8, 2009).

The present study, through examining the participating co-teachers' actions, reports, and reflections on their social interactions within the context of the PLC, answers the following research question: Can teachers improve their knowledge, confidence, and

practice of co-teaching through professional development participation in a teacher professional learning community? I intend to answer these questions through the following three sub-questions:

1) Does teachers' understanding of co-teaching and its basic models change through participation in the PLC?

2) Do the teachers gain increased comfort level towards co-teaching when they talked about co-teaching or engaged their co-teachers through PLC participation?

3) What modifications do the teachers report in their own co-teaching practices through PLC participation?

I used data where I found instances of discourse, documents or activities related to the following: (1) teacher's knowledge and skill acquisitions; (2), the data showing the changes in the teachers' comfort levels with co-teaching; and (3) teachers' reports and self-reflections on the modifications in their co-teaching practices. These instances occurred in (1) the meeting sessions of our PLC; (2) the PLC meeting reflections, (3) my analytic summaries of the Pre-/Post Interview data, and the Pre-/Post-PLC as well as a recurring online survey Data; (4) the field notes; and (5) teacher reflections. The selection of the data reflects my role as a participant observer who documented what happened in this learning community, what the teachers learned, and what they reported they learned through various activities. This permitted me to put teachers' words and actions regarding their understanding and their reports on the improvement of co-teaching into a wider context. For example, every respondent to the Post Interview questions mentioned the benefits they received from having time for discourse with colleagues.

I collected artifacts both within our PLC and outside our PLC, documented in my

field notes, which helped me gain in-depth insight into the thoughts of the PLC members. I also gathered data from PLC member's pre-and post interviews focused on how he or she thought about co-teaching, co-teaching models, and about teaching students in the context of co-teaching. Self-reflections on changes, which allow teachers to share privately with researchers, rather than put their ideas in public, were checked against data from the meeting discussions as well as from field notes of PLC. These self-reflections were completed by the teachers in semi-structured interview questions providing them with ideal sharing opportunities that may not be offered during individual interviews (Al-Jammal & Parkany, 2003; Fontana & Frey, 1994).

*Results*

The syntheses of data analyses show that the participating teachers obtained a clearer understanding of co-teaching, an increased knowledge of co-teaching, and gradual modifications of their co-teaching practices through their participations in our teacher PLC. In the following, I illustrate my findings based on the three sub-research questions.

*Improved Teachers' Understanding of Co-teaching and Its Basic Models*

Differences among the Pre-, Mid-Point, and the Post-PLC survey revealed that our PLC sessions advanced the participating teachers' understanding of Co-Teaching and its basic models (See Table 1). To set up a foundation for our study, we surveyed the participating teachers on how well they understood co-teaching and its models. When we analyzed our pre-survey data, we found that out of 24 teachers, 10 teachers (42%) disagreed that they grasped the concept and the models and 8 mostly (33%) disagreed, while only 2 teachers (8%) mostly agreed. No teacher indicated either "Strongly Agree" or "Agree" and 4 teachers (17%) stood neutral. However, at our early April survey, which marked the mid-point of the PLC sessions, we found the situation changed. Three teachers had dropped

out of the project by of the 21 teachers who completed the survey, 12 teachers (63%) reported that they mostly agreed that they had a good grasp of the concept of co-teaching and the co-teaching models. Four teachers (21%) agreed while 2 teachers (11%) strongly agreed, and only 1 teacher (5%) held the stance of neutral. The numbers for "Strongly Disagree," "Mostly Disagree," and "Disagree" were all zero. At our post-PLC survey, the numbers changed again. Nineteen of the twenty one teachers completed the survey questions and all their answers fell into the categories of "Strongly Agree," "Mostly Agree," and "Agree." The other categories showed no responses from the teachers. Most of the answers, this time, clustered around "Mostly Agree," 12 teachers (57%), which was more than half of the respondents. The next highest total was 6 teachers who chose "Agree," which is 29%. Three teachers answered "Strongly Agree," which is 14% (See Table 5).

Table 5: Improved Teachers' Understanding of Co-Teaching and Its Basic Models through PLC Activities

| | **Pre-PLC Survey (24)** | | **Mid-Point Survey (21)** | | **Post-PLC Survey (19)** | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| **Strongly Agree** | 0 | 0 | 2 | 11 | 3 | 14 |
| **Mostly Agree** | 2 | 8 | 12 | 63 | 12 | 57 |
| **Agree** | 0 | 0 | 4 | 21 | 6 | 29 |
| **Neutral** | 4 | 17 | 1 | 5 | 0 | 0 |
| **Disagree** | 10 | 42 | 0 | 0 | 0 | 0 |
| **Mostly Disagree** | 8 | 33 | 0 | 0 | 0 | 0 |
| **Strongly Disagree** | 0 | 0 | 0 | 0 | 0 | 0 |

Within the domain of their improved understanding of the concept and the models of co-teaching, the teachers also showed the improvement through their interview questions. In the following, we used qualitative data to explain our findings.

From Experiential Understanding to Systematical Deep Understanding

At the pre-interview, participating teachers reported their understanding of the concept and models based on their own teaching experiences. However, in their post-interview, they reported their systematic deep understanding of the knowledge. For instance, Maxie, who had attended a couple of workshops, stated the following:

> I have co-taught for 11 years. I know it is two teachers working together to assist students to achieve the learning goals of the class.
>
> [Pre-Interview, 2009, Maxie]

However, in her Post-interview, she reported differently:

> Co-teaching can be different for each teacher you work with depending on the content knowledge of the teachers, the comfort level the teacher feels sharing their class, and the needs of the students. ... I am able to not only describe these 5 models but choose and implement the model that will work best depending on curriculum, needs of students and co-teacher.
>
> [Post-Interview, 2009, Maxie]

The differences between Maxie's responses not only demonstrate her deep understanding of co-teaching, but also represent her sophisticated understanding of the concept and the dynamics revealed from utilizing the concept. This is a critical change from her understanding prior to participation in the PLC. Along this same line, Maxie indicated at the first PLC meeting (Meeting Notes, February 8, 2009) that she was only familiar with the supportive model of co-teaching wherein the special education teacher simple acts as a classroom helper. At a later PLC (Field Notes, May 14, 2009), she indicated that she was excited to try the other models of co-teaching as well. She believed that the station teaching model would be

especially interesting to use in her social studies class.

