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Existing research consistently supports the idea that there are 5 effective practices in professional development for educators. However, there is limited research pertaining to the utilization of co-teaching as an effective practice of professional development. The purpose of this study was to design and implement a process of professional learning that incorporates co-teaching and allows teachers to have voice and choice in professional development and to investigate the effects of this implementation.

Through reviewing research on professional development practices, various professional development models, district impact on professional development, and democratic practices, I was able to create a professional learning model. What I call the “Collaborative Professional Learning Cycle” (CPLC) focuses on the needs of teachers where professional learning happens with instructional coaches as outlined by the needs of teachers. The 5 components of a Collaborative Professional Learning Cycle are: (a) Identify the problem, (b) Research, (c) Plan, (d) Implement, and (e) Revise/Reflect.

In order to put my model into action, I implemented the CPLC with two sets of instructional coaches and teachers. I used 2 elementary general education classroom teachers and paired them with 2 district level instructional coaches. The school is a rural Title I school with 18 classroom teachers. The school serves approximately 370 students. I received interest from 12 of the 18 eligible staff members. While implementing the Collaborative Professional Learning Cycle, I investigated what participants experienced

during the CPLC and its different phases and components. I also examined whether participating in the CPLC caused the teachers' instructional practices to change. To gather data during implementation, I used the Instructional Quality Assessment (IQA), individual interviews, participant observation, and individual surveys. I analyzed this data using Spradley's (2016) coding process.

The findings from my study of implementation of the CPLC confirmed that teachers are eager to have a different modality of professional development. The Collaborative Professional Learning Cycle is an approach to professional development that can meet the needs of teachers because it is continuous, collaborative, and intentional. The study also showed that this approach to professional development can cause change in a teacher's instructional practices and motivate teachers to implement new strategies. As a result of implementation of CPLC, coaches were inspired to continue using this kind of professional development to provide teachers with coaching and instruction that is aligned to a teacher's needs.

THE COLLABORATIVE PROFESSIONAL LEARNING CYCLE (CPLC):  
IMPLEMENTING A VOICE AND CHOICE APPROACH  
TO TEACHER PROFESSIONAL DEVELOPMENT

by

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## TABLE OF CONTENTS

	Page
LIST OF TABLES .....	vii
LIST OF FIGURES .....	viii
CHAPTER	
I. INTRODUCTION .....	1
Problem Statement .....	2
Purpose of the Study .....	5
Related Literature: Principles of Effective Professional Development .....	9
Theoretical Framework .....	11
Research Questions .....	13
Methodology .....	13
Significance of Study .....	14
Summary .....	15
II. LITERATURE REVIEW .....	17
Effective Professional Development.....	17
Instructional Coach-Teacher Relationships .....	18
Action Research .....	21
Continuing Professional Development/Professional Learning .....	22
Co-Teaching.....	23
Effective Professional Development Practices: Summary .....	26
District Influences and Implementation of Professional Development .....	26
Teachers' Democratic Role in Professional Development .....	28
Designing the Collaborative Professional Learning Cycle.....	30
Identify the Problem .....	31
Research and Planning .....	32
Implement .....	33
Revise/Reflect .....	33
Collaborative Professional Learning Cycle .....	34
Summary .....	38

III. METHODOLOGY .....	39
Key Terms.....	40
Research Design.....	41
Research Participants .....	44
Problem of Practice.....	46
Data.....	48
Data Sources .....	48
Interviews.....	48
Surveys.....	48
Observations and journals.....	48
Instructional quality assessment .....	49
Data Collection Overview.....	49
Data Analysis .....	51
Coding.....	51
Domain analysis.....	52
Cover terms.....	52
Taxonomic analysis .....	53
Theme analysis.....	53
Research Subjectivities and Positionality .....	53
Trustworthiness.....	55
Summary .....	56
IV. RESEARCH FINDINGS .....	57
Participant Experiences Prior to, During, and After Implementation.....	58
Participant Experiences Prior to Implementation .....	58
Interviews.....	58
Surveys.....	64
Participant Experiences at the Midpoint of Implementation .....	66
Interviews.....	66
Observations .....	72
Journal review .....	75
Survey .....	77
Participant Experiences After Implementation.....	79
Interviews.....	79
Survey .....	88
The CPLC and Instructional Practices: Results from the IQA Pre- and Post-test .....	92
Summary of Findings: Main Themes .....	95
Collaboration.....	96
Continuity .....	97

Intentionality .....	97
Changes in Instructional Practices .....	97
V. ANALYSIS, IMPLICATIONS, AND CONCLUSIONS .....	99
Question 1: What Do Participants Experience as They Participate in the Collaborative Professional Learning Cycle? .....	101
Experience 1: Identify the Problem .....	102
Experience 2: Research .....	104
Experience 3: Planning .....	104
Experience 4: Implementation .....	105
Experience 5: Reflection and Revision .....	106
Participants' Overall Experiences of the CPLC and its Effects on Instruction .....	107
Question 2: How Do Teachers' Instructional Practices Change through the Implementation of the Collaborative Professional Learning Cycle? .....	113
Research Limitations .....	117
Implications .....	118
Future Research .....	118
District Implementation .....	119
School-level Implementation .....	120
Professional Learning for Teachers .....	120
Conclusions .....	122
REFERENCES .....	125
APPENDIX A. SURVEY FOR PARTICIPANT SELECTION .....	138
APPENDIX B. TEACHERS PRE-PROCESS INTERVIEW GUIDE .....	139
APPENDIX C. INSTRUCTIONAL COACHES PRE-PROCESS INTERVIEW GUIDE .....	140
APPENDIX D. TEACHERS AND INSTRUCTIONAL COACHES MID- PROCESS INTERVIEW GUIDE .....	141
APPENDIX E. TEACHERS AND INSTRUCTIONAL COACHES POST- PROCESS INTERVIEW GUIDE .....	142
APPENDIX F. TEACHER PRE-SURVEY DRAFT .....	143

APPENDIX G. TEACHER MID-SURVEY DRAFT.....	144
APPENDIX H. TEACHER POST-SURVEY DRAFT.....	145
APPENDIX I. RECRUITMENT SCRIPT.....	146
APPENDIX J. CONSENT TO ACT AS A HUMAN PARTICIPANT.....	147



## LIST OF TABLES

	Page
Table 1. Results from Pre-implementation Survey .....	65
Table 2. Results from Mid-implementation Survey.....	78
Table 3. Results from Post-implementation Survey .....	89
Table 4. Survey Results from Pre-, Mid-, and Post-survey .....	90
Table 5. IQA Results for English Language Arts .....	93
Table 6. IQA Results for Math.....	94

## LIST OF FIGURES

	Page
Figure 1. Creation of the CPLC Cycle as it Relates to Researched Fields .....	8
Figure 2. Collaborative Professional Learning Cycle Model .....	31
Figure 3. Relationship of Included Terms to the Cover Terms That Were Found from the Coding Process .....	52
Figure 4. Review of Collaborative Professional Learning Cycle Model.....	102

## **CHAPTER I**

### **INTRODUCTION**

In my former role as an Instructional Program Specialist, which partially included serving as an instructional coach, one focus of my job was to provide teachers with Professional Development (PD). This segment was at times frustrating. I have found a certain level of struggle with this task because I know, as a former teacher, that there are already many demands for teachers to balance. To justify the addition of PD to their workload, the sessions need to be well-designed and aligned to meet the needs of the teacher. As a PD presenter, I feel that what I have to share is important and can encourage change in teachers' mindsets about certain instructional practices. Yet there are times when I fall short and struggle with why I do not see implementation of practices into their classrooms. I never want to provide PD that could have been an email, because if it was simple enough to just be stated then, how is it beneficial enough to require teachers to take their time to be invested in it? I have worked with others who also provide PD and have expressed similar frustrations in terms of having difficulty reaching all teachers and seeing instructional practices change.

I feel that I have followed many of the research-supported effective PD practices, but I still only reach a few teachers. As Burbank and Kauchak (2003) express, "one of the major limitations of traditional models of professional development is the passive role imposed upon teachers, who find it difficult to implement ideas that are often

conceptually and practically removed from their classrooms” (p. 2). Traditional PD models tend to be limited in terms of the depth of collaboration and engagement with participants. Even many non-traditional PD models have their limitations in reaching teachers’ needs. Equity and mutual participation are required to have collaboration, which means that PD needs to move towards participants being invested, active, and generating ideas (Burbank & Kauchak, 2003).

### **Problem Statement**

Researchers have found consistently that current professional development practices are not meeting teachers’ needs and are leaving teachers unable to implement practices learned from training (Bill and Melinda Gates Foundation, 2014; Burbank & Kauchak, 2003; Darling-Hammond, 2008; Lieberman & Mace, 2008; Main & Pendergast, 2015; Patton, Parker, & Tannehill, 2015). Providing professional development is not enough. We need to focus on providing *effective* professional learning that involves teachers working on a problem of practice related to their current classroom needs (Gulamhussein, 2013; Webster-Wright, 2009).

Traditionally, PD is thought of as sessions that teachers attend as a presenter lectures to them about trending research, best practices, or training in a program that has been adopted by their LEA (local educational agency, usually a school district). DuFour and Eaker (2009) describe traditional professional development as “occasional day-long workshops” (p. 255), which are likely to receive negative reactions from teachers. Usually these professional development workshops are where teachers sit passively while being exposed to new ideas or practices. Darling-Hammond, Chung Wei, Andree, and

Richardson (2009) found in a study that while 90% of teachers ( $n=36468$ ) reported participating in professional development, over 50% of those teachers ( $n=21000$ ) also reported that the professional development was not beneficial. Typical offerings of professional development are ineffective at changing teachers' practices or influencing student learning, not only because of the mode of professional development, but also because most teachers often have not had input regarding their professional development needs (Gulamhussein, 2013). One study noted, "In interviews, teachers say that too many current professional development offerings are not relevant, not effective, and most important of all, not connected to their core work of helping students learn" (Bill and Melinda Gates Foundation, 2014, p. 3). DuFour and Eaker (2009) found that traditional professional development was fragmented, unfocused, and generally did not address current concerns within a school.

The United States appears to be considerably behind in providing certain kinds of professional learning opportunities when compared to other countries that are noted to be high achieving. High-achieving countries have more opportunities for teachers to observe other classrooms and schools, participate in collaborative action research, and collaborate with other teachers regularly on issues of instruction (Darling-Hammond et al., 2009). There is minimal research about professional development in which teachers have selected the professional development that meets their needs and in which they actively participate.

Research indicates that current professional development practices are inadequate. Studies by Bubb and Earley (2010) and Heystek and Terhoven (2015) have provided

insight into teachers' engagement in PD as it occurs within the demands and constraints of school communities, cultures, and policies. For example, it was found that a shortage of district funds, lack of collaborative co-support, limited time, and unreasonable teaching and learning expectations have all been found to impact teachers' experiences with professional development (Appova & Arbaugh, 2017). School systems are faced with limited funding to allow off-campus PD and are forced to be more strategic and creative with how teachers will receive PD, as well as what constitutes PD.

Another common issue surrounding PD is when to provide it. Teachers struggle with having adequate planning time. With more pressure placed on teachers in general, teachers have more responsibilities to cover during planning, thus making planning periods an undesirable setting for PD. In a study by Appova and Arbaugh (2017), one-third of teachers stated that they needed additional time for planning and developing lessons with other educators.

The Every Student Succeeds Act of 2015 (ESSA), however, has different criteria for PD. Under ESSA, professional development is intended to provide teachers, principals, or other school leaders with ongoing, differentiated, targeted, personalized support, and feedback for improvement. Moreover, professional development as described by ESSA should be developed with extensive participation of teachers, principals, other school leaders, and parents. In sum, professional development should be collaborative and modified to fit teachers' needs as a result of teacher feedback.

I believe that PD can and should be crafted in a way that incorporates the voices of all stakeholders and differentiated to the needs of those receiving it. I believe, in

essence, in a “voice and choice” approach to PD in the form of what I call the “Collaborative Professional Learning Cycle” (CPLC). In this study, I implemented a model of PD that I created, the CPLC, with a group of teachers and instructional coaches through a process that includes collaborative research, co-planning, co-teaching, collaborative reflections, and revisions.

### **Purpose of the Study**

The purpose of the study was to design and implement a process of professional learning that allows teachers to have voice and choice in professional development and to investigate the effects of this implementation. The CPLC I created relies heavily on instructional relationships. For the purpose of this study, coaches, curriculum specialists, and other professionals who may go by a similar name, who work directly with teachers to impact instruction, will be identified as instructional coaches. Instructional coaches are better equipped to engage teachers in PD when it is differentiated and in the context of current practices. Coaching is a fundamental element to this study. An instructional coach believes teachers, administrators, and other school personnel are capable of changing practices (Aguilar, 2013). The instructional coach is someone who helps analyze larger systems at play as well as historical context in order to understand the current situation (Aguilar, 2013). An instructional coach should be reflective and analytical about how things will be done. If an instructional coach is not mindful of how change happens, then it is possible that they will simply replicate structures of oppression that were produced by current systems (Aguilar, 2013). The CPLC utilizes collaboration and coaching within Professional Learning Communities (PLCs) and within the teacher’s classroom.

Instructional coaches are able to work collaboratively with teachers and focus on the teachers' interests in learning, assist them in researching effective practices, and help them in planning implementation during Professional Learning Communities.

Instructional coaches are then able to co-teach and collaborate in the classroom to implement professional learning with the teachers.

The practices in the Collaborative Professional Learning Cycle are different when compared to other existing coaching models in that the CPLC has instructional coaches and teachers collaborate and co-teach throughout the entire cycle. Other models have a strong emphasis on observation and demonstration, not sustained durations of ongoing co-teaching. There is emphasis of co-teaching in work by Killion and Harrison (2017); however, even the framework used by Killion and Harrison (2017) is different than the CPLC in that they utilized a gradual release model and still placed more emphasis on modeling/demonstrating rather than co-teaching. Co-teaching allows for an active role for both the instructional coach and the teachers. As stated by Desimone and Pak (2017), "Although there are certainly times when modeling, encouragement, and explicit direction are necessary practices, coaches should build in multiple opportunities for active engagement and teacher leadership in their own PD" (p. 6). In essence, teachers need more than demonstration from instructional coaches. I believe that the CPLC exemplifies the statement made by Desimone and Pak (2017).

The focus on differentiation for professional development is due to teachers having the democratic right to produce their own knowledge through action research and local dialogue (Apple & Beane, 1995). Moving forward in the CPLC, within the



classroom, instructional coaches and teachers are able to teach collaboratively with a co-teaching model to experience PD in a way that has not been previously experienced.

There are many professional development models that include a form of coaching and demonstration, but not in the respect that the instructional coach and teacher co-teach.

Generally, in other PD models, the teacher has not had an active role in the classroom when the coach demonstrates. I created the CPLC model through research on effective professional development and a combination of other existing models.

Figure 1 provides an overview of existing professional development approaches and the design of the CPLC. In Chapter II, I explain each step in the CPLC in greater detail and describe how existing research informs each step.

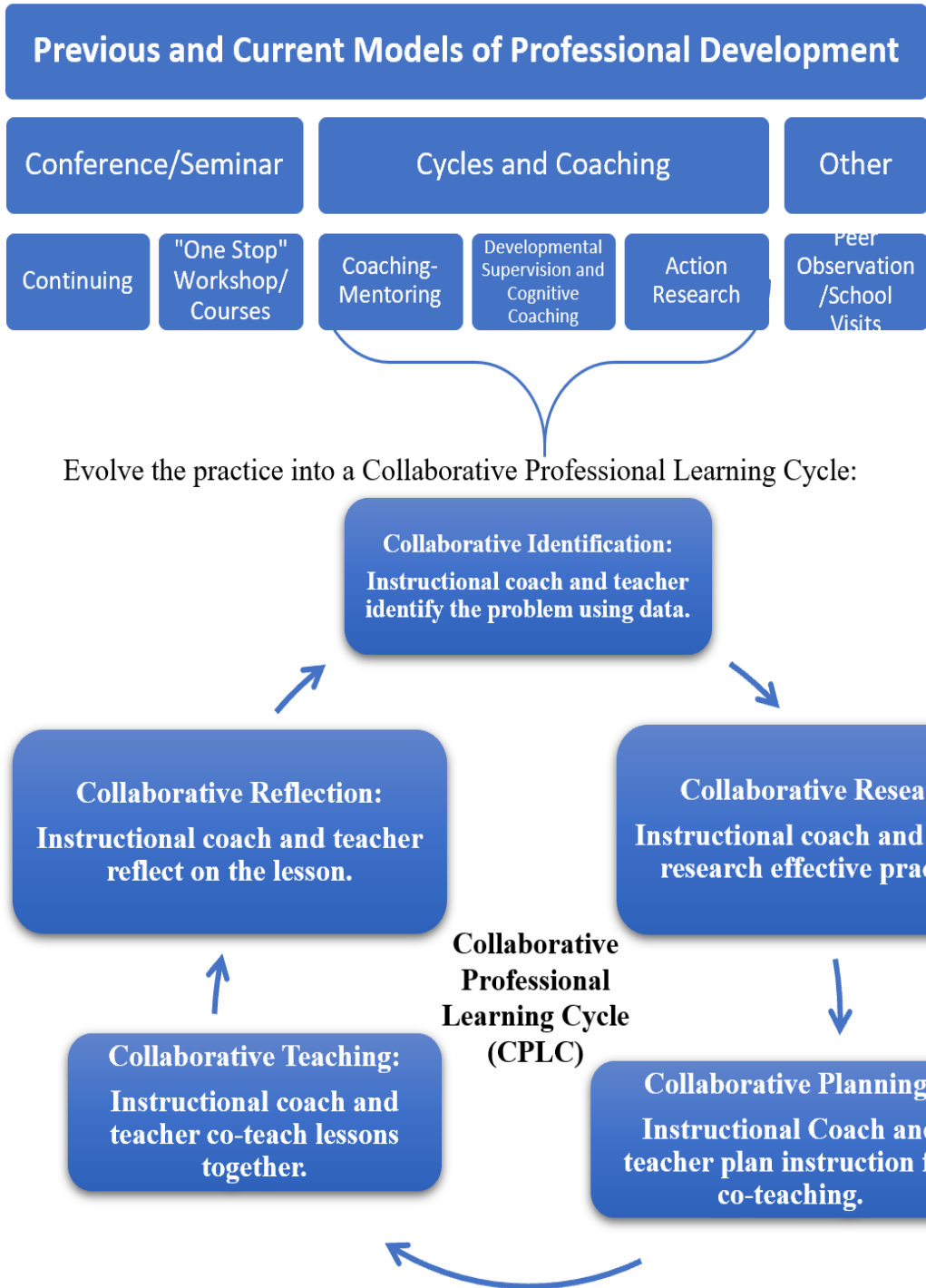


Figure 1. Creation of the CPLC Cycle as it Relates to Researched Fields.

