ROBBINS, SUSAN CORNWELL, Ph.D. A Study of Teachers' Perceptions of Participating in Professional Learning Communities and the Relationships between General and Special Education Teachers. (2013)
Directed by Dr. William D. Bursuck. 144 pp.

The purpose of this study was to explore perceptions of teachers who participated in professional learning communities, and the relationship of that participation to collaboration and co-teaching. Semi-structured interviews were employed to understand the perceptions of high school teachers who actively participated in PLCs with the goal of understanding how relationships developed in the course of that participation. The conceptual framework for the study combined three known models of school reform: professional learning communities, collaboration, and the co-teaching model of service delivery for students with disabilities. The sample of participants included special educators and general educators from four Title 1 high schools in a large Southeastern school district. Data were collected from each participant via pre-interview surveys and one-on-one private interviews. Coding of transcribed interviews was conducted by matching participants' comments and phrases to themes related to learning communities, collaboration, and co-teaching. Thematic matrices were constructed to identify associations between learning community elements and collaborative and co-teaching relationships. As a result of these analyses, six major themes were identified. These themes are discussed including their implications for future practice and research.

Key words: collaboration; co-teaching; professional learning community

A STUDY OF TEACHERS' PERCEPTIONS OF PARTICIPATING IN

PROFESSIONAL LEARNING COMMUNITIES AND THE

RELATIONSHIPS BETWEEN GENERAL AND

SPECIAL EDUCATION TEACHERS

by

Susan Cornwell Robbins

A Dissertation Submitted to
the Faculty of The Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Greensboro
2013

Approved by

_____
Committee Chair

This dissertation is dedicated to the memory of my parents William D. and Bessie M. Cornwell who believed in higher education opportunities for their children. I also dedicate this to my adult children Jodi Lynn Robbins and Richard (Chad) R. Robbins III who supported me in this journey to accomplish a lifelong goal.

This dissertation, written by Susan Cornwell Robbins, has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

Committee Chair   <u>William Bursuck</u>

Committee Members   <u>Stephanie Kurtts</u>

<u>Teresa Little</u>

<u>Carl Lashley</u>

<u>June 28, 2013</u>
Date of Acceptance by Committee

<u>June 28, 2013</u>
Date of Final Oral Examination

ACKNOWLEDGMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

viii

CHAPTER I

INTRODUCTION

Background

Public schools have undergone many changes as free education enters the second decade of the 21st Century. Class sizes are smaller than 20 years ago (Sparks, 2010), however some states are revising class size policies as a result of the current economic downturn (Stutz, 2011). Students have more access to computers and advanced technology in schools and at home than in the past, and teachers have more current and ongoing professional training in updated technology to use for instruction. Yet, in spite of this progress and almost four decades of school reform, many students who are at-risk and/or have disabilities continue to struggle to achieve classroom success (Austin, 2001; Katz & Earl, 2010; Vacca, Vacca, & Mraz, 2011). There is a critical need for teachers to identify and implement interventions available in each school to promote student success and improve teacher relationships with colleagues. This is particularly relevant at the secondary level where students with disabilities are often assigned to general education classes as the least restrictive environment (E. Carter, Moss, Hoffman, Chung, & Sisco, 2011; Dymond, Renzaglia, Gilson, & Slagor, 2007). Indeed, teachers are needed who can implement research-based interventions that address the diverse needs of all students; effective research-based strategies are needed to help teachers accomplish this important task.

Practical collaboration between general and special education teachers is needed, including but not limited to those in co-teaching situations. The need for professional development to prepare general and special educators to collaborate has been recognized for many years, yet the majority of general education teachers do not know how to effectively work with the special education teacher in the classroom (Bezzina, 2006; Bruce, Esmonde, Ross, Dookie, & Beatty, 2010). The practice of bringing teachers together to a centrally located site to learn a particular model of co-teaching has been the norm in most school districts; however, teachers do not receive the hands-on practice needed to become confident with the new skill/strategy before being sent back to the classroom to implement this model (Falk-Ross et al., 2009; Waldron & McLeskey, 2010). They return to the classroom without on-site coaching support to implement the co-teaching model and often quickly revert to the old level of comfort where the classroom teacher provides instruction and the special education teacher acts as an assistant.

In the past, teachers have worked in isolation; they had state mandated curriculum to follow, a set daily schedule, a scope and sequence determined by the adopted text or school system, and a classroom with a door that closed when the bell rang to begin class (DuFour, 2011; Shreeve, 2010). This environment of isolation created a barrier for teachers who attempted to collaborate and work together to problem-solve comparable issues that arose in class (Friedman, 2000). The successful model where teachers worked together to achieve a common goal was one that students needed to see in action prior to them entering the business world where team work is a typical daily

expectation. Students also needed to see teachers' enthusiasm and desire to work together to accomplish a common goal.

Professional learning communities (PLCs) represent one approach to facilitating school reform by fostering collaboration among teachers in the school environment. Professional learning communities provide an opportunity for teachers to overcome challenges they face in delivering curriculum instruction in a diverse classroom where students' abilities range from struggling learners with low motivation to academically-gifted students who excel through intrinsic motivation (Manset-Williamson & Nelson, 2005). There were six attributes common to professional learning communities that support school reform and benefit teachers and other stakes holders: (a) shared mission, vision, values, and goals; (b) collaborative teams; (c) collective inquiry; (d) action oriented and experimentation; (e) continuous improvement; and (f) results oriented progress (N. Carter, Prater, Jackson, & Marchant, 2009; Damore & Murray, 2009; DuFour, DuFour, Eaker, & Karhanek, 2004; NC Department of Public Instruction [NCDPI], 2010).

Research on professional learning communities showed that this model of school reform leads to improved teacher-practices, increased student achievement, increased learning for administrators, positive teacher attitudes, shared leadership in the classroom and school, effective conflict resolution strategies, and positive impact on school community (Colbert, Brown, Choi, & Thomas, 2008; Hines, 2008; Katz & Earl, 2010). A logical relationship between the activity in a PLC and the transfer of practice to the classroom resulting in enhanced learning for students was found in several studies

(Doolittle, Sudeck, & Rattigan, 2008; Katz & Earl, 2010). Researchers learned that the theory of teachers working together in a network to professionally develop their own teaching skills transmitted to learning for administrators and the whole school. Knowledge that was learned and shared within PLCs influenced teaching practices in the classroom, ultimately benefiting students, especially those who struggled with learning.

Co-teaching was another manner of engaging teachers in school reform so that they could actively collaborate to improve and transform typical events in their classrooms into an exciting learning environment. In co-teaching, general education teachers who were experts in their curriculum field were paired with special education teachers who brought expertise in teaching-strategies to work together to assist all students who struggled with learning (Friend, 2008). Potential benefits to all stakeholders when co-teaching and collaboration were used in the school environment include positive teacher attitudes, shared leadership in the classroom and student outcomes, shared unique teacher skills, and effective conflict-resolution strategies (Hines, 2008). An additional benefit to co-teaching is maintaining rigorous standards for all students in the classroom through continued support from the special education teacher (Horne & Timmons, 2009).

Co-teaching also resulted in increased educational opportunities for all students, less fragmentation in students' education, and a stronger system of support among the adults responsible for student education (Friedman, 2000; Friend, 2008). However, there were difficulties involved in getting teachers to participate in the co-teaching model because of perceived extra time needed to co-plan lessons, the stigma attached to teaching students with disabilities, and the fear of poor results on high-stakes tests which

were often used in teacher evaluations (Friend, 2008; Mastropieri et al., 2005). Indeed, the extent to which co-teaching may be part of the solution to helping students become more academically successful in high school remains unclear, though it remains a promising practice.

While both PLCs and co-teaching were promising models for implementing school reform, there was little research on how both could be used in tandem with general and special educators working in inclusive settings with students who have disabilities. Hence this study, which examined the relationship between the co-teaching of general and special educators and their participation in the same content-area PLC.

Conceptual Framework

In the business community, learning groups (teams) are highly regarded in that they have the same goals and objectives needed to produce a specific outcome for the company (Thessin & Starr, 2011). The public educational system in the United States has the same goal; to produce citizens who have skills that contribute to the community and global economy, and can sustain employment that allows each individual to live the lifestyle one chooses. The business model of PLCs was the platform from which educational learning communities developed. PLCs have been employed in the business world for years, but are a fairly recent addition to the field of education. Fewer jobs now allow employees to work alone; at some point workers become part of a team. For this reason, teachers need to demonstrate professional initiative to produce positive change in their school culture and environment by modeling this practice.

In an educational PLC setting, teachers are grouped, sometimes by grade (Perry, Walton, & Calder, 1999) or content-area (Stiggins & DuFour, 2009); by interest or school goals (Lujan & Day, 2009). These groupings are based on a school needs-assessment conducted as part of the reorganization for school change. The advantages to each premise for grouping teachers are unique in that they meet specific needs, school philosophy, and educational goals. For example, grade-level teachers work together to create projects or assessments, content-area teachers work to build a strong foundation that all teachers teaching that course follow, or choice of group where teachers select the group with which they feel most compatible.

PLCs as a school framework can be grouped into six themes based on policies, programs and practices: (a) shared mission, vision, values, and goals; (b) collaborative teams; (c) collective inquiry; (d) action orientation-experimentation; (e) continuous improvement; and (f) results orientation progress (Eaker, DuFour, & DuFour, 2002). Whatever the arrangement, the basic point is teachers are expected to work together to improve academic performance. The relationship is illustrated in Figure 1.

The theory behind PLCs is that individuals who work together with a common goal and use collaborative strategies to reach that goal will be more successful than those who continue to work independently (Siguroardottir, 2010). Also central to PLC theory is the belief that teachers need to know where students are going in terms of the curriculum, where students are now in their academic learning, and how to close the gap between the two using effective teaching-strategies (Chappuis, 2009). The one common question that

arises from school administrators to PLCs is: "How will you know when the students

reach the goal?"
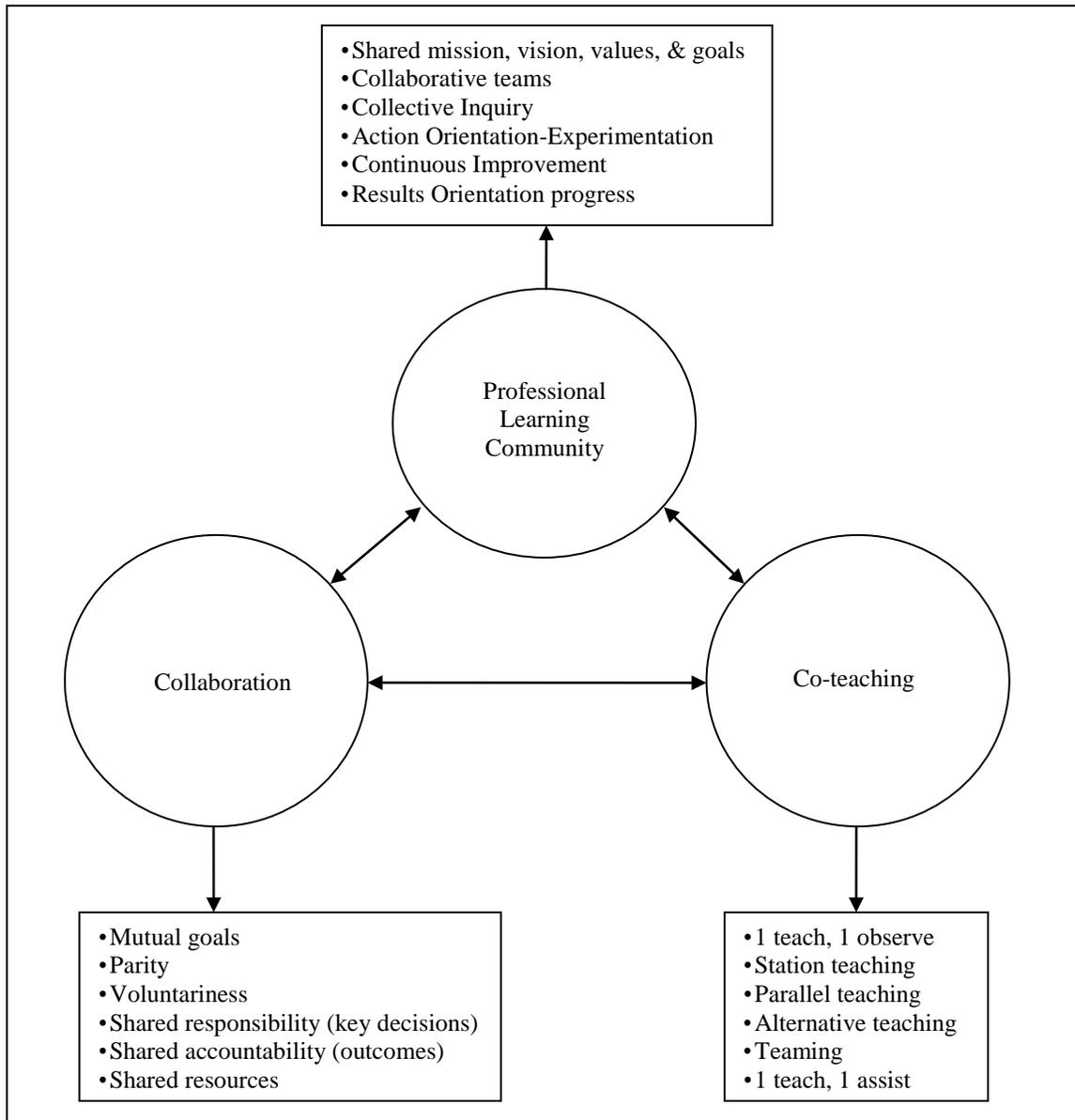
Adapted from Friend (2008) and Eaker et al. (2002)

Figure 1. Conceptual framework.

Significance

While both PLCs and co-teaching are promising models, there is little research on how both can be used in tandem with general and special educators working in inclusive settings with students who are at-risk and/or have disabilities. Out of the thirty-five studies located that were conducted on PLCs, twenty-two focused on collaborative practices, but only fifteen studies included both general and special educators. Only three studies examined the impact of PLCs on teacher collaboration that did not involve co-teaching.

Trent (1998) described the complexities faced by high school teachers who collaborated with special education teachers to provide supportive services to students with disabilities in the general education classroom. The complexities faced by the general educator were increased as a result of the extreme variance in student abilities within the class. Trent supported the research that shows lecture-style teaching is the least effective method of instruction and does not support a co-teaching model of teaching. One theme identified in his study addressed concerns when the special education teacher was unfamiliar with the content material and had incompatible beliefs with the general education teacher overall about education. A similar concern was identified in this study. Perhaps participation in the same PLC would help alleviate this problem.

The support provided in PLCs can lead to "dynamic communication" which describes the nature of professional discussions, and desired teacher outcomes which is the accomplishment of the common goals as identified in each PLC. Vincent, Harris, Thomson, and Toalster (2007) examined secondary schools management of excluded

students and those at risk for expulsion by using collaborative strategies between relevant parties to develop quality relationships. The students enjoyed the inclusive setting because it provided additional instructional support in the classroom. The school administrators previously had responded to the risk of student failure by creatively working with all stakeholders and creating a system for meaningful engagement in student education. Students were assigned to teams of teachers (PLCs) who closely monitored student behavior, provided easy access to these students on a regular basis to support their academic needs, and demonstrated teacher commitment to building a quality relationship with the at-risk students and their families.

This study investigated what happened when professionals who co-teach together also participated in the same professional learning community. The study also examined the perspectives of the teachers as they taught together, and worked with students with disabilities and students who struggle to learn.

Purpose of the Study

The purpose of this study was to examine the relationship between teacher participation in professional learning communities and the success in collaboration and co-teaching in the high school setting as a result of this participation. This study may fill a gap in the literature regarding the relationship between participating in professional learning communities and teacher collaboration including co-teaching. The study focused on the perceptions of paired teachers who worked daily with high school students with disabilities and who participated in the same PLC cadre. It examined and scrutinized, through the high school teachers' lenses, the PLC experience as it related to the inclusive

setting, a co-teaching model of service deliver, essential collaboration required for co-teaching success, and the prospect of improved student academic achievement as a result of these factors.

Research Questions

1. What is the relationship between general and special education teachers' participation in a professional learning community and the quality of their collaborative relationship including co-teaching?

2. What aspects of PLCs facilitate collaborative and co-teaching relationships?

3. What barriers to collaborative and co-teaching relationships exist within PLCs and what recommendations did teachers have for improving them?

Definition of Key Terms

Terminology used by school professionals is important in this study in that outdated terms typically continue to be used by educators in a context that is no longer correct. Some terms continue to be used interchangeably but inaccurately by both general and special educators. The following are definitions for these terms as used in this study.

Collaboration is a style for direct interaction and communication between coequal parties voluntarily engaged in shared decision making as they work toward a common goal (Cook & Friend, 2010). It is discourse among equal but different professionals as they work together independently and care about the same issues though their perspectives and priorities may differ (Skrtic, Harris, & Shriner, 2005).

Co-teaching involves at least two professionals teaching together in an ongoing situation each school day where learning opportunities are presented for all students by

providing needed support and services (Walther-Thomas, Korinek, McLaughlin, & Williams, 2000; Friend & Cook, 2003).

Inclusion, often inaccurately referred to as mainstreaming, is a system of beliefs held by practioners that students learn most effectively in the same setting as their age-level peers; where everyone is held to high expectations and students are actively engaged in the learning process in the least restrictive environment while having full access to the general curriculum (Friend, 2008). Inclusion is the belief or philosophy that students with disabilities should be integrated into general education classes regardless of meeting traditional curricular standards while having meaningful participation in class and receiving appropriate services (Lewis & Doorlag, 1999).

Inclusive practices is a term used to convey inclusive settings as the placement of students with disabilities in general education classrooms with nondisabled peers where specialized service through collaboration can be delivered to meet individual student needs (Friend, 2008; Friend & Bursuck, 2012).

A *professional learning community* is a group of individuals who are united in their commitment to common goals (student learning) that lead to school improvement for both teachers and students (DuFour, 2004). The key features in PLCs are: (a) sustained professional learning embedded in the job; (b) collegial learning and support; (c) interactive and integrative professional learning; (d) practical elements to professional development; and (e) results-oriented (Fogarty & Pete, 2010).

Limitations of the Study

The interview questions used in this study were developed to elicit teachers'

perceptions about their co-teaching experiences as well as perceptions of the impact of

participation in professional learning communities on the teachers' ability to collaborate

and co-teach. Several limitations should be kept in mind when interpreting the survey and

interview data. First,   the number of participants interviewed was relatively small;

although the teachers agreed to share their perceptions, the subject pool was fairly limited

in that the sample was from one school district, and only from Title 1 schools.

Second, the teacher sample was comprised primarily of Caucasians (15). Thus the

sample does not accurately represent the cultural make-up of the county population.

Indeed, local demographics in the county indicated a high percentage of Hispanic and

African-American families, yet this was not represented in the makeup of general and/or

special education teachers.

Third, the bias subjectivity of the researcher is unavoidable in that she: (a) was

part of the Exceptional Children Department; (b) participated as a co-teacher in the

inclusive setting with general education teachers; (c) recognized the needs of students

who struggle with learning based on her personal experiences; and (d) knew the role of

professional development in high school. To guard against this bias, special care was

taken when interviewing teachers and analyzing the results of the interview by using a

professional transcriber to type the interviews verbatim. Member check triangulation

added credibility to this study as a result of multiple source interviews. After the

interviews were transcribed, the teacher participants were given copies of the written

transcript to verify their statements and responses to the research questions. Informal checks were used during data collection to clarify teacher statements regarding the perceptions of PLC benefits to co-teachers. A second analyst reviewed the transcripts to minimize the potential threat to the validity of this study. The researcher did not interview teachers to whom she is assigned nor did she share interview data with the high school administrators. She utilized the same pre-interview surveys and interview questions for each participant to avoid systemic error of data collection; she used two audio recorders during the interviews to avoid loss of oral data due to technical malfunctions.

Teachers from other curriculum departments were available and willing to share their thoughts on collaboration and co-teaching; however, most co-teaching in high school occurs in freshman- and sophomore-level courses required of all students working toward a standard course of study high school diploma (i.e., English I, biology, civics & economics, Algebra I, and U.S. History). Therefore, teachers in other curricula areas were under-represented in this study. Despite these limitations, this study was significant in that professional learning communities are becoming more prevalent in schools as an element of school reform, and collaboration is a major component of this model. The results of this study informed educators how professional learning communities facilitated the critical area of collaboration and co-teaching so that appropriate support for students with disabilities and students who struggle in the classroom is provided.

Summary

Collaboration and co-teaching are critical elements to successful school reform especially in relationship to students with disabilities. Effective planning and ongoing collaboration are components of learning communities in schools. Professional learning communities, made up of teachers who teach the same content-area course, share the same goals, and are convinced that they can make a difference, are the glue that holds the educational community together. Teachers' perceptions of this model of service delivery and its contribution to improved student academic achievement were the foundation for this study. The relationship between general and special education teachers' participation in common PLCs and the quality of their collaborative relationship was one element of this study. Aspects of PLCs that facilitate collaborative and co-teaching relationships were another. The last element was recognizing barriers that exist within PLCs and suggesting recommendations to overcome these barriers.

The information gathered in this study provided direction to future researchers to explore variables affecting teachers' ability to participate in a common PLC and the benefits this engagement produces. Information and practices collected from these interviews supported the collaborative effort of co-teachers and colleagues to improve the learning of high school students with disabilities.

Chapter II of this study reviews current literature including the individual areas of professional learning communities, collaboration, and co-teaching. Chapter III describes the methodology used to conduct the study and includes a description of the participants. Chapter IV reports the results obtained from the pre-interview survey, personal

interviews, and describes the analysis of the data and its impact on special education. Chapter V reports the discussion, and related appendices. Available research examined collaboration, co-teaching, and professional learning communities as separate issues; however, relatively few studies have combined them into one study designed to explore the beliefs of the teacher participants and their perceptions of their involvement in common learning communities as it relates to collaboration and co-teaching, the focus of which is the education of high school students with disabilities.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Prior to 1975, many schools included students with learning difficulties in the general education classroom with the expectation that the teacher would utilize strategies to help students learn at the same pace as their age-level peers. In 1975, Congress passed landmark legislation in the form of PL94-142, ensuring that all students receive a free and appropriate education (FAPE) in the least restrictive environment. This was the Education of All Handicapped Children Act (EAHCA or EHA) which eventually became known as the Individuals with Disabilities Education Act (IDEA). IDEA: (a) included an assurance that students with disabilities receive FAPE providing special education and related services to meet students with disabilities' unique needs in the least restrictive environment; (b) protected the right of students with disabilities and their parents/guardians; and (c) financially assisted the state in providing effective education for all children with disabilities (Colker, Milani, & Tucker, 2003).

There are 14 areas of eligibility covered under IDEA, and most are found in students who attend public high school. Most students are being identified at an early age while in elementary or middle school, and start receiving critical interventions prior to entering high school. Approximately 11% of students in public schools have a disability that qualifies them for assistance under IDEA (U.S. Department of Education [US DOE],

2011); 95% are served in regular schools in the least restrictive environment to meet their individual academic needs while having disabilities in areas such as vision, hearing, walking, learning, and memory (National Center for Education Statistics [NCES], 2011).