*Teachers Gained Flexibility in Co-Teaching Model*

Participating teachers also reported an increase in their flexibilities regarding working with others under the structure of co-teaching. Post-interview data from Belle, who was frustrated by a one-day conference related to co-teaching, demonstrated the increase of her understanding of co-teaching and her increased flexibilities both with co-teaching and with co-teachers after participating in this PLC. In the interview, Belle said,

> Before this experience (PLC experience), I would have told you that co-teaching was simply two teachers co-existing in a classroom. I imagined power struggles and resentment, because that is what I have witnessed. What I have now been exposed to is a systematic approach that helps alleviate some of those problems. By defining the roles of the teachers (lead and support, parallel, station or team), both teachers can find a place where each is comfortable. If both staff feel confident in subject matter, then the parallel is useful, if a teacher is not as sure, the lead and support would be better. The piece of advice that made the most sense to me was that your dynamic can change daily or weekly depending on the subject being introduced.
>
> [Post Interview, May 2009, Belle]

Belle's response represents several other teachers' sentiment that they gained the knowledge of using the co-teaching models flexibly, which reduced power struggles and resentment. For example, the Dutchman stated prior to the PLC (Pre-Interview, Dutchman), "I am the content area teacher. Generally speaking I have taken a lead role while the special education teacher has taken a supportive role." Then he followed that with this statement from a future session, (field notes, March 27, 2009) "I enjoyed attending the PLC with the teacher I will be working with next year. We had many discussions about the models of co-teaching and are starting to make plans for how we might work this into the lessons for next year."

From our data analyses, I believe that these changes resulted in and also resulted from the co-teaching knowledge the participating teachers acquired through the PLC sessions particularly those pieces related to professional relationship building.

*Increased Teacher Comfort Level in Co-Teaching Settings*

Comparing the pre-interview data, the on-line survey answers, and the post-interview data, we also found that the teachers gained better understanding of their roles in the co-teaching model, which led to an increase in the teachers' comfort level in co-teaching settings. To understand the participating teachers' dispositions regarding their roles in planning, organizing, and delivering instruction in a co-taught classroom, we surveyed the teachers about their feeling of being an equal partner in their co-teaching team. When we analyzed our pre-interview data, we found that the answers spread out and covered five different categories. Out of 24 teachers, 7 teachers (29%) chose "Mostly Agree" and 5 teachers (21%) strongly agreed while 3 (12%) agreed, while 3 teachers (12%) disagreed and 6 (25%) selected "Neutral." There was no teacher that selected either "mostly disagree" or "strongly disagree". At our mid-point survey, we found the situation changed. This time, out of 21 teachers who did the survey, 7 teachers (37%) reported that they mostly agreed that they played an equal role in their co-teaching teams. Six teachers (32%) strongly agreed with this and five teachers (26%) agreed, while 1 teacher (5%) held the stand of neutral. The numbers for "Strongly Disagree," "Mostly Disagree," and "Disagree" were marked as zero. Our final survey showed the same tendency. Nineteen teachers completed the survey questions. Most of their answers clustered around "Mostly Agree" and "Agree." The mostly agree category absorbed 8 teachers (38%) responses and 6 teachers agreed (29%). Four teachers strongly agreed (19%). The total percentage falling into an agreeable category was 86%. There were 3 teachers (14%) holding a neutral position. But none of the

teachers disagreed on any level (See Table 6). After the mid-point of our PLC sessions, the teachers no longer felt that they were playing an unequal role in their co-teaching partnership.

Table 6: Increased Teacher Comfort Level in Co-Teaching Settings

| | **Pre-PLC Survey (24)** | | **Mid-Point Survey (21)** | | **Post-PLC Survey (19)** | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| **Strongly Agree** | 5 | 21 | 6 | 32 | 4 | 19 |
| **Mostly Agree** | 7 | 29 | 7 | 37 | 8 | 38 |
| **Agree** | 3 | 12 | 5 | 26 | 6 | 29 |
| **Neutral** | 6 | 25 | 1 | 5 | 3 | 14 |
| **Disagree** | 3 | 12 | 0 | 0 | 0 | 0 |
| **Mostly Disagree** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Strongly Disagree** | 0 | 0 | 0 | 0 | 0 | 0 |

Within the domain of their understanding of the role they played in their partnership, the teachers demonstrated their comfort level with co-teaching change through their interview questions and their session conversations as well. Some teachers indicated their role changed indirectly.

*From Being against Co-Teaching to Welcoming Co-Teaching*

Teachers' answers to the pre-PLC and Post-PLC interviews showed their beliefs changed towards Co-Teaching. After the PLC sessions, the teachers are more willing to accept the concept of co-teaching. For instance, at the Pre-PLC interview, Nivka, one of the general education teachers, when asked the question of what did he know about co-teaching,

answered "It involves multiple teachers teaching together" (Pre-Interview, Nivka). Yet, as an example of his discomfort with the concept, he indicated that in his co-teaching situations he was the lead teacher and the special education teacher was in the room simply for support. His beliefs about collaborating with another teacher softened over the course of our PLC meetings. At the Post-Interview, when asked the same question, he provided a thick description of his willingness to work with his co-teacher.

> I believe I have an excellent understanding of the various models of co-teaching. I find this to be very exciting. At the start of this project I was not very enthusiastic about co-teaching ...I am excited to work with my co-teacher and am confident that if I get assigned a different co-teacher for next year I will be able to explain the various models to them.
>
> [Post-Interview, 2009, Nivka]

Nivka indicated an attitude shift between the pre-interview and the post-interview – from "not very enthusiastic about co-teaching" to "I am excited to work with my co-teacher." Based on his reflections, this shift was created by his understanding of the concept of co-teaching and its basic models. He had also stated during the first PLC session (Field Notes, February 8, 2009) that he would have a very difficult time "giving up control" of his classroom to another teacher. That he felt protective and selfish about sharing his students. His co-teaching partner, Coach, even shared a conversation that the two of them had at the beginning of the year where Nivka said that he (Nivka) would take responsibility for teaching the class and told Coach that he would only be expected to help the special education students and little else.

Nivka's need for control slowly began to show signs of fading in the PLC. He and Coach were soon having discussions about ways for implementing the co-teaching models in their classroom (Field Notes, February 23, 2009). Nivka even publicly expressed that he

was starting to understand that giving the co-teacher a chance to take the instructional lead did not equate to giving up control of the classroom (Audio tape, March 8, 2009). He suggested that co-teaching meant both teachers being involved so even if the special education teacher took the lead, the general education teacher was still involved and still had some control. By the final PLC meeting (Meeting Notes, May 14, 2009) Nivka was expressing a desire to implement some of the various models of co-teaching putting more students in front of the special education teacher and was comfortable that this did not mean he was giving up control of the class. This willingness by Nivka to share the lead in the classroom may have been the catalyst for Coach to seek more of an active role in the co-teaching process and not simply be satisfied serving in a supportive role as his colleagues had noted (Post Interview, Stallion).

Some other teachers also showed the changes in their beliefs of and comfort with co-teaching. For instance, in the pre-interview, when asked to explain her role in their co-teaching team, Cane, a special education teacher said,

> Varied--support person in some cases, lead teacher at times, sometimes I removed my caseload students and/or others who needed additional help, often I was the one to do accommodations/modifications for students.
>
> [Pre-Interview, Cane]

Cane described her role as primarily a supportive teacher in their co-teaching setting. But this situation changed. When she was asked the same questions during the post-interview, Cane's answer indicated the change in her understanding about her roles in co-teaching,

> I've been co-teaching for 4 years now, but it [PLC learning] has given me more confidence as a special education teacher to step in and be more of the content expert..."
>
> [Post-Interview, Cane]

From less confidence to more confidence as a special education teacher, Cane reported indirectly that her understanding of the role changed after her participation in our PLC.