### **Related Literature: Principles of Effective Professional Development**

Gulamhussein (2013), Desimone (2009), and Dufour and Eaker (2009) found that there were similar principles of effective professional development. Gulamhussein (2013) asserted,

- The duration of professional development must be significant and on-going to allow time for teachers to learn a new strategy and grapple with the implementation problem.
- There must be support for a teacher during the implementation stage that addresses the specific challenges of changing classroom practice.
- Teachers' initial exposure to a concept should not be passive, but rather should engage teachers through varied approaches so they can participate actively in making sense of a new practice.
- Modeling has been found to be a highly effective way to introduce a new concept and help teachers understand a new practice.
- The content presented to teachers shouldn't be generic, but instead grounded in the teacher's discipline (for middle school and high school teachers) or grade-level (for elementary school teachers). (pp. 3–4)

Similarly, Desimone (2009) described six principles of effective professional development, including:

- Content focus: activities that are focused on subject matter content and how students learn that content;
- Active learning: opportunities for teachers to observe, receive feedback, analyze student work, or make presentations, as opposed to passively listening to lectures;
- Coherence: content, goals, and activities that are consistent with the school curriculum and goals, teacher knowledge and instructional practices;
- Instructional Coaching Practices: Promising Models, Empirical Support, and Considerations for Practice beliefs, the needs of students, and school, district, and state reforms and policies;
- Sustained duration: PD activities that are on-going throughout the school year and include 20 hours or more of contact time;

- Collective participation: groups of teachers from the same grade, subject, or school participate in PD activities together to build an interactive learning community. (p. 184)

I found similar components in DuFour and Eaker's (2009) research, who also included five principles of effective professional development. They asserted that professional development should:

- Attend to the tenets of good teaching.
- Provide on-going coaching that is critical to the mastery of new skills
- Results in reflection and dialogue on the part of participants.
- Be sustained over a considerable amount of time.
- Be evaluated at several different levels, including evidence of improved student performance. (pp. 276–277)

These principles are included, elaborated on, and expanded upon in terms of “effective” professional development in other research by Darling-Hammond (2008), Desimone and Pak (2017), DuFour and Eaker (2009), Garet, Porter, Desimone, Birman, and Yoon (2001), Guskey (2003), Lieberman (1995), Patton et al. (2015), and others. Outside of professional learning, educators have been known to use Design Based Thinking, which essentially refers to a problem-solving process that is cyclical. The five phases of Design Based Thinking are (a) discovery, (b) interpretation, (c) ideation, (d) experimentation, and (e) evolution (IDEO, 2013). This method of identifying challenges is similarly seen in the Collaborative Professional Development Cycle. Both processes help participants work toward identifying challenges within a system and providing structures and supports to address those challenges.

Gulamhussein's (2013), Desimone's (2009), and DuFour and Eaker's (2009) research provides focus on the principles I used in designing the Collaborative Professional Learning Cycle. Regardless of the researcher, effective practices of professional development can be narrowed down to (a) duration, (b) alignment to teacher's instructional practices, (c) active involvement, (d) content specific, and (e) coaching support. Using a foundation that included Gulamhussein's, Desimone's, and DuFour and Eaker's principles and research on instructional coach-teacher relationships, action research, continuing professional development, and co-teaching, I designed a Collaborative Professional Learning Cycle that reflects a democratic process that allows voice and choice in their professional learning.

### **Theoretical Framework**

When creating a framework for the CPLC, as Denzin and Lincoln (1998) stated, a "researcher approaches the world with a set of ideas, a framework that specifies a set of questions that he or she then examines in specific ways" (p. 30). I used the lens of adult learning theory to address how adults learn and how relationships and environments may be a factor in their learning. There are numerous theories that suggest how teachers learn, construct, and process information that is provided to expand their knowledge and craft. The ones that are most closely aligned with the CPLC are adult learning theory and social-constructivist theory. These theoretical concepts will constitute my theoretical framework.

Adult learning theory was the framework for studies by Baird and Clark (2017), who referred to the work of Malcolm Knowles. Knowles (1990) highlights the many

learning styles and effective practices of adult learners through the description of andragogy. Adult learners are motivated to learn through experiences of interests, learning that is life-centered, and why they are learning it (Knowles, 1990). Knowles (1990) discusses five areas of adult learning theory that have been researched to identify how adults learn. According to the research, adult learners are motivated to learn through, 1) experiences, needs, and interest, 2) adults learn in life-centered situations, and 3) experience is the richest method of learning (Knowles, 1990). Adults have a need for self-direction, and each adult has different needs in time, style, and place of learning (Knowles, 1990). Baird and Clark (2017) also noted in their study from Knowles's work that adult learners need to have new learning situated in the context of previous learning with active reflection.

Social-constructivist learning theory was utilized in a study by van den Bergh, Ros, and Beijaard (2015). Under social-constructivist learning theory, learners construct their own knowledge in interactions with social and authentic learning environments (van den Bergh et al., 2015). The purpose of their study was to identify the characteristics of teacher learning in context of participating in continuing professional development (CPD). Creswell (1998) identifies the purpose of social constructivism is to use the participants' views in a situation to describe meanings of categories and ideas.

It is fundamental to the CPLC framework that the participants experience professional development in life-centered situations, i.e., PLCs and their classrooms. Through the PLC, participants receive professional learning through experiences and related to their content, needs, and interests. The CPLC is an interactive and social

approach to professional development that is situated in the most authentic learning environment, within their schools, in their classrooms and with their students.

### **Research Questions**

In this multi-case, qualitative study, I explored the following research questions:

1. What do participants experience as they participate in the Collaborative Professional Learning Cycle?
2. How do teachers' instructional practices change through the implementation of the Collaborative Professional Learning Cycle?

### **Methodology**

The methodology I used in examining my research questions was a multi-case study (Yin, 2009). I studied the experiences of the teachers and coaches within one school district in which I implemented the CPLC. I used two classroom teachers who were paired with two instructional coaches. I used a qualitative design that included in-depth interviews, observations, a field-reflexivity journal, a three-part survey, and analysis of the Instructional Quality Assessment (IQA) (Junker et al., 2005). The IQA is a formal toolkit that utilizes classroom observation to rate instructional quality (Junker et al., 2005). Throughout each component of the cycle I collected observational data and transcripts of the meetings between each pair. Data collection was also the result of three interviews (pre, mid, post) I conducted with both the coaches and teachers at separate times for a total of 12 interviews.

Within the study, I observed the experiences of a teacher and an instructional coach throughout the implementation of the CPLC. Throughout the study I interjected

and provided support as necessary for implementation. I acted as a researcher during the interviews, observations, and surveys with the participants. I was a participant researcher and actively engaged with the participants as necessary to assist with the implementation process. To analyze the transcripts, associated data, a field-reflexivity journal, IQA rubrics, and interview questions, I utilized Spradley's (2016) coding process, which is explained in depth in the methodological chapter. I expected prior to the study that teachers' beliefs and practices regarding professional development would change based on the CPLC. The data provided from interviews, observations, field-reflexivity journal, and surveys can be used to help inform further uses of professional development for teacher effectiveness and implementation research.

### **Significance of Study**

If we expect teachers to improve their practices, then districts and schools will need to provide considerably more time for collaborative planning, staff development, and reflection. Apple and Beane (1995), for example, cite several moves we need to make in order to have democratic schools, one of which is building in time for teachers to reflect and learn. An issue that many schools face is having the appropriate time to provide teachers with sufficient planning structured into the school day (Apple & Beane, 1995). I believe that use of the Collaborative Professional Learning Cycle (CPLC) creates an efficient environment for teachers to embed research-based professional development in their classroom while improving implementation of practices gained through their professional development. I created the CPLC model by considering research regarding effective professional development and a combination of other existing models. The



CPLC differs from existing research and professional development models in that it extends the professional learning into the classroom with co-teaching between an instructional coach and a teacher.

We need democratic processes like the Collaborative Professional Learning Cycle to provide teachers with efficient, individualized, and effective professional development. My investigation into the implementation of the CPLC in a district will help determine whether the model allows for ongoing and intentional collaboration between a coach and teacher, which in turn would allow for better implementation of effective instructional practices.

### **Summary**

Baird and Clark (2017), Bill and Melinda Gates Foundation (2014), Borko (2004), Burbank and Kauchak (2003), Darling-Hammond (2008), Garet et al. (2001), Gulamhussein (2013), Patton et al. (2015), and others agree that there is a critical need for changing the format of professional development if we expect professional development to truly change teaching practices and meet the needs of teachers. The persistent search for and research on effective professional development shows that there is a need to improve the structure for professional development and professional learning. After reviewing the literature, I found it necessary to create a new model of professional development. In this study, I took research-based effective PD practices, integrated them into one model called the CPLC that allows teachers voice and choice in professional development, implemented the CPLC model, and investigated how coaches and teachers experienced the CPLC model. In a broader sense, the study also serves as a model for

educational leaders to “facilitate processes that engage self and others in critiquing the way things are, exploring the way life should be in moral and just communities, and stimulating action directed toward achieving the latter” (The University of North Carolina at Greensboro, 2018, “ELC Statement of Commitments,” para. 6).

In regard to future chapters, in Chapter II, I provide a comprehensive review of literature about common professional development types and their effect in the United States. I also identify other areas that affect professional learning such as teacher voice and choice in learning and district leadership. In Chapter III, I address the study’s research methodology, including setting, participants, data collection, and data analysis.

In Chapter IV, I discuss the findings of my research. Finally, in Chapter V, I summarize my findings and connect them to the established scholarship I reviewed in Chapter II. I conclude by discussing limitations of the study, implications of the study for practice and practitioners, and ideas for future research.

## **CHAPTER II**

### **LITERATURE REVIEW**

In conducting a critical review of the literature that concerns professional development, I reviewed 108 empirical ( $n=18$ ) and non-empirical ( $n=90$ ) peer reviewed research articles. In this chapter, I begin by discussing existing research related to the following aspects of effective professional development: (a) Instructional Coach-Teacher Relationships, (b) Action-Research, (c) Continuing Professional Development/Learning, and (d) Co-Teaching. I then review the literature that concerns the central office's role in implementation of professional development. Finally, I examine the limited literature concerning teachers' abilities to have a democratic role in professional development. I conclude the chapter by describing the components of the Collaborative Professional Learning Cycle (CPLC) that I designed. I used existing research on effective professional development practices in defining and designing the CPLC. I conclude the chapter by explaining the process of the CPLC, including how it relates to existing research.

#### **Effective Professional Development**

The question of "What makes professional development (PD) effective?" has been widely studied and has resulted, essentially, in a list of "do's" and "don'ts." According to Klingner (2004), Hunzicker (2011), Garet et al. (2001), Patton et al. (2015), and Lieberman (1995), effective PD is a result of connections to the classroom, collaboration, discussion, networking and partnerships, depth of knowledge, and

supporting teachers' needs. It is also ongoing. If a PD session is a 'sit and get' and only occurs one time, otherwise known as a 'one-stop' workshop model, then it is unlikely to be effective given that a majority of the session would not have been remembered to be implemented or applied in a classroom teacher's day-to-day routine (Hunzicker, 2011). Effective PD would be differentiated to a school, grade level, or teacher with additional support systems put in place to ensure the teachers understand and have confidence in trying a new routine.

When PD is seen as authentic and relevant (Hunzicker, 2011; Patton et al., 2015), teachers make a greater connection to it. Therefore, it is imperative that instructional coaches have information for planning PD well in advance and have met with administrators and teachers before planning a PD session(s). When sessions take place over a span of time, teachers are more likely to implement the practices while obtaining feedback to make necessary changes or fix misconceptions to strengthen their teaching practices (Garet et al., 2001). As the research in this area discusses, it is essential that teachers have collaboration and connection to the PD in order to implement it.

Through an analysis of the research, I identified core elements of effective professional development as the following: instructional coach-teacher relationships, action research, continuing professional development and professional learning, and co-teaching. I discuss each of these elements in detail.

### **Instructional Coach-Teacher Relationships**

Teachers' experiences in PD are closely related to a teacher's relationship/connection to the instructional coach. When communities of learning have been

established and trust/respect has been built, teachers are more likely to take risks (Patton et al., 2015). With collaboration between instructional coaches and teachers, there needs to be clearly defined and understood roles within the relationships that are being created in order to relieve tension and conflict (Coburn, Bae, & Turner, 2008). Teachers need involvement in the PD to move from a more passive role to a truly collaborative one that allows them to be invested in the PD. Currently teachers find themselves removed from their classrooms and experience difficulties implementing PD due to their passive role (Burbank & Kauchak, 2003). Learning communities encourage participation through shared experiences and development/sharing of ideas that result from social interaction (Sales, Traver, & Garcia, 2011). Liberman (1995) discusses how important it is for teachers to create networks, collaborative communities, and partnerships to support, nurture, and develop professional learning. It is also important to note in this relationship that the participation will be better received if it is voluntary (Hargreaves & Dawe, 1990). With the research provided, we see a trend in which collaboration, sense of community, and connections are important to teachers when receiving PD.

Coaching is an important aspect of the CPLC cycle. Research on coaching is evolving and identifying various ways to coach and appropriate coaching style. Research from Kretlow and Bartholomew (2010) state that teachers who received individualized coaching sessions following an initial training had higher and stable levels of implementation. One purpose of coaching is to encourage implementation of new teaching behaviors, as well as providing a means for teachers to reflect and examine their implementation (Kretlow & Bartholomew, 2010). Coaching allows for teachers to try

new teaching practices while receiving feedback and support throughout the process. Coaching requires a trusting relationship with sufficient time and individualized professional learning (Knight, 2007). Given that teachers need sufficient time with their coach, coaches also need to have adequate time to meet with teachers and not have additional tasks added to their job. Knight (2007) found that more than 300 instructional coaches identified that the other tasks they were assigned left them with little time to coach.

A coach is there to help teachers think and learn about planning, instruction, and pedagogy, rather than doing the work for the teachers (Killion & Harrison, 2017). As we have seen, most traditional approaches to PD fall short of helping teachers to know how to use the select strategies in practice, how to align the strategies to the curriculum, and how to differentiate the strategies for diverse learners (Killion & Harrison, 2017). These are instances in which a coach would come in to engage with teachers. Desimone and Pak (2017) state that, commonly, instructional coaches think that teachers learn when they view experts demonstrating lessons or when teachers receive reassurance that their own ideas are effective. However, neither of these activities requires the teacher to be an active constructor of knowledge (Putnam & Borko, 2000). Although there are certainly times when modeling, encouragement, and explicit direction are necessary practices, coaches should build in multiple opportunities for active engagement and teacher leadership in their own PD (Desimone, 2009; Garet et al., 2001).

## **Action Research**

Action research is seen as a collaborative way for teachers to participate in PD. The process of action research allows all participants a voice with its democratic procedures that are fully inclusive (Sales et al., 2011). As a form of PD, action research takes the environment of a school and utilizes it as a learning community for teachers to guide them through inquiry and aid them in changing or reflecting on their classroom practices (Calhoun, 1993). As previously stated, learning is a social experience. Teachers, just like students, need collaborative environments to expand their knowledge. “Knowledge is socially constructed through human activity and shaped by context and purposes that is then validated through a process of negotiations within a learning community” (Gningue, Schroder, & Peach, 2014, p. 20). Clark and Fournillier (2012) found that teachers learned best through discussions, feedback, reflections, and sharing summaries from research literature.

Researchers in action research emphasize the bridge that action research builds to close gaps between theory and practice. Li (2008), López-Pastor, Monjas, and Manrique (2011), McGee (2008), O’Grady (2008), and Osses (2008) all highlight the influence that action research has as a teacher development model and claim that it supports theory and practice relationships, since theory helps to develop better practices and practice helps to generate theory. López-Pastor et al. (2011) conducted a 15-year study on a group of teachers who participated in action research as a form of professional development. The study found that action research provided teachers with a shared vision of theory and practice, a consistent cycle for reflection, and protected time for collaboration between

teachers. One struggle with action research for some teachers is the added workload with research and data collection (Clarke & Fournillier, 2012), although they found it beneficial to be able to collaborate with others and focus on a need they had.