A key reform aspect of IDEA includes access to the general education curriculum and participation in high stakes testing. This has led to increases in students with learning disabilities being served in general education classroom settings where they also received additional support from teachers in the special education department. Both general and special education teachers struggled with this situation because one is experienced in course-content information while the other has experience with strategies to modify course material for struggling learners. Most teachers are not proficient in both areas.

When students continually struggle in class, they often become frustrated; those who do not receive some form of assistance to overcome this problem frequently see the solution to be dropping out of school. A 2011 federal report on high school dropouts noted that 15.5% of the 15–24 years old had some area of disability (NCES, 2011). Nationwide the dropout rate by state ranged from a low of 1.1% in Wyoming to the highest rate at 11.5% in Illinois for the 2008–2009 academic year. Students with disabilities who fail to obtain a high school diploma will earn, over their lifetime, significantly less income than their peers who complete high school (NCES, 2011).

Although graduation rates have increased for students with disabilities through services provided as early interventions for the nearly six million students with disabilities, the overall graduation rate for these students continues to lag behind the rate of nondisabled students (NCES, 2011). High schools are reaching annual yearly progress

(AYP) goals more often; however, those that miss their goal often do so as a result of subgroups, such as students with disabilities, not making expected student achievement. NCLB legislation has brought demands on school districts to hold teachers more accountable for student achievement including students with disabilities. Countless experienced teachers have not had formal research-based training in teaching students with disabilities or co-teaching with a colleague from the special education department. Many post-secondary educational institutions are now requiring all education departments to provide a basic introductory course in special education as a preservice prerequisite to graduation (Regional Educational Laboratory, 2008). Although this is a step in the right direction, teachers presently in the classroom also need training. Many of them already utilize diverse strategies during instruction, however more high school teachers continue to present content-area material in a lecture format with little variation due to time constraints, class size, and lack of training in working with students who struggle. There are a number of studies showing that a variety of professional development strategies can be helpful in increasing general educators' ability to teach students with disabilities (Bos, Nahmias, & Urban, 1997; Brownell, Yeager, Sindelar, vanHover, & Riley, 2004; Bullough & Baugh, 2008; Nichols, Young, & Rickelman, 2007).

Collaboration/Co-teaching

Collaboration and one aspect of collaboration, co-teaching, is a potential vehicle for further increasing general educators' ability to teach students with disabilities. Collaboration and co-teaching are covered in the following subsection. First, the term

collaboration will be defined as used in this review and study. Next, co-teaching will be

defined and described as it is implemented at the secondary level. Then the theory behind

co-teaching will be explained, followed by an examination of teachers' perceptions of

collaboration in the co-teaching model.

Collaboration

Collaboration is a style of direct interaction and communication between co-equal

partners engaged in shared decision-making as they work toward a common goal (Friend

& Cook, 2003). Collaboration can occur without employing a co-teaching model, and is

often used when teachers attempt to solve classroom problems (instructional and

behavioral). Teachers who regularly used collaborative practice can positively impact

student learning, focus the student-thinking processes on instructional content, and

energized student engagement in their own learning (Bruce et al., 2010). Ongoing

collaboration with colleagues also supported teachers' methods to integrate a variety of

both teaching and learning methods to encourage problem-solving skills and self-directed

inquiry-based learning (Elster, 2009). Collaboration is critical for co-teaching when two

teachers work together in the same class with the same students to provide enhanced

instruction for the whole class.

Co-teaching

By definition, co-teaching is pairing a general education teacher and a special

education teacher (or other specialist) to jointly deliver instruction to a diverse group of

students including those with disabilities or other special needs, in a regular setting to

ensure students with disabilities have access to the same curriculum as other students

while still receiving the specialized instruction to which they are entitled (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010). Co-teachers share responsibility for direct instruction, curriculum development (and modification), guided practice, reteaching and enrichment activities, discipline, and support as needed in the classroom (Walther-Thomas, 1997). Co-teaching involves at least two professionals teaching together in an ongoing situation each school day where learning opportunities are presented for all students by providing needed support and services (Walther-Thomas et al., 2000). It is different from collaboration, although the terms are often used interchangeably. Trent (1998) stated that collaborative teaching strategies could be sustained within the context of the high school setting when utilizing general and special education teachers.

However, the theory behind co-teaching is that with multiple teachers in the classroom, instruction can focus on student thinking and support problem-based learning to develop higher-level-thinking and communication skills for all students. In co-teaching, both teacher work with all students in the class nonetheless, planning the instructional lessons, and determining effective strategies requires collaboration. In co-teaching, a professional interaction occurs sporadically at the beginning of the teachers' relationship but over time, and with active participation from both parties, collaboration improves (Walther-Thomas, 1997). When implemented as designed, co-teaching supports students and teachers so less instructional time is lost due to student or teacher absence or academic schedule changes. When a teacher is absent, the other is prepared to continue the lesson from the previous class; when a student is absent, one teacher is available to reteach material missed. There is usually one teacher available to facilitate ongoing

instruction in the regular classroom and keep students focused on the concepts and moving forward in the curriculum while providing needed support (Bulgren, Deshler, & Lenz, 2007).

Research on Co-teaching

A three-year study of general education teachers in an elementary school examined their enthusiasm to adapt and adopt co-teaching strategies in their classrooms (Brownell et al., 2004). Teachers who were recognized as high adopters had five specific characteristics that influenced their willingness to adopt strategies: (a) knowledge of their curriculum and pedagogy; (b) knowledge and beliefs about managing student behavior; (c) strong views of teaching and student learning; (d) the ability to reflect on students' learning; and (e) the ability to adapt instruction. Data were collected through formal and informal class observations, teacher and principal interviews, field notes, and documentation of informal conversations with participants. This study established the necessity of intentional change in teachers' attitude towards co-teaching in an inclusive setting.

Another study conducted at the elementary level affected teachers and students when they examined teacher collaboration for school improvement and student achievement (Goddard, Goddard, & Tschannen-Moran, 2007). This particular study examined the relationship between teacher collaboration and student achievement in state mandated math and reading assessments. The teacher survey asked "To what extent do teachers work collectively to influence . . ." followed by specific types of decisions that were made in their schools. Results showed student achievement increased in math and

reading when teachers collaborated for instruction and planning. The outcome of the study supported the continued need to utilize collaboration as an essential component to improve student achievement.

A study conducted with elementary teachers examined teachers' perceptions of collaboration and co-teaching where instruction involved students with disabilities (N. Carter et al., 2009). Pairs of general and special educators taught in full inclusive settings as well as pull-out (resource) sessions. One of the limitations teachers identified was coordinating planning time between co-teachers because of the difficulty to schedule common time and the number of general education teachers involved with students with disabilities. Researchers collected data through semi-structured interviews and classroom observations then analyzed their information to examine teachers' perspectives of their practices. The results of teachers' perspectives defined problems such as: planning specific adaptations of class assignments and instructional accommodations for students with disabilities; difficulties within individual classes; and having different perspectives about disabilities. Teachers who avoided collaborating with their co-teachers did not overcome co-teaching barriers in the school and had a less successful co-teaching experience thus impeding the process of identifying class problems. Teachers with similar philosophical beliefs about disabilities held similar goals for students with disabilities and positively influenced teacher willingness to make accommodations.

Caron and McLaughlin (2002) examined indicators of excellence as related to collaborative practices in four elementary and two middle schools where all students were achieving commendable results. General (17) and special education (12) teachers,

administrators, as well as 30 students with disabilities were interviewed, school sites were visited, focus groups (25 general educators) were conducted, and classrooms were observed. Researchers identified strong collaborative communities and factors that fostered or impeded collaboration as primary indicators for their schools. The outcome of the study identified collaborative planning and teacher activities, supports for collaboration, shared leadership, shared decision-making, cohesive expectations for all students, and a collaborative culture throughout the school system as foundational indicators of excellence. The most arresting factor among the schools was that all teachers shared clear expectations about their responsibilities for improving student performance.

Another pertinent co-teaching study involved two teachers of middle school students in a co-taught history class as teachers examined what co-teaching looked like in their classroom, what factors of co-teaching were illustrated, and what could be learned from co-teaching (Bouck, 2007). Data were collected through class observations, field notes, and informal teacher conversations. Teachers believed supported conversations between teaching partners were beneficial to addressing issues of different roles available in the classroom, sharing and dividing instruction, and handling classroom management and discipline. A salient point made in this study referred to communication between participating co-teachers in how to address grading, student participation, individual principles of behavior and classroom management, and academic accommodations needed by students with disabilities. These issues should be discussed before entering into a co-teaching situation.

In a study encompassing teachers from kindergarten to grade twelve, Austin (2001) examined perceptions of general and special education teachers as they taught in inclusive settings with a co-teacher for at least one semester. The survey and follow-up interviews addressed perceptions of current experience, recommendation of collaborative practices, and teacher preparation for collaborative teaching (school-based supports). The results showed that the majority of co-teachers did not volunteer to co-teach although they endorsed the co-teaching model; they were assigned to a classroom teacher. General education teachers were the experts in the class and did more work in class due to their expertise in the curriculum. The special educator was frequently the visitor to the classroom and adapted the curriculum and provided remediation for students. The majority of co-teachers in the study believed in the principle of co-teaching and its contribution to the academic progress of all students in the classroom.

Teacher belief in co-teaching is an essential component because this model of service-delivery presents unique issues that validate the co-teaching relationship between general and special educators. Dieker and Murawski (2003) found co-teaching as a service delivery model to have benefits (i.e., more opportunities for differentiation and sharing; employing parallel teaching approaches to reduce student/teacher ratio) and barriers (i.e. sharing time prior to start of semester) at the secondary level; yet co-teacher pairs embracing the co-teaching model who worked to improve the relationship between co-teachers found ways to overcome the problems, and embraced the co-teaching model. An alternative view on co-teaching by Friend et al. (2010) who wrote co-teaching is a strong personal partnership based on parity and expertise of professional knowledge.

They advocated teaching until students have mastered the skill or concept, which is the ultimate goal of content-area teachers. However, skill mastery is time consuming and often overlooked at the secondary level in order to meet the pacing guide provided for each course by the local school district. Teachers need to be within 1–2 days of the curriculum guide lessons in order to have ample time to cover the subject matter and be prepared for local assessments. Co-teaching and collaborating with others teaching the same course provides needed communal support at high school.

One co-teaching study examined teachers (early childhood through high school grades) who enrolled in college courses: (a) to increase participants' knowledge of inclusive education (techniques and strategies of consultation and collaboration); (b) to present strategies and procedures to implement accommodations and adaptations of academic curriculum; and (c) to address classroom organization and behavior management strategies (Coombs-Richardson & Mead, 2001). This study supported the principle that better preparation for teachers before they encounter students with disabilities allowed teachers the opportunity to prepare individualized course material to support struggling learners. The results of the study supported professional development in the area of co-teaching to raise awareness of individual needs of students with disabilities, improve collaboration between general and special educators, and reeducate general educators to accommodate students with disabilities in the general population at school. This vital study related to ongoing educational opportunities for teachers to improve their attitude toward inclusive classes and a willingness to collaborate with colleagues.

Another study at the secondary level for perceptions of the co-teaching model involved middle school and high school students' perceptions rather than teachers' perceptions (Wilson & Michaels, 2006). Both students with disabilities and nondisabled students in English classes responded to survey questions asking yes/no and five-point Likert scale questions related to literacy development. Three open-ended questions about student experiences and perceptions of co-teaching completed the survey. Results showed that students enjoyed participating in co-taught classes because of the availability of help, individualized assistance, structural support used, as well as the multiple perspectives and styles used by teachers. They believed their overall level of understanding was enhanced by diverse teaching styles incorporated into lessons by teachers. This study involved students' perspectives on co-teaching and the benefits they obtained by participating in this model of class while focusing on high levels of academic achievement and being actively engaged in their own learning.

Another high school study investigated co-teaching approaches and examined the barriers encountered by co-teachers as they provided support services to students with disabilities in Queensland, Australia, and Pennsylvania (Rice & Zigmond, 2000). The barriers included entrenched attitude, unwillingness of administrators' to commit time to collaborate, and lack of school-wide commitment. Results from semi-structured interviews and classroom observations showed six recurring themes: (a) school-wide acceptance of inclusive policies/co-teaching as viable support option; (b) co-teaching benefits all teachers and students; (c) teachers rate professional/personal compatibility highly in preferred co-teaching partners; (d) special education teachers are seldom given

equal status in co-teaching partnership; (e) special education teachers need to "prove themselves" (capable of teaching in content-areas) to colleagues for the partnership to work; and (f) co-teaching involves overcoming entrenched attitudes and administrative barriers. A well-implemented co-teaching program resulted in academic and social gains for all students and was an effective support option for inclusive secondary classes. Many similar opinions were still found in schools where co-teaching was expected and embraced as a philosophy, but not applied with fidelity.

Keefe and Moore (2004) examined the challenge of co-teaching in inclusive classrooms at the high school level. Students in the classes (grades 9-12) had mild disabilities or specific learning disabilities. The special education teachers had limited roles in the classroom because the importance of specific content-knowledge was essential for students to pass the final course assessment. Co-teach teams were self selected for the initial school-wide co-teaching model (in grades 9-10). Teachers quickly learned the importance of planning, however most general educators were not prepared for demands made in the co-teaching model. Special educators felt the demand to have a level of expertise in each content-area in which they co-taught to be unrealistic. Through semi-structured interviews three major themes were identified as critical issues: (a) the nature of collaboration; (b) roles and responsibilities of each teacher; and (c) expected outcomes for teachers and students. Teachers acknowledged the importance of building their relationship, developing a deeper knowledge of disabilities, and the need for modifications. In this study, the researchers noted the limited role of the special education teacher while also noting the importance of content knowledge of the general education

teacher. Outcomes for teachers depended on the co-teacher relationship. The outcomes ranged from pleasant and a great experience to avoiding involvement with future co-teaching situations.

Four case studies examined the relationships between co-teachers in the content-areas of middle school Earth science and social studies, and high school chemistry and world history to determine teacher compatibility essential for differentiated instruction to occur, collaboration between general and special education teachers to transpire, precise roles and responsibilities for each teacher to be defined, and the best way to measure high stakes assessment (Mastropieri et al., 2005). Results noted through class activities observations, field notes, video tapes, artifacts, and interviews with teachers and students that: (a) teachers must have administrative support; (b) teachers' personality was an important variable for co-teaching success; (c) barriers continued to arise that prevented successful collaboration in the inclusive setting; and (d) though the setting was considered a co-teach situation, participants were not using optimal methods in class. Overall, the study reported positive results with motivated students, teachers claiming ownership for all students, and acknowledgment that a hands-on approach for activities was better for all students as a result of effective class management. There was no significant influence on co-teaching success as determined by academic content; however the interaction between content and teacher-knowledge did have a direct affect on co-teaching. Simpler content that was already known by the special educator led to a more equal relationship than when the content was not mastered by the special education

teacher at which point the teacher role changed to that of an aid who helped with class

management.

The final study in this section on co-teaching involved a high school English class

in a co-teach setting to compare academic outcomes of ninth-grade students with specific

learning disabilities in four different conditions: co-teaching, mainstreaming, general

education classes with nondisabled students, and special education students only

(Murawski, 2006). Data were collected through pre- and post-tests, interviews, and

formal assessments (TOWL vocabulary and writing; WRAT math and spelling; TORC

paragraph reading). The co-teaching setting was beneficial for students with learning

disabilities in reading, vocabulary, spelling, and math; however, writing scores did not

improve. Teachers enjoyed having another teacher in the classroom, but little co-planning

for curriculum or instruction was conducted. The final determination was that there were

no significant differences in student outcomes under these conditions. The educational

implications from this study indicated that teachers needed to be adequately trained in

how to co-teach effectively and efficiently. The addendum to this statement is that

ongoing professional development is mandatory for the co-teaching model to be

successful.

This section of the literature review included studies that involved strong support

for employing a co-teaching model. Most studies reported successful results for teachers

and positive benefits for all students, especially those with disabilities; however, several

studies reported teacher perceptions that did not lead the reader to expect them to be

future participants in co-teaching. Perhaps with more in-school support and coaching,

these teachers would have been more willing and knowledgeable about how to change how they collaborated with their co-teachers. The following section of the literature review addresses professional communities as a means of school reform and how some schools and teachers embraced collaboration, co-teaching, and meaningful support within their school setting through active participation in learning communities.

Professional Learning Communities

Professional learning communities are one method of creating school reform. Although there are many models of professional development (Eaker et al., 2002), the model examined for this study is used throughout the school district. The professional learning community is comprised of high school teachers who teach the same content courses (e.g., English 1, biology, Algebra 1, etc.), support staff, and faculty who work with these teachers. Over the course of several years, the community member make-up has changed as administrators have attempted to create learning communities that support both students' and teachers' needs in the school environment. In this part of the review, in order to understand the concept of professional learning community, a definition will be provided, followed by a brief historical background of the professional learning community. In looking at the theory supporting the use of professional learning communities in education, background information will be provided about key individuals who have initiated and sustained a community model in their schools.

Defining a Professional Learning Community

All professional learning communities (PLCs) are not alike; they are created and evolve differently according to context, phase, size, and external/internal conditions.

However, they all present key characteristics: sharing best practices; building positive school culture; improving student learning; taking collective responsibility; using data wisely; providing shared leadership; effecting planned change; and creating supportive structures (Wells & Feun, 2007).

For the purpose of this study, a professional learning community is defined as a fluid process with an array of behaviors and key characteristics (Muijs & Harris, 2007; Pounder, 2006). It requires active involvement by individuals at all levels (instructional, professional, and organizational) as long as they grow and learn from this process of educational change (York-Barr & Duke, 2004). The importance of a fluid process is to allow changes to evolve within the group as teachers recognize leadership characteristics and best-instructional-practices within group members.

A Brief History of Professional Learning Communities

Various professional community models have been used in business; however, DuFour modified the basic premise to apply to school settings and demonstrated its significance to educators in the classroom. Richard DuFour is a well published author and consultant for professional organizations such as the Association for Supervision and Curriculum Development. His area of expertise is in organization for professional learning communities. He has been implementing school reforms in terms of professional learning since the early 1990s.

The history in professional learning communities provides a strong foundation upon which to build this study as it examines teacher-perceptions of the advantages PLCs offer. A PLC requires members to meet and reach a set of goals. The PLC group unites in

their commitment to specific outcomes by participating in diverse activities that: (a) benefit participants; (b) reduce isolation of teachers; (c) provide better information to teachers; and (d) lead to academic gains for students which is the most critical component of the PLC model for school reform (NCDPI, 2010). Of these activities, the benefits to teachers and academic gains for students will be the core of this study.

Richard DuFour (2004) stresses three parts in his PLC model: (a) focus on learning; (b) collaboration; and (c) accountability. It is DuFour's model that the school district for this study follows. Each PLC is required to meet for one hour each week during which a goal is set for the meeting and a specific format is followed. The facilitator is expected to keep teachers focused on the topic and assist the group in reaching the goal. Goals are specific to each school and also to individual groups. Goals for the meetings often reflect evidence-based student progress or lack of progress in class, class activities that actively engage students in their own learning, as well as provide opportunities for teachers to collaborate. Notes are kept from each meeting, tasks are assigned to members, and an individual reflection is required from each member after each meeting.

One component of PLCs addresses benefits for teachers that increase personal learning time. General education teachers who work with students with disabilities have opportunities to learn behavior strategies while special educators learn specific content material. Another benefit is that all teachers receive inclusive training to support and meet diverse needs of students in secondary level classes. Participating in the PLC increases teachers' accountability by increasing student academic outcomes. Benefits to

teachers also address the primary questions repeatedly asked of teachers: What do you expect students to learn? How will you know what they have learned? How will you respond to students who are not learning (Eaker et al., 2002)? These questions guide individual learning communities based on the overall school goals.

Professional learning communities improve student learning through clear explanation of school-based learning-activities that utilize the co-teaching model. Support from PLC members sustains co-teachers and allows more attention from a teacher during the instructional lesson. This PLC model was formally presented at a conference for the Association for Supervision and Curriculum Development in 1998 to improve schools that had the desire and sustained interest to initiate change at one level to create improvement in student achievement (Eaker et al., 2002). The idea of school reform through learning communities was well received by educators when summer conferences were offered in the late 1990s. Administrators from schools and districts across the nation demanded more information and were provided the opportunity to see results that evolved from this model at Adlai Stevenson High School in Lincolnshire, Illinois.

DuFour's second component, collaboration, within professional learning communities as it relates to classroom teachers, counselors, and media specialists who interact with students, is an essential piece of the PLC foundation. Collaboration encourages teachers to communicate prior to each class meeting. Collaboration communication is a critical element that improves the positive aspects of an inclusive setting as stated in Friend et al. (2010). Collaboration which relies on discussion between teachers in professional, yet casual, conversations can contribute to or impede the

intended outcomes of co-teaching. Predetermined teacher roles and responsibilities within the class benefits everyone, yet those roles need to be flexible enough to meet the ongoing changes that occur throughout an instructional lesson (Vaughn, Schumm, Jallad, Slusher, & Saumell, 1994).

Research Supporting Effective Professional Learning Communities

Some school districts support the professional learning community model so strongly that they have initiated district-wide reform. Three studies were selected because they examine inclusive practices and peer support through different models of inclusive "community" action.

One study examined smaller educational environments that were created to provide opportunities for more collaboration and collegial activity between teachers (Supovitz, 2002). The study examined the theory that ongoing professional opportunities need to sustain inquiries and improve teaching and learning. Team-based schools had volunteered to follow this team-based model, thus their initial engagement may have been more supportive than other schools that were non-team-based. Teachers who reported higher interaction and collaboration with their peers were more involved in diverse school-related decisions. Overall, teachers needed to learn to work as groups rather than individuals and this could be continued during protected time for PLC meetings.

A study conducted in 2005 with six special education teachers whose high school students were identified as having learning disabilities, five junior high school teachers, and eight elementary school teachers examined an interactive model of staff development

(Scanlon, Gallego, Duran, & Reyes, 2005). Two workshop days were used for activities to familiarize teachers with instructional practices. Researchers evaluated the relationship of the workshop to effective practices after a six-week trial. Although this study did not identify learning communities as part of the study, the implications for data collection, analysis, shared development, and alignment of teacher beliefs and practices are evident when one looks at the responsibilities of a learning community. The alignment of theory and classroom practices is critical for success in both of these areas.

The final study that included all levels of schools examined the challenges of building inclusive communities in schools. The conceptual tools in this study were schooling, community, and inclusion (Curcic, Gabel, Zeitlin, Cribaro-DiFatta, & Glarner, 2011) as the researchers saw how the trickle-down effect related to inclusive schools. Interviews were conducted with one principal, one general education teacher and one special education teacher. Open-ended questionnaires relating to past and present policies and the systematic exclusion of students with disabilities from regular education classrooms were given to participants. The conclusion of this study stated that collaboration is central to building inclusive school communities, yet it is difficult for teachers to devote time and energy to this end with the current policies in place that demand student achievement as the outcome measurement over student learning. Inclusive education can and does occur, however it requires school change in attitudes of all stakeholders. Much of this can occur when teachers collaborate on a consistent basis.