Some other teachers also advanced their understanding of the role they played in their co-teaching pair from superficial to a deeper understanding. For instance, when Cheli, who did not have any opportunities to learn about co-teaching in the past, was asked about whether she understood the role she played in her co-teaching team, she simply answered "Yes" (Pre-Interview, Cheli). However, in the post-interview, she showed her reflection on her different understanding of the role she could now play,

> I have co-taught in the past so I think I was prepared prior to the PLC. But I will say that my co-teaching experience was very limited and looked mostly like the supportive co-teaching which was the most superficial.
> [Post-Interview, Cheli]

Cheli's understanding of her comfort level with co-teaching changed from "She thought she knew it," therefore, "no need to work on it" to "her self-realization that her 'co-teaching experience was very limited' and 'superficial'." This demonstrated a turning point in her understanding of co-teaching and her role in the model.

*More Comfortable Now to Sit Together*

One interesting dynamic that was documented in field notes was the alignment of the teachers at the first meeting. The teachers did not necessarily sit next to their co-teaching partner nor did they seem to align themselves by grade or teaching assignment. Particularly, the junior high teachers took peculiar positions within the community. Not only did all of the special education teachers sit at one table with the general education teachers sitting at another, but the two tables were on opposite sides of the room. This was

very curious indeed and somewhat indicative of a lack of camaraderie or professional relationship. At the second meeting these teachers had moved to the same side of the room and by the third session the junior high teachers, without prompting from the facilitator, were choosing to sit next to their co-teaching partner. I believe this is attributable to the activities that we engaged in during our first meeting related to establishing a PLC (see p. 95-96) and the activities during the second meeting that were designed to create collaboration between the co-teaching teams (see Appendix C). By creating these activities early in the process, it sent a clear message to the group that I intended to draw on this collaboration regularly. Another key was the time allotted during these early meetings for the teachers to talk casually about the topic as well. As DuFour, DuFour, Eaker, & Many (2006) point out, "... it is insincere and disingenuous for any school district or any school principal to stress the importance of collaboration, and then fail to provide time for collaboration" (p. 95). Seeing that they were going to have this commodity available to them in the PLC might have spurred the junior high teachers to sit closer together to take advantage of the opportunity to interact.

*Modifications in Their Co-Teaching Practices*

Differences among the Pre-PLC survey, Mid-Point PLC Survey, and the Post-PLC survey as well as the Pre-Interview data and Post-Interview data revealed that our PLC sessions assisted the participating teachers to acquire practical knowledge that could be applied in their co-teaching classrooms (See Table 3). To better understand the PLC teachers co-teaching practices, I asked whether they had been using multiple models of co-teaching strategies in their own co-teaching instructions. The Pre-Survey data demonstrated that most of the teachers did not use multiple co-teaching strategies at all. In analyzing the data, I found that out of 24 teachers, 8 teachers (33%) mostly disagreed that

they used multiple strategies in co-taught instructions and 8 teachers (33%) disagree, while 6 teachers (25%) selected Neutral. There was no teacher who "agreed" or "strongly agreed," and only 2 teachers (8%) "mostly agreed." The numbers showed that more than half of the participating teachers did not use multiple strategies at all. This was alarmingly high. However, the numbers changed. At the mid-point survey, I found that out of the twenty-one teachers who completed questions, the total number of "Strongly Disagree," "Mostly Disagree," and "Disagree" reduced to 3 teachers (15%). The total of teachers who responded "Strongly Agree," "Mostly Agree," and "Agree" was 15 teachers (72%) with the majority of 8 teachers (38%) who mostly agreed. Although three teachers (14%) still indicated they were neutral on this topic, this indicated a huge change in the teachers' co-teaching strategy application in their instructions. In the Post-Survey, the data analyses showed that more participating teachers used multiple strategies in their co-teaching settings. In detail, out of 19 teachers, only one teacher (5%) disagreed with using multiple strategies, one teacher (5%) held a neutral standing, while 17 teachers (90%) agreed that they used various co-teaching strategies, which spread out as 42% agreed, 32% mostly agreed and 16% strongly agreed. This change demonstrated that our PLC activities helped the teachers implement different co-teaching strategies in their classroom settings (See Table 7).

Table 7: Modifications in the Teachers' Reports about Their Co-Teaching Practices

| | Pre-PLC Survey (24) | | Mid-Point Survey (21) | | Post-PLC Survey (19) | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| **Strongly Agree** | 0 | 0 | 2 | 10 | 3 | 16 |
| **Mostly Agree** | 2 | 8 | 8 | 38 | 6 | 32 |
| **Agree** | 0 | 0 | 5 | 24 | 8 | 42 |
| **Neutral** | 6 | 25 | 3 | 14 | 1 | 5 |
| **Disagree** | 8 | 33 | 0 | 0 | 1 | 5 |
| **Mostly Disagree** | 8 | 33 | 1 | 5 | 0 | 0 |
| **Strongly Disagree** | 0 | 0 | 2 | 10 | 0 | 0 |

The change of using multiple co-teaching strategies by the participating teachers was also shown in the teachers' Pre- and Post-Interview data. In the Pre-Interview data, when the teachers were asked the ways they accommodated their special needs students in their co-teaching, most of the time, the teachers were given very direct and straight forward teacher-centered examples, rather than well-thought student-centered strategies. For instance, one teacher mentioned that "testing" was his way of accommodating his special needs students in the co-teaching setting, while "slower pace/one on one coaching" was the particular strategies he used (Pre-Interview, Tivo). Another teacher did the same, except she listed more straight forward teacher- centered strategies – "modified/read test, presented curriculum and created materials to accommodate learning styles of students" and her particular strategies were "repetition, slower pace, reduced work load, small group or one on one support, [and] re-teaching" (Pre-Interview, Maxie). However, in the Post-Interview, the participating teachers showed a broadened view of how to accommodate all students, including their special need students. In the Post-Interview, Maxie whose answer was

quoted above from her Pre-Interview said,

> I feel this will help in the classroom. Rather than just accommodating special ed I feel that using review techniques, like the 10 minutes when class starts, as one teacher deals with paper work, the other reviews material the students are expected to learn...all students benefit.
>
> [Post-Interview, Maxie]

Compared with her Pre-Interview data, Maxie showed a switch from her teacher- centered strategies to her strategy of taking all students' needs into consideration. Based on the analyses of our data, Maxie is not alone.

Participating teachers also showed their understanding of how to accommodate students who have special needs through their understanding of co-teaching models. For instance, Nivka demonstrated this point in the following quote,

> I think the thing that will most help my students is that I have a greater understanding of how to use co-teaching models for implementing differentiated instruction. I understood the principles of differentiated instruction but could never really figure out how to make it happen in my lessons. Now after this PLC I know how to approach the curriculum with modifications to help all students.
>
> [Post-Interview, Nivka]

Nivka nicely interweaved his understanding of differentiated instruction with co-teaching strategies. This demonstrated that he reached this level of knowledge application after participating and learning in our PLC.