### **Continuing Professional Development/Professional Learning**

The current ‘one stop’ PD leaves teachers frustrated, and this style of PD has often been found by teachers to be irrelevant or ineffective (Lieberman & Mace, 2008). Many researchers have found that teachers received the most effective PD when the learning happened over a duration of multiple days (Main & Pendergast, 2015). A model of PD that allows teachers learning opportunities over time is known as Continuing Professional Development (CPD) (Main & Pendergast, 2015; van den Bergh et al., 2015) or Continuing Professional Learning (CPL) (Webster-Wright, 2009). CPD is seen to allow teachers to be engaged in three learning activities: updating their knowledge, reflecting on practices, and collaborating with colleagues (de Vries, van de Grift, & Jansen, 2014). The model of CPD has been defined as “a learning process resulting from meaningful interaction with the context and eventually leading to changes in teachers’ professional practice and in their thinking about that practice” (van den Bergh et al., 2015, p. 142).

Other features of CPD that have been found to have a significant impact on teacher learning are the following: incorporation of specialist expertise, peer support, enquiry-oriented learning, learning from looking, aspirations for pupils, understanding why things do and do not work, and effective leadership (McNeill, Butt, & Armstrong, 2014). A study by McNeill et al. (2014) examined lead teachers who worked



collaboratively with teachers in classrooms. The study confirmed that teachers welcomed collaborative models of CPD, as opposed to transmission, formal training, and ‘top-down’ models. Some teachers in the study reported early indications of improvements in student performance.

Continuing Professional Learning recognizes that teachers’ learning shapes their practices through PD programs, interactions with colleagues, experiences outside work, and other combinations of experiences (Webster-Wright, 2009). It is also found that CPD allows teachers to update their knowledge and skills while having opportunities to reflect on their practices and collaborate with colleagues (de Vries et al., 2014). With CPL literature there is a discussion of how the term “development” can imply that teachers’ learning is passive (O’Brien & Jones, 2014) and that teachers are deficient and in need of developing rather than how teachers can engage in self-directed learning (Webster-Wright, 2009). CPL focuses on reframing PD as learning rather than developing. Professional development in the CPL model is seen that teachers learn in a holistic model with learning from experiences situated within a community of practice (Webster-Wright, 2009). Learning in a community that is situated in context allows for multiple conceptual perspectives and multiple units of analysis (Borko, 2004). This participation in a community increases teachers’ participation in the practice of teaching, which directly increases knowledge in and about teaching (Borko, 2004).

### **Co-Teaching**

Co-teaching is defined in varied ways. Bouck (2007) and Crow and Smith (2003) describe co-teaching as a method of instruction between two teachers of equal status

creating a learning community with shared planning, instruction, and student assessment. Friend and Cook (1992) and Killion and Harrison (2017) describe co-teaching as two or more educators who work collaboratively to deliver instruction to a group of heterogeneous students in a shared instructional space.

Rytivaara and Kershner (2012) defined co-teaching differently and in a way that aligns to my beliefs. They define co-teaching as a genuinely peer-learning relationship in which communication shifts between different contexts within and beyond the classroom. Essentially, co-teaching is viewed as collaborative where both partners benefit and learn from the experience with application of knowledge in the classroom or in a more generalized way. Co-teaching is a practice of sharing responsibility equally between the two teachers. Previously, when co-teaching was used as a form of professional development, a coach would create a lesson that may have been in collaboration with a teacher and then conducted the lesson with the teacher or group of teachers observing (Killion & Harrison, 2017). All features of effective professional development, such as active learning and links with the wider context of a teacher's work (Garet et al., 2001), are everyday matters in co-teaching. Therefore, co-teaching holds particular promise to teacher learning (McDuffie, Mastropieri, & Scruggs, 2009; Trent et al., 2003).

For co-teaching to be successful, active involvement is required from both/all teachers involved with a true sharing of the work (Rytivaara & Kershner, 2012). Many forms of traditional PD emphasize teachers as technicians rather than the professionals that they are, and teachers are required to make complex, contextualized decisions (Ball, 1995; Butler, Lauscher, Jarvis-Selinger, & Beckingham, 2004; Palincsar, 1999; Palincsar,

Magnussen, Marano, Ford, & Brown, 1998). Successful co-teaching also includes being in agreement about what model of co-teaching will be used, formality of planning, time, interruptions, dealing with mistakes, and clarity and purpose of what is being practiced (Killion & Harrison, 2017). Moving forward, my focus with co-teaching is using it as a form of professional development with instructional coaches. Butler et al. (2004) share a similar view on how co-teaching can be an experience of continuing professional learning in which teachers and researchers come together to bring a combination of formalized and practical knowledge to classrooms to make continued instructional changes. Teachers and researchers would collaborate to examine and reflect on practices in order to reach students. This can be done by trying new ideas in the classroom, monitoring the success of their efforts, conducting collaborative review of instructional practices, discussing outcomes, and critically reflecting on their teaching (Butler et al., 2004).

There are multiple models of co-teaching that can be utilized: large group/small group, parallel and simultaneous teaching, differentiated, simultaneous teaching, leveled groups, teaching together, tag-team, speak and chart, and duet teaching (Garmston, 2013; Zigmond & Magiera, 2001). In my research I utilize the teaching together model as best practice for the CPLC. The teaching together model allows teachers to both teach to the whole class and monitor student work. Essentially the teacher and coach utilize each other for conversation, modeling, and presenting the information to students. This keeps both the teacher and coach engaged throughout the lesson and building off of each other. The coach can demonstrate and the teacher can replicate in the moment what the coach is doing. Killion and Harrison (2017) define situations in which modeling by the coach

should take place, such as when the content is new, a teacher is uncertain about a new practice, a teacher has disbelief or concern about a practice, or if a teacher might benefit from a modeled practice. These situations are appropriate uses of coach-led co-teaching sessions and I feel are best utilized when the teacher is also co-teaching to be engaged with the practices themselves.

### **Effective Professional Development Practices: Summary**

We know from literature that effective PD is a result of connections to the classroom, collaboration, discussion, networking/partnerships, depth of knowledge, supporting teachers' needs, and that it is ongoing (Garet et al., 2001; Hunzicker, 2011; Klingner, 2004; Lieberman, 1995; Patton et al., 2015). When reviewing the literature, I found a statement by Desimone and Pak (2017) that best summarizes how effective instructional coaching can be:

Unlike the much maligned PD one-shot workshop, coaching is usually an activity that is on-going throughout the school year. Coaching involves continuous cycles of reflection and action to foster teacher growth (Teemant, 2013). The on-going nature of the coach's visits is associated with a strong impact on teacher and student learning, as explicated by Darling-Hammond and colleagues (2009). Further, teachers frequently have multiple points of interaction with their coach—in addition to conversing with them in a one-on-one setting, they may encounter them in grade-level meetings, school-based PD, administration of student assessment, or just around the school as coaches perform extraneous tasks (Bean et al., 2010; Deussen et al., 2007; Scott et al., 2011). Such factors help cultivate the sustained implementation of changes in teacher practice. (p. 7)

### **District Influences and Implementation of Professional Development**

In many districts how professional development will look year to year is decided at the central office level, whether it is tied to district initiatives or new program

implementation. If the use of coaching is utilized it is many times decided at the district level (Killion & Harrison, 2017). Each district's central offices must evaluate programs and collect, analyze, and use data on student performance to ground decision-making about programs and professional development at the district and school level. Districts should provide frequent opportunities for professional development, collaboration, and intellectual stimulation for teachers in areas that will give them more opportunities for learning in their field and with colleagues who share the same interests (Ravitch, 2013).

When reviewing literature on the district central office's role in implementation of programs and professional development, Honig and Coburn (2008) found that student achievement will not increase unless district central office administrators ground their decisions in evidence (be it data, research, or other forms of information) that particular approaches have a proven track record of raising student achievement. Cervero (2000) found that continuing professional learning has different barriers for districts than what were previously seen. There is also a struggle between updating professional knowledge and improving professional practice, as well as who is to provide the professional learning. When considering what "problem of practice" to focus on and updating professional knowledge, districts need to generate and use student and school performance data to drive their decisions (Honig & Coburn, 2008). Districts also need to utilize school improvement plans when considering professional development (Honig & Coburn, 2008).

Even with data-based decisions, implementation will be affected by motivation, compliance, environmental stability, competing centers of authority, contending

priorities, or other social-political milieus (McLaughlin, 1987). Honig, Copland, Rainey, Lorton, and Newton (2010) refer to how relationships between schools and instructional coaches supported schools in implementing improvement strategies, including intensive coaching. Coburn et al. (2008) found that understanding of appropriate roles and relationships provides guidance for interaction and decision-making, mitigating against power struggles and misunderstandings. They found that in the absence of clear authority relations, it can be very difficult to move forward (Coburn et al., 2008). Central office also arranged for coaches to provide predominantly job-embedded professional development to teachers and principals. Honig et al. (2010) found that building relationships with district office supports help improve schools' implementation of professional development.

In order for districts to overcome barriers to provide effective professional development, the professional development used must be evidence based, needed by teachers for professional growth, and grounded in data by school improvement plans. Research conducted by Cobb, Jackson, Smith, Sorum, and Henrick (2013) found that research on the role of district leadership practices in supporting the development of school capacity for instructional improvement is extremely sparse, as also noted by Honig (2008, 2013).

### **Teachers' Democratic Role in Professional Development**

For districts to implement effective change in professional development, they need input from their teachers regarding their preferences for professional development. Teacher voice and teacher choice is limited in professional development. Less than 30%

of teachers have made a decision in most of their professional learning opportunities (Bill and Melinda Gates Foundation, 2014). A survey of teachers found that when teachers did not choose their own professional learning opportunities, 61% were dissatisfied with the professional development experience (Bill and Melinda Gates Foundation, 2014). When teachers are left to their own perspectives, they are not engaging themselves in new knowledge and they are limiting their understanding. Noddings (2013) refers to Dewey to express how it is necessary in a democracy to recognize “free and equitable” exchanges with different groups and individuals to gather different viewpoints. We need a democratic process for professional development; without one we are simply wasting teachers’ time and resources. Much of what districts offer as professional development, teachers perceive as wasted time. However, learning activities that directly support teacher practices are valued much more positively by teachers, as they tap into their motivation to help students learn (Bill and Melinda Gates Foundation, 2014). Teachers need opportunities to articulate their opinions, work cultures that honor their voices, open spaces for professional choices, collegial dialogue, and a chance to build on their expertise and knowledge (Wood, 2001).

Much of what teachers learn is accomplished through lived experiences and social constructions, yet teachers’ professional development is considered to be “sit and get.” If we want teachers to continue to be builders of knowledge, teachers need to be able to share what they know in public forums (Wood, 2001). Democratic learning revolves around the ability to inquire, collaborate, and reflect within a community. The intention of social inquiry is to guide purposeful action in service to a better society, a primarily

democratic goal (Wood, 2001). Substantive dialogue helps to foster voice (the expression of ideas and opinions) as well as allowing for reciprocity (the hearing and critique of others' ideas and opinions) (Sevcik, 2001). According to Wood (2001), democratic dialogue is necessary so teachers can avoid becoming arrogant or rigid in decision-making. Dialogue allows teachers opportunities for reconsideration of instructional practices, sharing of practices, and continuous learning. In the literature it is profound how often researchers emphasize the need for teachers to be a central part of their professional learning.

### **Designing the Collaborative Professional Learning Cycle**

In designing the Collaborative Professional Learning Cycle (see Figure 2), I relied on the existing research I have discussed thus far in my review. In this section of the chapter, I describe each component of the CPLC and describe how scholarship informs that component.

The five components of a Collaborative Professional Learning Cycle are:

- i. Identify the problem
- ii. Research
- iii. Plan
- iv. Implement
- v. Revise/Reflect

Each component of the cycle is further identified as informed by research.



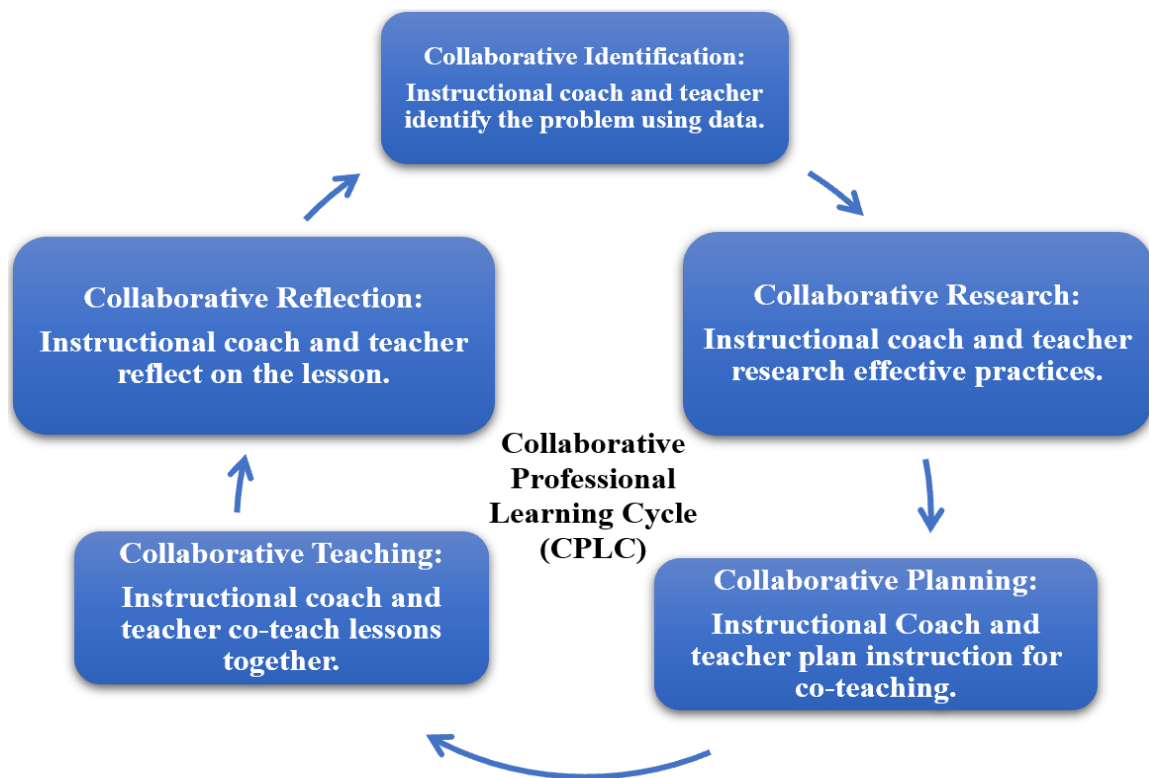


Figure 2. Collaborative Professional Learning Cycle Model. This Figure Represents the Process of the CPLC That Teachers and Coaches Utilize. Source: Lupton (2019).

### **Identify the Problem**

In creating the CPLC, I recognized that teachers and instructional coaches need to work collaboratively to identify the problem of practice. At the beginning of the CPLC, teachers work collaboratively with instructional coaches to discuss, analyze, and identify problems with practice or instruction that the teacher feels needs to be addressed in order to foster learning in their classroom. The teacher's need is the main consideration to identify the problem of practice. The teacher and instructional coach can also utilize data analysis to confirm the problem of practice. Research by Aguilar (2013) expresses the importance of this component because when instructional coaching is unfocused or the

purpose is not clear, the teacher tends to be unsatisfied with the experience. Aguilar (2013) defines the coach's task as to listen carefully and to be engaged in a process of exploration and assessment with the teacher. When a teacher and a coach have identified a focus and create a plan it can create energy, excitement, and focus between the teacher and coach (Aguilar, 2013).

### **Research and Planning**

The research and planning phases happen simultaneously within PLCs. The instructional coach helps allocate resources and identify recent research, based on the problem of practice identified in order to help the teacher build professionally and intentionally. A plan should be created through multiple conversations in order to explore the gaps in knowledge, skill, or capacity a teacher has to implement (Aguilar, 2013). The planning phase is where the teacher and instructional coach would discuss the teacher's teaching style, define possible boundaries, and share expectations or needs during co-teaching. Successful co-teaching also includes (a) being in agreement about what model of co-teaching will be used, (b) formality of time, (c) approaching interruptions, (d) dealing with mistakes, and (e) clarity and purpose of what is being practiced (Killion & Harrison, 2017). If an instructional coach is newly paired with a teacher, the planning phase is a good opportunity to start establishing a relationship of trust with the teacher. It is imperative that the coach and teacher build a strong relationship in order for co-teaching to work effectively. Throughout the cycle, the coach needs to work intentionally on fostering a positive, effective relationship with the teacher. During this phase it is also important that the teacher has a considerable amount of voice and choice in the process.

They need to be actively engaged during the research and planning. Planning should also be considered flexible (Aguilar, 2013). The partners collaborate and converse about the material to come to a consensus on how this practice can be modified and implemented into the teacher's classroom.

### **Implement**

Together, the instructional coach and teacher co-teach to implement the instructional practices aligned with the problem of practice. This is done through multiple co-teaching sessions in the classroom to allow support for implementation and time for the teacher to deconstruct what they are learning. For co-teaching to be successful, active involvement is required from both/all teachers involved with a true sharing of the work (Rytivaara & Kershner, 2012). In my research I utilize the teaching together model as best practice for the CPLC. The teaching together model allows teachers to both teach to the whole class and monitor student work. Essentially the teacher and coach utilize each other for conversation, modeling, and presenting the information to students. This keeps both the teacher and coach engaged throughout the lesson and building from each other with reciprocal conversations and reflections. The coach can model and the teacher can replicate in the moment what the coach is doing.

### **Revise/Reflect**

After the lesson(s) has/have been co-taught, the instructional coach and teacher will reflect on the lessons and decide on its effectiveness and further changes that need to be made, or lessons that need to be taught, in order to continue the process until the teacher feels comfortable with the change and sees positive effects in students' ability.