Six research studies at middle school level involved professional learning communities in some form of teachers' professional development and school reform.

These studies are included in the review because five looked closely at the organization of PLCs but did not identify teachers from the special education department. Student achievement was a critical component of the studies; however achievement of students with disabilities was not included.

Scribner, Cockrell, Cockrell, and Valentine (1999) examined the creation of professional communities in rural middle schools through organizational learning. Data was collected from interviews, observations, documents, and artifacts created by teachers. These teachers determined school improvement based on their PLC definition of a set of shared values and norms, personal mastery, critical reflection, and collaboration. Their double-loop learning was a process to examine the underlying assumptions that lead to effective use of dissemination of professional learning as well as the acquisition and integration of new knowledge. They did acknowledge that the process of forming PLCs was difficult.

An early study on creating learning communities in middle schools examined administrators and teachers who focused on nondisabled students' academic achievement after increasing opportunities for teachers to engage in high-quality professional development (Phillips, 2003). Through interviews, classroom observations, and focus groups, teachers acknowledged that it was critical for them to be focused on developing new knowledge, skills and practices through increased personal learning time. When this occurred, students demonstrated improved academic growth in reading and math.

Professional learning communities in middle school were studied to understand and practice the five disciplines this school believed were components of a PLC: (a)

systems thinking; (b) personal mastery; (c) mental models; (d) shared vision; and (e) team learning (Thompson, Gregg, & Niska, 2004). The questions explored in this study examined the middle school model of a PLC, the kind of principal who creates a PLC in his/her school, the beliefs and dispositions of that leader, teacher perceptions of the PLC at their school, and the relationship, if any, between PLCs, leadership, and student learning. The outcome of this study resulted in teachers and administrators seeing themselves as a learning organization that had a positive impact on student learning.

Hindin, Morocco, Mott, and Aguilar (2007) examined teacher collaboration with three junior high school teachers; one each from seventh and eighth grade and one special educator who taught students with disabilities in a separate setting. Data was collected through meeting and classroom observations, and interviews where teachers were asked to describe how they collaborated during after-school meetings; how the work from the group transferred to the classroom; and how teaching successes/challenges were brought to the group for discussion. Implications from this study showed teachers' work as a group was authentic in addressing urgent issues and encouraged dialogue about student learning. Teachers had ownership of curriculum, used the information with fidelity in the classroom, and problem-solved with colleagues during meetings. However, teachers did not share their learning experiences in such a way that others in the group could learn from them. The results indicated that teachers who were most vocal and able to articulate teaching practices did not necessarily implement best practices in their entirety. Ultimately, this study recommended exploring the role of facilitator in the learning groups to build stronger teacher communities.

Researchers from UNC Charlotte and NC State (Nichols et al., 2007) examined methods to improve professional development for middle school English teachers in the areas of reading and writing. Researchers studied instructional strategies implemented in reading and writing instruction. Data was collected through teacher's self reports, classroom visits, observations, and responses to Reading Language Arts Instructional Features Questionnaire. Professional development was provided each month during a planning period meeting. Although the study did not identify students with disabilities, the results reported a commitment to professional development that focused on a teacher's own critical analysis of making connections between research and actual classroom practices.

In 2009, Doppelt et al. spent two years examining the impact of a facilitated learning community approach to professional development on teacher practice and student achievement at a middle school. Each year of the study there were five four-hour workshops distributed throughout the school year. Student achievement was measure by pre-post knowledge tests and a six-question knowledge assessment designed around specific core concepts of science. Data were collected through student assessments, analysis of video tapes from teacher workshops, as well as informal observations of class activities. The results showed that distributing the workshops throughout the year, actively engaging teachers in the learning process, and facilitating collaborative community was effective.

This final section of the review examines two studies conducted in high schools and one study that included only teachers. These were included because math and English

are critical courses taught in high school where many schools use the co-teaching model. Again, nominal discussion involved teachers of or student with disabilities.

The first high school study examined conditions for improving teaching and learning through teachers' collectively questioning ineffective teaching routines and examining new concepts of teaching and learning (Little, 2003). Teachers discussed their classroom practice at the English department meetings, Academic Literacy Group meetings, and algebra groups "check-in" meeting (PLCs). Little analyzed the intellectual, social, and material resources of the professional learning communities through classroom practices as discussed in out-of-classroom interactions. She found the groups reserved time to work together to identify and examine problems in practice. Teachers looked for new solutions to continuing problems and willingly disclosed uncertainties to request advice from colleagues. As in previous studies, teachers felt responsible for student success, instructional improvement, and commitment to collaboration with peers. Evidence from meetings showed how teachers disrupt their instructional practice, although they do not see it when teaching, thus closing off opportunities for learning. The language used in professional communities' fostered collaboration within each group and supported camaraderie among members.

The second high school level study examined math and English professional learning communities at a Shanghai International School. The twenty-two teachers in this study did not include any special education teachers. These subject-based professional learning communities used a collective learning approach. The processes included collective lesson planning, lesson observations, post-lesson conferences, and open

lessons. The goal was to foster teamwork between teachers. Wong (2010) states that PLCs contribute to teacher development in two ways: (a) sharing learning resources; and (b) creating shared-language and knowledge about practice and commitment to high quality of intellectual work for students. The basic foundation (climate of trust, shared goal, etc.) found in PLCs were encompassed in this concept. The teachers' main goal is successful student achievement on comprehensive exams. The English group was weaker than the math group in that the collaboration between teachers was not in-depth and appeared superficial. Teachers' personal practice was required but not accepted as a personal belief in the process. On the other hand, the math PLC was stronger because teachers used inquiry-based and student-oriented teaching approaches. The findings of this study show a need for more structural support, and teacher-learning should extend outside schools and into education institutions. The professional learning communities need to be sustained through a thoughtful context that is clear to all participants. This may be hindered by examination-driven values of the school district that makes teachers accountable at a level that changes teachers' views of education.

The final study on professional learning communities involved teachers from two school districts (kindergarten to Grade 6). Teachers did not identify students with disabilities as being part of the class make-up. The PLC model applied in each district focused on communication, teaching and learning content, co-teaching problem-solving strategies, and collaborative analysis of student work samples (Bruce et al., 2010). Authentic professional learning opportunities had separated learning opportunities from natural and practical to indicating that teachers were deficient in their teaching methods.

Data was collected through teachers' surveys, student achievement tests, class observations, interviews, and field notes. The results of the study showed one school district made changes in their instructional practice through PLCs that resulted in students demonstrating learning and increased student thinking, and higher teacher-efficacy that energized classroom effort. The other school district did not have the same results because they could not sustain the PLCs. This study illustrated the need for collaboration and classroom-embedded support, and confirmed earlier research that showed an indirect relationship between teacher-efficacy and student achievement.

Use of Professional Learning Communities with Co-teaching

As with any new concept, grouping teachers in similar content-areas communities, mandating protected meeting times, teacher attendance, and demanding accountability from each group requires a period of adjustment before any substantial benefits will be noticeable. School culture, individual teacher differences, and general resistance to change all have an impact on transforming a school population from being mediocre to one of excellence.

A critical issue that arises at all education levels is availability of time to effectively collaborate with colleagues. The time required for co-teaching planning through workshops and planning-period meetings is essential to the development of strong teacher relationships (Doppelt et al., 2009). This is the heart of the PLC process: to build inclusive schools, develop positive perspectives and attitudes, and support changes in teaching practices to reach desired goals with positive outcomes for students (Curcic et al., 2011; Hudson & Glomb, 1997; Wilson, Nash, & Earl, 2010). In order for teachers to

embrace change, they need to see the immediate benefit of these changes. School reform changes are designed to create improved teacher outcomes as well as improved student learning outcomes.

The proposed study will examine professional learning communities at the high school level as they include content-area teachers who co-teach, collaborate, and examine school reform. Co-teaching can be an effective instructional delivery option for students with disabilities in general education classrooms (Hang & Rabren, 2009). The idea of identifying individual roles of participating teachers is a critical first step as the relationship develops between general and special educators in the classroom (Keefe & Moore, 2004; Vaughn et al., 1994).

When there is more than one teacher in the classroom more academic-appropriate student interactions occur. Moreover, a higher level of student engagement results in teachers developing more confidence in their own instructional skills that ultimately benefits all students (E. Carter, Sisco, Brown, Brickham, & Al-Khabbaz, 2008; Coombs-Richardson & Mead, 2001). E. Carter's group of students demonstrated an improved and higher level of academic engagement when they were interacting with their peers. Teachers supported inclusive settings for students with disabilities and interactions in general education classrooms provided a better foundation for instructional interaction with students' nondisabled peers. This improved interaction leads to an opportunity for special education teachers to share strategies with general education teachers in less structured settings such as content-specific learning communities. Results showed that professional development is a feasible way to improve student achievement, build on

teacher experience, and should include adequate support for classroom teachers. Professional development occurs in PLCs when the team facilitator incorporates a strong research component in the training.

Summary

Professional literature on learning communities, as they relate to students with disabilities and their teaching is inadequate. In the areas of co-teaching, collaboration, and inclusive settings more research that supports these models of instruction. However, there are not enough studies in PLCs in regard to co-teaching and collaboration.

School reform, teacher-to-teacher collaboration, and improved student performance are the ultimate goals for education professionals. Co-teaching, collaboration, and professional development are stepping stones to the essential changes needed as the world economy demands more highly trained workers with the ability to adapt to changing circumstances. Professional learning communities are a promising model that can be implemented at the high school level to attain common goals with the schools and provide teachers with ongoing collegial support in the day-to-day challenge of teaching.

Additional studies need to be conducted in the area of PLCs to refine professional development for in-service teachers and support continued academic progress in the classroom. A conviction that continuous and on-going training with the co-teaching model of service delivery in professional learning communities is a progressive step in school reform for both general and special educators. Further, this model may shed light on ways to improve achievement for students with disabilities as well.

The following chapters of this academic work include the methodology used in this study that will be presented in Chapter III, followed by the results in Chapter IV, and the discussion in Chapter V. Appendices include the survey instruments and interview questions.

CHAPTER III

METHODOLOGY

Introduction

Professional learning communities are one method of influencing school reform at a level where both teachers and students are actively engaged in educational change (Vincent et al., 2007). This study was designed to examine the perceptions of high school general and special education co-teachers who participated in professional learning communities (PLCs). The focus was an analysis of experiences of high school general and special educators within a PLC and their collaborative relationship in inclusive settings with particular emphasis on co-teaching in the classroom. The study concentrated on factors within the PLCs that contributed to improving collaboration among high school teachers including co-teaching associations, achieving common goals, facilitating teams to work interdependently and developing a focus on student academic progress as shown by member commitment to ongoing improvement in the school.

This chapter includes the rationale for using face-to-face interviews, a framework for the study, background and demographic information on the participants, a description of the procedures used within the professional learning community, a summary of data collection methods, and a description of the protocol used to analyze data. Qualitative research was employed to collect, analyze, and interpret the data.

Design

Studies (Keefe & Moore, 2004; Mastropieri et al., 2005) showed that many teachers did not know how to collaborate and co-teach effectively, although they had received initial training through pre-service courses and professional development opportunities (Argyropoulos & Stamouli, 2006; Curcic et al., 2011). The literature emphasized the ongoing need to provide more training for general and special education teachers in this area (Angelides, 2008; Mohr & Dichter, 2001; Murawski, 2006). Professional learning communities offered an opportunity for colleagues to collaborate and co-teach more effectively by: (a) putting into effect strategies that augmented relationships between co-teachers while they engaged in meaningful work; (b) providing a setting in which to discuss factors that increased teacher efficacy; (c) identifying elements that impacted student learning while in inclusive settings; and (d) recognizing barriers that prevented effective collaboration and co-teaching from happening in a classroom.

A qualitative design that employed pre-interview surveys and semi-structured face-to-face interviews was selected because it provided the researcher with current perceptions of the teachers directly involved in PLCs and co-teaching in inclusive settings based on personal experiences (Austin, 2001; Creswell, 2009). Soliciting information through one-on-one interviews was a manageable method to collect data from a small group of teachers (17) in a reasonable period of time. Interviews are an effective qualitative method that allowed the researcher to control the line of questioning, examine professional learning community participants' perspectives from content-area

teachers, as well as from special educators, and gather insight into the ways educators facilitate or hinder the education of adolescents with special needs (Ghesquiere & Van der Aalsvoort, 2004). The participants worked under "regular or typical" teaching conditions while collaborating and co-teaching at the secondary level. During the interviews, teachers had the opportunity to clarify and expand on survey responses, enabling them to provide more informative answers to open-ended questions in a structured setting (Fitzpatrick, Sanders, & Worthen, 2004). Boundaries were set within the interview to limit the time and aspects of the study to create a framework in which data could be collected (Miles & Huberman, 1994).

Digitally recorded oral responses permitted the PLC to be examined through several lenses throughout the study (Maxwell, 2005). The study provided data about: (a) the actual experiences teachers encountered when collaborating with peers within the structure of PLCs; (b) personal experiences with the co-teaching model; and (c) recognition of barriers that appeared when collaborating and co-teaching and working with students with disabilities in the general education classroom. Data were collected at the end of summer break and the beginning of the first academic semester, and were based on teacher experiences with PLCs during the previous academic year.

Problem and Purposes Overview

The primary investigator recognized that many high school students with disabilities included in general education setting (i.e., content-area classrooms) struggle to acquire subject-matter content through reading the textbook, engaging in class activities, and listening to classroom lectures (Cromley & Azevedo, 2007; Jitendra,

Burgess, & Gajria, 2011). Research showed that teachers need to employ strategies that will benefit typical students as well as students with special needs (Murawski & Hughes, 2009). Teaching strategies could be acquired through professional development (i.e. workshops and onsite coaching), enrollment in college classes, and active participation in professional learning communities where colleagues discuss successful classroom approaches, and share insights on making students more successful when they struggle to create meaning from new information.

The purpose of this study was to examine the relationship between teacher participation in professional learning communities and the success of collaboration and co-teaching in the high school setting as a result of this participation. Data were collected on whether general and special education teachers perceived their participation in professional learning communities as contributing to their level of collaboration and quality of co-teaching to improve the performance of high school students with disabilities enrolled in content-area classes (DuFour, 2007; Guthrie et al., 2006). Data were also collected on teachers' perceptions of barriers to collaboration and co-teaching relationship that exist in PLCs that prevent student progress from being achieved.

The study examined the experiences, perceptions, and relationships of teachers involved in a professional learning community at high schools in a medium sized city located in a southeastern state. It was guided by the following research questions:

1. What is the relationship between general and special education teachers' participation in a professional learning community and the quality of their collaborative relationships including co-teaching?

2. What aspects of PLCs facilitate collaborative and co-teaching relationships?

3. What barriers to collaborative and co-teaching relationships exist within PLCs and what recommendations did teachers have for improving them?

Research Hypothesis

The basic premise for this study was teachers actively participating in professional learning communities would exhibit effective high levels of collaboration and co-teaching skills. Factors that may contribute to facilitating high levels of collaboration, and ultimately more effective co-teaching, included teaming educators who taught the same courses, shared problem-solving strategies and skills, improved consultation skills, and developed strong co-teaching environments in the same PLC for the academic year.

Study Design

"What is it about PLCs that leads to higher levels of collaboration and co-teaching?" was the driving question for this study. Rosenholtz (1985), DuFour (2004), and Hord (2009) found that teachers needed ongoing and continuous support. This could be provided in various formats but was an essential component when discussing school reform among teachers and the concern of maintaining quality teachers. PLCs provided one intense format for teacher support that could take place with the timeframe of the work hours at each school. Learning community members were teaching under similar conditions on a daily basis with the same population of students, receiving similar support from administrators in the school, and struggling with comparable on-going problems while looking for coping strategies from colleagues. PLC meetings offered an

opportunity to vent frustration to colleagues who were in similar situations and might also be struggling with similar problems. Joint problem-solving activities, sharing leadership responsibilities within the community, and striving for the same student achievement goals through regular collaboration and co-teaching settings provided a strong system of support at no cost to the school community (Fogarty & Pete, 2010; Lieberman & Mace, 2009).

Framework

This qualitative study involved the collection of several data types from a convenience sample of subjects. First, demographic information such as licensure certification, degrees held, courses taught, gender, and years of experience was collected. Second, data was collected on teacher perceptions of their current collaborative and co-teaching practices. Third, interview data were obtained by the use of semi-structured face-to-face interviews that probed teachers' perceptions of the relationships between PLC participation, and collaboration and co-teaching in content-area classes (McGloin, 2008). Data were collected from general and special education teachers who had taught together at least one semester in a co-teaching setting, and were assigned to a PLC group during that time.

The general education teachers were assigned to PLC groups by an administrator who used the courses taught by teachers as a criterion for group assignments. Special education teachers were assigned to a separate group with their peers; however, several teachers attended multiple PLC meetings to supplement ongoing orientation to co-taught course goals and objectives while others simply asked for reassignment to a more

appropriate group. Some administrators provided reasons to their faculty for PLC assignments, others did not. On occasion, individual teachers advocated for a PLC assignment change; some were approved, while others were not.

Rationale for Interviews

Several factors contributed to the decision to conduct a qualitative study involving semi-structured interviews. While an Internet survey was initially considered, this idea was discarded; it was felt that the number of respondents might not be large enough to reliably represent the district. More importantly, an interview methodology better fit the research questions, the intent of which was to study the perceptions of PLC participation, and collaborative and co-teaching relationships among general and special educators. Semi-structured interviews allowed participants to describe the phenomenon of professional learning communities and their contribution to school reform through additional collaborative opportunities. The interview format allowed the researcher to control the line of questioning to follow-up questions, probe for more information, and elicit a more comprehensive response when teachers spoke of relevant issues. It was also determined that by employing a convenience sample of teacher participants with experience in both co-teaching and active engagement in a professional learning community, the interviews, although conversational, would provide the diverse perspectives needed to answer the research questions.

<div align="center">

Setting

</div>

This study took place in four county-wide high schools in a southeastern state. The schools were selected for this study because they were Title I schools. Title I school

designations were determined by the proportion of student body performing below grade level on state assessments. The high schools were: school C (69%); school N (61%); school P (69%); and school W (84%). High-impact secondary level schools were selected because they had the largest population of students with disabilities: school C (15.6%); school N (10.4%); school P (8.5%); and school W (6.7%). The ethnicity of the county in general was as follows: White 43.0%; Black 28.8%; Native Hawaiian and other Pacific Islander 0.1%; American Indian/Alaskan Native 0.4%; Hispanic 21.6%; Asian 2.3%; reporting two or more races 3.9% (US DOE, 2011). The county school system was identified as one of high-need, indicating additional funds were necessary to provide supplemental academic support for the schools to meet annual yearly progress (NCDPI, 2010). Of the 14 high schools (not including alternative schools), nine were Title I schools (students performing below grade level); and six were Equity Plus schools (based on number of students eligible for free or reduced-rate lunch). The difference between Title I schools and Equity Plus schools was the governing agency that determined student needs: Title I designation was based on federal program guidelines; Equity Plus was a local program and school designation could change more frequently than the federal designation.

Sample

Participants for this study were selected from the pool of general education high school teachers (grades 9–12) who taught in an inclusive setting and co-taught with special education teachers within the county school district. The teachers were selected from the nine Title I high schools. They were recommended by the Exceptional Children

Department Case Manager at each high school. General education teachers were teaching or had taught content-area classes or basic curriculum classes that were exit standards for a high school diploma (standard course of study or occupational course of study). Eight of these teachers were assigned to the same PLC during the previous semester (three were special education teachers and five were general education teachers) both co-taught and were assigned to the same PLC during the previous semester. A summary of demographics is shown below in Table 1.

Table 1. Demographics Summary

Item	Total	General Education	Special Education
Subject Taught			
English	7	2	5
Algebra I	6	2	4
Biology	2	1	1
Social Studies	7	3	4
Resource	8	0	8
Gender			
Male	8	4	4
Female	9	4	5
Teaching Experience	X	7–32 years; $M = 16.5$	7–24 years; $M = 17.5$
Co-teaching Experience	X	2–13 years; $M = 4.5$	4–10 years; $M = 6.5$
Experience in PLCs	X	2–10 years; $M = 5$	2–5 years; $M = 2.7$
Licensure/Certification			
6-9	2	2	
9-12	7	7	2 (English) 1 (Social Studies)
AIG	2	2	0
ELA	1	1	0
K-12	9	0	9
Highest Degree Earned			
Bachelors	7	4	3
Masters	10	4	6

Professional Learning Communities

The goal of professional learning communities in the county was to improve student achievement by enhancing teacher effectiveness. All schools in this county were required to apply a PLC model with this goal in mind. The framework presented by the school district to school facilitators included an essential knowledge and process that involved the same organizational identity throughout the school system (Triangle Leadership Academy, 2007). A collaborative culture with equitable system resource allocation and results-oriented curriculum utilized similar pyramids of interventions (i.e., individual curriculum goal assessment, after-school tutoring, and in-class review intervention). Similar instructional strategies were used throughout the district; however, each school administrator was granted flexibility in creating individual PLCs assignments annually.

Content-area teachers in this county were assigned to PLCs for an academic year by school administrators through a variety of methods. Some administrators created PLCs by teaming teachers who work with the same age group of students; others assigned communities by the curriculum taught to students, and still others created PLCs to meet discipline area needs (Eaker et al., 2002). Some communities changed members each semester to reflect a change in courses teachers were assigned to teach. Special education teachers were more apt to change co-teacher assignments than general education teachers due to the fact that high school schedules change at mid year as a result of block scheduling.

The professional learning communities met at least three times each month during protected-time (45 minutes to one hour either before or after school) when no other meetings or conferences could be scheduled. By county mandate, teachers were not to schedule routine appointments, conferences, or other responsibilities (i.e., club meetings, athletic practices, etc.) that would conflict with these pre-scheduled meetings. Meeting dates were determined prior to the school year and entered onto the school calendar of events that was distributed to all teachers during per-school training in August. PLC members were required to attend (not arrive late or leave early), and refrain from making or receiving cell phone calls, text messages, e-mails, etc. during the meetings. They were not to correct papers, write lessons, or engage in activities not directly related to the meeting agenda. The focus of the PLCs was on student-learning and potential ways to increase student achievement.

The components of the PLC were multidimensional by program design. At the core of the PLC were artifacts (i.e., sample assessments, student work samples, evidence of implementing strategies, evidence of current levels of student learning) that had been created by individual teachers and shared with colleagues at PLC meetings to enhance teaching skills and promote student learning across curriculum. The PLC members discussed the artifacts presented and employed collaborative problem-solving strategies as they suggested collecting additional data, implementing research-based intervention, and/or employing additional evidence-based teaching strategies. As the Title I schools all have high percentages of at-risk adolescents and adolescents with disabilities, the focus of the PLCs was on students mastering the "essential learning." Key dimensions such as

teaming, collaborative problem-solving, data sharing, and co-teaching were critical elements in the basic framework for learning communities where team members continued to clarify and analyze evidence of instructional practices that positively impacted student learning in both block classes and year-long environments.