*Conclusion*

The social theorists believe that learning occurs through people's social interactions (Vygotsky, 1978; 1981). Teacher professional learning community researchers argue that the learning community setting provides participating teachers the environment for learning to happen (Archinstein, 2002; Hord, 2009; Niu, 2008; Weisthimer, 1999; Well, 2008). It

was evident that our study reflected both of these perspectives. Within the PLC contexts, the participating teachers shared, discussed, and learned from one another and from the facilitators the knowledge, models and strategies on/around co-teaching. Their learning was demonstrated through the change of their physical settings, their session discussions and conversations, their answers to the survey questions, as well as their answers to the interview questions. What the teachers learned in our PLC is all very important in their future co-teaching collaborations. For instance, their improved understanding of the concept and models of co-teaching are able to foster positive relationships with their partner teachers in their future assignments. This is because theoretically, co-teaching draws on the strengths of both the special education teacher and the general education teacher regarding teaching content, managing classes, and pacing the curriculum as well as engaging everyone, including language diverse children, children with disabilities, and children covered by IEPs in the learning activities (Kloo & Zigmond, 2008). This study also demonstrated that co-teaching, if applied as a model of collaborative teaching, can be viewed as a positive approach in supporting teachers in teaching all children.

Teachers reported that after participating in our PLC, they had the flexibility to choose different co-teaching models in different situations accordingly. This is a significant learning outcome for co-teachers because co-teaching researchers have been working on the issue of division of work between a general education teacher and a special education teacher in the same room (Stainback & Stainback, 1992; Villa, 2008). Other researchers focused on the functions between the two teachers in the same room (Kovic, 1996; Zigmond, 2006; Volonino & Zigmond, 2007). They found that only when the two teachers utilized their expertise at the right occasions can their teaching be the most effective (Friend, Reising, & Cook, 1993; Friend & Cook, 2003; Protheroe, 2004; Pugach & Johnson,

1995). From our study, and based on teacher responses to post-interview questions, the teachers came to understand this dynamic as well.

Using both quantitative and qualitative methods made what our participating teachers learned visible and provided evidence for their learning. Based on their knowledge and skills, the teachers shared their experiences and understanding of the dynamic of co-teaching and how to work effectively with their co-teachers. The quantitative data provided information regarding teacher perceptions and experiences with co-teaching as part of this PLC. The qualitative data showed evidence for explaining what the teachers learned and what changes the teachers had in their thinking, their knowledge base, and their practices. The integration of the two sets of data matched my thoughts that PLC was an effective way in helping teachers understand co-teaching and in improving teachers learning as well as teaching practice in co-teaching settings. Additionally, using the ways of collaborative learning within the context of PLC helped the teachers gain insights into the significance of social interactions inherent in group work, such as their co-teaching teamwork, which can help the teachers structure their collaborative team more effectively (Creswell, 2003).

## Chapter 6: Overview of the Landscape and Implications of the Study

*Mediations and Social Development Theory*

Based on the data analyses, the participating teachers reported that they learned about co-teaching from various aspects (See Chapter 5 for details). These learning results indicated that PLC is an effective format for teacher learning. Referring to Vygotsky's "social development theory," our PLC provided the teachers focused mediations with which to construct knowledge. Within the structured format, however, several events occurred which relate directly to Vygotsky's ideas of social theory and demonstrate its influence on our PLC members' learning. The first mediation occurred in our third PLC meeting. One of the participating teachers brought a copy of an article for everyone in the PLC that she had just read for a special education class she was taking at a local university. The topic was co-teaching and she felt that there were some interesting ideas in the article that paralleled discussions we had within our group. This bringing in of artifacts is a prime example of a Vygotsky mediation and social theory of learning. As Printy (2008) stated regarding social learning theory, "Social learning is a reciprocal process. The learning that results from participation feeds back into the community and impacts subsequent participation" (p. 189). This teacher synthesized what she learned in another context with the information she was gathering in our PLC and then returned that learning to the group changing the dynamics of future participation within the PLC.

This spurred another member of the community to invest in our community goal and continue this pattern of reciprocal learning. After Sera brought the article from her university course to share with the PLC, Tivo began thinking about how he could help others understand co-teaching better. He and his co-teaching partner had decided to try to work out a lesson using one of the co-teaching models. They tried using the template that

we distributed during our PLC meeting (Appendix E) but felt that it didn't fully capture the essence of what they were trying to accomplish. After our fifth PLC meeting Tivo sent out an email to everyone in the PLC group. Generated from discussions he had with his collaborating teacher, both in the PLC meetings and outside the group time, they had devised a worksheet for designing co-taught lessons that they believed made the process more efficient (Appendix E). They shared this form with all members of the PLC and also included some discussion in the group about how they worked through the process (Audio-tape, PLC meeting, March 28, 2009). Again, this type of shared artifact strengthens the learning and reinforces the social learning theory of Vygotsky.

These teacher "mediations" had an impact on the PLC member's interactions and affected the learning which occurred. They were also responsible for changes in teachers' beliefs about co-teaching, as well as their perception about their own skill acquisition within the community. From the first PLC meeting when conversations were very guarded, based primarily on the teachers' lack of knowledge related to co-teaching, to the confidence exhibited by these two teachers who were willing, in fact eager, to share information they had and ideas for improved teaching, I saw tremendous growth in the group. The teachers' learning was mediated by both the arranged activities and their own individual interests. As a result, their meditated actions led to their reported intellectual capacity development and the development of their higher order thinking.

*Constructing a PLC*

As I tried to understand what I had witnessed in order to tell the story of this PLC and its members, I reflected on a comment made by one of the teachers at our first meeting. I was explaining my role in this process, particularly that of facilitator, and he said, "So you are basically the ringmaster for this circus" (Field notes, PLC meeting, February 8, 2009).

We all had a good laugh at the time but now that the meetings are over, a different analogy sprang to my mind. When I thought about how I had designed the structure of the PLC, created and organized the information we discussed at the meetings, but also realized that how far the activities were extended was driven by the teachers' interests, I realized that what occurred most closely resembles creating a new structure. In the following, I will describe what the experience looks like by defining the steps in the process that should be undertaken when designing a PLC. By illuminating the steps in the process, my grounded theory can be explained in greater detail and clarity. By understanding this process, I believe that others will be able to follow this model for their own professional development efforts.

It is imperative that one understand the basic concepts of PLC. There is a great deal of literature related to professional learning communities and the facilitator must understand what it takes to form a PLC, what is necessary to facilitate PLC meetings, and what criteria to use in determining the effectiveness of the PLC. The PLC creates the framework in which the issues, problems, discussions and activities reside. To be successful the facilitator must be clear on what constitutes the essential structure of the PLC, which in our case was co-teaching.

The first thing that happens is that one must create the basic structure of the entity. If you picture the outside boundary of a structure, a wall, or a fence for example, then imagine that this "outer shell" is comprised of the topic to be investigated in the PLC. In our structure, I imagined the walls were composed of co-teaching, with the very idea of co-teaching wrapping all around the structure in order to contain the activities inside (Diagram 1).