Recent research suggests that PD is more successful when teachers have more frequent opportunities to receive feedback on their instructional practices and pedagogy (Desimone & Pak, 2017). Feedback is most effective when it is explicit and uses multiple sources of data that can be gathered from coaching observations or samples of student work (Desimone & Pak, 2017). However, there are times in which coaches have trouble balancing positive and constructive feedback in a way that teachers clearly know areas for improvement and is not overwhelming with too much information (Killion & Harrison, 2017). Through the CPLC cycle, teachers would receive immediate feedback either during the lesson or following the lesson so that the feedback is timely and usable.

### **Collaborative Professional Learning Cycle**

The CPLC cycle incorporates the effective professional development practices that were informed by the work of Desimone (2009), DuFour and Eaker (2009), and Gulamhussein (2013). The process of identifying the problem allows for support to teachers for implementation of a problem of practice. The collaboration that is created within the identification phase gives teachers an active role in finding approaches to the identified practice. Implementation and co-teaching provide teachers a way to see how the practice works in their classroom and allows them to have support as they implement the practice. The duration of the complete cycle allows teachers to have continuous support and time to grapple with the new practice.

The process by which a teacher develops professionally is not always a democratic one. More often than not, teachers have little say in how, when, or in what context they will attend professional development. A study by the Bill and Melinda Gates

Foundation (2014) indicated that out of 973 teachers only  $n=93$  (10%) were able to always choose their professional development as compared to  $n=175$  teachers (18%) who had no choice in the professional development they attended. Burbank and Kauchak (2003) argue for teachers to have a more active role in professional development, and that the definition of professional development needs to be broadened to include the “experience and voices of teachers” (p. 500).

I agree with this position. I propose that professional development should be viewed through a different lens, one that will allow voice and choice for teachers before, during, and after professional development activities in order to allow teachers continuous professional learning (CPL) (Webster-Wright, 2009). The work of Webster-Wright was inspiring in changing my mindset around what should be considered for professional development. The CPLC incorporates the mindset of CPL because professional development should be ongoing and a cycle of learning. The act of teaching requires both a social and constructive process in order for learning to occur. Knowles (1990) noted that adults learn through life-centered situations with rich experiences. Planning our curriculum should be prepared in a collaborative community of educators. Members of this community can provide experiences and resources to each other in the best interest of our students’ education. Darling-Hammond (2008) stated that teachers learn best by collaborating with other teachers, analyzing students and their work, and sharing what they see.

Within education, there is tension about professional development. We know that as educators, we need to live by our own motto of being “life-long learners”; however,

educators face time restrictions that impede managing and attending PD. When teachers receive PD that is conducted within one meeting session, they often find it difficult to implement (Darling-Hammond et al., 2009). Through observation as an educator and as a presenter, it is apparent to me that many teachers are not actively engaged during PD. It has been observed that teachers may take the time to catch up with their colleagues or emails; while others may try to be engaged, it is difficult to take in all that is happening. Historically and currently, “one stop” workshops are the predominant model for delivering professional development (Darling-Hammond et al., 2009). Darling-Hammond and colleagues utilized the School and Staffing Survey (SASS) and found that between the years of 1999 and 2004, approximately 92% of surveyed educators participated mainly in traditional workshop sessions for professional development (Darling-Hammond et al., 2009). However, workshops have an appalling track record for changing teacher practice and student achievement (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). Teachers do not need to receive professional development as much as they need to be engaged in continuing professional learning with contextual and applicable experiences.

In 2014, the Bill and Melinda Gates Foundation conducted surveys and interviews which found that teachers feel that the professional development formats such as coaching and collaboration can provide substantial positive effects. Teachers also stated that in strong collaborative environments, there are significant benefits in their everyday work. However, these formats currently fall short of the ideal and leave many teachers unsatisfied. I believe that when professional development is brought into a classroom and

implemented with the teacher, teachers will be engaged with the professional development. The CPLC model allows for this process to take place.

The CPLC model allows for co-teaching and continuous collaboration; this process builds instructional relationships with researchers and teachers in Professional Learning Communities (PLCs) and in teachers' classrooms (DuFour, 2014). PLCs support ongoing professional development for teachers that is needed for continual improvement (DuFour, 2014). In PLCs, teachers work collaboratively on common goals, standards, assessments, and problem solve core instruction so all teachers can be effective. If teachers on the team struggled to effectively reach all students to demonstrate proficiency in a standard or skill, then that standard or skill would be identified to become the focus of its own professional development sessions (DuFour, 2014).

Teachers can reach out to other teachers within the school, district, or other collaborative forums for advice (DuFour, 2014). In addition to DuFour's network, I would like to include the option for teachers to seek help from district curriculum facilitators or university professors. By utilizing instructional coaches, they can begin to build an instructional relationship. An instructional relationship refers to the trust, practices, and connections that are established and built between the presenter and teachers based on the instructional needs of the teacher.

The CPLC relies heavily on instructional relationships. Researchers, coaches, and curriculum specialists will be better equipped to engage teachers in PD when it is differentiated and in context to current practices. The CPLC utilizes collaboration within PLCs. Instructional coaches are able to work collaboratively with teachers and focus on

the teachers' interests in learning, assist them in researching effective practices, and help them in planning implementation. The focus on differentiation for professional development is due to teachers having the democratic right to produce their own knowledge through action research and local dialogue (Apple & Beane, 1995). Moving forward in the CPLC, within the classroom, instructional coaches and teachers are able to teach collaboratively with a co-teaching model to experience PD in a way that was not previously experienced.

### **Summary**

Through reviewing the various professional development models, district impact on professional development, and democratic practices, I was able to create a professional learning model. The CPLC focuses on the needs of teachers where professional learning happens with instructional coaches as outlined by the needs of teachers. We know that there is a need for how we provide professional development in order for instructional practices and mindsets to have a great rate of change. I believe that the CPLC model will help teachers advance their classroom practices.

To investigate how coaches and teachers respond to the CPLC, I implemented it in one district with a pair of coach-teacher partners. In the next chapter, I explain my methods for studying the implementation of the CPLC.



### **CHAPTER III**

### **METHODOLOGY**

My purpose in this study was to design and implement a process of professional learning that incorporates co-teaching and allows teachers to have voice and choice in professional development and to investigate the effects of this implementation. Through my observations of teachers working collaboratively with instructional coaches who are implementing the CPLC process, I expected to see teachers' instructional practices change throughout the process as they co-taught with an instructional coach. I want the CPLC process I designed to allow teachers a chance to experience professional development that gave them a voice throughout their learning process that was tailored to their needs and was their choice. More times than not, teachers have little say in how, when, or in what context they will attend professional development. Teachers need to have a more active role in their professional development.

The purpose of this multi-case qualitative study (Yin, 2009) of the implementation of my reform design was to explore the following research questions:

1. What do participants experience as they participate in the Collaborative Professional Learning Cycle?
2. How do teachers' instructional practices change through the implementation of the Collaborative Professional Learning Cycle?

### **Key Terms**

For the purposes of clarity, there are a few key terms that I would like to define. The first of these is “teacher.” In my research, a teacher is classified as a regular classroom-setting teacher. This does not include special education teacher, content specialist, teacher assistant, or other educators who are not viewed as the primary fulltime classroom teacher. This is important because this study’s focus is on how classroom teachers are better able to adapt their practices for the achievement of all students in their classroom. Wilson and Peterson (2006) explained how teachers create opportunities for students to learn; however, teachers cannot control how students interpret what they learn. Therefore, teachers become responsible for analyzing students’ interpretations and facilitating another discussion to alter, edit, and enrich them.

The second term that is vital to my research is “instructional coach.” For the purpose of this study, an instructional coach is defined as a previous classroom educator who provides a form of personalized professional development in the school setting. For the purpose of this study they are district level curriculum coaches/specialists. However, in future settings this role could also be fulfilled by a school level curriculum coach/specialist or a college researcher/professor within the teacher education programs at a university. Jim Knight (2004) stated that “an instructional coach’s main task is to help teachers see how research validated practices offer useful solutions to the problems teachers face. Instructional coaches teach teachers about strategies and routines validated through research” (p. 33).

The final term that I define in relation to my research is “teacher success.” Within the realm of this study, a teacher has been successful if they changed instructional practices in their classroom that benefited their students’ learning as measured by the Instructional Quality Assessment (IQA). In discussion regarding teaching standards, the National Research Council (NRC, 2001) describes this teaching standard in context to student learning/achievement:

The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners. The teacher understands and can identify differences in approaches to learning and performance, including different learning styles, multiple intelligences, and performance modes and can design instruction that helps use students’ strengths as the basis for growth. The teacher believes that all children can learn at high levels and persists in helping all children achieve success . . . The teacher identifies and designs instruction appropriate to students’ stages of development, learning styles, strengths and needs. (p. 25)

This standard expresses the importance of teachers understanding how students learn, which in turn can lead to student success. The IQA can assess this standard through approximately 20 rubrics/rated items that focus on the Principles of Learning (Resnick & Hall, 2001) mainly in academic rigor, clear expectations, self-management of learning, and accountable talk (Junker et al., 2005). My research focuses on how coaches help teachers essentially understand this standard and adjust their teaching practices to benefit student learning; in adjusting their practices, the teacher themselves will find success.

### **Research Design**

My multi-case study was a qualitative design that relied on in-depth interviews, observations, and surveys as instruments for data collection. I believe that a multi-case

study was the best approach for this study since the CPLC model has not been researched. Yin (2009) describes multi-case studies as a way to describe and explain real-life interventions that are too complex to illustrate simply through survey. In the study, I situated myself in a position to examine the experiences of teachers and instructional coaches throughout the implementation of the CPLC. Creswell and Poth (2017) describe a case study as a qualitative approach where the investigator explores real-life case(s) over time through detailed, in-depth data collection involving multiple data sources. With much of my study focused on implementation of the CPLC, a case-study methodology is the most appropriate form. Yin (2009) explains that most researchers execute case studies in order to answer the question, how was it implemented? The data gained from interviews, observations, and surveys can be used to help inform further uses of professional development for teacher effectiveness and implementation research.

I was actively engaged in this research study. In my role, I served as a researcher, coach, and observer, which can be considered to be a complete participant (Creswell, 1998). I provided participants, both teachers and instructional coaches, with training on co-teaching expectations and the CPLC framework for professional learning. The initial training took place after the selection of participants had occurred. During the meeting we defined the variations of co-teaching. I emphasized during the meeting that teams would focus on using the model of two teachers “teach the same content/teach together.” This form of co-teaching allows for modeling and tandem teaching. I also provided participants with examples of co-teaching as well as non-examples of co-teaching in order to underscore expectations. Each teacher and instructional coach pair participated in

an activity in which they defined their non-negotiables. Each teacher identified her expectations regarding classroom environment, organization, teaching philosophy, instructional strategies, and student engagement. I described and provided scenarios that illustrated each component of the CPLC framework: identify the problem using data, collaborative research, collaborative planning, collaborative teaching, and reflections and revision of lesson. Teacher and instructional coach pairs also worked together to answer the following questions:

- What do you want from your co-teaching partnership?
- What will you have to do to achieve this?
- How will you or others know when it has worked?
- What will it look like to your students?
- What will your students be doing differently?

During this meeting the teachers and coaches received the consent to participate (Appendix J). After the initial training, CPLC participants were paired together to begin implementation of the cycle. Throughout each component of the cycle I collected observational data and transcripts of the meetings between each pair. As needed, I coached the instructional coaches when teachers were not being given voice and choice throughout the process. It is important that the teachers' needs were being heard and met.

During the study I encouraged co-teaching pairs to utilize the "teaching together model" as best practice for the CPLC. The teaching together model allowed teachers to both teach to the whole class and monitor student work. Essentially the teacher and coach utilized each other for conversation, modeling, and presenting the information to

students. The teacher together model kept both the teacher and coach engaged throughout the lesson and building off of each other. The coach was able to model, and the teacher could replicate in the moment what the coach was doing. I observed teams co-teach and collaboratively plan to help inform the study; observations helped validate the IQA and provide coaching to participants. At the final lesson another IQA was performed to identify the teachers' exit instructional quality and measure it against their initial quality in order to determine what instructional changes they made while participating in the CPLC.

### **Research Participants**

I studied the actions, experiences, and perceptions of educators within one school district. I used two elementary general education classroom teachers and paired them with two district level instructional coaches. A principal, from within the district in which I worked, agreed to allow me to conduct my research at his or her school. The school was a rural Title I school with 18 classroom teachers. The school serves approximately 370 students. In order to select participants, I met with all of the staff members during a staff meeting called by the principal. Upon meeting with the staff, I described to them the purpose of my research and the expectations of participation (Appendix I). I provided each teacher with the participant interest form (Appendix A). Before leaving I collected all participant interest forms. I received interest from 12 of the 18 eligible staff members. Criteria for teacher and coach selections were based on results from a researcher-designed questionnaire (Appendix A). The questionnaire for teachers focused on availability, willingness to participate, need/area for support, years of experience, and

administrator's consent. I narrowed down the participants to two participants due to the restrictions of having a timeframe and how much data I could reasonably collect. To narrow down the participants I selected participants who had between 5-20 years of experience, and who had an area of concern that a coach could address through co-teaching.

Research participants were from a span of K-5 teachers and district level Instructional Program Specialists. The district level Instructional Program Specialist served as instructional coaches for this study. The coaches that I selected had previously supported the school with Math and English Language Arts curriculum development and engagement. They had established a basic relationship with the majority of the staff through Professional Learning Communities (PLCs) and Professional Development activities. As these coaches had already been assigned to support this school, it was already a communicated expectation that they support the school and teachers' instructional needs. Through a conversation with the Principal, district Elementary Director, and Assistant Superintendent, we discussed how the instructional coaches could support teachers differently through coaching and co-teaching. Due to coaches having established relationships with the school and teachers, we did not have to focus as intentionally on establishing relationships. However, I do recognize that it is important for coaches to build relationships with teachers early on in the process and throughout the cycle.

All participants' names are pseudonyms. The two elementary teachers in this study are referred to as "Ms. Adams" and "Ms. Bryans." Ms. Adams was a fifth-year

teacher; she taught fifth grade and was departmentalized teaching only math. She was also the only fifth-grade math teacher in her school. Ms. Bryans was in her 19th year of teaching; she teaches fourth grade and was on a grade level with two other teachers.

The coaches are referred to as “Ms. Cross” and “Ms. Yang.” Ms. Cross has been in education for 18 years and has been in a coaching role for 7 years. She worked with Math teachers across the district. Ms. Yang has been in education for 13 years and has been in a coaching position for 7 years. She worked with reading teachers across the district. Both Ms. Cross and Ms. Yang have participated in district level instructional coaching professional development that occurred over a one-year timespan. The professional development integrated work by Jim Knight on instructional coaching.

### **Problem of Practice**

At the beginning of the CPLC, each instructional coach and teacher pair identified a problem of practice. The CPLC process primarily focuses on providing supports for instructional practices, because instructional practices can easily be modeled and replicated.

Ms. Cross and Ms. Adams focused on mathematics. Their problem of practice was identified by the teacher, who stated she needed support with student dialogue in math. When the pair researched instructional practices that could support the problem of practice, they found Math Talk Moves as a resource. As the pair co-planned lessons, they decided to focus on introducing one Math Talk Move at a time to students. Together the pair co-taught and modeled the use of the talk move with students; as the coach would lead, the teacher would model for students with prompts and questioning. As the teacher



felt more prepared with the talk move, she would include it in her lessons without the coach's assistance and would seek feedback from the coach as necessary. The coach provided feedback during the lesson with dialogue during in-between moments, such as when students were working with partners. The coach would also provide feedback after the lesson in the form of an email or follow-up conversations during the next co-planning session. During follow-up iterations of the cycle, the coach and teacher would add additional talk moves to the teacher's lessons with continued support and co-teaching.

Ms. Yang and Ms. Bryans focused on English Language Arts. Ms. Bryans identified her problem of practice as comprehension. Ms. Yang and Ms. Bryans problem-solved together using data from Ms. Bryans's student performance to identify that strong vocabulary instruction could impact student comprehension. Ms. Bryans and Ms. Yang co-planned a lesson to include activities focused on vocabulary acquisition. The pair co-taught together as Ms. Yang modeled the instructional practices, questioning routines, and probing, while Ms. Bryans would actively participate and model responses for students as well as add guiding questions for students. As students would work with partners, Ms. Yang would provide Ms. Bryans with feedback and things to look for in student work.

I provide further analysis and observational data regarding how the coach-teacher pairs worked together in Chapter IV.

## Data

### Data Sources

**Interviews.** Data collection resulted from three interviews (pre, mid, post) that I conducted with the coaches and teachers at separate times for a total of 12 interviews. Interviews took place in a setting that was convenient and comfortable for the interviewees. Interviews took place prior to implementation of the CPLC (pre), during the implementation of the CPLC (mid), and after implementation of the CPLC (post). I created interview questions to gain insight of the participants experiences throughout the duration of the CPLC.

**Surveys.** A longitudinal survey (Appendix F, Appendix G, and Appendix H), which I created, was also given to teachers before the process and after the process. A survey offers a useful qualitative tool to help collect facts and characteristics of a phenomenon, as well as describe the relationships among events (Merriam & Tisdell, 2015). The survey was designed using a Likert-type scale to collect data on how a teacher's experiences and use of instructional practices had changed over time. The survey examined participants' opinions of the collaborative model of professional development.

**Observations and journals.** Data were also collected from ongoing observations I conducted of co-planning and co-taught lessons from each team. I chose not to observe every lesson or planning session. I wanted time for the teams to have unobserved sessions, so it would feel more natural to the teachers to co-plan and co-teach. I documented my observations in my field-reflexivity journal. After I would observe the

sessions with the teams, I would reflect on their time together using reflective questioning. I would ask myself: What do you notice about the teacher-instructional coach relationship? What do you observe as the pair co-teaches? Does one person take charge (teacher or coach) or is it shared? Does the teacher express their needs? Do they have a voice and choice in the process? Are there changes in the teacher's practices?