Each month the responsibilities of teachers within the PLC changed. The facilitator organized and ran the meeting for the month while other teachers took the roles of time keeper (beginning and ending time of meeting; clearing of old business) and recorder (record keeper for teacher attendance, discussion topics, direction of future work, decisions made, assignment of tasks, and subsequent actions). Everyone was required to participate as the facilitator at least once during the academic year.

Data Collection and Instrumentation

To ensure effectiveness of the data collection methods, a pilot test of the survey and interview questions and protocol was conducted at a local school with retiring or transferring teachers. Initial contact was made with Case Managers at the selected high schools that provided dyads of co-teachers who might be interested and willing to participate in the study. This inquiry led to e-mail and phone contact with potential subjects.

Three types of data were collected for this study: pre-interview survey data, face-to-face interview data, and follow-up interview data. Teachers were contacted by phone to allow the researcher to initiate basic introductions and arrange times for interviews as well as obtain accurate e-mail addresses for the mailing of surveys. Each of these survey areas is described below.

Three brief pre-interview surveys (Appendix A) were e-mailed to participating teachers: Part I asked for basic demographics; Part II asked teachers to rate their perceptions of collaboration; and Part III asked teachers to rate their perceptions of co-teaching. Surveys were brief to ensure teacher participation.

The first survey, Part I, collected demographic information about gender, years of experience as a teacher and a co-teacher. It also asked for the area of teacher certification, highest degree earned, area of licensure. An essential component asked about content-area classes co-taught, and types of professional development on inclusive practices including co-teaching and collaboration in which participants were involved.

The second survey, Part II, was adapted from Goddard et al. (2007). It assessed teachers' perceptions of collaboration using a Likert-type scale adapted to match the format used in the third survey. The survey asked teachers to indicate the extent to which teachers worked collectively to make decisions in a range of school situations. The statements to which the teachers responded reflected situations involving actual collaboration between teachers in the classroom setting and in their PLCs.

The third survey, Part III, was Marilyn Friend's Co-Teaching Survey: Teachers (Friend, 2008). Key questions were selected from this survey because they focused on perceptions about co-teaching as viewed from a practitioner's lens. Of the eight items in Friend's original survey, numbers two, three, and six remained the same while number one had a belief statement added to the original phrase. Two questions were also selected and adapted from the Goddard et al. (2007) survey. These questions asked for teacher perceptions related to working collectively and collaboratively in teams to influence

decisions at the local school level. The interview questions were designed to elicit teacher perceptions about collaboration and teacher-to-teacher interactions in the co-teaching setting, academic benefits of co-teaching to students with and without disabilities, and challenges and recommendations to remedy the barrier that emerged in a co-teaching setting when teachers were members of the same PLC.

After a short introduction, each interview began with a review of basic information provided in Part I of the survey. Interview questions (Appendix B) and follow-up questions (Appendix C) were based on those used in earlier studies (Austin, 2001; Goddard et al., 2007; Hang & Rabren, 2008; Lujan & Day, 2009). The interview questions solicited participants' attitudes, opinions, behaviors, and perceptions as they related to professional learning communities and its relationship to collaboration including co-teaching and took an average time of 35 minutes each (Fitzpatrick et al., 2004). The questions focused on individual teacher perceptions regarding the collaboration process, effectiveness of PLCs in fostering relationships between general and special education teachers, co-teaching benefits as a result of interactions among PLC members, and perceived barriers to collaboration and co-teaching. The level of question became more specific as the protocol was followed. The interviews closed with an opportunity for teachers to share other information that was not covered by the interview questions. Teachers' responses were given freely and with minimal prompting with the exceptions needed to clarify or reword a question.

Each interview took place at a time and place of the participants choosing. Several teachers chose to meet during their planning period while others preferred to meet in their

classrooms; three selected to meet at a local coffee shop after school hours. Interviews generally began with the researcher explaining the process of collecting the data, the focus of the study, identifying others within the district who were being included, details of the consent agreement, and an explanation that the participant would have the opportunity to review their transcript of responses prior to their inclusion in the study (member checking). Approximately one hour was spent with each participant from the initial meeting until the conclusion of the interview. Everyone responded positively to the process and was forthcoming when answering the questions. Participants appeared to be genuinely interested in the study and its potential outcome for them and the district. Based on the participants' enthusiasm when sharing their perceptions, it is the researcher's judgment that they were responding honestly and giving unguarded replies to the queries.

Data Collection

Each teacher identified according to research protocol received an email inquiry about their willingness and availability to participate in the study. The inquiry was sent electronically through the county schools web-based system. A cover letter explained the purpose of the surveys and interviews, described the expectations of the participating teachers, and informed participants of their right to decline or withdraw from the interview at anytime without fear of penalty (Austin, 2001). The investigator followed up with personal phone calls to ensure that each participant understood the expectations for the study and she answered questions that teachers posed. Ultimately the study was

conducted with eighteen teachers and nine dyads of co-teachers since two special

education teacher worked with multiple teachers throughout the academic year.

The pre-interview surveys were sent by interschool mail to each participant to

complete two weeks prior to the interview. A reminder notice with another copy of the

survey was sent five days later to teachers who had not returned the initial survey. A

phone call to each teacher was also made five days prior to the interview asking teachers

to complete and return the survey to allow the researcher time to review the data. A

reminder e-mail with the words *interview reminder* in the subject-box was sent to

participants three days prior to the scheduled interviews. If the teacher did not complete

the electronic survey prior to the interview a paper copy was available at the interview for

the teacher to complete prior to beginning the interview.

The interview began with the subject restating basic information about the

assigned PLC for the previous academic year to record this data for later analysis when

the interview had been transcribed. Interview questions were asked about perceptions of

collaboration with colleagues and individual experiences in co-teaching with the primary

focus being on the impact of the PLC process on these practices. Questions also

addressed issues related to providing differentiated instruction for students with

disabilities. Ten questions led the interview that allowed the participants to describe their

experiences and perceptions of collaboration, co-teaching and participation in a learning

community. Five questions directly related to interactions in the professional learning

community and teacher engagement; three questions related to collaboration taking place

in the high school; one question directly related to inclusive classes and co-teaching; and

a final question asking about barriers to collaborative relationships. The researcher asked

follow-up questioned during the interviews to elicit more depth and clarity to the

responses or to explore themes related to the overall research focus.

Interviews were recorded on one digital recorder and one mini cassette tape-

recorder with the participants' specific permission to do so. Interviews were then

professionally transcribed using an identification system using only the school, teaching

role (general or special) and numerical sequence. No individual participant's identity was

revealed through this process and extreme discretion was used to maintain participant

confidentiality while communicating over the school web mail site. In all, the entire data

collection phase spanned approximately four weeks. Transcripts took an additional three

weeks to complete. Early interviews were transcribed as others were still being conducted

to avoid any disruption of the study. Analysis of the responses began immediately and

continued until the data collected were sufficient to describe perceptions of the subjects

as related to learning communities.

Follow-up questions were formulated from the participant responses after a

review of responses at the end of that interview, in phone conversations, or in further

face-to-face interview sessions. The targeted responses implied themes or revealed

factors that supported or restricted the ability to collaborate with co-teachers and

colleagues through participation in learning communities.

To verify the effectiveness of these methods and accuracy of the questioning,

pilot interviews were conducted with retiring teachers or teachers who were leaving

either the school or district. Questions and probes were tested to determine if the resulting

responses focused on the topic of the conceptual framework and whether the questions had quality of depth and insight that required meaningful conclusions to be drawn following the analysis. Data collected from the pilot study provided sufficient evidence to answer the proposed research questions. Teachers responded positively throughout the process without apparent reluctance to answer challenging questions about their teaching behaviors and authentic engagement in learning communities. No data collected in the pilot study is included in the findings of this study or in any published report.

Data Analysis

Data analysis procedures organized by research question and data collection instruments are summarized below in Table 2. The data collected from the survey were analyzed using methods described by Maxwell (2005), Holstein and Gubrium (1995) and Riessman (1993). Teachers' responses to the pre-interview surveys were summarized to create a foundation upon which to analyze the professional relationship of perceptions as they relate to learning communities. For example, cross-tabulations were conducted to determine the frequency of responses for all teachers. Descriptive comparisons between special and general educations were also analyzed. Interview responses provided qualitative data that revealed the perceptions of each participant through text segments allowing the researcher to study the phenomenon of PLCs, co-teaching, and collaboration through the teachers' lens (Creswell, 2009). The goal was to systematically organize themes and subthemes into a comprehensive yet concise construct. In this study there is the participants' perception and authentic participation in three main areas, collaboration, co-teaching, and participation in a learning community that are being explored.

Table 2. Research Questions and Procedure

Research Questions	Data Sources	Analysis Procedure
1. What is the relationship between general and special education teachers' participation in a professional learning community and the quality of the collaborative relationships including co-teaching?

2. What aspects of PLCs facilitate collaborative and co-teaching relationships?

3. What barriers to collaborative and co-teaching relationships exist within PLCs? | Pre-interview survey on Co-teaching & collaboration

Face-to-face interviews | Descriptive data. Collapsed categories to agree, disagree, and neutral. Calculated % agree, % disagree, and % neutral overall and for general and special education teachers separately.

Pattern-matching (Angelides, 2008; Argyropoulos & Stamouli, 2006).

Open Coding (Horne & Timmons, 2009; Bos et al., 1997; Doppelt et al., 2009) |

The interrelationship of themes was coded as they pertained to learning communities, and their relationship to collaboration and co-teaching between general and special educators. The steps that were followed for coding the data are described next and then summarized in the research matrix that follows.

Open coding was the first step in analyzing data by examining, comparing, and categorizing data. Identifying and coding small nuggets of meaning that contained distinct characteristics within the predetermined guidelines (Bos et al., 1997; Doppelt et al., 2009; Horne & Timmons, 2009). A matrix was set up for each interview and follow-up question. Columns were labeled teachers, response, code, and category. Participants were coded alphabetically by school name first letter and a numerical code based on alphabetic order in the school (C4 = Cxxx High School, fourth teacher as arranged alphabetically by last name). The response column contained the direct quote from the

interview, and then words/phrases were high lighted to indicate specific references to the question and/or research question. The code column contained only the words or phrases that were high lighted and indicated a clear-cut meaning or quality explicit to the interview or research questions. The last column contained broad categories as the 1st step to delve into teachers' perceptions of PLCs and how they assisted or hindered collaboration and co-teaching.

Table 3 is a sample of the matrix used to show the process of data analysis for this study. Frequencies were calculated by counting the repetitive mention of themes in teachers' responses during the interviews. These were tabulated and recorded in columns based on the role assigned to the teacher (special or general education).

Table 3. Question 5: What are factors you perceive as improving co-teaching associations?

Subject	Unit	Code	Category	Larger theme
P1	I think one is the ability for teachers to work together. There's a lot of times, the teachers at school, they want to work together and they want to share ideas but they don't have the opportunity to do it. I think before . . . I think even last year a little bit, our PLCs were kind of scripted and we felt like we had to stick to the script, and a lot of times we didn't get to talk about the things we felt could really help us in a classroom. I think giving the teachers the opportunities and the abilities to collaborate more without sort of a	Work together Talk about helpful things for classroom Collaborate more often "Wing it" & do our own thing in PLC meeting	Positive value of Collaboration Improved Communication	Protected time for collaboration

Table 3. (Cont.)

Subject	Unit	Code	Category	Larger theme
P1 (cont.)	(Cont.) checklist of what we have to do when we come together, cause there is so little time anyway. When we are able to come together, it's good just to be able to… we're just able to ==wing it a little bit==, and ==do our own thing== instead of having to follow a script.			

Reliability

Reliability was addressed using several methods. Participants' input was assessed via member checks with completed transcripts reviewed by each participant. Teachers were directed to edit or remove portions of the transcript they felt did not represent their true perceptions. The member check process required no deletions and only minor additions were made to the responses to more clearly explain participants' perceptions. A quality check included having coded data reviewed for accuracy and bias by two doctoral-level practitioners; only minor corrections were suggested which did not alter the results or interpretation of the data.

<div align="center">Summary</div>

School reform has not accomplished long lasting effective changes despite ongoing attempts to improve school and individual student performance (Katz & Earl, 2010). Research has examined co-teaching as a method of service to deliver appropriate education to students with disabilities as well as the advantages of ongoing collaboration among teachers. Effective

practices have been identified that benefit high school students in content-area classes (Cox, McIntosh, Reason, & Terenzini, 2011; Hager, 2012; McAleavy, 2013). Studies that examined learning communities found that while teachers collaborate among themselves, co-teachers from the special education field are often excluded from the interaction (Keefe & Moore, 2004). Teacher knowledge is the most important factor influencing student knowledge, yet most high school teachers continue to teach in isolation.

This study used qualitative methods to explore the perception of high school special and general education teachers regarding the facilitating factors and barriers that learning communities provide through collegial support, sharing of skills and resources, and overall experience to provide academic guidance. Applying a semi-structured format of questions, the researcher conducted in-depth interviews examining the unique perspectives of co-teachers and the learning communities to which they were assigned. Four high schools in the same school district were used to compare and contrast teachers' perceptions of the benefits or hindrances that learning communities offer to collaborating and co-teaching relationships. Data were coded and analyzed to determine factors and barriers to these relationships and ongoing collaboration in PLCs and conclusions were made how these factors can be improved upon at the high school level and what further research must be conducted to address the overall underperforming outcomes for students with disabilities. The results are reported next in Chapter IV.

CHAPTER IV

RESULTS

Introduction

The purpose of this chapter is to report the specific findings of the study. Data were collected from 17 high school teachers who were assigned to four Title I high schools in a medium-sized city in a southeastern state. Pre-interview surveys were utilized to ask about basic demographic information, perceptions of teacher collaboration, and perceptions of co-teaching experiences prior to the interviews; where possible, general education teachers were paired with their co-teachers from the special education department to determine if their perceptions of collaboration and co-teaching vis-à-vis professional learning communities (PLCs) were similar. Each interview took between thirty and forty-five minutes to conduct and three to four hours to transcribe verbatim. Follow-up interviews were conducted with twelve of the teachers (five general educators and seven special educators) to clarify earlier responses and obtain more direct information about their perceptions of and participation in PLCs. The lead researcher was unable to make contact with and re-interview six teachers.

Part I of the pre-interview survey completed by teachers asked about teaching assignments (i.e. courses taught, special education, general education, etc.), gender, years of teaching experience (as well as co-teaching experience and participating in a professional learning community), type of certification or licensure, highest degree

earned, and type of professional development in which they participated concerning co-teaching, collaboration, and PLCs. Part II of the survey asked teachers to indicate the extent to which they agreed with eleven statements relating to collaboration and decision-making at their high school using a Likert-type scale. The final part of the survey, Part III, asked teachers to indicate the extent to which they agreed with eight statements relating to co-teaching at their high school using the same Likert-scale rating.

After the interview was completed, each interview was transcribed verbatim, and then each question was examined for overall information that could be separated into categories related to the conceptual framework. Matrices were created to organize teachers' direct responses to each question and to assist with initial coding procedures. Open coding was used in the initial step to generate possible categories for later in-depth analysis. The first column contained the verbatim responses from the interviewee. The next column contained words or phrases that directly corresponded to the emerging themes; the third column contained possible categories and themes that were identified in the teachers' perspectives. The final column contained major ideas for themes that related to collaboration, co-teaching and relationships in learning communities. Data were analyzed by examining teacher perceptions of collaboration and also co-teaching relationships to key aspects of learning communities. This coding procedure was followed for every question and follow-up question. Key words and phrases were highlighted and extraneous comments were removed to reduce distracting information when placed in the category column. Coding was further expanded to separate responses by teacher assignment, general education classes or special education inclusion, for each

survey statement. A second data matrix was created to record responses for barriers and recommendations as related to collaboration and co-teaching relationship in respect to professional learning communities.

This chapter is organized as follows: first, collected demographic data of the participants; next, review of research questions and the data for each question described and summarized; and finally, data reporting barriers and recommendations to developing collaborative and co-teaching relationships through the implementation of learning communities.

<div align="center">**General Perceptions of Collaboration and Co-teaching**</div>

General Teacher Perceptions of Collaboration

The results of the pre-interview survey on collaboration are summarized below in Table 4. Note that to clarify the findings, the survey scales were simplified from five categories to three: agree, neutral, and disagree. Survey results are reported for the entire sample as well as for the subsamples of general and special education teachers. The results are further clarified via direct quotes relating to general perceptions of collaboration taken from the interviews.

Sixty percent of teachers were in agreement that teachers in their high school work collaboratively to plan school improvement. They perceived that teachers had opportunities to participate on committees (i.e. school improvement team) that included administrators, teachers, students, parents, and community members.

> We share materials, expectations, goals, information, etc. (Interview, general education teacher).

At the beginning of the year, the principal asks for volunteers for the committees at school. The S.I.T. is made up of teachers, parents, and students. This requires a lot of cooperation between the team members to accomplish anything throughout the year. (Interview, general education teacher)

Table 4. Pre-Interview Survey: Collaboration

Survey Items	Total Teachers $n = 17$			General Education $n = 8$			Special Education $n = 9$		
	D	N	A	D	N	A	D	N	A
At my school teachers work collaboratively to:									
Plan school improvement	18%	24%	59%	13%	38%	50%	13%	25%	63%
Select instructional methods and activities	24%	6%	71%	38%	13%	50%	0%	13%	88%
Evaluate curriculum and program	18%	35%	47%	25%	25%	50%	0%	63%	38%
Determine professional development needs and goals	35%	24%	41%	25%	38%	38%	38%	25%	38%
Plan professional development activities	41%	35%	24%	25%	50%	25%	38%	50%	13%
Analyze student achievement data	24%	12%	64%	25%	13%	50%	0%	25%	75%
Differentiate student learning across curriculum	24%	24%	53%	25%	25%	50%	38%	38%	25%
Create a collaborative environment	12%	41%	47%	0%	50%	50%	13%	50%	38%
Include special education professionals in decision-making	29%	53%	18%	38%	38%	25%	13%	75%	12%
Collaborate sufficiently within my department	41%	24%	35%	25%	25%	50%	38%	38%	25%
Collaborate among teachers in my PLC	18%	41%	41%	25%	25%	50%	13%	38%	50%

Note. D = Disagree; N = Neutral; A = Agree

More than two-thirds (71%) of the respondents agreed that teachers collaborated to select instructional methods and activities in and for their classes. One general education teacher made the following statement during the interview.

> . . . being able to work on the planning aspect on where you want to go, then being able to reflect on what worked (instructional strategies) and what didn't work. Where you want to go, then being able to reflect on what did and didn't work, I think is also part of our collaborative practice.

A special education teacher had a similar comment about collaborating with her colleagues.

> An example would be the Wiki. Everything was posted on-line within a setting everybody had access to it. When someone found a good website, they shared it with the others who taught Algebra I. Some of the stuff on-line is great. Some of it not so great.

Two-thirds (64%) of the teachers agreed that they collaborated to analyze student achievement data with others who taught the same course. The following excerpts from interviews with general education teachers support the concept of collaboration within their department to analyze student data at county high schools.

> . . . they also assessed the quizzes and broke them down into what concept needed to be retaught or even what question *did* they get?

> Our principal is really big on collecting and analyzing data both on the kids and on the teachers. I've gotten better the more I do it, and he requires teachers to reflect on their personal data… Meeting with other teachers in my PLC and listening to them talk about how they are interpreting their numbers has really helped me understand mine.

Forty-four percent of the participants agreed that teachers in their school worked

collaboratively to differentiate student-learning across the curriculum. However, more

general teachers were in agreement on this item than special education teachers (60%

versus 25% respectively). Indeed, special education teachers seemed to feel that they

were shouldering much of the responsibility because of their different knowledge base.

This view is evidenced in the following comments.

> I know my co-teacher wanted to help XXX by reducing the amount of required
> homework, but she didn't know how to do it. That's where my strength came in. I
> could choose questions that were critical to the concept we were testing.

> Mr. XXX knew XXX wasn't understanding what he (student) read but didn't
> know what to do. When I suggested we get audio books that would read verbatim
> text it was like a light bulb went off in the teacher's head. I don't think he knew
> the district had or could provide that kind of help.

Half of the teachers (50%) agreed that teachers at their schools created a

collaborative environment by sharing successful research-based teaching strategies and

information they acquired from workshops and training sessions. Collaboration was

evident to them during department meetings, faculty meetings, PLC meetings, and

informal gatherings. One special education teacher stated how some teachers

collaborated.

> . . . we would meet like once a week, usually before school in the morning. It
> allows us to . . . put things together. If they have labs they want to do, time to get
> the labs all set so we can trade off on different days for different labs.

As evident from the data, not all teachers felt the environment was collaborative.

For example, one special educator shared her concerns about the level of support and

active engagement in collaborative activities outside required meetings. An example of

her perspective of collaboration follows.

> . . . and I would try to plan instruction with the other [3] teachers that I worked
> with, but they were too busy with their own meetings and teaching
> responsibilities to work with my tight schedule. I will say that they were
> concerned with student achievement but not how I could work with them to help
> our students be more successful in class. The teachers didn't have time to
> collaborate with me.

There was less overall agreement about collaboration among teachers on a

number of items. Interestingly, only 33% of the overall teachers agreed that teachers

worked together to evaluate curriculum and their specific program. This was an item on

which general and special educators disagreed, with 60% of the general education

teachers agreeing that programs were evaluated collaboratively while only 38% of the

special educators felt similarly. According to one special educator:

> Evaluating curriculum and individual programs is not done by us; it's done by
> people in central office. Even when we provide feedback through surveys, I don't
> believe it makes any difference. The special education program doesn't change
> and the way we provide service to students at the high school level has limitation
> due to scheduling.

A reason for the apparent lack of collaboration between general and specific education

teachers around curriculum evaluation is that curriculum evaluation tends to be program-

specific (i.e., Algebra I, English I and II, Civics/Economics, etc.) and related to state-

tested areas.

> You know I teach civics and I'm the department chair so I know what is going on
> in the whole department; the others who teach civics with me are only concerned

with evaluating this one side of the social studies curriculum. (Interview, general education teacher)

I don't have time to attend all the department meetings for the classes that I co-teach in and I don't really have any interest in evaluating the program. I just need to know exactly what the students need to learn. My input for these evaluations doesn't amount to anything. (Interview, special education teacher)

While almost half (44%) of the teachers surveyed agreed that colleagues within their department collaborated sufficiently, considerably more general educators (70%) perceived this happening than did special educators (25%).

Ideally, all teachers have discussed the best methods for presenting different information, and used those methods to improve student understanding in their classrooms, and ultimately to improve school scores. (Interview, general education teacher)

There are always some teachers who do not work well with their peers. This is the group that will always hold back the progress the school community is trying to achieve. (Interview, general education teacher)

I know we should be working with our peers more than we do but I just don't have the time to meet with everybody as often as necessary. Unless we are in a department meeting, I often don't even have time to speak to my EC colleagues. (Interview, special education teacher)

According to the special education teachers, only 25% of whom felt there was adequate collaboration with their general education colleagues:

I do not have a science credential so I don't provide a lot of input about content and how it will be presented to the whole class, never mind the ones who struggle with reading. (Interview, special education teacher)

. . . the principal decides who he thinks his best teachers are to teach these kids. Then he throws me into that class with the teacher. (Interview, special education teacher)

General Teacher Perceptions of Co-teaching

The results of the pre-interview survey on co-teaching are summarized below in Table 5. As with the collaboration scale, the survey scales were simplified from five categories to three: agree, neutral, and disagree. Survey results are reported for the entire sample as well as for the subsamples of general and special education teachers. The results are further clarified via direct quotes relating to general perceptions of co-teaching taken from the interviews.