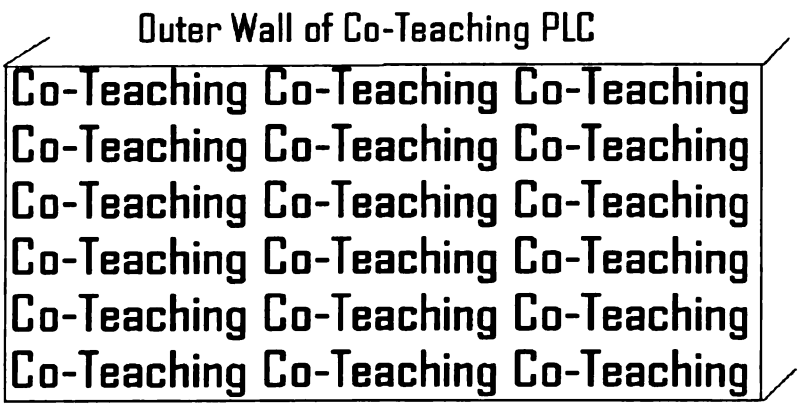



Diagram 1

It is critical to keep in mind that a lot of important events can take place outside of the PLC and that members often take from the PLC experience and bring in to the PLC new information. However, the facilitator must be very conscientious about maintaining the integrity of the structure. In order to maintain the integrity of the structure, the facilitator must be prepared to deal with these outside elements coming into the structure. If the outside information is beyond the scope of the PLC, the facilitator should move quickly and decisively to maintain the focus on the critical issue. There can be a fine line between allowing the members to expand their thinking and still maintain their focus on the essential structure of the PLC. When designing this "outer shell" then, it is important to be mindful to include places for members to enter and leave the community without losing their focus.

If the PLC itself sets the boundaries of our structure, then the layout of the interior represents the main topics which are covered in the PLC meetings. For example, in the PLC from this study, the focus was on co-teaching. Within the confines of our Co-teaching PLC structure, I created places of significance that we would all visit together. These places were concepts like differentiated instruction and the five models of co-teaching. For these big concepts we all moved through the activities together under my direction as the PLC

facilitator. In the structure of the PLC these activities were located at the center but there were other issues, problems, discussions and activities that were included inside the main structure as well (Diagram 2). Issues such as: means of collaborating with peers, classroom management, lesson structure, grading policy, parent communication, etc. These issues were introduced during our discussions related to differentiated instruction and the models of co-teaching, but they were not investigated as a whole group. Instead, meeting time was given for discussions and interactions between group members to explore these topics individually or in small groups. This way they could spend more time with the topics that interested them most and less on the ones that they deemed to be not as significant.

Diagram 2

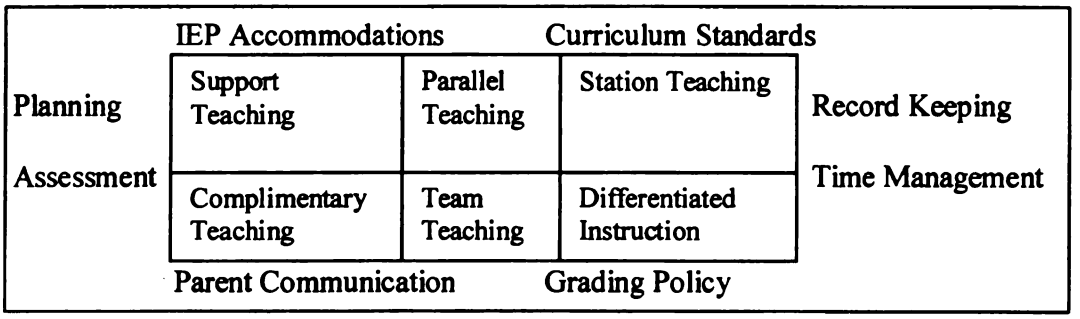



Diagram 2

As a PLC facilitator, it is imperative to take the structure and layout into careful consideration. When I was building the structure I understood that simply setting my walls around some activities, readings or discussions would not be enough. I needed to create a logical progression through the main topics, allowing time for discussions to build bridges from one topic to another. Then I also had to consider the most advantageous placement of these elements within the structure. Considering that, the following questions echoed in my mind:

Where should each activity be located within the construct of the PLC? Should we first discuss differentiated instruction and then the models of co-teaching, or do we investigate the models first? How does one activity fit with another? Should we discuss the models individually and then allow time for the teachers to explore them one at a time or do we cover the big picture at once? What is the most logical flow of activities once we leave the more structured portion of our meeting? How accessible should the information be to the participants? When does the facilitator encourage participants to take a break and when should refreshments be offered to the group?

A well-thought out, logical, efficient design to the PLC will go a long way in determining the success of the PLC. As the PLC facilitator, I have to give careful consideration to which information and which activities will be included. Which will be featured? Which will be placed on the fringes, available for the participants to explore on their own? If the structure is not solid foundationally, and the activities are not arranged systematically before the meetings begin, it might be easy for PLC members to get lost or lose interest. For our PLC, the structure was clearly defined prior to the start of our meetings with the focus on co-teaching and all of the activities housed inside fitting that theme.

With this theory in mind, what happened in our PLC becomes a little easier to analyze. Within the structure of our PLC, all the participating teachers understood that we were together to study a specific topic (co-teaching models and elements), which reduced the ambiguity and set all of us in motion towards the same goal. Fortunately, nobody wanted or tried to alter our study goal, never trying to introduce different topics, though occasionally bringing in new information about the issues we were already discussing.

As I explained in the methodology chapter, I pre-selected some topics and issues for

the teachers to learn. These became the foci of our learning activities during our first meetings. The order and the type of the activities then could be said to have contributed to the fixed structure of the learning within our PLC. Then I placed topics at the fringes of our discussions that would be important and relevant to the main topic, but not as critical for implementation of co-teaching. These would include issues like division of instruction, time management, classroom/homework assignment procedure, responsibility for parent communication. All are necessary to our goal but made more sense, given the time constraints and the goals for this PLC, to be viewed and studied individually or in small groups.

Feeling the need to give everyone a general overview regarding the most important elements of co-teaching, I took a methodical approach at the start to peak the PLC members' interest and curiosity. I wanted to emphasize that each model of co-teaching was slightly unique from the others but all shared some important elements as well such as; lesson design, teacher responsibility division, implementation, research, etc. These were left to the discovery process and were revealed through the discourse and social interactions in the PLC. These elements were not covered in the whole group instruction intentionally so that the teachers would have to discover them on their own and work through them as a group learning process.

As stated at the outset, I did not want to take all the freedom away from the teachers in our PLC meetings. Knowing that each individual differs from the others, and that they may have had different research interests in co-teaching, time was set aside for the teachers to explore. They could go it alone, with a partner or in small groups. At the end of the exploration time, the teachers were organized to report back on what they had discovered. It was very interesting to witness some teachers work their way all around the co-teaching

concepts while others preferred to get a deeper more intimate understanding of one or two models of co-teaching. Neither type of exploration was discouraged. Based on the data analyses, actually, both contributed greatly to the learning and understanding of the expertise of each participant in the PLC.