**Instructional quality assessment.** Teachers also had an initial and post-implementation assessment performed to determine if there were any changes in their instructional practices. When identifying the teacher's instructional practices, I utilized the Instructional Quality Assessment (IQA). The IQA consists of approximately 20 rubrics/rated items that focus on the Principles of Learning (Resnick & Hall, 2001) mainly in academic rigor, clear expectations, self-management of learning, and accountable talk (Junker et al., 2005). With Ms. Adams, I used the rubrics from the Math IQA (Boston & Wolf, 2006). With Ms. Bryans, I used the English Language Arts IQA (Matsumura et al., 2006).

### **Data Collection Overview**

Once partnered, the teachers and instructional coaches participated in the Collaborative Professional Development Cycle for 4 months (August through November). At the initial implementation of the CPLC, teachers participated in an initial IQA performed to determine their beginning level of instructional quality. I gathered the IQA data on Ms. Adams and Ms. Bryans during a normally scheduled class. After collecting my initial observational data (IQA), the coaches and teachers came together for a meeting. All participants and instructional coaches attended an introductory meeting to

discuss expectations regarding which co-teaching models should be utilized, to become acquainted, and ask questions. After the meeting, teachers and coaches met during routinely scheduled PLCs on a bi-weekly basis and co-taught on the weeks they did not plan. I observed the first, second, fourth, and fifth co-planned sessions and co-taught lessons. As I collected observational data, I also reflected on what was observed and captured those reflections in my reflexivity-field journal.

During co-planning the teams identified a problem of practice that the teacher determined, and they addressed it collaboratively. Ms. Adams and Ms. Cross chose to work on math-talk moves as the instructional problem of practice. Ms. Bryans and Ms. Yang chose to work on comprehension with a focus on vocabulary as the instructional problem of practice. I assisted coaches and teachers as needed with the co-teaching aspect and other forms of collaboration as necessary. Interviews occurred during pre-, mid-, and post-cycle (see Interview Guides in Appendix B, Appendix C, Appendix D, and Appendix E). The interviews asked questions about their opinions and experience with the Collaborative Professional Development Cycle and other professional development experiences that they have had. Each participant answered interview questions that I created. That last set of data that was collected was survey data for the teachers only which occurred simultaneously with the interview data collection. To summarize the data collection process, data collection consisted of:

1. Instructional Quality Assessment (IQA) delivered both prior to and following implementation of the CPLC;

2. Participant observations conducted throughout the study and documented in a journal in which I kept field notes and engaged with my reflexivity;
3. Individual interviews that occurred prior to, during, and following the study;
4. Participant surveys delivered both prior to and following implementation of the CPLC; and
5. A reflexivity journal that I kept during the study.

### **Data Analysis**

To analyze data collected from interview transcripts, observations, Instructional Quality Assessment data, field-reflexivity journal, and the survey results, I utilized Spradley's (2016) coding process. I determined a list of a priori codes based on the existing literature.

### **Coding**

While analyzing the data, I developed a list of 13 emergent codes that were used for data analysis (Figure 3). Coding also took place during each analysis of data with the pre-, mid-, and post-interviews and surveys, the observations, and field-reflexivity journal. To code the interview transcripts, I opted to print them all and color code the related codes. Spradley's (2016) method of analyzing qualitative data involves four steps: domain analysis, taxonomic analysis, componential analysis, and theme analysis. Domains consist of cover terms, categories, and semantic relationships, which are the connection between cover terms and categories (Spradley, 2016).

What do participants experience during the Collaborative Professional Learning Cycle?

Cover Terms	Collaborative	Intentional	Continuous
Included Terms	<ul style="list-style-type: none"> <li>• Relationships</li> <li>• Partnerships</li> <li>• Supportive</li> </ul>	<ul style="list-style-type: none"> <li>• Purposeful</li> <li>• Targeted</li> <li>• Goal</li> <li>• Teacher choice</li> </ul>	<ul style="list-style-type: none"> <li>• On-going</li> <li>• Implementation</li> <li>• Change</li> </ul>

Figure 3. Relationship of Included Terms to the Cover Terms That Were Found from the Coding Process.

**Domain analysis.** Using Spradley's (2016) approach in the domain analysis, I started by identifying a semantic relationship. The semantic relationship I was looking for was how participants identified the central elements of the Collaborative Professional Development Cycle (CPLC). The semantic relationship connects the cover term and category together. Through analysis of interviews, observations, surveys and field-reflexivity journal, I found patterns in how the teachers experience professional development and ideally how professional development would be designed.

**Cover terms.** I continued to code the data by highlighting related conversations from the interviews with color coding. I used 13 domains/codes in the coding process of the interviews, observations, and surveys. The 13 codes were (a) continuous, (b) relationships, (c) collaboration, (d) intentional, (e) purposeful, (f) implementation, (g) change, (h) partnership, (i) teacher choice, (j) goals, (k) targeted, (l) support, and (m) teacher voice. These codes were then grouped into three themes because of the relationships that they had with each other (Figure 3).

**Taxonomic analysis.** The taxonomic analysis involved finding relationships in each domain (Spradley, 2016). In each domain I further analyzed relationships in teacher's experiences with professional development. I also included in the analysis the observations with this taxonomic analysis to see how relationships and practices changed. I matched the included terms to the cover terms to identify three themes, collaboration, intentional, and continuous (Figure 3).

**Theme analysis.** The last step in Spradley's (2016) qualitative analysis is a theme analysis. The theme analysis defines the assertion from the data. An assertion will apply to multiple situations and will repeat in several domains (Spradley, 2016). I utilized the codes to identify patterns and trends among the shared experiences of the instructional coaches and teachers.

### **Researcher Subjectivities and Positionality**

An important facet of conducting trustworthy research is for researchers to contend with the issues of researcher subjectivity and positionality. Researchers should be transparently mindful regarding how their backgrounds, perspectives, and research interests affect the interactions they have with the participants of their studies (Lichtman, 2013). The process of reflection about one's position can be a helpful way to uncover assumptions and address potential biases (Arthur et al., 2017). As Glesne (2011) has pointed out, being aware of one's positionality "is being attuned to intersubjectivity, how the subjectivities of all involved guide the research process, content, and ideally, the interpretations" (p. 158).

As I observed the participants and collected data, I also recorded my reflections on the observations in a field-reflexivity journal. Through the process of observing it was important to note the actions and conversations that occurred in my field-reflexivity journal. After taking notes in the journal I added a reflective piece to what I observed and added insight to the process. It has been noted that qualitative researchers probe into the experiences of their participants and try to abstract and theorize inductively to reveal valuable insights that can be interpreted and applied to other cases (Palaganas, Sanchez, Molintas, Visitacion, & Caricativo, 2017). This process influenced not only the research participants but myself since the reflexivity journal captured these moments of reflection (Palaganas et al., 2017).

In my current role in education, I see many teachers who are frustrated with the many demands that they face and lack of aligned professional development that they receive. As a researcher and educator, I believe that we can provide better professional development for teachers that equip teachers with skills and tools that have been tailored to their needs and ultimately their students' needs and which they can use in their classrooms. With the need to review and change curriculum on an annual basis, teachers can feel left in the dark and unheard. Teachers need to feel as if the system of which they are a part is a democratic practice that needs them and their expertise. Through a collaborative cycle of professional development, teachers take their professional learning into their own hands and make the instructional decisions needed to better their practice.

My educational and work experiences have a direct impact on my positionality. I believe that teachers need a voice in why and how they develop professionally. I believe



that if teachers do not see value and connections in what they learn, then what they learn will not be implemented or seen as valuable for their limited time, if at all. Many things that researchers find may not be relevant to teachers. Therefore, I believe that researchers and teachers need to be in the same room together putting forth a common vision of best practices for students. These perspectives can impact my data in looking too closely for specific trends and patterns in data and possibly missing data that reflect views that differ from my own.

In my previous role as the district Coordinator of Testing, Accountability, Research and Grants, I neither had any supervisory capacity over any of the participants, nor did I conduct formal observations of the participants. I believe that my professional role did not have an impact on their participation in this research. In my previous role as an instructional coach, I was fortunate to be able to build many coaching and professional relationships with the current instructional coaches and teachers. These prior relations can have an effect on the study. I believe that the existing relationships are beneficial because research shows how relationships are necessary for teaching and learning. By having this groundwork already done, it is one component that will not need to be expanded upon during the implementation of the CPLC.

### **Trustworthiness**

To improve the reliability of the results, I utilized multiple data sources as a form of triangulation (Merriam & Tisdell, 2015). Triangulation refers to using multiple methods of data collection (Merriam & Tisdell, 2015; Yin, 2009). In my study I utilized surveys, interviews, transcripts, observations, artifacts (i.e., documentation from meetings

and PLCs, lesson plans, and documentation from reflections) field-reflexivity journal, and results from the IQA to cross-check data that inform my study.

From the data collected, I am able to argue that a teacher's professional development is directly tied to their ability to implement strategies in the classroom through use of the CPLC model. This process is solidified through partnerships with instructional coaches. Establishing trustworthiness resulted in in-depth analysis of participants' experience and data trends from survey results. Transcriptions, recorded interviews, reflexivity journal, IQA rubrics, and survey results are available for review.

### **Summary**

The purpose of this study was to implement the Collaborative Professional Learning Cycle and investigate participants' perceptions of its efficacy as a process of professional learning. Through the observations of teachers working collaboratively with instructional coaches who were implementing the CPLC process, I saw teachers' instructional practices change throughout the process as they co-taught with an instructional coach. In conducting the multi-case study, I used a qualitative design with in-depth interviews, observations, surveys, and the IQA. The design of the study was to situate myself within the experiences of a teacher and an instructional coach throughout the implementation of the CPLC. Throughout each component of the cycle I collected observational data and transcripts of the meetings between each pair. As needed, I coached the instructional coaches if teachers were not being given voice and choice throughout the process, as it was important that the teachers' needs were being heard and met.

## **CHAPTER IV**

### **RESEARCH FINDINGS**

The purpose of this study was to implement the Collaborative Professional Learning Cycle (CPLC) that I designed and explore the following research questions:

1. What do participants experience as they participate in the Collaborative Professional Learning Cycle?
2. How do teachers' instructional practices change through the implementation of the Collaborative Professional Learning Cycle?

To sufficiently investigate these questions, I employed the following data collection procedures:

1. Instructional Quality Assessment (IQA) delivered both prior to and following implementation of the CPLC;
2. Participant observations conducted throughout the study and documented in a journal in which I kept field notes and engaged with my reflexivity;
3. Individual interviews that occurred prior to, during, and following the study;
4. Participant surveys delivered both prior to and following implementation of the CPLC; and
5. A reflexivity journal that I kept during the study.

In this chapter, I describe the findings from my implementation of the CPLC. I review participants' experiences as well as the results of the two administrations of the

IQA. First, I explain participants' experiences prior to, during, and after implementation of the CPLC. Participant experiences were gathered through interviews, observations, field-reflexivity journal, and surveys. Second, I examine the results of the IQA with regard to how the CPLC affected the teachers' instruction. I conclude by presenting the three main themes regarding CPLC implementation.

### **Participant Experiences Prior to, During, and After Implementation**

#### **Participant Experiences Prior to Implementation**

**Interviews.** In implementing the CPLC it was important to gather the participants' experiences about professional development and the process of the CPLC in order to shape professional development that best aligns with the teachers' needs. Prior to the study I interviewed each teacher and instructional coach individually to gather their experiences and opinions on professional development. Teachers and instructional coaches were asked similar questions, but some questions were adjusted to align more closely with their role (see Appendixes B and C). During the pre-interviews teachers and coaches were asked to describe their experiences with professional development, opinions of how they felt professional development could change, and their experiences with professional learning communities (PLC), collaboration, and co-teaching. Both teacher participants spoke positively and negatively about their prior professional development experiences. They had both experienced professional development that they were not invested in or that they felt was not useful. One of the teachers spoke about how timing and location can affect their perception of the professional development. With

many of the professional development sessions being short workshops, there was not time to follow up or plan.

The teachers also spoke positively about some professional development in which they had participated; in these sessions the professional development was interactive and hands-on. During the pre-interview, participants mentioned how professional development needs to be collaborative in nature. I asked participants, “How can professional development change?” Ms. Bryans responded by stating,

Instead of one large session where they chunk everything up, it needs to be continuous. Constantly, leave a little bit, practice in your room, leave a little bit, and practice in your room. That way when you do have questions there’s somebody there to answer it, because when you’re at the beginning and they give it all to you and there’s no check-up, if you have a question. Because you’re not going to have a question until you go use it. And there’s nobody there after they tell it to you to ask. (Pre-interview, Ms. Bryans, 9/05/2018)

In encouraging Ms. Bryans to talk more about her opinion, I asked her to discuss what she would like to see between coaches and teachers; she stated, “More coming in, pushing in, and helping me within my classroom. Not as much me going to you, but you coming to me” (Pre-Interview, Ms. Bryans, 9/05/2018). I again probed her to talk more about her statement of having to “go to them,” to which she replied,

If I have a question, I’m going to have to seek them out, I’m going to have to go ask them, and it’s all going to be through email. I’ve had several questions with Ms. Cross and every time it’s through email. I just think it would be beneficial if they came to me when I have questions and came in. (Pre-interview, Ms. Bryans, 9/05/2018)

I then asked Ms. Bryans to discuss if she thought co-teaching with someone would improve her instructional practices. She stated,

As with anything, if you're teaching with someone or you're doing anything with someone, and if they're coach, they're obviously, they've been successful in the classroom. Or if it's somebody that's coming in, even as an equal, a teacher, if they're coming in to help you, as with anything if you work with someone you're going to learn something from them. You're going to take something that then you're going to take ownership of and use, and they're going to take something from you, and they're going to learn. So it's a win-win for both teachers involved. (Pre-interview, Ms. Bryans, 9/05/2018)

Ms. Bryan's emphasis on collaboration resonates with how teachers need support throughout the implementation of professional development experiences. Many times, after teachers receive PD they are left on their own to implement it, which usually results in failed implementation. I also feel that Ms. Bryans' opinions reflect the research from Knowles's (1990) adult learning theory that adults learn in life-centered situations and that adults have a need for self-direction. Ms. Bryans' repeated emphasis on wanting the coach to be there to ask questions and collaborate with shows her need for life-centered learning. There were similar comments made about collaboration from a coach's perspective.

During the pre-interview with Ms. Cross she was asked the same question, "How could professional development change?" Her response was,

I think that all professional development needs to have a piece that they are able to collaborate, process, but then also have some form of whether it's the co-teaching or the modeling or going to observe another teacher. I think that in order to build the capacity and to really highlight some of the great things that are happening, we've got to see it in action, no matter if you are a beginning teacher

or a veteran teacher that's been teaching 25 years. When you can see something in action, that's empowering. (Pre-interview, Ms. Cross, 9/10/2018)

Intrigued by her experiences and opinion as an instructional coach, I asked her to discuss her thoughts more in depth by answering the question, "What do you think about collaboration between coaches and teachers?" She responded by stating,

I think that it empowers all that's involved because again it becomes that we're on level playing ground. We're going to do best practices based on what the research says. But I'm not going to just train you and leave you alone. I'm going to train you and we're going to guide through it and we're going to talk about it and we're going to reach together and then after that we're going to reflect. And then we're going to refine what we've done and implement it. So again, it's more of a, with our children we scaffold our instruction, and that is something that a lot of times we don't do in professional development. We just give them all the layers instead of layering it a little at a time. And so I think that that is where we've got to move to, is where our professional development is scaffolding. We're going to give you a little information. We're going to implement it. We're going to reflect. Now we're going to come back and we're going to add another layer. And what that's going to do is it's going to shrink the teacher's instruction so that it's so intentional that the students are going to be the ones that gain from the whole process. (Pre-interview, Ms. Cross, 9/10/2018)

The second coach had a similar opinion about collaboration; she also discusses about meeting the needs of the teachers which aligns to being intentional. This was seen as coaches and teachers discussed how professional development needed to be purposeful, targeted, goal-oriented, aligned, and intentional. Ms. Yang was asked to speak on her opinion about professional development:

I think we have to really look at our world and where it is in collaboration and communication. Those 21st century skills are so key for our students, but they're also key with our teachers. We have to make sure with the models of professional development as well, that we are making sure that collaboration piece is at the forefront because we've got to listen to each other's ideas. Listen to where each

other's coming from, how we can support one another, and also being able to communicate our needs because professional development for teachers is for personal growth for instruction, and if we aren't meeting the needs of the specific teacher with that differentiated piece of professional development, then we're not meeting the needs of the teachers. (Pre-interview, Ms. Yang, 9/10/2018)

Ms. Yang's focus is on collaboration and intentionality with communication. She highlights the CPLC's purpose of teacher voice and how important it is that we learn how to communicate with each other for the benefit of personal growth. This idea also aligns with social-constructivist learning theory, which describes how learners construct their own knowledge in interactions with social and authentic learning environments (van den Bergh et al., 2015).

During the pre-interviews, in a conversation with Ms. Bryans she discussed the theme of continuousness. Ms. Bryans's opinion is similar to that of Ms. Cross, as can be seen from our dialogue below:

Tina Lupton: So talk more about, you said time was sometimes something that was a barrier.

Ms. Bryans: You get all these ideas from 3:00 to 5:00 at a workshop or from 3:30 to 4:30 at a workshop and you never have the time to especially talk to your colleagues about that planning time to be able to talk to them about how we're going to implement that in our room. I get that idea globally, but then I don't get to bring it down to inside my building.

Tina Lupton: So is it the time of the day as well as having time to follow up?