Table 5. Pre-Interview Survey: Co-Teaching

	Total Teachers $n = 17$			General Education $n = 8$			Special Education $n = 9$		
Survey Items	D	N	A	D	N	A	D	N	A
To what extent do you agree with each statement about co-teaching at your school?									
I understand the purpose/goals of our co-teaching program and believe my class is a true co-teaching model.	12%	18%	70%	0%	25%	75%	13%	25%	63%
Co-teaching is benefiting students with special needs	12%	0%	88%	13%	0%	87%	13%	0%	88%
Co-teaching is benefiting teachers in PLCs	18%	29%	53%	13%	25%	62%	25%	38%	38%
Educate administrators and staff about benefits to co-teaching	18%	35%	47%	13%	50%	37%	25%	25%	50%
Overall, I am satisfied with the current co-teaching program	24%	41%	35%	13%	32%	55%	38%	38%	25%
Planning can be spontaneous with changes occurring during the instructional lesson	6%	29%	66%	0%	38%	62%	13%	25%	63%
Students accept both teachers as equal partners In the learning process	6%	12%	82%	13%	0%	87%	0%	25%	75%
Encourage new teachers to accept co-teaching as an effective model of delivering instruction	12%	18%	70%	13%	25%	62%	13%	13%	75%

Note. D = Disagree; N = Neutral; A = Agree

The remaining survey statements had more varied perceptions; however, they continued to rate the agree choice more often than either of the other choices. When viewing co-teaching is benefitting teachers in PLCs, 50% of the overall sample was in agreement. Slightly less than three-fourths of the general education teachers (70%) agreed that co-teaching benefits to teachers in their PLC of co-teaching, while an additional 38% of the special educators agreed that co-teaching was beneficial to teachers in their PLCs. As one general education teacher stated:

> It gives us both the opportunity to observe another teacher using effective teaching strategies in our common class. I continue to learn from my colleagues. This ongoing observation opportunity often comes up in our PLC meeting.

When asked about spontaneous planning, most teachers (63%) agreed that changes occurred during the instructional lesson on a regular basis and it was not a negative trait to co-teaching. Seventy percent of general educators and 63% of special educators agreed that alternate plans could be implemented when changes needed to occur during a lesson. More special educators agreed that changes during instruction were a result of the necessity of teachers being more willing to make the changes as needed when a lesson was going either really well and could be expanded, or not going well at all and needed major revisions.

> When XXX is in my class and she like the instructional content, it's almost guaranteed that we will be making changes during the lesson because she is so aware of student engagement and understanding of the lesson. If it's going well, she flies with it. If the lesson is sluggish, she steps in for a few minutes to review or restate critical information, surveys the faces of the kids, then gives the class back to me (Interview, special education teacher).

> . . . being able to flow, almost seamlessly between teachers, back and forth. If I start a lesson, I guess I'm speaking mostly about XXX or XXX, if I'm stuck helping a kid, them being able to take over for the next step without there being any down time. (Interview, general education teacher)

To summarize general teacher perceptions of both collaboration and co-teaching while there was some evidence of positive perceptions of both collaboration and co-teaching on the part of both special education and general education teachers, ratings related to co-teaching tended to be higher for both groups; general education teachers tended to rate the level of collaboration and co-teaching higher than special educators. Interestingly, most teachers felt that co-teaching benefited special education students.

Research Questions 1 and 2

The first two research questions were: What is the relationship between general and special education teachers' participation in a professional learning community and what is the quality of the collaborative relationships including co-teaching? Two hypotheses were created based on the PLC co-teaching and collaboration literatures. Hypothesis one was that there PLC would be a positive relationship between general education and special education teachers. Hypothesis two was that the relationship between the PLC and collaboration and co-teaching would be positive because the PLC promoted a common mission, vision, values, and goals; created interdependence so that teachers relied on each other for assistance and cooperation; and provided a focus on school improvement.

The data analysis outlined in Chapter III identified several general themes that emerged as teachers spoke of their perception of the relationship between collaboration and co-teaching and the active participation in professional learning communities. From

these general themes more specific subthemes that addressed issues teachers viewed at individual schools that related to learning communities and the implementation of this concept at their school became apparent. The themes for Research Questions 1 and 2 included: learning communities provided time to collaborate with other teachers and build cohesive relationships; teachers appeared to benefit from the presence of co-teachers in the learning community who have worked effectively together; and teachers felt they learned through the learning community how to analyze data and plan instruction more collaboratively. Each of these themes and subthemes help explain the interaction of collaboration and the teachers within a PLC. The frequencies for themes related to general and special educators in PLCs and the quality of collaborative relationships including co-teaching are shown below in Table 6.

Table 6. Themes: Research Questions 1 and 2

	Frequency	
Theme	General Educator	Special Educator
The PLC provided a protected time for teachers to collaborate with each other and build cohesive relationships.	6	6
Teachers benefitted from the multiple perspectives of teachers in learning community meetings.	3	2
Teachers appear to benefit from the presence of co-teachers in the PLC who have effectively worked together in the past.	4	2
Teachers felt that through the PLC, they learned how to analyze data and plan instruction more collaboratively.	9	2
Total frequency	22	12

The PLC provided a protected time for teachers to collaborate with each other and build cohesive relationships

Teachers believed they were working together in learning communities to achieve at least one common goal toward school improvement. They shared in learning community meetings lessons and activities that were successful; they also discussed lessons and activities that were less successful when compared to their colleagues' results. Teachers liked to talk to colleagues and share their positive experiences as well as their challenging experiences. During these talks in the PLC meetings, teachers discussed student progress, the challenges of revising lessons to meet Common Core standards, and how to deal with inappropriate behaviors that occurred in the classroom and prevented students from learning. Both general and special education teachers recognized the need for collaboration throughout the day, the week, and the semester. Protected time for collaboration was critical to develop the co-teacher relationships as well as instructional planning time.

> A lot of times when we were [attending the PLC] meeting in the morning before school, several of us would be walking down the hall together and start talking about things we wanted to discuss at the PLC meeting itself… This informal time to talk was beneficial to me on many occasions as to how we would implement a new idea. (Interview, special education teacher)

> When I was co-teaching with Ms XXX, we often talked as I was making copies or she was making coffee in the teachers' workroom. Some days that was the only time we had to plan either before or after class because she was also working with another co-teacher that semester. (Interview, general education teacher)

> Last semester I worked with Ms YYY and her planning period was first while mine was third. We didn't have common planning time but we did talk a lot informally in the work room or in the hall. She had a protected planning period while I had to split mine between lunch and another duty. (Interview, special education teacher)

. . . as the year progress, he either calmed down or I began to understand him better. The time we had together in the PLC allowed me to see the ABC [antecedent, behavior, consequence] of him. When we began to co-teach, things were not so bad. I had had the time to observe him in a teaching situation as well as in a planning situation.

The effect of shared planning occurring during PLC meetings is supported in the data in several ways. Teachers wanted and needed consistent opportunities to meet with their peers and discuss issues that rose within the context of their work-related responsibilities. Discussion of student related data, construction of common assessments, and planned interventions were a few of the topics debated among teachers during their clearing time in the PLC.

I really enjoyed co-teaching with Ms. XXX because her office was off the work room and when I was running copies we could have a quick discussion about an issue without waiting until later in the day or even the next day. Many times it was a continuation of what went on during the early morning PLC meeting. It wasn't the best way to plan or discuss problems in the class but sometimes that all we have with a high school block schedule. (Interview, general education teacher)

There was constant pressure to evaluate classroom planning and adjust lessons that originated from other factors than student achievement. With the Common Core standards being implemented in the county, teachers needed to revise lessons to meet new concepts and skills added to their courses. This was critical for teachers with less teaching experience since they didn't have the toolbox of resources the experienced teachers had. The PLC provided a time and structure for doing this.

We share materials, expectations, goals, information, etc. (Interview, general education teacher)

At the beginning of the year, the principal asks for volunteers for the committees at school. The S.I.T. is made up of teachers, parents, and students. This requires a

lot of cooperation between the team members to accomplish anything throughout the year . . . time with learning community members gives me information from their view point that I need to share with S.I.T. (Interview, general education teacher)

Teachers collaborated during weekly PLC meetings, made initial contact in PLCs, and then followed up outside the meeting to select instructional methods and activities in and for their classes. While the district provided texts, teacher materials, and technology access to approved websites and on-line sites for curriculum related ideas related to the new standards, teachers still needed collegial support to implement the new teaching strategies. The following statement is an example of this in practice.

. . . as far as getting new ideas; things that maybe I didn't think about or other teachers didn't think about and they get to hear about it, see how it's been working, going to work in another teacher's classes, instead of just going to workshops and hearing things and not necessarily knowing if they work or not. This was probably one of the most helpful things that occurred in our PLC meeting.

Basic materials were provided to everyone, however individual preferences for manipulatives, lesson-plans that met Common Core standards, and activities that extended a lesson were more individualized, and thus teachers needed opportunities to share their "new finds" with colleagues. One general education teacher made the following statement concerning the content of her teams' collaboration.

. . . being able to work [in the PLC] on the planning aspect on where you want to go, then being able to reflect on what worked (instructional strategies) and what didn't work. Where you want to go, then being able to reflect on what did and didn't work, I think is also part of our collaborative practice.

> . . . the exchange of experiences, just having someone there who has taught for many, many years, taught through different groups of students, different administrations, different colleagues; someone who has seen all aspects of the profession, someone who could constantly come to me to give me this information or this advice or anything like that. This was really helpful at the meetings and afterwards. (Interview, general education teacher)

The co-teacher from the special education department supported this view with his own comment in reference to new ideas and activities to implement, that further embraced concepts the students struggled to understand.

> When I'm co-teaching with Ms. XX in Algebra and we have that additional time in the PLC to discuss new ideas to try in class, especially when we know students in the past have struggled with, it's great. I get energized and excited that maybe this time we've found that magic activity that makes the concept clear to everyone!

Special education teachers brought strategies to the inclusive classes and PLC meetings to diversify instruction for students who struggled with typical instructional styles. They wanted more time to plan instruction with their co-teachers, and learning community meetings helped provide some of this essential time to plan and share. A special education teacher made this comment about collaborating with her colleagues from the learning community. There were times when she had two mandatory meetings scheduled at the same time and she had to miss the PLC meeting.

> An example (of sharing information and meeting notes) would be the Wiki. Everything was posted on-line within a setting everybody had access to it. When someone found a good website, they shared it with the others who taught Algebra I. Some of the stuff on-line is great; some of it not so great.

Teachers benefited from the multiple perspectives of teachers in learning community meetings

Teachers perceived that they had developed different perspectives toward teaching as a result of their engagement in the PLCs. The weekly meeting for the PLC group provided opportunity to share the success of the methods and/or the challenges that appeared during their lessons. Co-teaching pairs each had experiences in any given week that provided issues and success that served as personal learning moments for them. These shared moments were brought to the larger PLC group. Members had various years of experience so their approach to the same concept brought different perspectives depending on the course content. It was during the learning community meeting that teachers could "clear" the air at the beginning of the meeting and discussed problems they had encountered since the last meeting.

> I was trained in Canada and taught on a Native American reservation out west so my perspective is often very different from others. I'm willing to listen and learn but I also contribute to every learning community meeting I attend. That's why I get there on time and stay until the end (Interview, general education teacher).

> Several teachers in my PLC have more educational experiences and areas of interest that they bring to the PLC meeting. Some members are older, some very young and inexperienced in teaching. Everyone sees things differently. (Interview, special education teacher)

Co-teaching assignments were in the areas of Algebra I, English I and II, biology, and social studies (civics/economics and US history). Participants in the study had worked at least two semesters with their co-teacher although not necessarily consecutive semesters. Several co-teachers had been assigned to the same learning community at least once during the last year and this time together granted them the opportunity to view their perspectives from the other teacher's side. Relationships developed between the co-teachers and the students in the

classes that in the view of some of the teachers, contributed to the successful achievement as evidenced on the exams. Social studies teachers who had taught with the same special education teacher at one school and had attended the same PLC for at least one semester with him made the following comments.

> When I co-teach with Mr. XXX we have more success and fewer problems with the class as a whole because he has a social studies background and knows how to plug any holes in the lesson as we go along. Sometimes he's in my PLC group and sometimes he's not. We found the extra time in these meetings to be helpful especially if he was also teaching in another class such as biology that semester. We're about the same age but look at things differently and when I want to move quickly through a concept, he'll stop me if he thinks the EC kids aren't getting it. Actually, he'll stop or slow me down if he sees that any kid isn't quite getting it.

> I've seen it [co-teaching] used very successfully in two classrooms that I'm aware of. That is really very individual to those specific teachers and their co-teaching partners. They just happen to have a good relationship because they were dedicated educators. . . . At some point in their past they had been in the same PLC groups but for whatever reason were assigned differently and didn't always co-teach together.

> Last year I worked with Ms. XX who taught Algebra I and she was always using music, rap, and rhythms to teach math rules to the students. We talked about her teaching style in PLC one time and the others were not really open to this style of teaching but it's really effective for her students. EOC scores are right up there where they should be. (Interview, special education teacher)

Teachers appear to benefit from the presence of co-teachers in the PLC who have effectively worked together in the past

As indicated in the survey data, teachers had a positive perception of co-teaching; fully 88% of the teachers agreed that co-teaching benefits everybody in the classroom. One possible contributing factor to this positive perception of co-teaching was the presences of co-teachers in the PLS who had an effective co-teaching relationship. Indeed, the collaboration between effective co-teachers that was modeled during the

meetings provided an example of how co-teaching could work. Teachers spoke of how

other PLC members listened as the pairs of co-teachers provide information about class

activities and student progress, and appeared to be open to participating in co-teaching at

some point in the future.

> My PLC group has a couple of inexperienced teachers. They aren't new or even young, but just don't have teaching experience in the county. I think one of them would make a good co-teacher at some point in the future after she's learned the curriculum and how we run the school including her responsibilities in the learning community.
>
> Co-teachers in the classroom benefit all the students. I have to teach all the students including the EC kids. The EC teacher also teaches all the kids so there is no discrimination and no teasing problems from anyone. The time we had in the same PLC was very helpful. Next year I hope we can expand on my co-teacher's instructional time. The kids don't know he's with special ed so as long as we plan it well, everyone will benefit from having two teachers in class. (Interview, general education teacher)
>
> Now that I've worked with Ms. XX, I know more about her quirks in the classroom and why some of them happen. When I was in her PLC meeting the others were strange in different ways, but she and I talked specifically about kids in our class and what we were doing with them. It was nice when a teacher new to our school asked for electronic copies of the websites we used. (Interview, special education teacher)

The following English teacher says she spoke in the PLC meeting of her positive

co-teaching experience with the hope of encouraging others to volunteer for inclusive

classes.

> I really like the co-teaching model because it gives me another teacher in the classroom that I can depend on to help the kids, help me, and give me honest feedback when a lesson isn't going the way we planned.

The special education teacher with whom she works stated he had this to say in the PLC meeting to support his co-teacher.

> When I'm with a good classroom teacher who knows the students and is willing to listen to me when I offer strategies and suggestions to improve the instruction, it's great. I want to stay with this teacher all year because it's a successful relationship! (Interview, special education teacher)

When teachers who had not co-taught classes previously asked questions of the co-teachers in learning community meetings about how their relationship worked in the classroom, they listened to the response and often recognized the enthusiasm that emanated from both teachers. The following is an excerpt from a social studies teacher's interview who had not realized the enthusiasm shown by the co-teachers was so important to the group.

> Last year Ms. YYY was in our civics PLC. She had never had an inclusive class but I remember her looking and listening to us share what was happening in our class and we had her full attention. She saw the passion we had for teaching.

Teachers felt that through the PLC, they learned how to analyze data and plan instruction more collaboratively

According to the survey, nearly two-thirds (64%) of the teachers agreed that they collaboratively analyzed student data during learning community meetings with others who taught the same course. The process of analyzing the data was taught to the facilitator who trained PLC members. Few teachers had experience in interpreting data, so it was a learning process for nearly everyone.

When it comes to analyzing data, I'm not very good. But my PLC facilitator has been really good to explain it to me, even when she has to do it again and again and again. (Interview, general education teachers)

I can read data from psych and educational evaluations, but I get lost when I look at Mr. XXX's data. He doesn't know how to read it and neither do I. The little bit of training we get at planning period meetings isn't very helpful to me. (Interview, special education teacher)

Each general education teacher was provided with Education Value-Added Assessment System (EVAAS) data that predicted the probable success of each student in the class. The school district provided the results of other common formative assessments given throughout the semester to allow teachers to view ongoing results and to reteach concepts that were not mastered by students in class. Teachers were expected to continue to analyze data as it was provided to them after each common assessment. Teachers worked with PLC members to learn this process and ensure they understood the data as it was written. The following excerpts from interviews with general education teachers support the utility of the PLCs in helping teachers within their departments analyze student data at county high schools.

. . . they also assessed the quizzes and broke them down into what concept needed to be retaught or even what question *did* they get?

Our principal is really big on collecting and analyzing data both on the kids and on the teachers. I've gotten better the more I do it, and he requires teachers to reflect on their personal data (as shared in learning community meetings).

Another general education teacher perceived student data as a benefit when the opportunity was available to discuss the results with others in his PLC.

My principal is really big on data which is good because he gets lots of it from central office. He passes it on to us and we discuss it at our department meetings and our PLC meetings. I think this helps us as a whole school because we all get to see our data and it's the same kids across the board. We don't get individual kid scores in other courses but we get to see how we are doing overall compared to last year and to other school in the county.

PLC meeting agendas asked for desired outcomes and action steps. Oftentimes, a decision was made at the PLC where everyone would implement a specific teaching strategy and report back to the group the outcome of the lesson. When teachers met with their PLC, they reported their outcomes, whether instructional changes were made, and the impact of those changes on student achievement. An experience from a social studies teacher explains how this worked in her PLC.

I remember when we were teaching the amendments to our class. At the PLC meeting we had talked about a better way to get the kids to memorize the Bill of Rights and then the Amendments when my co-teacher suggested we make a "cheat sheet" to use for as a study-guide. She copied the Bill of Rights onto a quarter sheet of card stock, and shortened the Amendments into concise phrases that she printed onto half-sheet card stock, and then distributed them to the whole class. The kids punched holes in them and stuck them in their binders. When exams rolled around, those sheets were still in the folders!

Ms. XX would come into my class the day after our weekly PLC meeting and be full of ideas she wanted to try in class. We had once class that was better to work with than the other so that was the one we tried "new ideas" on. Invariably we had some really good results with this class; we also had mixed or negative results with the other class we shared, but we took all this back to the next learning community meeting.

PLCs helped teachers create assessments and effective lessons. This also added focus to difficult concepts that needed to be reinforced as well as changes made when a lesson was not successful and needed to be quickly revised so instruction could continue. This science teacher used the following to illustrate her point.

> When Mr. XX would come into class, he really didn't know what was going on as far as the curriculum was concerned but he could recognize very quickly if a lesson wasn't going well. The few times he attended our PLC meetings, he picked up on the importance of specific concepts and rules that had to be followed so he could quickly interject reminders or even slight changes in the process we were working on. After class we discussed what happened. He always knew what I needed to keep the lesson moving.

Sometimes discussions during PLC meetings led to direct changes made in classroom instruction.

> She'd hear something that I would say or my student teacher would, and it would lead to some nice new lesson that they would think or a new way of teaching something or relate it to the student lives in a better way than I did. It was an advantage. (Interview, general education teacher)

Working in learning communities allowed general educators to listen to others discuss teaching strategies that were working and teachers referring to situations that occurred in previous years with a co-teacher.

> . . . being able to flow, almost seamlessly between teachers, back and forth. If I start a lesson, I guess I'm speaking mostly about XXX or YY, if I'm stuck helping a kid, them being able to take over for the next step without there being any down time. (Interview, general education teacher)

Special education teachers brought strategies to the inclusive classes and PLC meetings strategies to diversify instruction for students who struggled with typical instructional styles. They wanted more time to plan instruction with their co-teachers, and learning community meetings helped provide some of this essential time to plan and share. A special education teacher made this comment about collaborating with her

colleagues from the learning community. There were times when she had two mandatory

meetings scheduled at the same time and she had to miss the PLC meeting.

> An example [of sharing information and meeting notes] would be the Wiki.
> Everything was posted on-line within a setting everybody had access to it. When
> someone found a good website, they shared it with the others who taught Algebra
> I. Some of the stuff on-line is great; some of it not so great.

Research Question 3

What barriers to the development of collaborative and co-teaching relationships exist

within PLCs? Hypothesis 3: Barriers to the development of collaborative and co-teaching

relationships exist within PLCs.

Something that obstructs or impedes progress is considered a barrier. In an

educational setting, teachers often identify barriers that impede student progress or

prevent school change. The following overall themes of barriers to collaboration within

PLCs were revealed: assignments to learning communities are not systematic; the content

covered in PLCs is often not relevant to general and special education teachers

collaborating and co-teaching; entrenched differences between general and special

educators are undermining the impact of PLCs on collaboration/co-teaching. The

explication of each theme related to barriers will be followed by recommendation made

by teachers to resolve the barriers in question. The frequencies of themes relating to

barriers to the development of collaborative and co-teaching relationships are shown in

Table 7.

Table 7. Themes: Research Question 3

	Frequency	
Theme	**General Educator**	**Special Educator**
The process of assigning general and special educators to PLCs is not systematic.	5	6
The content covered in PLC meetings is often not related to topics relevant to general and special educations teachers collaborating and co-teaching.	6	2
Differences between general and special educators can undermine the effective functioning of the PLC.	6	13
Total Frequency	17	21
Themes for Recommendations	**General Educator**	**Special Educator**
Assign co-teacher prior to summer vacation.	5	4
Retain PLC membership make-up for continuous academic years.	2	3
Administrators should visit co-taught classrooms more often.	4	3
Set PLC monthly agendas at the beginning of the academic year.	2	3
Select PLC agenda topics to make them more relevant to struggling students.	3	5
Create a PLC group comprised of co-teachers.	2	3
Total Frequency	18	21

The process of assigning general and special educators to PLCs is not systematic

The assignment of teachers to teachers to PLCs is not systematic across the school system. One problem, while not directly about assignments per se, but that could affect the composition of a PLC, involves inconsistent support for the co-teaching model throughout the district. A general education teacher had this to say about her feelings about the random reassignment of co-teachers and PLC members:

> One year I would have a co-teacher for the fall semester and we worked well together for two periods a day. The students made excellent progress in class and on the EOC. The co-teachers was part of my PLC and we just shined when discussing student progress and teaching strategies. Then the next year I had nothing. The whole department lost co-teachers and I felt that everything I had pushed for and supported was gone. (Interview, general education teacher)

Another barrier to the ability of the PLCs to foster collaboration and co-teaching practices is that co-teachers are not always assigned to the same PLC. In the words of one special educator:

> At the very first meeting we all introduced ourselves and what courses we taught and I felt at odds with the others because I was co-teaching, but didn't necessarily have my co-teacher in the same group. I came to talk about teaching strategies and how to help the students learn, but the agenda would be about how we were to evaluate our EVAAS data. I didn't have any data of my own and had to share with someone else who didn't teach with me. That was useless for me.