Once the teachers began taking these explorations in our PLC meetings, several asked about more in depth knowledge related to different concepts. This fostered the idea of bringing in educational specialists to offer more information. I invited an outside expert to give the whole group a more intensified lesson about the characteristics of specific co-teaching elements. The PLC members were most curious about the implementation of co-teaching models and wanted to hear about the struggles and successes other teachers may have encountered. The focus of this "experts" presentation was on planning, time management and implementation. Bringing in this "expert" to our PLC was given very positive reviews by all members of the group as they recognized and appreciated what a great opportunity this was for our PLC members. For example, Cane said, "The guest speaker was excellent. I would love for everyone to have the experience of hearing her".(Post-interview, Cane, May, 2009). This sentiment was echoed by Dorothy, "I certainly would love to hear more from Dr. Hines. She did a great job and was very enthusiastic" (Post-interview, Dorothy, May, 2009).

The research data showed that from the teachers' perspective, the most effective part of this activity, bringing in an educational specialist, was the opportunity it created for teacher learning in the PLC. This learning was represented by the fact that after getting the information from the "expert" the teachers were able to go back to certain elements of the co-teaching process and see for themselves if the information held true (Audio tape, PLC Meeting, April 14).

These actions were connected by the teachers' common interests of learning about the co-teaching concepts and issues, which were the mediation of our PLC. These mediations not only anchored the teachers' learning, but anchored our PLC to be a "family" where all members relied on, supported, and learned from one another. Also because of these anchored relationships, the participating teachers had opportunities to learn from an "expert" and from one another collectively about co-teaching, meanwhile, focusing on their own individual interests. Because of these mediated actions, from a very early stage, I noticed that our study group developed and owned the characteristics of a PLC as defined by the literature and the teacher learning fit the definition of Vygotsky's social learning theory.

*Limitations and Future Research*

While these findings highlight significant changes the participating teachers reported through their involvement in our PLC, they are embedded in the case study of one group of teachers. Meanwhile, as my background conclusions were drawn from the quantitative data, I must acknowledge that the data were restricted by the comparatively small number of participating teachers. Further, the in-depth qualitative data were drawn from a partial segment of the group members. Also, this PLC was not a complete success for all participants as we had three of our original members drop out during the process. One member left for personal reasons due to complications with her pregnancy that forced her to remove herself from her classroom teaching as well. The other two teachers left of their own accord. One said that he simple felt too busy to add this activity to his workload (Field Notes, Personal Conversation, March 14, 2009) The other mentioned to me that he simply was not interested in becoming a better co-teacher and didn't want to be assigned to future co-taught classrooms (Field Notes, Personal Conversation, March 15, 2009). He believed

that if he stayed in our PLC it would give the school administration good cause for assigning him to more co-taught classrooms and that was a situation he wanted to avoid.

Another limitation was that the PLC setting was outside of their co-teaching classrooms and that the learning was isolated from practical application which partially compromised the authentic context of co-teaching (Brown, Collins, & Duguid, 1989). This study showed what the teachers learned in our PLC settings, what they reported as modifications through surveys and changes they planned to make in instructional practice. It did not show us what modifications the teachers actually adopted in their co-teaching classrooms and whether the modifications were truly a direct result of participation in the PLC.

Multiple cases offer a deeper understanding of the learning process and the learning results (Auerbach & Silverstein, 2003). Building on this argument, further research related to teacher learning within the context of PLC should have more research sites, including more co-teaching teams. Another thought for the future research might be a long-term study, such as two-year or three-year project with a following up of observations in the co-teaching classrooms. In this way, the co-teacher can demonstrate their modifications of practice through their real actions.

The data in this study confirms what others have discovered; that PLC is an effective method of professional development. Given that there was no "control group" in this research, it is difficult to claim that the gains made in teacher knowledge, comfort, and skills related to co-teaching were all the result of the PLC participation. It was undeniable that the group came together and assumed the characteristics of a PLC that they developed positive collaborative relationships, and that through the presence of mediations, enhanced the learning of all involved with the PLC. So while the evidence here is not profound

enough to suggest causation, there is enough to demonstrate correlation. Perhaps future studies can build on what was achieved in Brandnew JH/HS High Schools and draw a stronger link between teachers' learning about co-teaching in the context of PLC.

In addition, my hope is that future researchers will reflect on the manner in which this PLC was constructed and use what was learned to design and implement their own PLC research. Bear in mind that the structure is the PLC, the outer wall is the main topic, and the spaces inside the structure encompass the activities, issues and conversations. If constructed this way, a PLC can reflect any study topic that a researcher may endeavor.

In reviewing the post-PLC interview data, one theme surfaced in the teacher responses time and again; The participants felt that this format for professional development was far more productive than the traditional one-day workshop format. Cane stated, "I thought this was more helpful than a master's class I took on co-teaching and collaboration" (Post-interview, Cane, May, 2009). Dorothy's response added quite a twist to this same belief. She said,

> I actually attended a workshop put on by Dr. Villa who wrote the book we used, "A Guide to Co-teaching." I have to admit that the workshop was not very stimulating. I liked the ideas that Dr. Villa was presenting but not the method. I thought the activities that we participated in during the PLC brought his ideas to life and made them more understandable and accessible. I think that is kind of funny that the workshop put on by the text author was not as informative to me as the work we did in the PLC!
>
> [Post-interview, Dorothy, May, 2009)]

Administrators are often trying to bring their staffs together to work on common issues and goals. Building harmony among the faculty can sometimes be a difficult proposition. However, creating a PLC akin to what we developed in this study should help the administrator establish a more cohesive unit with the staff and serve the administrator well for future professional development or school improvement efforts. Several PLC

members in this study commented that they felt closer to their colleagues after this experience and believed that more opportunities of this kind should be utilized in the future. Toward that point Nivka declared,

> This model of professional development needs to be utilized much more for teacher learning. I'm a big believer in Socratic learning. I felt like this PLC experience was a terrific forum for having important conversations with peers. I have never been at a workshop or PD where we had such extensive time for conversing and learning together. This was a great model for PD.
>
> [Post-interview, Nivka, May, 2009]

While there were some teachers who did not agree with responses from colleagues, the majority found the activities in the PLC useful in changing their perceptions regarding co-teaching, particularly with efforts to best meet academic needs of all students.

# APPENDIX A

*Interview Questions*

1. What do you know about co-teaching?
    a. Have you had any past learning opportunities related to co-teaching?
    b. Have you had a previous co-teaching assignment?
        i. Where?
        ii. What grades?
        iii. Describe your role in that setting.
        iv. Were you asked to share information about your experience with others?
    c. Are you familiar with others who have co-taught?
    d. Have any others shared their experiences with you?
    e. What do you know about the models of co-teaching? Specifically, could you briefly introduce the models that you know, their names, their characteristic, and to use the model?
    f. What do you think are the functions of co-teaching in addressing the needs of all students?
2. Do you believe that co-teaching is an effective method for teaching special education students?
    g. What about its impact on general education students?
    h. Do you believe that teachers are capable of effectively planning, organizing, and instructing in a co-taught setting?
    i. Do you believe that you will have the time and resources to be a part of an

effective co-teaching team?

j. Some teachers think that co-teaching allows us to better adapt and modify lessons to meet individual student learning needs. What do you think? Do you agree or disagree? Why?