Ms. Bryans: Time to follow up.

Tina Lupton: Okay so time to follow up.



Ms. Bryans: I would say more with that because yeah, I'm not so much worried about when you give it to me, it's that I want to be able to have that time to use it in my room. I think I like that.

Tina Lupton: So in your opinion, how can professional development change?

Ms. Bryans: Instead of one large session where they chunk everything up, it needs to be continuous. Constantly, leave a little bit, practice in your room, leave a little bit, and practice in your room. That way when you do have questions there's somebody there to answer it, because when you're at the beginning and they give it all to you and there's no check-up, if you have a questions . . . because you're not going to have a question until you go use it. And there's nobody there after they tell it to you to ask. (Pre-interview, Ms. Bryans, 9/5/2018)

Ms. Bryans expressed need for time to follow up is an aspect to continuous professional development. When professional development is continuous there are more opportunities for questioning, reflection, and implementation of practices. During the pre-interviews with the participants they essentially discussed the importance of having teacher-instructional coach relationships. Without having a relationship, it can be difficult to have reoccurring, open dialogue that the teachers are seeking. Ms. Cross was asked to discuss the impact of being present in the classroom, modeling, and co-teaching with teachers, and if she felt an impact on her relationships with teachers:

Absolutely. It wasn't again that I am the holder of the knowledge, it was that she is going to train you but she's also going to show you what it looks like and I've had teachers that said, now I want you to come back and watch me, and I think that that is the most powerful form of professional development because it allowed me to again go in and to observe those teachers and support them after they had implemented it. So they needed to be trained, but they also needed to see it in action and then they wanted me to come back to say, am I on the right track? And so it wasn't just a one and done, it was a continuous support. (Pre-interview, Ms. Cross, 9/10/2018)

Ms. Cross highlighted the importance of coaches being able to observe the teachers in order to support them with implementation of instructional practices. The continuous support that Ms. Cross emphasized is integral in implementation of the CPLC. During the pre-interview Ms. Cross was asked to discuss her opinion on how professional development could change. She noted,

Again, I think it goes back to their lack of time to collaborate and to really process and plan the information that we're given. I think that we've gotten in a bad habit to say, well if I give them five professional developments then they're going to grow as professionals, when in reality when you're giving them that much information, they can't become an expert on one of them because there's so much, because I'm going to give you some information and then a month later I'm going to train you on something different. So they never have that time to really refine their teaching practices, to become proficient at whatever they've been trained on with professional development. (Pre-interview, Ms. Cross, 9/10/2018)

Here Ms. Cross identified one of the most common frustrations among teachers and coaches—the lack of time to collaborate and come back to continue collaborating.

**Surveys.** Prior to the study the teachers also participated in an anonymous survey to identify how they would feel about collaboration with an instructional coach. Results for the survey are found in Table 1. The Likert-type scale that was used allowed for teachers to select (a) *Strongly Agree*, (b) *Agree*, (c) *Disagree*, and (d) *Strongly Disagree*. I avoided using an indifferent rating of “neither” or other neutral terms to ensure that participants expressed an opinion. The results show an agreeance to each statement of either agree or strongly agree.

Table 1  
Results from Pre-implementation Survey

Pre-survey Questions	Responses	
	Teacher 1	Teacher 2
Collaborative planning with an instructional coach will be beneficial.	Strongly Agree	Strongly Agree
Collaborative planning with an instructional coach will assist me with rich instructional resources.	Strongly Agree	Agree
Collaborative planning with an instructional coach will assist me with identifying students' misconceptions and needs.	Strongly Agree	Strongly Agree
I believe I can co-plan with an instructional coach.	Strongly Agree	Strongly Agree
I feel that I can voice my professional needs during planning.	Strongly Agree	Agree
I believe I can co-teach with an instructional coach.	Strongly Agree	Agree
I believe that I will learn valuable instructional practices from co-teaching.	Strongly Agree	Strongly Agree
I believe that co-teaching will help me implement changes in my classroom.	Strongly Agree	Strongly Agree

Prior to participating in the CPLC, teachers already expressed a desire to collaborate with coaches and assume it would be beneficial for them. Through the analysis of the survey results we see that teachers feel that a coach can provide them with valuable instructional resources and practices. This opinion of the teachers stressed their need for more collaborative experiences of professional development. The survey results also supported the teachers' opinions during the interview and aligned with what they

conveyed during the pre-interview—a need for more collaborative professional development, continuous support from a coach, and allocation of resources that meet their needs.

### **Participant Experiences at the Midpoint of Implementation**

**Interviews.** Part way through the cycle, I interviewed each participant to gather their experiences regarding the CPLC. During the mid-interviews, participants were asked to discuss their experiences with implementation of the Collaborative Professional Learning Cycle (CPLC); they were asked to speak about the different parts of the process such as co-planning and co-teaching. Throughout these interviews, the participants all expressed excitement about participating. Overall, they enjoyed collaborating with each other. The teachers were excited to have someone in their classroom to watch model lessons and to collaborate with. The coaches discussed that by being in the classrooms they were able to reflect in the moment with the teacher and adjust the instruction on the spot.

The ideas that professional development needs to be continuous, intentional, and collaborative were heard throughout the mid-interviews with participants. This was seen as coaches and teachers discussed how professional development needed to be ongoing, continuous, consistent, implementable, and seeing change. Through their reflections I found that they continually discussed how favorable the ongoing support and collaboration they had was. Ms. Bryans, one of the teacher participants, reflected on how she viewed collaboration and continuation between coaches and teachers. She stated,

I feel that if we spent more of our efforts in collaboration with those who do our Professional Development rather than just listening and taking off we would see more of an effort made to internalize our professional development and we would actually gain knowledge. After you sit and listen to a PD for 2-3 hours I tend to lose my focus. I take so many ideas away that it is virtually impossible to explore them all. By sitting with her for an hour or two each week I actually explore the resources with her rather than listening about them. (Mid-interview, Ms. Bryans, 10/16/2018)

The comment made about having greater access to those who do the professional development is also heard in a conversation with Ms. Adams. Ms. Adams discussed how collaborating with the instructional coach has really benefited her planning and instruction. Following is our dialogue:

Tina Lupton: Tell me about how the collaborative planning has affected your instruction.

Ms. Adams: I have been introduced to resources and ideas for instruction that I didn't know before.

Tina Lupton: Can you tell me more about that?

Ms. Adams: My co-teacher has given several suggestions for ways to incorporate math talk in my classroom. She also suggested ways to revamp my math workshop that was not working the way it did last year.

Tina Lupton: What made that experience different from other PLCs?

Ms. Adams: I feel like I have accomplished more during co-planning PLCs than my ordinary PLCs.

Tina Lupton: Tell me about some challenges with the process so far.

Ms. Adams: Planning for a lesson ahead of time but getting behind in class before the lesson.

Tina Lupton: Tell me about how the co-teaching experience has been?

Ms. Adams: My co-teacher has conducted number talks in my classroom and it was nice to be able to see someone else complete a number talk and observe the way she questions students about their methods.

Tina Lupton: What has been the most beneficial part of co-teaching?

Ms. Adams: Having a different voice and a new face in the classroom. My students have enjoyed having Mrs. Cross with us. She has noticed some things during instruction that maybe I didn't see. She also can explain concepts in a different way. Since we have been focusing on math talk it has been nice to be able to model this for my students. (Mid-interview, Ms. Adams, 10/16/18)

With Ms. Cross providing professional learning in Ms. Adams's classroom, Ms. Adams was able to observe how to implement the instructional practices with her students and she was able to replicate the practices. The statement from Ms. Adams was observable within co-teaching lessons and the relationship that was built between she and Ms. Cross.

It was apparent that having greater access to the coaches was beneficial for the teachers. During the mid-interview with Ms. Bryans, she reflected on how different her experience with the CPLC was compared to other professional developments she has participated in. Following is her reflection:

I think we would truly teach our teachers rather than it just being a delivery system of information overload. I have actually used resources and have had the opportunity to email her if I have had any questions. I don't usually feel that comfortable with the PD presenter because there are 100's of people in the PD rather than just my PLC. I appreciate being given this opportunity. I have found that PD can be something that you look forward to and not just another meeting. By being in a small group and being able to communicate easily with my coach I have felt more comfortable about asking questions if I didn't understand. (Mid-interview, Ms. Bryans, 10/16/2018)

By having a coach to work with one-on-one, Ms. Bryans's ability to meet personal instructional needs are met, compared to working within a traditional setting, where it is less likely that she would have been able to have a dialogue about her specific needs and questions. Ms. Bryans discussed the importance of being able to have a relationship with the coach because it allows her to feel comfortable with asking questions.

From a coach's perspective, she identified similarly with Ms. Bryans, regarding the importance of being able to build a relationship with teachers. She stated,

I think as a whole it has made both of us stronger and then for me in my role I'm ready to do this with more teachers. I'm using the same format with many different teachers in the PLCs that I'm a part of because it is powerful and they need to feel supported. It's not just, "I'm going to pop in and see you later" 2 months later. It's that progression of, "Okay, let's meet and plan." Well, now let's model together and co-teach. It's not just me modeling or the teacher or me observing the teacher but we're doing it together again as partners and then that reflecting piece. (Mid-interview, Ms. Cross, 10/19/18)

Ms. Cross also discussed how she has felt inspired by this process and the benefits of using this modality of professional development so much so that she expanded the practice on her own with other teachers. Ms. Cross continued to discuss her experience with implementing the process on her own with other teachers. Her experience was:

I've already implemented it in a couple of other schools without the teachers really knowing. They need to have somebody that they feel supported by and not just "you're a district personnel and you're just doing this because you have to." The teachers that say, "I love that you've jumped right in and you've helped me to see that by saying this in a different way it connected with the students better." It's something I've been able to apply at other schools. (Mid-interview, Ms. Cross, 10/19/18)

Ms. Cross's passion for the CPLC is evident in her intentionality in using the model with other teachers. I would suggest, however, that with implementation of the CPLC both participants are aware and trained to participate, in order for more effective outcomes as well as allowing for teacher voice and teacher choice. In continuing to discuss how the CPLC was functioning for the participants, Ms. Cross and I talked about how her experience with the CPLC has been different than working with a professional learning community (PLC). She stated,

We're very intentional. We tell our teachers we want them to be intentional and strategic with their lessons. Sometimes with PLCs we might have a topic but then there are sometimes where maybe there's not a topic focused for the PLC. This has allowed this particular PLC to be very strong because, again, we have a focus. We are working on the math discourse. Well, how is that math discourse going to look throughout the math block, not just a snapshot. It's allowed us to be more focused on what our goal was. I guess if you compare the two PLCs that we've had the PLC time that we've had for planning has been very different. In the sense of it's not taking as long because we have our direction and we know what direction we need to go in to help the students be successful. (Mid-interview, Ms. Cross, 10/19/18)

Ms. Cross discussed the importance of intentionality and that by having a focus the conversations and planning were purposeful and productive. Instructional coaches, myself included, have experienced PLCs that can be quite unfocused and not aligned to the practices that DuFour (2014) researched. When PLCs follow DuFour's model, teachers can gain instructional practices, align lessons, and more effectively reflect on student data. However, that is not always the case. Many times, teachers claim to be participating in a PLC; however, it is unintentional and resembles more of a social gathering than a productive planning session.



As I continued to discuss the CPLC with Ms. Cross, I asked her to identify what has been the most beneficial part of the co-teaching. She stated,

Co-teaching has been great and we've been able to see different things with students. Like this past week I shared something that I noted by one of the students in a conversation that we had and then a strategy that I had shared. The teacher said, "Ah, I've never thought about that strategy." I love the co-teaching part but I feel like the planning part has allowed us to make sure that that core instruction and what we are planning is going to support the students where their needs are. For my particular teacher I'm working with time management, that was something that was a struggle and she felt like she was spending too long on certain pieces. That was a piece that we added this last time for co-teaching. Because of the planning you're able to have those conversations, you're able to reflect, which has been you're going to be able to see the effects during the co-teaching. (Mid-interview, Ms. Cross, 10/19/18)

Ms. Cross highlighted how beneficial it has been for her to be in the classroom, to have seen Ms. Adams practice in action and collaborate with her to craft her instructional practices in a way that benefits students. They worked well together in collaboration and dialogue around Ms. Adams's instructional practice.

During the mid-interview with Ms. Yang, we discussed her experiences with the CPLC. Below is some of the dialogue we had:

Tina Lupton: Take some time to tell me about how you feel about the process.

Ms. Yang: I have enjoyed working with the teacher I have been paired with. I think the planning and dialogue as well as the co-teaching has been strengthened because of this.

Tina Lupton: Tell me about how the collaborative planning has affected your instruction.

Ms. Yang: Allowed for more dialogue that was intentional and also allowed for a more strategic focus on the learning experience of the students and the instruction of the students.

Tina Lupton: What made that experience different from other PLCs?

Ms. Yang: It is intentional, purposeful, and meaningful to all stakeholders.

Tina Lupton: Tell me about some challenges with the process so far.

Ms. Yang: Time is the challenge with my schedule. I believe if I was school based and there full-time the process would be even more effective. (Mid-interview, Ms. Yang, 10/16/2018)

Ms. Yang discussed how the CPLC allowed her to have a more focused and intentional planning session with her teacher. I have heard throughout the study that intentionality of the CPLC has been one of the most beneficial elements. The CPLC allowed for coaches to work one-on-one with teachers in the classroom setting, which is ideal for intentional planning around instructional practices. Through the mid-point interviews the teachers and coaches explicitly discussed the value of having relationships to build instructional practices that are grounded in collaboration.

**Observations.** The dialogue that Ms. Adams had about having greater access to coaches was also observed in a co-teaching lesson. On October 8, 2018 I observed Ms. Adams and Ms. Cross co-teach a math lesson. Ms. Cross started the lesson by modeling Math Talk Moves as the teacher walked around the room observing Ms. Cross and checking on students. Together they continued the lesson by having the students talk about what they think their next talk move (adding on) will be about. Ms. Cross and Ms. Adams visited groups of students as they discussed. Ms. Cross brought back the group and reminded them how to show if they agree with someone (they had a hand signal). Then, continuing to model, Ms. Cross elicited responses from students. During the lesson Ms. Adams and Ms. Cross dialogued back and forth off of each other. Ms. Adams and

Ms. Cross took turns being the lead and model the talk move for the students. After discussing the talk move, they moved into a number talk to continue to use the talk move. After they did a number talk, both Ms. Cross and Ms. Adams moved around the room to gather student responses. After number talk, Ms. Adams took the lead using an interactive whiteboard lesson to demonstrate division. While Ms. Adams was talking, Ms. Cross wrote for Ms. Adams on the board. Throughout the lesson Ms. Adams and Ms. Cross continued to take turns being the lead.

The lesson showed how co-teaching incorporates active learning for the teacher by the instructional coach modeling different practices in the classroom. This lesson utilized strong collaboration between the teacher and instructional coach as they dialogued with each other and took turns leading the class. The reciprocity that occurred allowed time for the teacher to see the instructional practice being modeled as well as adapt their teaching on the spot and implement the actions while the coach watched to give actionable feedback. This practice aligned with the research on adult learning theory that adults learn in life-centered situations; experience is the richest method of learning. Therefore, adult learners need to have new learning situated in the context of previous learning with active reflection (Knowles, 1990).

During an observation of Ms. Yang's and Ms. Bryans's co-teaching, I observed the relationship that they built and what was conveyed in the survey and interviews. It was obvious to see how comfortable the pair was co-teaching. This was the fourth lesson that they co-taught. Ms. Bryans started the lesson and Ms. Yang was supporting by distributing materials. Ms. Bryans used her smart board to engage the students in an

audio reading of a story while the students followed along. Ms. Bryans and Ms. Yang followed along at the front of the room. During the reading Ms. Yang would take the lead and model a think aloud around vocabulary. She used choral response to engage the students in questioning. Ms. Bryans described an activity to the students that they would do together in groups to work on vocabulary and context clues. Together, Ms. Yang and Ms. Bryans monitored student worked while the students worked together to identify synonyms. Ms. Yang brought students back together to have continued dialogue with the students. Once the students were focused, Ms. Yang demonstrated another think aloud; during the think aloud, Ms. Bryans and Ms. Yang collaborated in conversation. Ms. Bryans and Ms. Yang had students discuss again and they monitored the conversation again. Throughout the lesson, Ms. Bryans and Ms. Yang continued to collaborate with conversation and model for students. Ms. Yang would elicit responses and Ms. Bryans would write what the students said.

As seen with Ms. Cross and Ms. Adams, Ms. Bryans and Ms. Yang also shared great reciprocity in co-teaching. Ms. Bryans was always engaged in what Ms. Yang was saying when she would lead the conversation. By seeing Ms. Yang lead, Ms. Bryans was able to strengthen her instructional practice in the moment and mimic questioning techniques demonstrated by Ms. Yang. Both collaborative pairs were able to build relationships with each other through co-teaching and strengthen instructional practices. The reciprocity of dialogue and leadership that occurred between both pairs created an environment of dynamic professional learning.

**Journal review.** Data I reviewed from my field-reflexivity journal captured and reflected on the observations. In the field-reflexivity journal I noted that

Team one had what I would consider a successful first round of planning. The coach and the teacher have good dialogue and they are collaborating well, the coach is allowing a lot of time for the teacher to express their ideas. Teacher and coach plan to co-teach in a way that both coach and teacher will utilize each other to “popcorn” off each other to build on in the lesson and conversation. Coach and teacher do a good job collaborating and taking the time to check in and see if each other agree.