One special education teacher was upset when she was assigned to a new (to her) course with a different co-teacher, and did not have ample time to collaborate, plan, and just start building a working relationship with this teacher. Having her new co-teacher in

her PLC might have been of significant benefit, particularly for this teacher, who had had

negative experiences with co-teaching in the past.

> Co-teaching is one way to deliver service to students who need assistance in a general education class, yet there have been semesters when I hated to go to class because the teacher didn't want me and didn't know how to modify her instruction for my kids. (Interview, special education teacher)

Another assignment problem was of particular concern to special education

teachers. Often administrators assigned teachers to PLC based on individual school

needs, such as scheduling, and not the needs of teachers. As a result, special education

teachers expressed concern that their PLC assignment did not necessarily match their

teaching assignment, leading to the perception that PLC meeting agendas were not

related to their job. The irrelevance of meeting content to EC teachers' responsibilities

was a major source of frustration.

> I was part of the English PLC for a while because that's where I was doing my co-teaching but I found that the facilitator was bringing topics to the meeting that didn't pertain to what we needed. Eventually, that PLC just stopped meeting as often as required. (Interview, special education teacher)

> XXX has been co-teaching with me this past year and tried to attend a couple of the PLC meetings just so he would know what was happening within the course framework from central office. He sat through one particularly awful meeting, then asked me if that happened often. Fortunately I could tell him no, however the purpose for the meeting does seem irrelevant often enough for me to wonder who is planning the overall program at our school. (Interview, social studies teacher)

Special education teachers who participated in this study had taught with their

assigned general education teacher at least once in the past academic year; however, the

annual reassignment of teachers to courses and co-taught classes based on student

schedules had a negative impact on the development of a working relationship between these teachers. General education teachers had a more consistent schedule of courses they taught, while special education teachers were reassigned each year and sometimes at mid-year when the semester changed. One special education teacher explained her perception of meeting with co-teachers in the following manner.

> . . . but once again having the time and finding the time to meet with everybody [from different departments] is very difficult. There are so many different [PLC] meetings and other things. That, I find to be the most difficult part.

The process of evaluating special education teachers did not hinge on EOC scores; however, administrators discussed students' progress when in co-taught classes. The teachers from the special education department felt similarly. They were an accepted part of the PLC one year, and then dropped from that PLC the following year. When they encountered general education teachers in the hallway, they were often asked why they were not part of that learning community again. Teachers in the special education program did not have a reason, except that an administrator assigned them to a different PLC. This is what one special education teacher had to say about the random PLC assignment.

> I enjoyed working with the department and they were starting to listen to me and ask questions by the end of the year. I felt accepted by them, and then the following year I was moved to a different course, different teacher, and different PLC. Ms. XXX told me she missed me and all the information I brought to our meetings. I felt so appreciated but it was too late. Administrators had moved me.

Recommendations from teachers relating to learning community assignments

One of the most critical recommendations was for administrators to make co-teaching

assignments prior to summer break to allow collaboration between co-teachers to occur when

available during summer months and in more casual settings. Teachers reasoned that PLC

assignments could be made for content-area teachers and their co-teachers as a unit rather than

breaking up the pair and assigning the special educator to an independent group.

> If XXX was in my PLC that would provide an additional hour each time we meet to
> work our way through upcoming lessons and that would help me and the students.
> (Interview, general education teacher)

Participants within PLCs also felt that administrators needed to keep the learning

community make-up the same for more than one year to allow the relationships to build among

the members. The internal exchange of responsibilities within the PLC was an accepted

expectation however, the change of membership each year was frustrating when the group was

trying to build relationships, support student progress, and utilize strategies that were

successful consecutive years as evidenced by end-of-course assessments.

> I've worked with this teacher in algebra since I came to the school and now that
> I've been in her PLC for a year [this is my second year] I see where the whole
> dept is going. The new Common Core stuff is driving the curriculum and
> sometimes the group doesn't see how their changes disrupt the EC students. I can
> offer my "expertise" in the PLC meetings and they know me well enough that I
> have some real knowledge about what is working and where problems continue to
> exist in class. (Interview, special education teacher)

> When I was in a good PLC, we moved ahead with curriculum and student-needs
> rather than focusing on individual complaints about things we can't fix. I prefer to
> be in the same PLC as my co-teacher . . . (Interview, general education teacher)

The content covered in PLC meetings is often not related to topics relevant to general and special education teachers collaborating and co-teaching

Teachers expressed frustration with keeping the PLC meetings focused on goals and were looking for structure in the PLC. One problem involved the manner in which the meetings were run. Several teachers expressed concerns that one or two teachers in their group dominated meetings and talked over others to control the conversation and meet personal agendas. One special education teacher was quite clear about his experience with women in his PLC group and their method of communication.

> Well, you know me; I just let them talk until I'd had enough then told them to let us get on with our meeting. These women were terrible to have in our group. I hated wasting time with them because they weren't going to share anything anyway and when they didn't get their way, they huffed and disrupted the meeting. There wasn't anything we could do to change their behavior and there were no consequences for them professionally.

Each school conducted facilitator meetings most months, but not with fidelity to the PLC model.

Ideally, each member of the learning community was expected to take an opportunity to participate in that role during the course of the year; however, that was not necessarily the most effective method to support the identified goal for the school. Teachers felt there were other ways to provide the critical foundational support needed for PLCs and to effectively and efficiently assist teachers in the classroom. One general educator shared this concern.

> The facilitator for our meetings would come in with a prescribed agenda for the meeting and we were expected to follow that guideline for the monthly meetings.

How did that help us when we had no input to the agenda and no support for our problems?

Relationships between co-teachers needed time available during PLC meetings to ground their relationship in the discipline content area. A general education teacher had this to say about the expected actions and subsequent outcomes.

A lot of time we spend the first 80% of the meeting talking about what they want us to talk about and the last twenty minutes . . . or last 20% talking about what we really need to talk about as far as our students and helping our students.

Another problem related to content was that timing and discussion-content of PLC meetings created effects beyond student achievement. A special education teacher had a different perspective of these results based on her job responsibilities and interaction with students. She attended two different PLCs trying to meet the needs of her teaching assignment while also meeting intrinsic professional needs of following the curriculum in her co-taught classes. Her concern focused on the anticipated legislature that would tie teacher pay to student outcomes on critical course assessments; her pay would reflect only student achievement, not the other elements of her job responsibilities.

I work with several teachers with whom I really have no choice. If our students perform well on EOCs in one class and not another teacher's class, I may not get any pay raise at all. My pay will be tied to the results of two or three teachers when I don't have adequate time to plan with them? That is so unfair.

Recommendations from teachers to provide relevant content within PLC agendas

Topics assigned to PLC for discussion originate from administrators or from specialists in the central office. Teachers believe that getting administrators into the

classroom more often and for a longer period of time would provide an updated insight

into barriers that teachers encounter on a regular day, such as students misbehavior

including disrespectful behavior exhibited toward both teachers and other students. As

one experienced math teacher says:

> I get really annoyed when kids who are late to my class are pounding on my door
> to get into class, then continue to disrupt the instruction. Yet the next PLC
> meeting has a meeting topic of how we can stop kids from being late to class or
> being disrespectful. How am I supposed to know that? It all goes back to home
> training!

The perception of many teachers in this study was that administrators have lost

touch with the education aspect of a teacher's job. As one general education teacher

stated:

> The last time I was the PLC facilitator, the assigned topic for the agenda was
> about reading instruction and how we measured student growth, what activities
> we were using, etc. We don't teach reading at the high school, so this topic had no
> relevance. I didn't see the connection to the annual goal we all talked about at the
> beginning of the year.

The monthly agendas for the year should be set at the beginning of the year with

an understanding that changes could be made to meet unexpected situations that needed

to be addressed by the faculty through their PLC group. An overall plan for the year

should be in place and set not by the central office but by a team of teachers and

administrators who have a goal that relates to their specific high school to meet for the

year. This could include a focus on collaborative skills as well as data collection and

analysis of student achievement. The agendas need to meet more needs than just one

determined by central office.

> Administrators need to initiate a new protocol or system, then leave it alone for a year before revising it. How can we make improvements if we continually have to learn and implement something new for the class?

> . . . sometimes people come to a learning community, but they're not willing to participate in the way that they should be participating. They are just there because they were told to be there. The teachers new to the school need someone who will not be judgmental and can help them, but the interaction needs to happen outside the classroom.

Differences between general and special educators undermined the effective functioning of the PLC

The data revealed a divide between general and special education teachers and

this divide ultimately affected the functioning of the PLC. Indeed, some general

education teachers did not work well with a co-teacher in the classroom; others did not

believe the special education program really helped students and still others did not want

to co-teach.

> The first year I went from full resource room teacher to inclusive classes as well as my resource responsibilities. I ran into a general education teacher who told me flat out that she didn't teacher *those* kids. It took me three days to settle that dispute and I had to co-teach with her for the whole semester. She did not want *those* kids. (Interview, special education teacher)

> There are so many times that I'm trying to do my job and advocate for the students but the gen ed teachers won't bend or change their stance. When we're in the PLC meeting and there are other teachers from the math department my co-teacher sounds very supportive of differentiated instruction in the classroom but when I try to do it, he balks at it. The PLC groups sounds really supportive but I'm not sure what they really do in their classroom. Ms. XX has come into the afterschool meeting [PLC] already upset and can't seem to get control of herself

because 4th period class was so badly behaved and disruptive to the lesson. This is when I wonder why I came back into special education.

I've taught this course with other gen ed teachers so I know the content and feel confident in my teaching skills but this new [to me] teacher wouldn't share the teaching responsibilities. I had 2nd period planning but she had 4th so the only time we could plan was either before or after school. You know how that goes. (Interview, special education teacher)

The special education-general education divide was exacerbated by what teachers perceived as problems with administration. Co-teaching assignments were made by administrators, guidance counselors who scheduled classes, or Exceptional Children Case Managers made without serious input from general and special education teachers in the classroom. The following comments were made by special education teachers.

As I said earlier, my school is small and different from the typical high school; however I do not know where I will be teaching until I return in August. Guidance schedules the teachers' classes from the Master Schedule set in February. When more than 1 or 2 EC students are in a class, I'm assigned to that teacher as a co-teacher for the inclusive class. I'm fortunate that I know the teachers from my time here at the school but it does make it difficult to plan and provide diversified instruction when I don't know the subject I'll be co-teaching until just before school opens.

I know my EC department chair works with guidance on scheduling EC kids into classes with teachers who work better with our kids. Usually the schedules stay fixed unless the student drops or adds a course in the summer. Sometimes an administrator or guidance counselor will make a class change for teachers and that affects me. I'm comfortable with the course I teach now, usually English and US History. The other EC teachers in my department cover biology and math. But every once in a while, a glitch occurs and I'm stuck in a co-teach class with a teacher I don't know well, co-teaching a course that I don't know the curriculum!

Teachers expressed their frustration about when they were able to share ideas about improving the school and having someone with authority to take the ideas to heart

then implement the changes. A general education teacher felt a major barrier was the lack

of appreciation and acknowledgement of teachers in the special education program.

> I feel that the EC teachers are not appreciated as much as they should be and their
> contributions to student achievement aren't acknowledged the way general
> education teachers are.

In several instances, special and general education teachers found that their

philosophical perspectives on classroom issues were not in accordance with the learning

community. Both types of teachers mentioned these differences in teaching approach and

overall viewpoint.

> Every time Mrs. XX started a new section she'd get anxious about "my" kids. We
> weren't in the same PLC so she never heard "my" side of a class situation. She
> was assigned the inclusive class and I was the co-teacher that semester. She kept
> telling me I couldn't help the kids set-up the problem during practice problems,
> but I felt that was the best time to provide the intervention. I was teaching them
> strategies to remember how to set up the work, while the lead teacher was setting
> up a testing environment. If we had been in the same PLC I would have had
> another opportunity to explain why I did what I did, and it wasn't to make her
> look bad in the class. (Interview, special education teacher)

> The kids in the Exceptional Children program have to meet the same standards as
> everyone else so I don't agree when XXX continues to help the students,
> especially when I've just explained what they have to do and shown them on the
> monitor. He needs to let them figure out how to do the work. (Interview, general
> education teacher)

> The first time XXX was in my PLC I was pleased to see him because I had been
> the lone male in the group, but that changed as I listened to him over the course of
> a couple of weeks when he spoke about his classes. I was scheduled to co-teach
> with him in the spring and I started to think it might be a miserable semester. I
> started to plan how I would approach our time in the inclusive class… He wanted
> the kids to be able to write comprehension responses that were the same level and
> quality of his honors class students. That wasn't going to happen without a model
> and regular practice. He needed to understand where we were starting from then

we might get to where he wanted the kids to be. (Interview, special education teacher)

Another difference centered on the evaluation process. General education teachers were focused on EOC scores since that was the basis for their evaluation. Special education teachers, however, were not sure how student outcome evaluations applied to them. Both groups failed to comprehend the relevance of the new district evaluation tool.

> . . . being able to plan the assessment questions to know what direction the kids are supposed to be heading in and how to get them to that final outcome, are really important to me. I think my PLC is good about that, but not so focused on school change… The teachers' evaluation tool was a topic for a couple of weeks in the PLC but since we hadn't seen the tool and all the parts that make up the evaluation, I don't think anyone in my PLC was really interested in it. We focus on EOCs and how these grades compare us to other high schools in the county and in the state. (Interview, general education teacher)

> The teacher evaluation tool doesn't match my job description so when we discussed it in our PLC, I think in January or February, we did what we had to according to the weekly agenda then moved on. My group was more concerned with semester results than the evaluation over which they have no control. Again, course EOCs were more important to the teachers and to me but until these scores reflect what I do, I'm not going to worry too much. (Interview, special education teacher)

Special education teachers perceived that many general educators with whom they taught did not support the foundational piece of special education that all children should be taught in the least restrictive environment.

> I remember her complaining [in our PLC], "student X was assigned to my English I class and he was awful. Why wasn't he in a different school? He was disruptive every day and you [special education teacher] didn't do anything to stop him. I had to teach the regular kids but you wouldn't do anything to deal with his disrespectful and disruptive behavior." It was a very long semester.

When I was an administrator in another county, gen ed teachers were assigned sped teachers regardless of either's choice. Our school was an inclusive school where all the students were assigned gen ed classes unless they couldn't cope with that, but they all started in a regular class. I think that's what happens in the real world and everyone needs to work out the kinks when problems come up. (Interview, general education teacher)

On the other hand, general educators were of the opinion that they were the experts in the curriculum area when providing instruction in the classroom, so they were the lead teacher. The following excerpts from interviews with a special education teacher and then a general educator illustrate teachers' perceptions of barriers to collaboration and co-teaching relationships.

At our training in August, we always hear how the general education teacher is the expert with the curriculum but I'm the expert with strategies to "level the playing field" for our students.

If you listen to Ms. XXX who is the PLC facilitator trainer for our school, I am the lead teacher in the class because my name is on the class list and I'm the content-area teacher. The EC teacher is an equal teacher but works more with learning strategies unless she has credentials in my subject area.

Recommendations from teachers to overcome communication problems occurring in PLCs

In general, recommendations to overcome barriers were offered from special educators more often than general educators. One recommendation for ameliorating general education and special education difficulties was to set agendas so that issues were more relevant to special educators would be addressed.

If we could preview the topics for the coming year it would help us plan better in the meetings. I know we can't make major changes but I think we could tweak

some of the topics to meet the membership concerns a lot better than the vague topics we often get. (Interview, general education teacher)

Most of the time these agendas set by the principal have nothing to do with EC issues but they do address students overall. I believe that a lot of our kids haven't been identified as EC or they don't qualify but they benefit from my being in the classroom. I'd like to see the PLC group modify the agenda to meet these kinds of needs. (Interview, special education teacher)

While not directly related to the PLC per se, special education teachers felt that class lists needed to include both co-teachers' names as the teacher of record to support the view of administrators that co-teachers are equal and share all teaching responsibilities and accountability. Putting the two groups of teachers on an equal footing could boost the status of special education and create more opportunities for them to become an active part of the group. Teachers also perceived that the ongoing need to have training for teachers and administrators in how to implement and support the co-teaching model across the curriculum in all schools would have a similar effect on general and special education relationships, including interactions within the PLC.

The kids know I'm in the classroom and I'm a teacher but my name isn't on the door, I don't have access to NCWISE data, and I can't track the students' progress without using the teacher's password. Only one teacher has trusted me with that information.

Barriers related to teacher status affect the core of the collaborative relationship so necessary for a smooth running PLC as well as for effective collaboration and co-teaching. One special educator strongly and repeatedly suggested the formation of a learning community of co-teachers across the curriculum to improve the co-teaching model within the high school and set a strong foundation for the future.

I do think that if it was truly brought forth to an administrator to set up a professional learning community of just teachers who are co-teachers, I do really believe that over the course of time, if you did that for one year, I do think your co-teaching situations would be much improved throughout that year and would set that strong foundation for years to come. That's the one thing I do want to get across. I do think that that could . . . it should be approached immediately at school.

Summary

The purpose of this study was to examine the relationship between teacher participation in professional learning communities and their success in collaboration and co-teaching in the high school setting. This study has attempted to provide clarity to this relationship through interviews of general education and special education teachers at four Title I high schools. Using an interview protocol with questions targeted at discovering participants' perceptions of the relationship between teacher participation in learning communities and active engagement in collaboration and co-teaching, data were collected and analyzed. It is apparent from the shared experiences of these school professionals that relationships exist between the framework of learning communities and the collaboration and co-teaching components. The results also show that barriers exist that affect the PLC-collaboration/co-teaching relationship. A discussion of these results will connect this study to existing research in learning communities and collaborative and co-teaching relationships with the purpose of increasing understanding of the interaction of these frameworks and leading to potential future research.

CHAPTER V

DISCUSSION AND IMPLICATIONS

Introduction

The complex relationship between teacher collaboration and co-teaching and active engagement in professional learning communities was explored in this study. Despite the common implementation of PLCs as a vehicle for school change, there is still a lack of empirical data describing positive changes in collaboration and co-teaching relationships as a result of authentic participation in PLCs at the high school level. This study was conducted to help fill this gap in professional literature.

This chapter will provide an overview of the study, a statement of the problem, a re-statement of the research questions, and the data collected. The themes identified in Chapter 4 will be discussed in the context of the conceptual framework and recommendations made about the significance of the themes. Limitations of the study will be acknowledged, and finally, implications for practice and suggestions for future research will be discussed.

Summary of Study

This qualitative study investigated the use of professional learning communities a common strategy to create school change at the high school level to facilitate collaboration/co-teaching relationships between general and special educators. The rationale for this study was the lack of empirical data documenting how general and

special education teachers in PLCs at the high school level developed collaborative

relationships including co-teaching. Demographic data, pre-interview surveys, and face-

to-face interviews were gathered from special education and general education teachers.

Twelve of the teachers had co-taught together and participated in the same PLC.

Interviews were conducted and transcribed verbatim. The transcripts were

analyzed according to procedures outlined in Chapter III and themes were identified

related to the following research questions:

1. What is the relationship between general and special education teachers

    participating in a professional learning community and the quality of the

    collaborative relationships including co-teaching?

2. What aspects of PLCs facilitate collaborative and co-teaching relationships?

3. What barriers to collaborative and co-teaching relationships exist within PLCs

    and what recommendations did teachers have for improving them?

The basic hypothesis of the study was that the various features of the PLCs,

including shared mission, vision, values, and goals, collaborative teams, collective

inquiry; action orientation-experimentation, continuous improvement, and results

orientation would have a positive impact on the quality of teacher collaboration and co-

teaching. These features of PLCs are in the conceptual framework for the study shown

below in Figure 2.

This study revealed four key themes related to Research Questions 1 and 2: (a) the

PLC provided a protected time for teachers to collaborate with each other and build

cohesive relationships; (b) teachers benefitted from the multiple perspectives of teachers

in learning community meetings; (c) teachers appear to benefit from the presence of co-teachers in the PLC who have effectively worked together in the past; (d) teachers felt that through the PLC, they learned how to analyze data and plan instruction more collaboratively.
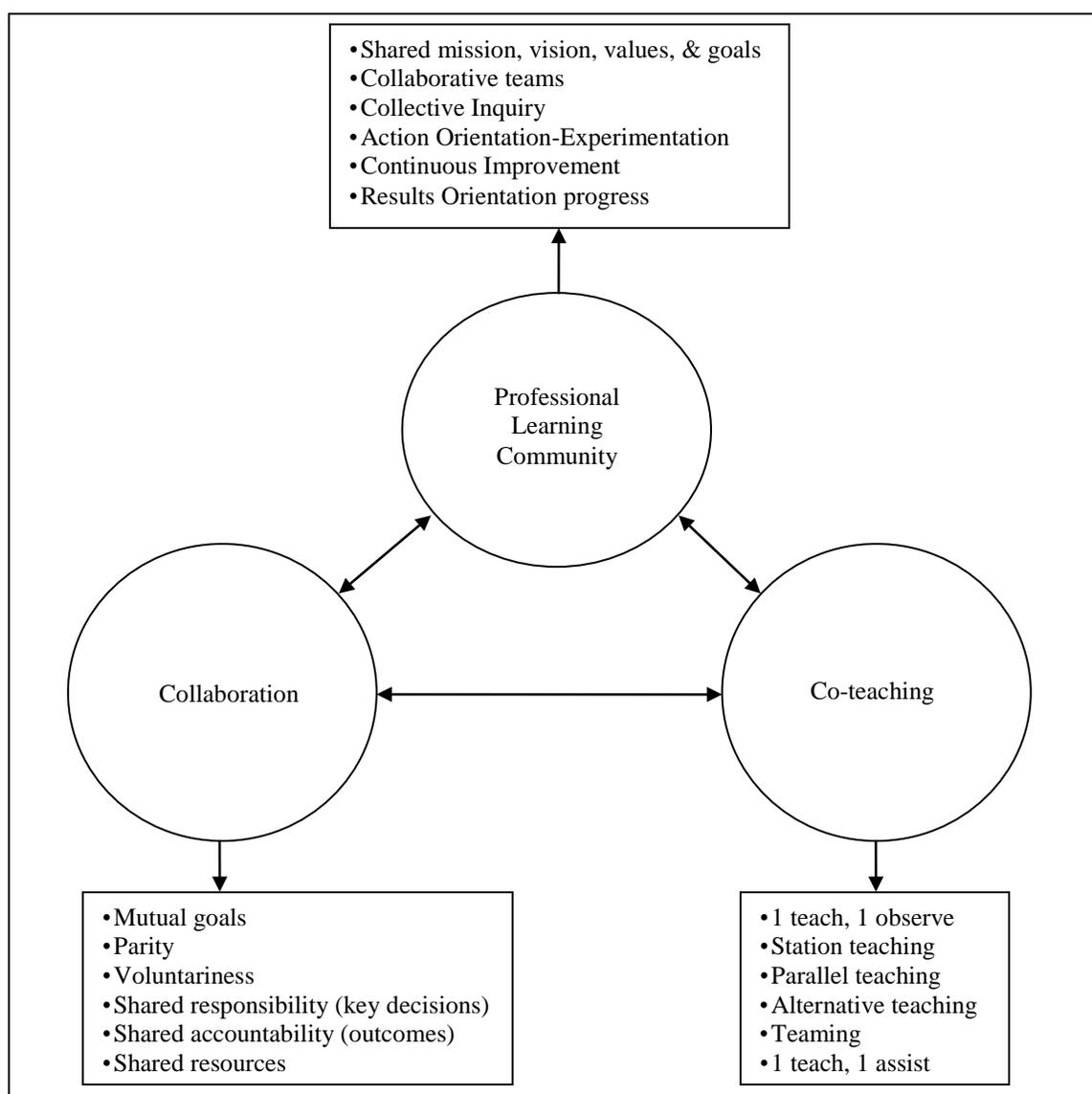
Adapted from Friend (2008) and Eaker et al. (2002)

Figure 2. Features of PLCs in the conceptual model.