3. Do you feel that you have the skill to utilize the various co-teaching models in your classroom instruction?

   k. Are you confident that your collaboration skills are a good match for a co-teaching assignment?

   l. What are the problems that you faced or imagine you would face in co-teaching? Why? (The answer may reflect on their beliefs or skills related to co-teaching though it is asked in this section.)

   m. Do you feel you have the skill to work in a co-taught classroom?

      i. Do you need more training?

      ii. Would you understand your role?

   n. Do you feel confident in your communication skills in working collaboratively with other staff members?

      i. Would this be evident in a co-teaching assignment?

## APPENDIX B

*Survey Questions*:

1) What is your gender?

2) What is your current teaching assignment?

3) How many years do you have of teaching service?

4) I am aware of the multiple models of co-teaching?

5 I have been assigned to a co-teaching classroom in the past?

6) I have a good grasp of the names and purposes of the five models of co-teaching?

7 I believe that co-teaching has the potential for meeting the needs of all students?

8 I would like to be assigned to more co-teaching sections?

9) Co-teaching allows us to better adapt and modify lessons to meet individual student learning needs?

10) Co-teaching allows the partner teachers to better plan and organize instruction?

11) I feel my collaboration skills are sufficient to be an equal partner in planning, organizing, and delivering instruction in a co-taught classroom?

12) I believe that my participation in a teacher learning community professional development will help me improve my instructional practice?

13) I am confident that my partnership in a co-teaching classroom will help me improve my instructional practice?

14) In my opinion, co-teaching will allow me to take more instructional risks and offer a wider variety of learning opportunities for the students?

15) I believe that I have strong classroom management skills?

## APPENDIX C

Meeting 1 – Setting the norms and expectations for the PLC. Have teachers write three "expectations that they would have for meetings. Begin to talk about how sharing these expectations will help us gain comfort with one another and move forward together. Explore any initial concerns the teachers may have related to co-teaching or professional learning community. Have the teachers write down three goals that they hold for the coming school year. Look for common answers and build off of this commonality to demonstrate the potential for working on common goals and objectives. (Half Day)

Meeting 2 – Review "norms" and "goals" discussion from first PLC meeting. Begin discussion of Differentiated Instruction. Complete learning styles survey and review multiple intelligence literature. Ask teachers to work in small groups to think of ways they might try to differentiate the instruction in a lesson for their current classroom situation. (Full Day)

Meeting 3 – Begin by asking for volunteers from the PLC group to share if they attempted any differentiated instruction strategies in their classroom since our last meeting. Look for common patterns in their attempts at differentiation. (Half Day)

Meeting 4 – Spend entire morning session leading the PLC group through a discussion of co-teaching models and methodology. Center discussion on the text we are using to frame our work, "A Guide to Co-teaching" by Villas and Thousand. Describe Support, Parallel, Station, Complementary and Team Teaching models. Give examples and review video demonstrations connected to the text. Afternoon sessions will be devoted to creating a

sample lesson in small groups using each model of co-teaching for comparison and perspective. (Full Day)

Meeting 5 – Review models of co-teaching and their distinctive elements. Review Differentiated Instruction. Begin discussion on how to integrate differentiation into co-teaching methodology. Allow time for teachers to explore lesson creation infusing co-teaching instruction with differentiated instruction. (Half Day)

Meeting 6 – We will be visited by a co-teaching "expert" from the Bureau of Educational Research. The presenters name is Dr. Rebecca Hines who is acclaimed for her work on co-teaching. Dr. Hines will help give some insight into the special education student for our teachers to ponder as well as to enlighten us about best practice in co-teaching. Dr. Hines will demonstrate through discussion and video presentation how co-teaching has been implemented in other classrooms. We will also do a Q & A at the end. (Full Day)

Meeting 7 – Review what we heard and possibly learned from the presenter at the previous PLC meeting. What made an impression? What questions were answered? What questions would we still like more information regarding. Co-teaching teams will use this time to work collaboratively on planning and preparation for classroom instruction. (Half Day)

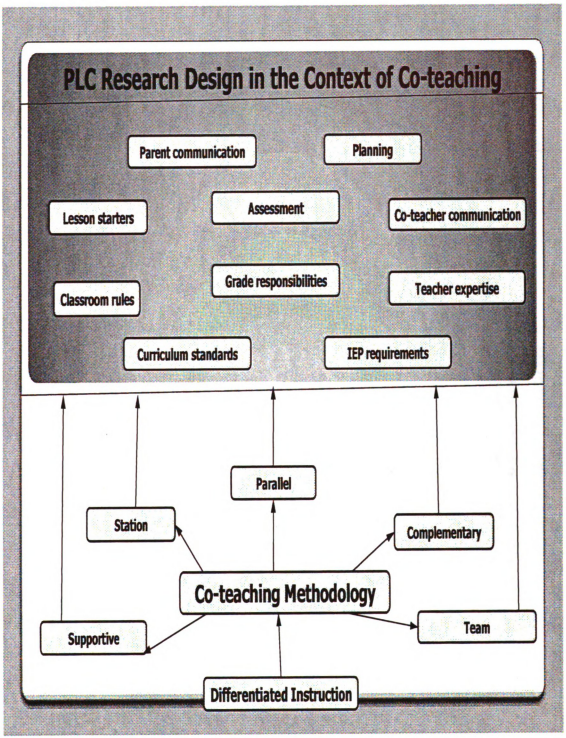
Meeting 8 – The morning session will be devoted to reviewing the models of co-teaching. Again the teachers will work in small groups. Each group will be assigned a different model of co-teaching and all groups will be given the same lesson. The group members will then create the lesson plan for the day based on their assigned model of co-teaching. The groups

will then present what their lesson will look like, what will the responsibilities of each co-teacher look like, how will the class period be structured, based on their model of co-teaching. We will then debrief as a whole group and hopefully begin to see a clear picture of how each model looks, how the models are similar to each other and how they are different. (Full Day)

Meeting 9 – The PLC members will review more of the materials related to our guiding text. The focus will be on the ancillary pieces of instruction such as classroom management, parent communication, student records management, etc. After our whole group review the teachers will have an opportunity to work individually or in small groups reviewing the literature or having discussions on the topic. (Half Day)

Meeting 9 – We will begin with a general overview of the materials covered in the PLC to date. We will also cover the last two chapters of the text, "A Guide to Co-teaching." The PLC members will report back on any new instructional practices they may have tried in their classrooms related to differentiated instruction and co-teaching. Co-teaching teams will use the remainder of the time to work collaboratively on planning and preparation for classroom instruction. (Full Day)