I further reflected upon their first session of planning together and noted about how the instructional coaches training was apparent in observation. I noted,

Overall with this first session I feel that the coaching training that the instructional coach has received is allowing for effective collaboration. In general, the teacher had ample amount of voice and choice in the planning session and they left with a plan of what their first lesson would be. Ms. Cross was excited to plan with Ms. Adams and it was noticeable in how well planned she was in the meeting and came with ideas, at one point I did want to hear Ms. Adams opinion so I interrupted the conversation to let Ms. Adams reflect. Ms. Adams reflected well to my prompting and expressed her similar ideas to Ms. Cross.

Using the field-reflexivity journal allowed me to not only capture observable moments but perceptions and emotions that came from implementation of the CPLC.

Ms. Bryans emphasized the importance of having time with an instructional coach and how more effective the time was when it was spread out over time. This moment was also captured in my reflexivity journal. After observing the pair in planning, I reflected on this meeting by writing,

Team two did not have as smooth of a planning time as team one had. They did however utilize data effectively to start the conversation and the coach was able to

use the data to address some areas of focus. Ms. Bryans was able to ask many questions about the data specific to her students and what she felt like the data showed. Ms. Yang supported Ms. Bryans' questions with research and resources. Overall Ms. Bryans seemed to be comfortable talking with Ms. Yang. Ms. Yang gave suggestions of instructional teaching practices and questions to use. Ms. Bryans and Ms. Yang continued to collaborate and share ideas of different books, after multiple book suggestions they decide on one book to use in class. There were times of long silences and searching for resources and minimal collaboration. Ms. Yang finally asked what her role is in the classroom and provides some suggestions of what she can do, such as model with the teacher for the students. Overall, Ms. Yang and Ms. Bryans started strong, had moments of disconnect and then ended strong.

The field-reflexivity journal shows the beginning stages of Ms. Yang's and Ms. Bryans's relationship during the coaching process. The field-reflexivity journal allowed me to see the changes in planning that occurred between the pairs over time. I observed Ms. Yang's and Ms. Bryans's fifth planning session which was significantly different than the first. During the fifth planning session, Ms. Bryans discussed with Ms. Yang what her plan was for when they co-teach. Ms. Yang gave suggestions of instructional teaching practices and questions to use. Ms. Bryans and Ms. Yang continued to collaborate and share ideas of different books; after multiple book suggestions, they decided on one book to use in class. The planning was collaborative and had shared dialogue between Ms. Bryans and Ms. Yang. Ms. Yang and Ms. Bryans discussed data from a recent assessment and how the data impacts their instruction coming up; they needed more resources for in-text citations. Ms. Yang discussed resources for in-text citations. Together they created an activity to do with the students. After their session, I reflected on what I observed:

The planning and lessons are reoccurring and are providing effective instructional practices. Great collaboration, they are very intentional on what they plan and I see what they plan happen in the classroom as they co-teach. I see great reciprocity between the coach and teacher as they plan and teach with each other. They are both very natural together. I also see how reflective they are in the moment to provides important dialogue to planning.

The field-reflexivity journal was a beneficial tool and added data to confirm the themes that occurred. The journal allowed me to capture my own perceptions as a complete participant.

**Survey.** During the implementation of the CPLC, the teachers participated in another anonymous survey. The survey asked similar questions (Table 2) that they answered in the prior survey, and there were two additional questions asked to capture the mid-process of the CPLC implementation. Survey results indicated that both teachers either agreed or strongly agreed with each statement from the survey. Teachers expressed that the collaboration with the instructional coaches has been beneficial for co-planning and co-teaching. The teachers felt as if they could sustain the instructional practices after the instructional coaches have left. Between the pre- and mid-survey, teachers have either strongly agreed or agreed with all statements showing that they perceive the CPLC as a professional learning experience that was meeting their needs.

During mid-implementation of the CPLC, I have seen the coaches and teachers collaborate intentionally to support implementation of instructional practices in the classrooms that aligned with the teachers' needs. The continuous support that the teachers receive has been expressed as one of the most favorable elements of the CPLC. It has

also been evident throughout the interviews, surveys, and observations that collaboration has been necessary to make the CPLC effective.

Table 2

## Results from Mid-implementation Survey

Mid-survey Questions	Responses	
	Teacher 1	Teacher 2
Collaborative planning with an instructional coach is beneficial.	Strongly Agree	Agree
Collaborative planning with an instructional coach is assisting me with rich instructional resources.	Strongly Agree	Agree
Collaborative planning with an instructional coach is assisting me with identifying students' misconceptions and needs.	Strongly Agree	Agree
I feel comfortable co-planning with an instructional coach.	Strongly Agree	Strongly Agree
I feel that my professional needs are addressed during planning.	Strongly Agree	Strongly Agree
I feel comfortable co-teaching with an instructional coach.	Strongly Agree	Strongly Agree
I am learning valuable instructional practices from co-teaching.	Strongly Agree	Agree
I continue to implement the changes made from this experience when I am not co-teaching.	Agree	Strongly Agree
I feel more knowledgeable as a result of the co-teaching.	Strongly Agree	Agree
I am better able to implement change of instruction because of co-teaching.	Strongly Agree	Agree



## **Participant Experiences After Implementation**

**Interviews.** During the post-interviews, the participants were asked to reflect on their experiences throughout implementation of the CPLC, as well as changes they perceived to have happened in their instruction. The questions that teachers and instructional coaches were asked are a variation of the questions that they had been previously asked. I kept my questioning consistent for each interview so that I could capture their perceptual changes throughout the implementation of the CPLC. The post-interview (Appendix E) asked the teachers and instructional coaches to reflect on their experiences and the CPLC process to indicate how beneficial the process was.

During the post-interview with Ms. Cross, she resonated with the idea that coaches are committed to continuous learning and improvement. She also discussed how coaching was a way to guide—not direct—teachers through learning. Ms. Cross continued to express her opinions of how her collaborative planning experience was different than how she has worked with other PLCs in the past, explaining,

The biggest difference is that, it's that continuation. It's not just an every other week or once a month, the teacher and I, we met once a week and there were some times that we were going to be meeting on a Wednesday and I had a question or the teacher had a question and we were emailing each other or we were texting each other. I think that, that has been able to allow us to have that deeper relationship because again, it's that we know that we're going to see each other once a week. And so we would have those conversations, we've had, have predetermined talking topics and as a matter of fact, she called me Wednesday after she got her check-in data because she wanted to share the results of our students. And that's what she said, she said, "I'm so excited, I had to call you, I had to share the results of our work and what we've been able to do with our students." (Post-interview, Ms. Cross, 11/13/2018)

Unlike current professional development practices such as the one-stop workshop, instructional coaching as found in the CPLC is an activity that is ongoing throughout the school year. The CPLC involves continuous cycles of coaching, reflection, and action to foster teacher growth. Ms. Cross was asked to describe the most beneficial part of co-teaching, and stated,

I think the most beneficial part is just being able to be there weekly and having a rapport with the teacher and the students, and being able to be that constant support. So not just, "I'm here for PLC and then I'm gone, I'll see you later." But it was that constant continuous support reflecting and there were some times that we might not have been able to reflect at the end of it, but we would always send an email, I would send an email and I would say, "How did you feel it went, what do we need to do moving forward?" Even if we didn't get to have that face to face, reflection piece together, we did it over email or through a phone call. I think that was the most beneficial, it's just that the relationship we were able to create to be there together to support the students and again it wasn't her students, it was our students. And so I feel like both of us took ownership of the process because we want to support the students the best of our ability. (Post-interview, Ms. Cross, 11/13/2018)

Throughout each of Ms. Cross's responses she essentially described the continual nature of the CPLC and its importance. The ability to collaborate with a teacher throughout multiple months allowed the coach to provide ongoing support and individual attention that the teacher needed. Ms. Cross discussed how collaborative planning affected her instruction and coaching:

I think that has been the most impactful for the instruction and then for the planning, we have been very thoughtful in what we are planning. And because of that, I feel like the lesson plans that we've created together have been more rigorous and because of that, I feel like the students have been more successful. I think it is because during that planning and during instruction, we've been more intentional on the questions that we ask and the outcomes that we expect from our students. So that goes back to having those high expectations and because of those

high expectations and our planning being more engaging, we've been able to support the students to have a deeper understanding of the concepts. (Post-interview, Ms. Cross, 11/13/2018)

She also reflected on the teacher that she worked with and how her instruction changed over time, describing,

I do think at the beginning we were laughing because we would say, "oh, we need to have a timer." Because she was in too much time and she wasn't the flow of instruction but sometimes not what it should be. And I think that's why we lost some of the students, I still think that there is some part of that and that will be something else that we look at moving forward. But I do feel like it was more focused and again, like I say it again intentional, as far as what we were planning and how we were planning and what the students were doing. And so of course we were more intentional, again, we were able to go deeper with the standards instead of just getting in that surface level, which I feel like is where we probably were at the very beginning, we were very surface level. (Post-interview, Ms. Cross, 11/13/2018)

Throughout implementation, Ms. Cross was always very positive and open to expressing her experiences during the CPLC. As an instructional coach, Ms. Cross had many strengths when collaborating with teachers. Ms. Cross was able to build a strong relationship with Ms. Adams so that she was able to have honest conversations about Ms. Adams instructional practices and provide effective feedback.

The other coach, Ms. Yang, had similar remarks when asked the same interview questions. She noted,

During planning, I was able to just really help them expand ideas and those good practices that they already had in place. So that was a good tool for me as well because I actually was working with the same team every week, which is not something I normally get to do. And it was good to see that and how their dialogue has changed and how they had found some things and started incorporating them in a different way. I liked the consistency. I was not spread

out. I knew exactly what it was that I was working with, with this PLC, and I was able to do that on a weekly basis. We were in contact and collaboration. It was something that was really beneficial, and we talked through different things as well leading up to each time that we got together for the co-teaching lesson. (Post-interview, Ms. Yang, 11/13/2018)

Ms. Yang expressed some frustrations that have not really been expressed to this point, and that was the chaotic nature of being an instructional coach. She had much experience in being “spread out” and at times it can be difficult to keep up with teachers’ needs. Often there is expression of teacher frustration, but this is a reminder that the coaches also experience frustrations with professional development.

Ms. Yang felt strongly about collaboration, so much so that she highlighted it again in the post-interview when she was asked to discuss the most beneficial part of co-teaching. She answered,

To me, after the collaboration part . . . Well, really I guess all-in-all, it was the whole entire collaboration part because we talked about students, we talked about challenges, we were able to run that through, and then coming back together afterwards and truly reflecting and having some students . . . Oh, my goodness, I could believe we got this out of them. Did you see this? It worked for them. It didn’t work for this group, what can we do next time? Or I love this, I want to do this and incorporate it the next time that we get together. That collaboration part, too, is what else can I support or give or offer as well as far as what she was incorporating within. So that collaboration piece, I think that’s going to probably continue all year, just to really have somebody to talk through things and making sure that we are being intentional and purposeful about what we’re teaching in the classroom. (Post-interview, Ms. Yang, 11/13/2018)

Throughout the interviews there was a consensus among participants that teachers need continuing support and collaboration during implementation of practices. This theme of collaboration was seen multiple times and in various forms. At times teachers and

coaches would speak of relationships, partnerships, and support, such as Ms. Bryans asserting,

Today it definitely changed. She was not here, but yet we're continuing on. That would be the biggest change. And also I like knowing that I feel comfortable enough with her as not really my presenter but be able to still go to her if I need help. I feel like you build a relationship that you may not feel in the standard professional development. Our instruction has definitely changed with reading. Just our whole pathway leading into. I mean, we're purposeful now and I hate to say that especially with you working at the central office because I don't think we were before. I think we were very much, this is the story we read last year. We know it's good. Let's do it. Okay. Well also we need this story and now it's like, no, we're teaching this. We need to find a story that matches this, that we can also bring in other elements for. So I think our planning and I personally think that it is, I think she's gotten us excited again, even Mr. B and Miss. M over there. (Post-interview, Ms. Bryans, 11/12/2018)

To hear about how collaboration brought excitement back into a teacher's pedagogy speaks to the effectiveness of the professional learning. Ms. Bryans was asked to reflect and discuss how her instruction changed over time, and she noted,

I wish you would have been in our PLC at the beginning of the year versus today. Our instruction has definitely changed with reading. Just our whole pathway leading into. I mean, we're purposeful now and I hate to say that especially with you working at the central office because I don't think we were before. I think we were very much. This is the story we read last year. We know it's good. Let's do it. Okay. Well also we need this story and now it's like, no, we're teaching this. We need to find a story that matches this, that we can also bring in other elements for. (Post-interview, Ms. Bryans, 11/13/2018)

I noticed many changes in Ms. Bryans's attitude during implementation of the CPLC. When I first sat down with Ms. Bryans to discuss her interest in the CPLC, it was obvious that she felt like she needed support. She was "burnt out" as a teacher, and although she had many strong instructional practices, they were not well aligned to meet the changing

population of her students. Over the years, Ms. Bryans had a steadily increasing population of fifth-grade students who were struggling readers. The instructional practices she once used were not as effective as they had been, leading to the need for additional support. With implementation of the CPLC, Ms. Bryans was provided the ongoing support she needed.

When Ms. Bryans and I met for her post-interview she expressed her experiences of the CPLC process. She stated,

Thoroughly enjoyed it. I've learned lots of new activities that I'm using in my classroom. She's guided me to resources that I already had that I may have forgotten about and it has changed the way we're planning reading. I can tell you that right now when we just planned, it's getting us more to the activity focus, getting them to interact more amongst each other rather than just me being a leader. It's more trying to get them to be the leaders. And that's hard for me because I am more of a, "Here, let me tell you this," kind of teacher but I've tried really hard to back off, let them learn and when they're making their mistakes to keep my mouth closed and try to let them work their way through it. So I've enjoyed it. (Post-interview, Ms. Bryans, 11/12/2018)

Ms. Bryans was a teacher participant who, after teaching for 19 years, is considered to be a veteran teacher. She has experienced ample amounts of professional development, but her excitement with working in the CPLC framework was like no other. She explained,

Honestly when you first got . . . And I'm not just saying this, I am one of these people, but when you first get your degree and you've got all these new ideas, I'm that kind again in reading like, "Oh my God, I can do that. Oh my God, the bags, oh my God." (Post-interview, Ms. Bryans, 11/12/2018)

The continuous support that the teacher receives was beneficial for potentially promoting long-term instructional changes in the teacher's practice. To have Ms. Bryans

reflect further and on another component of the CPLC, I asked her to discuss how the collaborative planning affected her instruction. She explained,

Well, my instruction actually changed throughout, because I had begun with the beginning of the year the way that I had instruction the previous year, just whatever I was used to. There were some flaws and things that weren't working out for me with our new group. With collaborative planning, she gave me some ideas and a way to change my math workshop to make it easier on the kids and me not having as many things going on at once. We were able to bring in a different, the talk move strategy, so that helped. It gave us a different way to start off our day. With our co-planning, she really helped me have a way to align my instruction so it was going from one thing to the next. It kind of helped a smoother process, not as chaotic. (Post-interview, Ms. Adams, 11/21/2018)

Ms. Bryans had expressed through all of the interviews that she has had many experiences with professional development, and that she was not always invested in those experiences. When talking about the CPLC process, I always say how enthusiastic Ms. Bryans was. It was apparent that Ms. Bryans was enjoying her professional development experience with the CPLC. When I observed her planning with Ms. Yang and co-teaching, I saw how energetic she was and genuinely interested in what Ms. Yang was sharing.

During the post-interviews with Ms. Yang, Ms. Adams, and Ms. Bryans, they were all asked about what they determined to be the most beneficial part of co-teaching. Although each participant had separate interviews, their responses to this question were very similar. They all spoke very highly about the collaboration that was able to happen because of the ability to co-teach. Ms. Yang's response was,

It was two people that were on the same page that knew what we were doing through our instruction with the students, and it was very targeted. And that was

extremely beneficial, and we were able to see and converse and give feedback and clear up anything that was going on with the students in that moment with two of us being in there as well. And then, again, loving the feeding off of each other's ideas, even though we had that plan, just in that moment type stuff. (Post-interview, Ms. Yang, 11/13/2018)

In Ms. Adams's response, she stated,

I would say just having the time to observe and have her in here with me, and able to see what teaching looks like somewhere else, because we don't get the time to do that. It also put me in the role of yeah, we're a two-person team so I'm bouncing off what you're doing to kind of put me in a different instructor role. Like, put me out of my comfort zone because it may not have been similar to how I normally lead my instruction, but I feel like it had definitely been beneficial for me. I would say that's probably the best part, being able to really view someone else's teaching style but also be a part of that at the same time. (Post-interview, Ms. Adams, 11/21/2018)

Ms. Bryans responded,

Having that new enthusiasm coming from new ideas that I got from her and actually doing them together instead of just going to a workshop and getting them where they tell you I liked doing rather than being told. (Post-interview, Ms. Bryans, 11/13/2018)

Ms. Yang found the importance of being able to provide feedback in the moment and adjust practices when needed. Ms. Adams discussed the importance of having another person in the room and the reciprocity that occurred. Ms. Bryans discussed the impact of having someone with new ideas and having them in her room with whom to share ideas. Essentially, all three discussed the ongoing collaboration that was able to occur.