The study also revealed three key themes related to research question 3: (a) the process of assigning general and special educators to PLCs is not systematic; (b) the content covered in PLC meetings is often not related to topics relevant to general and special education teachers collaborating and co-teaching; (c) differences between general and special educators can undermine the effective functioning of the PLC. All of these themes are discussed within the framework of the conceptual framework just described.

Shared Mission, Visions, Values, and Goals

A major element in the PLC model is that all members have shared mission, vision, values, and goals (DuFour et al., 2004; Hord, 2009; Rosenholtz, 2013). The hypothesis here is that teachers coming together as such in a PLC would have a positive effect on their collaboration and co-teaching.

To this end, teachers needed to view academic issues addressed in PLC meetings through multiple lenses to understand the depth of the issue. It was evident from the interview data that teachers benefited from the multiple perspectives of teachers brought together in learning community meetings. The opportunity for teachers to articulate their perspectives on specific topics is essential if teachers are to co-exist in a common PLC and work with teachers from other learning communities (Doppelt et al., 2009; Lieberman & Mace, 2009).

Throughout the year, teachers were encouraged to participate in professional development workshops, enroll in classes at institutions of higher education, and attend state or national conferences where they have opportunities to learn innovative teaching strategies that can be incorporated into classroom instruction. Teachers who participated

in these opportunities took back different perspectives on teaching strategies, activities, interventions, instructional websites, as well as professional contacts to assist with classroom issues (Little, 2003). The opportunity to network with other professionals is a positive element that was brought up at PLC meetings throughout the year. It was felt that academic goals could be met through continuing collaboration with supportive colleagues at their schools.

One ongoing element of PLCs that addressed shared mission and vision involved administrators requiring their teachers to visit another teacher's class and conduct a short (10-15 minute) observation. Sometimes teachers were to observe a teacher from their department, while other times the observation was to be of someone who taught the same course (Nichols et al., 2007). Although observation checklists were to be given to the classroom teacher, often times the two teachers collaborated about what was actually observed in the class and how improvements could be made to the instruction or activity. The weekly PLC meeting following the observations often became a forum for different perspectives on similar courses since everyone had completed the classroom s*napshot* observation. Teachers frequently believed they were doing one behavior, but the observer saw something totally different. With short conferences after the observation, teachers could briefly discuss the lesson, student activity, class management, distractions or disruptions that occurred in the brief observation time. When the observation was done correctly, teachers shared the positive elements of the class and provided suggestions that were based on realistic observations of teacher/student interactions (Cox et al., 2011;

Supovitz, 2002). Multiple perspectives from teachers of what they observed actually being taught in the classroom led to meeting the vision and goals of the school.

Interestingly the EC teachers' observations were markedly different that those of the general education teachers. While general education teachers believed they were differentiating instruction for students with disabilities and making their modifications, the EC teachers did not necessarily observe that. When this topic was addressed in the PLC, the general education teachers often dismissed it as occurring later, after the observer had left the class. The observation activity was designed to allow teachers to observe teacher-quality traits in progress during the work day with specific instruction on the follow-up activity in PLCs (Brownell et al., 2004). This opportunity for EC teachers to address a major shortcoming was critical in meeting IEP guidelines and doing so during PLC meetings addressed shared goals and values for the students.

Although the EC teachers were often critical of what general education teachers said they were doing in class and what was actually observed during the *snapshot* observation they were supportive in explaining how and why differentiated instruction was needed for students to be successful. The PLC meetings where co-teachers were assigned provided an opportunity for all members to collaborate on different strategies that were effective in their classrooms.

The data revealed that the process of assigning general and special educators to PLCs was often not systematic and that this tended to undermine the PLCs common mission, vision, values, and goals. Mastropieri et al. (2005) stated that the relationship between co-teachers was an essential component to the success or failure of an inclusive

class and students with disabilities. The relationship between co-teachers was built on trust and respect for the expertise the other teacher brought to the classroom (Vangen & Huxham, 2003). When co-teachers were not assigned to the same PLC it disrupted the teaching relationship since they worked as a unit but met as individuals to discuss common school and instructional goals.

While co-teaching was successful when both practiced effective teaching behaviors such as structure, clarity of instruction, student engagement, and enthusiasm for the course content, it could be detrimental when not supported by school administrators (Azzopardi, 2011; Curcic et al., 2011). Since PLC assignments in this study were made by an onsite administrator, several teachers questioned the system for assigning teachers to the PLC. They wanted someone to clarify the purpose for assigning teachers to PLCs if not to collaborate on content-specific material that lead to improved student performance and improved overall school performance (Wong, 2010).

Each school administrator had the flexibility of creating PLCs to meet county guidelines for the upcoming academic year as well as individual school mission and vision statements. County administrators determined overall school goals for the whole system based on data provided by the state, and allowed each school to create a system to meet these goals. The county school board strongly advocates the learning community model, yet allows each school administrator to implement the program with minimal follow-up support to ensure fidelity to the PLC model. Several teachers had been involved in the PLC model in other school districts; other teachers had been involved since the inception of the program for the whole term it had been in place in the county;

still other teachers had entered the school system and joined the PLC model as it was

already in place. Many teachers felt there was no structural support to keep the model in

place and move both students and teachers forward to meet the goals as the PLC was

initially implemented (York-Barr & Duke, 2004). They did not see how the annual

changes of PLC membership improved student progress or helped them as professionals

meet the school mission, vision, values, or goals.

Action Orientation and Experimentation

DuFour (2007), DuFour et al. (2004), and Hord (2009) refer to action orientation

and experimentation as turning aspirations into action; visions into reality; recognizing

that learning involves action; teams serve as catalysts for action and learning.

Unfortunately, the content covered in PLC meetings was often not related to topics

relevant to general and special education teachers collaborating and/or the co-teaching

model. The facilitator for each PLC attended a monthly meeting where topics for the

ensuing weeks were assigned. Teachers were given minimal direction to assist with

facilitating the meeting, other than the topic of discussion, action steps and responsible

person, and artifacts for the meeting such as handouts, work samples, and data collected

by teachers. While this was simply a guideline for the group, most stayed within the

framework provided to the facilitator. Topics that were assigned to the collaborative

group related to lesson plan structure, EVAAS predictions, follow-up with parent contact,

in-school academic interventions to assist students who were struggling, etc. If co-

teachers were not in the same PLC, they heard different input based on the academic

grouping to which they were assigned. If co-teachers were in the same PLC they were

often more actively engaged in the discussion topic, and the EC teachers related the topic, when possible, to the needs of students who struggled with learning (Bingham, Parker, Finney, Riley, & Rakes, 2006).

Several PLC groups deviated from the assigned weekly topic since they knew there was no follow-up from administrators to ensure compliance from the teachers. Nevertheless they did focus on student or teacher needs and provided support in whatever form was available, although they did not meet the assigned goal for that particular meeting (Paterson, 2007). They did not see the relevance to their PLC group's needs.

Continuous Improvement

Systematic improvement for both students and teachers is the guideline for this element of continuous improvement. Improvement and achievement focus on, among other things, problem-solving and collaborative analysis of work samples (Bruce et al., 2010; Bulgren et al., 2007).

Students are accountable for their learning and their learning is measured through formative assessments spread throughout the semester. Students' final opportunity to demonstrate mastery of a series of concepts is the EOC in their course (Bouck, 2007). This makes it reasonably easy for teachers to determine students' academic achievement. If students are not making continuous progress, collaboration during PLC meetings provided teachers with interventions to assist students in meeting course goals. Teachers, on the other hand, have formative assessments throughout the year in the form of *snapshot* observations by administrators. The PLC meetings provided the opportunity for co-teachers to discuss the current evaluation tool to understand its implementation and

plan strategies to improve instruction. This evaluation process followed the McCREL evaluation tool which is new to administrators as well as teachers and required several faculty meetings to explore and explain with any degree of confidence from administrators. Ideally, the purpose of formative assessments is to foster perpetual learning for the teacher, who in turn, cultivates learning in students (DuFour, 2007; Richardson, 2011).

Collaborative Teams

Teachers who work collaboratively and interdependently as a team to achieve common goals are the force behind successful PLCs. Personal professional growth is essential for organizational growth within the school while teachers are engaged in sharing this newly acquired information with colleagues in their PLCs (Doppelt et al., 2009). Protected time for teachers to plan is one critical element teachers believe is vital for their continuous improvement in their professional field.

A critical theme that emerged from the research, protected-time for teachers to collaborate with each other and build cohesive relationships, suggests the importance of shared planning time. Indeed, the data showed that teachers interviewed considered having time to plan instruction with colleagues as essential. Although teachers had one planning period each day to grade papers, contact parents, plan instructional lessons, co-teachers often did not have the same planning time. Several studies have strongly recommended a minimum of forty-five minutes contact time each day for teachers to interact with colleagues, specialists, and support staff to address curriculum and student learning needs (DuFour et al., 2004; Hindin et al., 2007). The teachers felt that the PLC

weekly meeting provided opportunities for members to collaborate, plan, and reflect on ways to improve their teaching skills. Having time together may be especially important as the new Common Core Standards are introduced. General educators are more familiar with the core standards in their content area; PLC time can be used to better acquaint special educators with the standards.

The data also showed that general education teachers who taught with the same EC teacher from previous semesters were not as concerned about common planning time, although they preferred to have some time each week to make long-term plans and collaborate about special events (Falk-Ross et al., 2009). General education teachers who had different EC teachers each semester were less trusting in handing over control of the class instruction, thus these teachers saw more of a need for additional time for them to plan together in a regularly scheduled time.

Data showed that smaller collaborative teams, with past experience together are stronger and teachers were more trusting and confident with their colleagues' instructional experience, class management style, and overall comfort of class control (Vangen & Huxham, 2003). At least one pair of co-teachers at each high school alluded to the trust they had built with their co-teacher. The amount of time they collaborated both in the class and outside the classroom was instrumental in creating this trust. The quality of the relationship between co-teachers had an effect on the inclusive class model utilized by the teachers. General education teachers with tenuous co-teaching relationships were less likely to apply a strong co-teaching model in the classroom due to their lack of confidence in their co-teacher. Common planning time as well as the time

available during PLC meetings provided the additional time needed to build the requisite

relationship needed for effective co-teaching (Keefe & Moore, 2004).

Weekly learning community meetings provided an additional three to four hours

of collaborative opportunities per month for teachers who taught similar classes. The high

schools that implemented the PLC model with fidelity tended to have better teacher

responses when they collaborated; evidently, the weekly meetings provided a structured

support for all members of the PLC. Room assignments are a common contributing factor

to informal collaboration. Teachers in the same hallway or building collaborate more

often than teachers who are assigned rooms in other campus buildings. As special

education teachers do not benefit from room placements they have to create and grasp

opportunities as they occur in order to collaborate outside the classroom. The PLC

meeting provided them with an opportunity to build relationships while working on

collaborative teams.

Collective Inquiry

PLC teams are expected to explore best-practices and common sense when

interpreting the levels of achievement of their students. As a group, they should be

investigating new methods and teaching strategies in an effort to *hook* students' interest

in the course. While we want teachers to articulate problems they encounter, the data

indicated that ongoing differences among educators can undermine PLCs**.** Conflicts about

PLC beliefs, how to plan for co-teaching, and how to manage misbehavior were some of

the more critical elements that undermined PLC functioning. As conflicts arise, they must

be resolved through problem-solving skills which most often involve collective inquiry to

get to the root of the issue. Most co-teachers develop distinct working roles and responsibilities, strategies for differentiated instruction, and methods of emphasizing statewide EOC assessments (Keefe & Moore, 2004).

Teachers who came to PLC meetings with a different agenda that did not relate to the courses and PLC purpose, interfered with group progress, and impeded other PLC members from meeting their own goals (Austin, 2001). While some PLCs modified their weekly agendas, the teachers who arrived at the meeting with a totally different focus were of concern to the learning community as it employed collective inquiry to meet school and individual professional goals.

Perhaps the most effective strategy to eliminate or minimize the presence of different foci of concern was through communication. Several teachers mentioned the use of e-mail to provide a reminder of the meeting and the upcoming topic. However, the e-mail also requested additional concerns that teachers wanted added to the agenda. Providing meeting follow-up contact with a copy of the meeting notes was often cited as another way to keep all members on the same page. These meeting notes needed to be included on the Professional Portfolio flashdrive each teacher compiled throughout the year. Active Listening skills are another strategy to keep the collaborative group focused. While this skill set is often taught in primary grades, several teachers believed these skills would minimize interruptions during the meetings that disrupted the limited time for PLC members to learn and practice teaching strategies that would benefit their students. Several teachers wanted to explore strategies to avoid the differences that continued to come up regularly. Scanlon et al. (2005) noted that interactive meetings provided a

moderate form of staff development support that fell into the domain of PLCs as they applied collective inquiry strategies.

Results Orientation

In order to graduate from high school, students must demonstrate a minimum level of proficiency in state mandated courses. Levels of student proficiency must be examined by the PLC teams to determine if the goals are accomplished or whether the intentions are good but not purposeful. Co-teaching potentially benefits both students and teachers in this area since both teachers must monitor and document student progress through EOCs or IEP goals.

Teachers in the professional learning community appeared to benefit from the presence of co-teachers who have effectively worked together in the past. One of the paramount benefits to the PLC membership was the continuous stream of information the EC teachers provided to the general education teachers (Weiss & Lloyd, 2002). It seemed that the learning community was a source of regular professional development for participating teachers, especially when a new directive from an administrator had an impact on classroom instruction. Early in the year, all PLC members were renewing acquaintances or meeting new colleagues yet they were also using the PLC forum to investigate matters such as which teachers were assigned to classes with an abundance of students with disabilities and who was assigned to co-teach these classes.

The PLC meeting was also the perfect venue to showcase co-teaching. When both co-teachers were assigned to the same group, they shared their successes with the other teachers. First there was sharing of the powerful benefit of reducing the teacher/student

ratio when co-teachers are in a class. The typical class at high school is between twenty-eight and thirty; however co-taught classes are often reduced in size to less than twenty-five while adding another highly-qualified-teacher to the classroom. The ratio of teachers to students drops from 1/28 to 2/28 or 1/14. The PLC meetings were also filled with behavior discussions and here again, teaches learned from the co-teachers who were present. For example, co-teachers had the same types of misbehavior issues, yet coped with them differently since there were two adults in the classroom. Redirection or removal of the student from the classroom were the most common interventions; while one teacher dealt with a student, the other continued instruction with the remaining students. The presence of co-teachers in the PLC was critical and may have accounted for the relatively high rate of satisfaction teachers expressed with co-teaching on the pre-interview survey.

Teachers felt that through the PLC, they learned how to analyze data and plan instruction more collaboratively. As teachers met regularly in PLCs with aggregate data either from the previous year or current year, open discussion on what scores meant and why some classes made more progress than others became important to the whole group (Trent, 1998). For example, quarterly exams provided opportunities for PLC members to read their raw data and see which concepts need to be reviewed or retaught.

The findings just discussed addressed each element of the conceptual framework. The elements of the conceptual framework (shared mission, vision, values, and goals; collaborative teams; collective inquiry; action orientation and experimentation;

continuous improvement; and results orientation progress) are aligned with the themes in

Table 8.

Table 8. Conceptual Framework Elements Aligned with Themes

Elements	Themes
Shared mission, vision, values, & goals	Teachers benefitted from the multiple perspectives of teachers in learning community meetings. The process of assigning general and special educators to PLCs is not systematic.
Collaborative teams	The PLC provided protected time for teachers to collaborate with each other and build cohesive relationships.
Collective Inquiry	Differences between general and special educators can undermine the effective functioning of the PLC
Action orientation - experimentation	PLC agenda topics are often not relevant to collaboration and co-teaching
Continuous Improvement	Content covered in PLC meetings is often not related to topics relevant to general and special education teachers collaborating and co-teaching
Results orientation progress	Teachers felt that through the PLC they learned how to analyze data and plan instruction more collaboratively.

Limitations

There were several limitations to this study: the potential bias of the researcher; a

restricted sample of high schools; and participant sensitivity to maintaining

confidentiality. First, the researcher was an employee of the district, co-taught at one of

the participating schools and participated in multiple PLCs. This extensive experience in

the district could have biased her interpretations of the data. Second, the study was

conducted only at three Title I high schools. Thus the ability to generalize the results of

this study is limited. While the sample size was adequate for obtaining study data, it is not possible to generalize the results beyond the demographics of the studied schools. Third, participants were sensitive to the issue of the researcher maintaining confidentiality. While positive examples were shared with ease, discussion of barriers and problems within the individual schools elicited carefully constructed responses to avoid any indication of low job satisfaction. Last, it should be mentioned that initially, dyads of co-teachers who had participated in the same PLC were to have been interviewed. Unfortunately, this was not possible due to the fact that special education teachers were not consistently assigned to the same general education teacher or to the same professional learning community.

Implications

The findings of this study show that professional learning communities can be an effective setting for fostering collaboration and co-teaching. For example, assigning both co-teachers to the same learning community can be of benefit to the co-teachers themselves, colleagues who teach similar courses, and the culture of the school itself. Further, providing additional training for co-teachers on a regular basis seems to maximize the effectiveness of the PLCS, providing additional support to both general and special educators. The PLC experiences appeared to set the occasion for a strong co-teaching experience when teachers return to the classroom. Indeed, in that setting, expectations of teachers' roles, district and school objectives, and achievement are articulated and clarified. Brownell et al. (2004) state that collaboration is a tool for helping teachers work with students with disabilities with an understanding that general

education teachers' skills and teaching practices will improve through ongoing collaborative practices. While collaboration is a great potential tool as this study showed, differences in familiarity with curriculum, pedagogy, and class management can have a negative impact on its effects.

It is critical that special education teachers in inclusive settings become embedded in their curricular departments with their general education colleagues with whom they teach in order to effectively serve students with disabilities. PLCs are one tool that can engage teachers of all students in the mission of meeting all students' needs and minimizing the barriers that prevent student progress. Lieberman and Mace (2009) wrote that teaching practices can be shared between practitioners with varying levels of experience. The participants of this study supported this concept by sharing vignettes of class incidents, co-teaching experiences, and individual aspirations for their students and their colleagues. Relationships between co-teachers appeared to improve when they were assigned to the same PLC groups. Teachers spoke candidly about aspects of the PLC that facilitated the co-teaching relationship. They also shared perceptions of barriers that prevent them from developing the needed relationships to co-teach effectively.

The findings of this study also have implications in the areas of professional development. As shown in this study, professional development in effective co-teaching strategies should be provided by educators who have successful experience in these areas, and can demonstrate and share strategies that are reasonable to be implemented into the course curriculum with minimal disruption to course standards.

Future Research

While there appears to be a relationship between participation in a PLC and the perceived level of collaboration and co-teaching between general and special educators, this relationship needs to be examined more directly and systematically. For example, while it is clear that the time provided by PLCs was valuable, it is unclear how and weather the various elements of the PLC were indeed helpful, or whether just giving teachers a block of time without other meeting requirements would have been just as effective. Controlled, quantitative studies are needed to resolve this important issue.

Also, instead of relying on only surveys and interviews, conducting observational studies that document more directly the PLC process, would be valuable. Such studies could also include observations of co-teachers before and after PLC participation to determine the impact of the PLC more quantitatively.

One of the reasons PLC participation may not have been as robust as expected is that the PLC were not specifically designed to deal with issues directly related to general educators interacting with special educators. Indeed, the results showed teacher concern that the agendas were not always relevant to their needs. For example, given that a number of teachers in the study expressed the desire to be involved insetting PLC agendas, the impact of the PLCs with teacher-developed agendas could be studied. Examining the impact of PLCs specifically designed with co-teaching strategies in mind would also be helpful.

Ultimately, the benefit of any procedure lies in its ultimate impact on student achievement. While the survey and interview data show teacher felt that students were

definitely benefitting from co-teaching, future studies of the relationship between PLCs and co-teaching and collaboration need to include measures of student achievement when feasible.

Summary

The purpose of this study was to examine the relationship between teacher participation in professional learning communities and the success in collaboration and co-teaching in the high school setting as a result of that participation. This topic was addressed to fill a gap in the professional literature that looked at professional learning communities in high school. Previous research had suggested that using professional learning communities was a method of bringing about school reform to improve student academic achievement as well as meet the professional needs of educators (DuFour et al., 2004; Scanlon et al. 2005; Curcic et al., 2011). The results showed that the ongoing opportunity to collaborate on a regular basis with colleagues in a PLC was beneficial overall, but further research examining more precisely the impact of PLCs on collaborative and co-teaching relationships needs to be conducted.

REFERENCES

Angelides, P. (2008). Patterns of inclusive education through the practice of student teachers. *International Journal of Inclusive Education, 12*(3), 317–329.

Argyropoulos, V., & Stamouli, M. (2006). A collaborative action research project in an inclusive setting: Assisting a blind student. *British Journal of Visual Impairment, 24*(3), 128–124.

Austin, V. (2001). Teachers' beliefs about co-teaching. *Remedial & Special Education, 22*(4), 245–255.

Azzopardi, A. (2011). Creating inclusive communities. *International Journal of Inclusive Education, 15*(1), 1–4.

Bingham, S., Parker, S., Finney, P., Riley, J., & Rakes, J. (2006). The teachers as Researchers Academy: building community, expertise, and a knowledge base for teaching. *Phi Delta Kappan, 87*(9), 681–688.

Bezzina, C. (2006). "The road less traveled': Professional communities in secondary school. *Theory into Practice, 45*(2), 159–167.

Bos, C., Nahmias, M., & Urban, M. (1997). Implementing interactive professional development in a workshop course on educating students with AD/HD. *Teacher Education and Special Education, 20*(2), 132–145.