Meeting 10 – This meeting will focus on reviewing what we thought we knew about co-teaching when we started, and what we think we know about co-teaching know. We will discuss the members' perception of co-teaching and their willingness to implement the co-teaching strategies and differentiated instruction into their lessons. With remaining time we will discuss other possible areas the teachers believe they need more clarification regarding. (Half Day)


PLC Research Design in the Context of Co-teaching
Parent communication
Planning
Lesson starters
Assessment
Co-teacher communication
Grade responsibilities
Classroom rules
Teacher expertise
Curriculum standards
IEP requirements
Parallel
Station
Complementary
Co-teaching Methodology
Supportive
Team
Differentiated Instruction

## APPENDIX E

| DATE: _____ | CO-TEACHING LESSON PLANNER | | UNIT/LESSON: _____ |
|---|---|---|---|
| | | **Responsiblities of the** | **Responsiblities of the** |
| | **Comments/Notes** | **General Education Co-Teacher** | **Co-Teacher with the Angel's Wings** |
| Lesson/Task Description | | | |
| Lesson/Task Objectives | | | |
| Teaching Methods | | | |
| Performance Steps/Formative | | **Role** | **Role** |
| Assessment Procedure(s): | | Supportive | Supportive |
| | | Parallel/Station | Parallel/Station |
| | | Complementary | Complementary |
| | | Team teach | Team teach |
| | | Day 1 | |
| | | Day 2 | |
| | | Day 3 | |
| | | Day 4 | |
| Desc Summative Assessment | | Day 5 | |
| What went well? | | Special Equipment/Materials Required | |
| What went poorly? | | | |
| Improvement Suggestions | | | |
| Content Standards Addressed | | | |
| Taxonomy check-list | Knowledge ( ) Comprehension ( ) Application ( ) Analysis ( ) Synthesis ( ) Evaluation ( ) | | |
| Learning Styles Addressed: | Sensing and Intuitive ___ Visual and Verbal ___ Sequential and Global ___ | | |

## APPENDIX F

## Participant Demographics

| Name | Teaching Certification | Years of Service | Gender |
|---|---|---|---|
| *Participant #1 | Math/Language Arts | 6 | Female |
| Participant #2 | Social Studies | 6 | Female |
| Participant #3 | Science | 7 | Female |
| *Participant #4 | Social Studies | 9 | Male |
| Participant #5 | Language Arts | 10 | Female |
| Participant #6 | Language Arts | 11 | Female |
| *Participant #7 | Science/Language Arts | 11 | Male |
| Participant #8 | Math/Science | 13 | Female |
| *Participant #9 | Science/Math | 14 | Male |
| Participant #10 | Math | 15 | Female |
| Participant #11 | Science | 24 | Female |
| Participant #12 | Social Studies | 30 | Female |
| Participant #13 | Special Education | 3 | Male |
| *Participant #14 | Special Education | 4 | Female |
| *Participant #15 | Special Education | 5 | Male |
| Participant #16 | Special Education | 7 | Female |
| Participant #17 | Special Education | 8 | Male |
| Participant #18 | Special Education | 8 | Female |
| Participant #19 | Special Education | 8 | Female |
| Participant #20 | Special Education | 9 | Female |
| *Participant #21 | Special Education | 12 | Female |
| Participant #22 | Special Education | 14 | Female |
| *Participant #23 | Special Education | 23 | Female |
| Participant #24 | Special Education | 23 | Female |

*Denotes that the teacher participated in Pre and Post Interviews

## APPENDIX G

**Excerpt from Field Notes, February 8, 2009**

Began with discussion regarding our goal for creating a PLC. We worked on two activities. The first was designed to illicit responses related to each person's goals. Every one wrote three personal goals and then we made a chart.

I noticed that almost everyone wrote down the goal for student success. I took this opportunity to say that student success is a goal not just for SPED but also GE. As we moved into a break a lot of teachers were talking very excitedly about this idea of common goals. One said something about how we forget that we are all in this together. This conversation was carried on but several teachers through the break. CM and MB in particular were talking about this goal for student success and how they have it every year. CM is SPED but MB is GE. They were laughing about how the had this same goal but never talked about it before.

We also did an exercise for creating norms of behavior within our group. I was trying to establish the environment of a PLC. I notice that the JH SPED teachers are not sitting on the same side of the room as the JH GE teachers. That is very interesting.

We talked about trust, and ownership and responsibility for each other.

**Excerpt from Field Notes, February 23, 2009**

As we discussed the various models of co-teaching several teachers commented that they saw a hierarchy between the models. I don't remember presenting it this way. I remember saying they could start with the model they feel most comfortable with and then move to another model and then add another. They may have seen this as a progression.

Several teachers did comment that it would take the longest to get comfortable with Team Teaching where both share authority equally.

Some teachers expressed experience with co-teaching but what they described is the basic supportive model.

(I felt I talked too much during the morning session. I need to work on eliciting response and encouraging the teachers to lead dialogue. The afternoon went better in this regard.)

Small group discussions were very useful. This seemed to draw the teachers out and they began to invest themselves in what we were potentially learning. They all seemed to fall into conversation easily. NL mentions his concern about giving up power or control of his classroom. This sparked a good conversation about roles and authority.

**Excerpt from Field Notes March 8, 2009**

Great discussion about the models of co-teaching. Also a lot of great discussion about professional development. It seems the teachers are seeing some connection between what we are doing in PLC and becoming co-teachers.

JVH gave some very good insight into the struggle he had in the past with developing a relationship with is co-teacher. He mentioned that there personal teaching styles didn't match. He talked about wishing he had known more about the importance of building a relationship.

I can't remember who said it but one of the teachers said, "I worried that the district believed if they put two teachers in a room they could just automatically co-teach." (I need to check the tape to see if I can identify who said this. It was a comment made on break

about 10 am.)

**Excerpt from Field Notes April 14, 2009**

Belle spoke to me after the session. She was concerned about having the work we were doing conveyed to administration. She said the PLC was extremely helpful to her in understanding CT and that she was excited to try the new models next year but isn't sure the administration is committed to CT. Apparently there has been some discussion about reducing the number of CT sections for next year. I need to check.

Belle told me that the activity today was "cool". It showed her that the models were not that different. She talked about the idea of the models being a hierarchy (this came out in earlier meeting, I need to find when). After the activity today where we took one lesson and had groups use a different model and create a lesson plan showed her that no model was really "harder or easier".

**Excerpt from Field Notes, May 14, 2009**

We spent today debriefing what we had done in the PLC. Many teachers spoke with excitement about the co-teaching models. Teachers like Nivka and Coach who were so reluctant about the project at the beginning are now enthusiastic about giving co-teaching a good try next year.

Everyone was very relaxed today. It was great to see them having many side conversations with others in the group that they were not really interacting with at the beginning. MG and MK even changed tables at the break so they could talk with other teachers.

CM was talking in her small group about using other models of CT. NL said he wanted to try them all next year. CM said she would be happy just trying one new model. She said that

she was tired of the supportive model that she has used for years (she is sped teacher). I heard her say something about the station model. It sounded like this was her favorite of all the models.

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