Bouck, E. (2007). Co-teaching . . . not just a textbook term: implications for practice. *Preventing School Failure, 5*(2), 46–51.

Brownell, M., Yeager, E., Sindelar, P., vanHover, S., & Riley, T. (2004). Teacher learning cohorts: A vehicle for supporting beginning teachers. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children, 27*(2), 174–189.

Bruce, C., Esmonde, I., Ross, J., Dookie, L., & Beatty, R. (2010). The effects of sustained classroom-embedded teacher professional learning on teacher efficacy and related student achievement. *Teaching and Teacher Education, 26,* 1598–1608.

Bulgren, J., Deshler, D., & Lenz, B. (2007). Engaging adolescents with LD in higher order thinking about history concepts using integrated content enhancement routines. *Journal of Learning Disabilities, 40*(2), 121–133.

Bullough, R., & Baugh, S. (2008). Building professional learning communities within a university-public school partnership. *Theory into Practice, 47,* 286–293.

Caron, E., & McLaughlin, M. (2002). Indicators of beacons of excellence schools: What do they tell us about collaborative practices? *Journal of Educational and Psychological Consultation, 13*(4), 285–313.

Carter, E., Moss, C., Hoffman, A., Chung, Y., & Sisco, L. (2011). Efficacy and social validity of peer support arrangements for adolescents with disabilities. *Exceptional Children, 78*(1), 107–125.

Carter, N., Prater, M., Jackson, A., & Marchant, M. (2009). Educators' perceptions of collaborative planning processes for students with disabilities. *Preventing School Failure, 54*(1), 60–70.

Carter, E., Sisco, L., Brown, L., Brickham, D., & Al-Khabbaz, Z. (2008). Peer interactions and academic engagement of youth with developmental disabilities in inclusive middle and high school classrooms. *American Association on Intellectual and Developmental Disabilities, 113*(6), 479–494.

Chappuis, J. (2009). *Seven strategies of assessment for learning*. Boston, MA: Pearson Publishing.

Colbert, J., Brown, R., Choi, S., & Thomas, S. (2008). An investigation of the impacts of teacher-driven professional development on pedagogy and student learning. *Teacher Education Quarterly, 35*(2), 135–154.

Colker, R., Milani, A., & Tucker, B. (2003). *The Americans with Disabilities Act* (4th ed.). Cincinnati, OH: Anderson Press.

Cook, L., & Friend, M. (2010). The state of the art of collaboration on behalf of students with disabilities. *Journal of Educational and Psychological Consultation, 20*(1), 1–8.

Coombs-Richardson, R., & Mead, J. (2001). Supporting general educators' inclusive practices. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children, 24*(4), 383–390.

Cox, B., McIntosh, K., Reason, R., & Terenzini, P. (2011). A culture of teaching: Policy, perception, and practice in higher education. *Research in Higher Education, 52*(8), 808–829.

Creswell, J. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Los Angeles, CA: Sage.

Cromley, J., & Azevedo, R. (2007). Testing and refining the direct and inferential

    mediation model of reading comprehension. *Journal of Educational Psychology,*

    99(2), 311–325.

Curcic, S., Gabel, S., Zeitlin, V., Cribaro-Difatta, S., & Glarner, C. (2011). Policy and

    challenges of building schools as inclusive communities. *International Journal of*

    Inclusive Education, 15(1), 117–133.

Damore, S., & Murray, C. (2009). Urban elementary school teachers' perspectives

    regarding collaborative teaching practices. *Remedial and Special Education,*

    30(4), 234–244.

Dieker, L., & Murawski, W. (2003). Co-teaching at the secondary level: Unique issues,

    current trends, and suggestions for success. *High School Journal, 86*(4), 1–13.

Doolittle, G., Sudeck, M., & Rattigan, P. (2008). Creating professional learning

    communities: The work of professional development schools. *Theory into*

    Practice, 47, 303–310. doi:10.1080/00405840802329276

Doppelt, Y., Schunn, C., Eli, S., Mehalik, M., Reynolds, B., & Ward, E. (2009).

    Evaluating the impact of a facilitated learning community approach to

    professional development on teacher practice and student achievement. *Research*

    in Science & Technological Education, 27(3), 339–354.

DuFour, R. (2004). What is a "professional learning community"? *Educational*

    Leadership, 61(8), 6–11.

DuFour, R. (2007). Professional learning communities: A bandwagon, an idea worth considering, or our best hope for high levels of learning? *Middle School Journal, 39*(1), 4–8.

DuFour, R. (2011). Work together but only if you want to. *Phi Delta Kappan, 92*(5), 57–61.

DuFour, R., & DuFour, R. (2004). What is a "professional learning community"? *Educational Leadership, 61*(8), 6–11.

DuFour, R., DuFour, R., Eaker, R., & Karhanek, G. (2004). *Whatever it takes: How professional learning communities respond when kids don't learn*. Bloomington, IN: National Educational Service.

Dymond, S., Renzaglia, A., Gilson, C., & Slagor, M. (2007). Defining access to the general curriculum for high school students with significant cognitive disabilities. *Research & Practice for Persons with Severe Disabilities, 32*(1), 1–15.

Eaker, R., DuFour, R., & DuFour, R. (2002). *Getting started reculturing schools to become professional learning communities*. Bloomington, IN: Solution Tree.

Elster, D. (2009). Biology in context: Teachers' professional development in learning communities. *Journal of Biology Education, 43*(2), 53–61.

Falk-Ross, F., Watman, L., Kokesh, K., Iverson, M., Williams, E., & Wallace, A. (2009). Natural complements: Collaborative approaches for educators to support students with learning disabilities and literacy difficulties. *Reading & Writing Quarterly, 25*(1), 104–117.

Fitzpatrick, J., Sanders, J., & Worthen, B. (2004). *Program evaluation: Alterative approaches and practical guidelines.* Boston, MA: Pearson Allyn and Bacon.

Fogarty, R., & Pete, B. (2010). Professional Learning 101: A syllabus of seven protocols. *Kappa, 91*(4), 32–34.

Friedman, I. (2000). Burnout in teachers: Shattered dreams of impeccable professional performance. *Journal of Clinical Psychological, 58*(5), 595–606.

Friend, M. (2000). Myths and misunderstandings about professional collaboration. *Remedial and Special Education, 321*(3), 130–133.

Friend, M. (2008). *Co-Teach! A handbook for creating and sustaining effective classroom partnerships in inclusive schools.* Greensboro, NC*:* Marilyn Friend, Inc.

Friend, M., & Bursuck, W. (2012*). Including students with special needs: A practical guide for classroom teachers* (6th ed.). Boston, MA: Pearson.

Friend, M., & Cook, L. (2003). *Interactions collaborations skills for school professionals.* Boston, MA: Allyn and Bacon.

Friend, M., Cook, L., Hurley-Chamberlain, D., & Shamberger, C. (2010). Co-teaching: An illustration of the complexity of collaboration in special education. *Journal of Educational and Psychological Consultation, 20*(1), 9–27.

Ghesquière, P., & Van der Aalsvoort, G. (2004). Special needs education as a social system: Responding to the challenge of methodology. *International Journal of Disability, Development and Education, 51*(2), 217–222.

Goddard, Y., Goddard, R., & Tschannen-Moran, M. (2007). A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement in public elementary schools. *Teachers College Record, 109*(4), 877–896.

Guthrie, J., Wigfield, A., Humenick, N., Perencevich, K., Taboada, A., & Barbosa, P. (2006). Influences of stimulating tasks on reading motivation and comprehension. *Journal of Educational Research, 99*(4), 232–245.

Hager, K. (2012). Self-monitoring as a strategy to increase student teachers' use of effective teaching practices. *Rural Special Education Quarterly, 31*(4), 9–17.

Hang, Q., & Rabren, K. (2008). An examination of co-teaching: Perspectives and efficacy indicators. *Remedial and Special Education, 30*(5), 259–268.

Hindin, A., Morocco, C., Mott, E., & Aguilar, C. (2007). More than just a group: Teacher collaboration and learning in the workplace. *Teachers and Teaching: Theory and Practice,* 13(4), 349–376.

Hines, J. (2008). Making collaboration work in inclusive high school classrooms: Recommendations for principals. *Intervention in School and Clinic, 43*(5), 277–282.

Holstein, J., & Gubrium, J. (1995). *The active interview*. Thousand Oaks, CA: Sage.

Hord, S. (1999). Assessing a school staff as a community of professional learners. *Southwest Educational Development Laboratory, 7*(1), 1–8.

Hord, S. (2009). Professional learning communities. *National Staff Development Council, 30*(1), 40–43.

Horne, P., & Timmons, V. (2009). Making it work: Teachers' perspectives on inclusion. *International Journal of Inclusive Education, 13*(3), 273–286.

Hudson, P., & Glomb, N. (1997). If it takes two to tango, then why not teach both partners to dance? Collaboration instruction for all educators. *Journal of Learning Disabilities, 30*(4), 442–448.

Jitendra, A., Burgess, C., & Gajria, M. (2011). Cognitive strategy instruction for improving expository text comprehension of students with learned disabilities: The quality of evidence. *Council for Exceptional Children, 77*(2), 135–159.

Katz, S., & Earl, L. (2010). Learning about networked learning communities. *School Effectiveness and School Improvement, 21*(1), 27–51.

Keefe, E., & Moore, V. (2004). The challenge of co-teaching in inclusive classrooms at the high school level: What the teachers told us. *American Secondary Education, 32*(3), 77–88.

Lewis, R., & Doorlag, D. (1999). *Teaching special students in general education classrooms* (5th ed.). Upper Saddle River, NJ: Merrill Prentice Hall.

Lieberman, A., & Mace, D. (2009). The role of 'accomplished teachers' in professional learning communities: Uncovering practice and enabling leadership. *Teachers and Teaching: Theory and Practice, 15*(4), 459–470.

Little, J. W. (2003). Inside teacher community: Representations of classroom practice. *Teachers College Record, 105*(6), 913–945.

Lujan, N., & Day, B. (2009). Professional learning communities: Overcoming the roadblocks. *Delta Kappa Gamma Bulletin, 76*(10), 10–17.

Manset-Williamson, G., & Nelson, J. (2005). Balanced strategic instruction for upper-elementary and middle school students with reading disabilities: A comparative study of two approaches. *Learning Disability Quarterly, 28*(1), 59–74.

Mastropieri, M., Scruggs, T., Graetz, J., Norland, J., Gardizi, W., & McDuffie, K. (2005). Case studies in co-teaching in the content areas: Successes, failures, and challenges. *Intervention in school and Clinic, 40*(5), 260–270.

Maxwell, J. (2005). *Qualitative research design: An interactive approach* (2nd ed.). Thousand Oaks, CA: Sage.

McAleavy, T. (2013). Taking schools to the next level. *Education Journal, 159.*

McGloin, S. (2008). The trustworthiness of case study methodology. *Nurse Researcher, 16*(1), 45–55.

Miles, M., & Huberman, A. M. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage.

Mohr, N., & Dichter, A. (2001). Building a learning organization. *Phi Delta Kappan, 82*(10), 744–747.

Muijs, D., & Harris, A. (2007). Teacher Leadership in (In)action: Three case studies of contrasting schools. *Educational Management Administration & Leadership, 35*(1), 111–134.

Murawski, W. (2006). Student outcomes in co-taught secondary English classes: How can we improve? *Reading & Writing Quarterly, 22*(3), 227–247.

Murawski, W., & Hughes, C. (2009). Response to intervention, collaboration, and co-teaching: A logical combination for successful systemic change. *Preventing School Failure, 53*(4), 267–277.

National Center for Educational Statistics. (2011). *Fast facts.* Retrieved October 9, 2011, from http://nces.ed.gov/fastfacts/display.asp?id=59

North Carolina Department of Public Instruction. (2010). Retrieved December 26, 2010, from www.ncpublicschools.org/nclb.org

Nichols, W., Young, C., & Rickelman, R. (2007). Improving middle school professional development by examining middle school teachers' application of literacy strategies and instructional design. *Reading Psychology, 28*(1), 97–130.

Paterson, D. (2007). Teachers' in-flight thinking in inclusive classes. *Journal of Learning Disabilities, 40*(5), 427–435.

Perry, N., Walton, C., & Calder, K. (1999). Teachers developing assessments of early literacy: A community of practice project. *Teacher Education & Special Education, 22*(4), 218–233.

Phillips, J. (2003). Powerful learning: Creating learning communities in urban school reform. *Journal of curriculum and Supervision, 18*(3), 240–258.

Pounder, J. (2006). Transformational leadership: Practicing what we teach in management classroom. *Journal of Education for Business, 48*(1), 2–6.

Regional Educational Laboratory at SERVE Center UNC Greensboro. (2008). *Preparing elementary school teachers in the Southeast Region to work with students with disabilities.* No. 065.

Rice, D., & Zigmond, N. (2000). Co-teaching in secondary schools: Teacher reports of developments in Australian and American classrooms. *Learning Disabilities Research & Practice, 5*(4), 190–197.

Richardson, J. (2011). The ultimate practitioner. *Kappa, 93*(1), 27–32.

Riessman, C. (1993). *Narrative analysis.* Thousand Oaks, CA: Sage.

Rosenholtz, S. (1985). Effective schools: Interpreting the evidence. *American Journal of Education, 93*(3), 352–388.

Rosenholtz, S. (2013). *About PLCs: History of PLCs.* Retrieved May 12, 2013, from http://www.allthingsplc.info/about/evolution.php

Scanlon, D., Gallego, M., Duran, G., & Reyes, E. (2005). Interactive staff development supports collaboration when learning to teach. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children, 28*(1), 40–51.

Scribner, J., Cockrell, K., Cockrell, D., & Valentine, J. (1999). Creating professional communities in schools through organizational learning: an evaluation of a school improvement process. *Educational Administration Quarterly, 35*(1), 130–160.

Shreeve, A. (2010). A phenomenographic study of the relationship between professional practice and teaching your practice to others. *Studies in Higher Education, 35*(6), 691–703.

Siguroardottir, A. (2010). Professional learning communities in relation to school effectiveness. *Scandinavian Journal of Educational Research, 54*(5), 395–412.

Skrtic, T., Harris, K., & Shriner, J. (2005). *Special education policy and practice: Accountability, instruction, and social challenges*. Denver, CO: Love Publishing.

Sparks, D. (2010). Here's what a true learning community looks like. *Journal of Staff Development, Fall,* 53–57.

Stiggins, R., & DuFour, R. (2009). Maximizing the power of formative assessments. *Phi Delta Kappan, 90*(9), 640–644.

Stutz, T. (2011). *Waivers to Texas class size law triple, thanks to funding cuts.* Retrieved from the Dallas News website at http://www.dallasnews.com/news/state/headlines/20111124-waivers-to-texas-class-size-law-triple-thanks-to-funding-cuts.ece

Supovitz, J. (2002). Developing communities of instructional practice. *Teachers College Record, 104*(8), 1591–1626.

Thessin, R., & Starr, J. (2011). Support the growth of effective professional learning communities. *Kappa, 92*(6), 48–54.

Thompson, S., Gregg, L., & Niska, J. (2004). Professional learning communities, leadership, and student learning. *Research in Middle Level Education Online, 28*(1), 35–54.

Trent, S. C. (1998). False starts and other dilemmas of a secondary general education collaborative teacher: A case study. *Journal of Learning Disabilities, 31*(5), 503–513.

Triangle Leadership Academy. (2007). Retrieved July 13, 2012, from http://www.triangleleadership.com

U.S. Department of Education. (2011). *Fast facts.* Retrieved October 9, 2011, from

http://nces.ed.gov/fastfacts/display.asp?id=59

Vacca, R., Vacca, J., & Mraz, M. (2011). *Content area reading literacy and learning*

across the curriculum. Boston, MA: Pearson.

Van der Aalsvoort, G., & Ghesquiere, P. (2004). The realities of learners with special

educational needs and their contexts: A methodological challenge. *International*

Journal of Disability, Development, and Education, 51(2), 131–133.

Vangen, S., & Huxham, C. (2003). The tangled web: Unraveling the principle of

common goals in collaboration. *Journal of Public Administration, 22*(4), 731–

760.

Vaughn, S., Schumm, J., Jallad, B., Slusher, J., & Saumell, L. (1994, April 4–8).

Teachers' views of inclusion: "I'd rather pump gas." Paper presented at

American Education Research Association, New Orleans, LA.

Vincent, L., Harris, B., Thomson, P., & Toalster, R. (2007). Managed moves: Schools

collaborating for collective gain. *Emotional and Behavioral Difficulties, 12*(4),

283–298.

Waldron, N., & McLeskey, J. (2010). Establishing a collaborative school culture through

comprehensive school reform. *Journal of Educational and Psychological*

Consultation, 20(1), 58–74.

Walther-Thomas, C. (1997). Co-teaching experiences: the benefits and problems that

teachers and principals report over time. *Journal of Learning Disabilities, 30*(4),

395–407.

Walther-Thomas, C., Korinek, L., McLaughlin, V., & Williams, B. (2000). *Collaboration for inclusive education developing successful programs.* Boston, MA: Allyn Bacon.

Weiss, M., & Lloyd, J. (2002). Congruence between roles and actions of secondary special educators in co-taught and special education settings. *The Journal of Special Education, 36*(2), 58–68.

Wells, C., & Feun, L. (2007). Implementation of learning community principles: A study of six high schools. *NASSP Bulletin, 91*(2), 119–120.

Wilson, G., & Michaels, C. (2006). General and special education students' perceptions of co-teaching: Implications for secondary-level literacy instruction. *Reading & Writing Quarterly, 22*(3), 205–225.

Wilson, G., Nash, M., & Earl, G. (2010). Supporting students with language learning difficulties in secondary schools through collaboration: the use of concept maps to investigate the impact on teachers; knowledge of vocabulary teaching. *Child Language Teaching and Therapy, 26*(2), 163–179.

Wong, J. (2010). Searching for good practice in teaching: a comparison of two subject-based professional learning communities in a secondary school in Shanghai. *A Journal of Comparative and International Education, 40*(5), 623–639.

York-Barr, J., & Duke, K. (2004). What do we know about teacher leadership? Findings from two decades of scholarship. *Review of Educational Research, 74*(3), 255–316.

APPENDIX A

PRE-INTERVIEW SURVEY

Part I: DEMOGRAPHICS

General education teacher _____ Special education teacher _____

Subject _____ Gender _____ Years teaching experience _____

Years co-teaching experience _____ Years participating in PLCs _____

Types of professional development on co-teaching and collaboration (check all that

apply):

_____ Workshop; _____ College class; _____ Professional conference;

_____ Presenter for workshop

Type of Certification/Licensure _____

Highest Degree Earned _____

Part II: COLLABORATION

Indicate the extent to which you agree with the following statements about teachers at your school collaborating to make decisions.

Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)		
_____	_____	_____	_____	_____	1.	Plan school improvement
_____	_____	_____	_____	_____	2.	Select instructional methods and activities
_____	_____	_____	_____	_____	3.	Evaluate curriculum and programs
_____	_____	_____	_____	_____	4.	Determine professional development needs and goals
_____	_____	_____	_____	_____	5.	Plan professional development activities
_____	_____	_____	_____	_____	6.	Analyze student achievement data
_____	_____	_____	_____	_____	7.	Differentiate student learning across curriculum
_____	_____	_____	_____	_____	8.	Create a collaborative environment
_____	_____	_____	_____	_____	9.	Include special education professionals in decision making
_____	_____	_____	_____	_____	10.	People in my department collaborate sufficiently with one another
_____	_____	_____	_____	_____	11.	Collaboration occurs often among teachers in my PLC

Goddard, Y., Goddard, R., & Tschannen-Moran, M. (2007). A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement in public elementary schools. *Teachers College Record, 109*(4), 877–896.

Part III: CO-TEACHING

Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)		
_____	_____	_____	_____	_____	1.	I understand the purpose/goals of our co-teaching program and believe my class is a true co-teaching model.
_____	_____	_____	_____	_____	2.	Co-teaching is benefitting students with special needs
_____	_____	_____	_____	_____	3.	Co-teaching is benefitting teachers in their PLCs
_____	_____	_____	_____	_____	4.	Educate administrators and staff about benefits to co-teaching
_____	_____	_____	_____	_____	5.	Overall, I am satisfied with the current co-teaching program.
_____	_____	_____	_____	_____	6.	Planning can be spontaneous with changes occurring during the instructional lesson
_____	_____	_____	_____	_____	7.	Students accept both teachers as equal partners in the learning process
_____	_____	_____	_____	_____	8.	Encourage new teachers to accept co-teaching as an effective model of delivering instruction.

Friend, M. (2008). *Co-Teach! A handbook for creating and sustaining effective classroom partnerships in inclusive schools.* Greensboro, NC: Marilyn Friend, Inc.

Goddard, Y., Goddard, R., & Tschannen-Moran, M. (2007). A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement in public elementary schools. *Teachers College Record, 109*(4), 877–896.

APPENDIX B

INTERVIEW QUESTIONS

1. Tell me about yourself in respect to teacher experience and the professional learning community to which you are assigned.

2. Describe your experience with co-teaching.

   - What do you like about the co-teaching model as used in your school?
   - How does this relate to participation in the PLC?

3. Describe the qualities of your collaborative relationship.

4. In what ways has your participation in a PLC helped you as a teacher?

5. What are factors you perceive as improving co-teaching associations?

6. Describe your perception of the best co-teaching relationship you have with a general education teacher.

   - What aspects of a PLC facilitate a collaborative and co-teaching relationship?

7. Describe how your professional learning community collaborates.

8. What challenges or barriers to collaboration and co-teaching relationships exist within PLCs?

   - Give me an example of what you dislike or what bothers you about the co-teaching model as used at the high school level?
   - How do you address this in your PLC?

9. Explain how you know when students are not understanding class instruction.

   - What do you or the co-teacher do for an intervention in this situation?
   - Describe how differentiated instruction occurs in your co-teach class.

10. What happens in your professional learning community to help struggling students in class?

    - What are factors that help you understand the needs of students with disabilities?

Fitzpatrick, J., Sanders, J., & Worthen, B. (2004). *Program Evaluation: Alterative approaches and practical guidelines*. Boston, MA: Pearson Allyn and Bacon.

APPENDIX C

FOLLOW-UP QUESTIONS

1. Several teachers mentioned that they are assigned the same PLCs with their co-teachers only occasionally. <u>Who</u> makes the assignments? <u>On what basis</u> are the assignments made?

2. When you are assigned to the <u>same</u> PLCs, how does that affect your relationship with the co-teacher?

3. **for special educators only**: When you are assigned to the <u>same</u> PLC as your co-teachers, how does this affect your participation in the PLC?

4. When you were in the <u>same</u> PLC as your co-teacher, how does this facilitate your collaborative and co-teaching relationships with your co-teacher?

5. When you are assigned to different PLCs than your co-teacher, how does this affect your collaborative and co-teaching relationships with your co-teacher?

6. Describe how participating in the <u>same</u> PLC changes barriers encountered in the co-teaching model?

7. Describe how participating in a different PLC than your co-teacher changes barriers in the co-teaching model?

8. In what ways do you perceive the collaboration to have changed by participating in the <u>same</u> PLC as your co-teacher?