Throughout the process it was important that the instructional coach and teacher are able to collaborate and communicate with each other. It was necessary that they are able to situate themselves in the room when co-teaching so that they can communicate with each other when adjustments are needed and be reflective in the moment. Ms. Yang also spoke about the importance of collaboration. She stated,

That collaboration part, too, is what else can I support or give or offer as well as far as what she was incorporating within. So that collaboration piece, I think that's going to probably continue all year, just to really have somebody to talk through things and making sure that we are being intentional and purposeful about what we're teaching in the classroom. (Post-interview, Ms. Yang, 11/13/2018)

During the post-interview with Ms. Adams, she discussed the importance of continuous professional development. In talking with Ms. Adams, she emphasized that she would enjoy participating in the CPLC again. She expressed,

I feel like there's some more for me to learn, and that we could get accomplished. We worked on our math talk, and that's what we concentrated on, but I feel like if we could continue the sessions, maybe we could work on a different topic as well, something that, maybe small group instruction or something that you can always benefit from. I feel like if it can keep going, there's always more to learn. (Post-interview, Ms. Adams, 11/21/2018)

Ms. Adams's comments acknowledged her need that she, like many others, is a lifelong learner and that there is always more to learn. However, that can be difficult to do when the modes of professional development do not align to meet their needs or to the five principles of effective instruction. This was expressed in a conversation with Ms. Adams; she stated,

I've got a lot of information from this. It has helped my classroom dynamic. I have learned a lot from it. I've been given different resources, instructional strategies. I feel like it's been beneficial, progress made in my students as well. I feel like without it, my classroom wouldn't have been successful because there's just been so much with it that has been brought to the table that I really wouldn't have thought of on my own. (Post-interview, Ms. Adams, 11/21/2018)

Ms. Adams discussed how the collaboration with her coach impacted her instruction because she received resources to help her be successful with her students. Ms. Adams accentuates her opinion on how the CPLC process works, explaining,

I loved the process, with having the time to co-plan and especially spend the time with an instructional specialist that can give me resources and activities and strategies to use in my classroom. It's nice to co-plan and then co-teach. With us being able to co-plan quite a bit, it did help. I mean, it would be nice if this could just go on forever and that I'd always have a co-teacher, but it was really nice to have dates for co-planning with having the time to do that and then co-teach. Then we would reflect afterwards. (Post-interview, Ms. Adams, 11/21/2018)

The participants were consistent in their opinions throughout interviews when discussing the CPLC process. They all discussed the importance of having professional development be continuous as they talked about how the CPLC was ongoing. They all discussed—many times—how much they appreciated the collaboration. It was also apparent that the intentionality and focus of co-planning and co-teaching was found to be constructive.

**Survey.** After implementation of the CPLC, the teachers took one final anonymous survey. The post-survey (Table 3) has similar questions to the pre- and mid-survey and it includes two new questions to have teachers convey about the process in its entirety. As seen with the previous surveys, the teachers either agreed or strongly agreed

with all statements. The post-survey included the most selections of “*strongly agree.*” The data suggest that the teachers had a positive experience with implementation of the CPLC and found the process to be effective. The survey data were further analyzed by compiling the three surveys together as seen in Table 4.

Table 3

## Results from Post-implementation Survey

Post-survey Questions	Responses	
	Teacher 1	Teacher 2
Collaborative planning with an instructional coach was beneficial.	Strongly Agree	Strongly Agree
Collaborative planning with an instructional coach assisted me with rich instructional resources.	Strongly Agree	Strongly Agree
Collaborative planning with an instructional coach assisted me with identifying students’ misconceptions and needs.	Strongly Agree	Agree
I felt comfortable co-planning with an instructional coach.	Strongly Agree	Strongly Agree
I felt that my professional needs were addressed during planning.	Strongly Agree	Strongly Agree
I was comfortable co-teaching with an instructional coach.	Strongly Agree	Strongly Agree
I learned valuable instructional practices from co-teaching.	Strongly Agree	Strongly Agree
I will continue to implement the changes made from this experience when I am not co-teaching.	Strongly Agree	Strongly Agree

Table 3

Cont.

Post-survey Questions	Responses	
	Teacher 1	Teacher 2
I feel more knowledgeable as a result of the co-teaching.	Strongly Agree	Strongly Agree
I am better able to implement change of instruction because of co-teaching.	Strongly Agree	Strongly Agree
I feel that this process helped me change my instructional practices.	Strongly Agree	Strongly Agree
I feel that this process was more beneficial than traditional Professional Development.	Strongly Agree	Strongly Agree

Table 4

Survey Results from Pre-, Mid-, and Post-survey

Question was asked during:	Question	Total Percentages of Responses			
		Strongly Agree	Agree	Disagree	Strongly Disagree
Pre, Mid, Post	Collaborative planning with an instructional coach was beneficial.	83%	17%	0%	0%
Pre, Mid, Post	Collaborative planning with an instructional coach assisted me with rich instructional resources.	67%	33%	0%	0%
Pre, Mid, Post	Collaborative planning with an instructional coach assisted me with identifying students' misconceptions and needs.	67%	33%	0%	0%
Pre, Mid, Post	I felt comfortable co-planning with an instructional coach.	100%	0%	0%	0%
Pre, Mid, Post	I felt that my professional needs were addressed during planning.	83%	17%	0%	0%

Table 4

Cont.

Question was asked during:	Question	Total Percentages of Responses			
		Strongly Agree	Agree	Disagree	Strongly Disagree
Pre, Mid, Post	I was comfortable co-teaching with an instructional coach.	83%	17%	0%	0%
Pre, Mid, Post	I learned valuable instructional practices from co-teaching.	83%	17%	0%	0%
Pre, Mid, Post	I will continue to implement the changes made from this experience when I am not co-teaching.	83%	17%	0%	0%
Pre, Mid	I feel more knowledgeable as a result of the co-teaching.	75%	25%	0%	0%
Pre, Mid	I am better able to implement change of instruction because of co-teaching.	75%	25%	0%	0%
Post	I feel that this process helped me change my instructional practices.	100%	0%	0%	0%
Post	I feel that this process was more beneficial than traditional Professional Development.	100%	0%	0%	0%

*Note.* Data are a result of responses from two teachers.

The survey results indicated that teachers either agreed or strongly agreed through all iterations of the survey with all questions. I added questions to each survey in order to capture the transitions that were being made as the CPLC was being implemented. On average, both teachers strongly agreed with all statements, essentially stating that they feel strongly about the Collaborative Professional Learning Cycle. Through observations,

instructional quality assessments, interviews, and surveys, all of the data were overwhelmingly positive about the implementation and components of the PCLC.

### **The CPLC and Instructional Practices: Results from the IQA Pre- and Post-test**

When identifying the teachers' instructional practices, I utilized the Instructional Quality Assessment (IQA). As I described in Chapter III, with Ms. Adams I used the rubrics from the Math IQA and with Ms. Bryans I used the English Language Arts IQA.

The IQA data in Table 5 represent Ms. Bryans's pre-CPLC implementation and post-CPLC implementation data based on the English Language Arts rubrics. In order to analyze the ELA IQA data, I had to synthesize several of the rubrics. Originally there were 21 rubrics. I combined rubrics that were looking for similar information. Rubrics were combined into six groups: participation, contributions, support with evidence, interpreting the text, expectations, and rigor. Prior to Ms. Bryans's participation in the CPLC, she scored a 1 for participation, a 4 for contributions, a 6 for having students support with evidence, a 4 for how students were interpreting text, a 15 for how students were held accountable with expectations, and a 7 for task rigor. The first lesson I observed of Ms. Bryans's class was a whole group lesson where she was reading a book aloud to the students and asking questions. During the times she would ask questions, less than 25% of the students were participating. In this lesson, when students would answer questions there was not additional conversation to link students' ideas. In general, there was little evidence of students contributing evidence to their answers. Students were not expected to explain their thinking or reasoning. Most questions that students were asked were at the recall level and isolated. The focus was a basic understanding of the text.

Table 5

## IQA Results for English Language Arts

IQA for English Language Arts Areas of Assessment	Pre-Observation	Post-Observation	Total Possible Points
Participation	1	4	4
Contributions	4	12	12
Support with Evidence	6	16	16
Interpreting the Text	4	12	12
Expectations	15	28	28
Rigor	7	11	11
Number of Points	37	83	83
Percentage	45%	100%	

During the post-IQA that followed the work that was done with the instructional coach via the CPLC, the overall tempo and style of the lesson was very different than the first lesson that I observed. During this observation, the students were working collaboratively on a task in groups of four, and the teacher was walking around the room listening to student conversation and engaging in dialogue with the students and guiding them with thought-provoking questions. The students had a new process of answering questions for which they were held accountable. The students were required to always have the text and to use the text to explicitly state the evidence of their claims. They were also required to make connections of the vocabulary they were working on to “real-world” context. The entire class was participating and consistently discussing. The students would make explicit connections to what a partner was saying and would share

ideas during discussions. The teacher guided students to be engaged with the underlying meaning of the text. Overall, the lesson was completely different than the first lesson and it was apparent that the teacher had a new energy about her.

Ms. Adams also participated in two instructional quality assessments. Hers were also completed prior to the CPLC and after the CPLC. Table 6 shows the data that were collected from the observations.

Table 6  
IQA Results for Math

IQA for Mathematics Areas of Assessment	Pre-Observation	Post-Observation	Total Possible Points
Participation	2	3	4
Teachers Linking	1	3	4
Students Linking	1	3	4
Asking (Teacher's press)	1	3	4
Providing (Students responses)	1	4	4
Potential of task	2	4	4
Implementation of task	2	4	4
Student discussion following task	2	4	4
Questioning	1	4	4
Mathematics Residue Rubric	1	4	4
Number of points	14	36	4
Percentage	35%	90%	

During the first observation of Ms. Adams's class she was teaching a lesson on division. The students were sitting in groups for a whole group discussion. Ms. Adams was reviewing terms for division with the students. Ms. Adams would ask a recall question and select one student to answer and move on to her next question. During this



lesson approximately 25-50% of students participated. During the questioning, students' answers were not linked to each other's and further discussion was not evident. Students did not use Math Talk moves and were not prompted to do so. Students were not asked to provide evidence of their understanding or support their statements. After reviewing terminology, students were grouped together to work on a division problem. The focus of the task was about solving the division and not necessarily developing mathematical understanding.

During the post-observation, the class dynamic was different as well as the dialogue. Prior to the whole-group lesson Ms. Adams had incorporated a number talk to start the class. Ms. Adams would intentionally prompt students to re-voice what another student had said; she would ask students to reason what another student had said or to add on to what a student had said. There were times when students naturally restated or added on without being prompted. The lesson that the students were working on was understanding remainders in division. The students were to create their own real-world problem, solve, and present to the group the steps they took to solve the problem. As the students were presenting, Ms. Adams would question the presenting group but pose the questions to the other students to keep all students attentive during the presentations. This implemented instructional practices that were noticeable and sustained in the classroom with students naturally utilizing the practices without being prompted.

### **Summary of Findings: Main Themes**

In this chapter, I discussed the data that I collected during observations, participant interviews, surveys, and the Instructional Quality Assessment. To improve

reliability of the results, I utilized multiple data sources as a form of data triangulation (Merriam & Tisdell, 2015; Yin, 2009). Triangulation refers to using multiple methods of data collection (Merriam & Tisdell, 2015; Yin, 2009). Utilizing this method, I was able to see similarities in participants' experiences and the changes of experiences throughout implementation of the CPLC.

Based on my analysis of the data, I identified three main themes regarding how participants experienced CPLC implementation:

1. The CPLC encouraged teachers and coaches to work collaboratively;
2. The participants appreciated the intentionality of the CPLC; and
3. The participants appreciated the continuity of the CPLC.

I also found that the CPLC produced instructional changes in teacher practices.

### **Collaboration**

Teachers and coaches were able to collaborate during routinely scheduled PLCs on a bi-weekly basis and co-taught on the weeks they did not plan. I assisted coaches and teachers as needed with the co-teaching aspect and other forms of collaboration as necessary. I observed teams co-teach and collaboratively plan to help inform the study, validate the IQA, and provide coaching. Collaboration was required through each component of the CPLC. Teams collaborated as they engaged in identifying the problem of practice. They collaborated as they planned the lessons and researched strategies to improve upon the problem of practice. They collaborated as they co-taught and reflected on lessons. They were able to build strong relationships through coaching to where they continued to collaborate and support each other outside of planning and co-teaching.

**Continuity**

Teachers and instructional coaches worked collaboratively with each other over a 4-month time span where they strengthened instructional practices. The cycle, designed the way it is, required ongoing support. The teachers and coaches worked together weekly for planning, co-teaching, and support. The ongoing support allowed the teachers to implement a practice and refine it over time. Teachers discussed that because of the ongoing support, they were able to use the practices in their classrooms and felt more successful in implementing them because of the continued support through coaching.

**Intentionality**

Through identifying a problem of practice that the teacher determined, the teams were able to intentionally plan to address it. The collaboration with planning helped teachers intentionally focus on their problem of practice and address implementation of strategies that helped them with their problem of practice. Teachers addressed multiple times how their planning and teaching was more impactful because they were focused on specific instructional practices. Their PLCs became more than just identifying what they were teaching, but how they were going to teach it. The transition from planning about standards and activities to planning for instructional practices was a change in how the PLCs were conducted, but was a necessary change that improved the intentionality of teaching.

**Changes in Instructional Practices**

At the final lesson another IQA was performed to identify the teachers' exit instructional quality and measure it against their initial quality in order to determine what

instructional changes they made while participating in the CPLC. The IQA showed that both Ms. Bryans and Ms. Adams exhibited changes in their assessed instructional practices. Overall Ms. Bryans increased from 45% to 100% on the IQA rubrics. Through collaboration with Ms. Yang, Ms. Bryans was able to improve her instructional practices on rigor of expectations, clarity and detail of expectations, access to expectations, analyzing and interpreting text, and academic discussions. Ms. Adams increased from 35% to 90% on the IQA rubrics. Through collaboration with Ms. Cross, Ms. Adams was able to improve her instructional practices of overall academic discussions within her classroom. Students were able to consistently respond with evidence, provide tasks that prompted students to provide evidence, and allow for discussions that created connections and mathematical residue.

I created the CPLC to focus on the effective professional development practices. The cycle's design ensures ongoing collaboration that intentionally focuses on a problem of practice. The data confirms that the cycle that I designed encouraged ongoing collaborative planning with reflections between the teacher and the coach that encourages teacher voice and choice. Moving forward in Chapter V, I discuss the analysis, implications, and conclusions.

## **CHAPTER V**

### **ANALYSIS, IMPLICATIONS, AND CONCLUSIONS**

In this study, I designed and implemented a model of professional development that includes the five effective practices of professional development, co-teaching, and voice and choice of professional learning for teachers. I implemented the Collaborative Professional Learning Cycle (CPLC) with two pairs of instructional coaches and teachers as participants. In implementing the Collaborative Professional Learning Cycle, I investigated the elements of the CPLC that were necessary for effectiveness and if the result of participating in the CPLC caused each teacher's instructional practices to change. The study's methodology consisted of the Instructional Quality Assessment (IQA), individual interviews, participant observations, and individual surveys.

Working with teachers and coaches to implement the Collaborative Professional Learning Cycle (CPLC) throughout this research was exciting. It was inspirational to see teachers and coaches collaborate, as well as become enthusiastic about professional learning. As I listened to the teachers and coaches during the interview processes, it was always evident that they were passionate about what they do and about the opportunity to learn alongside fellow educators. They were always thoughtful and genuine in their responses. What repeatedly appeared in our conversations was how they expressed a need for collaborative, intentional, and continuous professional learning. This research was

more than just a way to identify a change in teachers' practice; it was a way to provide them with a professional learning experience they desired and needed.

I began this dissertation project with a desire to connect teachers with instructional coaches in a way that was beneficial for teachers' professional learning. I was interested in knowing what components of professional development were impactful in changing a teacher's practice. In order to learn more about how professional development leads to implementation in the classroom, I asked the following questions:

1. What do participants experience as they participate in the Collaborative Professional Learning Cycle?
2. How do teachers' instructional practices change through the implementation of the Collaborative Professional Learning Cycle?

In implementing the Collaborative Professional Learning Cycle as a process of professional learning, I was able to observe teachers working collaboratively with instructional coaches. I saw teachers' instructional practices change throughout the process as they co-taught with an instructional coach. I designed the study in such a way that I was able to situate myself within the experiences of a teacher and an instructional coach throughout the implementation of the CPLC. I observed each component of the cycle and collected observational data and transcripts of the meetings between each pair and reflected on the process. As needed, I was a complete participant (Creswell, 1998), and coached the instructional coaches when teachers were not being given ample voice and choice throughout the process. I studied the experiences of the teachers within one school district, pairing two classroom teachers with two instructional coaches. Research

participants were from a span of K-5 teachers and district-level Instructional Program Specialists. Teachers and instructional coaches worked collaboratively with each other over a 4-month time span.

Baird and Clark (2017), Bill and Melinda Gates Foundation (2014), Borko (2004), Burbank and Kauchak (2003), Darling-Hammond (2008), Garet et al. (2001), Gulamhussein (2013), Patton et al. (2015), and others agree that there is a critical need for changing the format of professional development if we genuinely expect it to change teaching practices and meet the needs of teachers. Research on effective professional development shows that there is a need to improve the structure of professional development and professional learning. The CPLC aligns with research-based practices of effective professional development. Through the implementation of the CPLC, the participants expressed support and a desire to continue the CPLC.

In this chapter, I revisit the research questions and share the conclusions I drew from the data including interviews, surveys, observations, field-reflexivity journal, and the results for the Instructional Quality Assessment (IQA). I answer and explore what I found concerning each question. I also share implications for future research and my closing thoughts.

### **Question 1: What Do Participants Experience as They Participate in the Collaborative Professional Learning Cycle?**

As I discussed in Chapter IV, three themes explain the participants' experiences in the CPLC:

1. The CPLC encouraged teachers and coaches to work collaboratively
2. The participants appreciated the intentionality of the CPLC

3. The participants appreciated the continuity of the CPLC

Moving forward, I discuss how each component in the framework affected these participants' experiences. The components of the framework allowed for each central theme to occur naturally during the implementation of the CPLC.

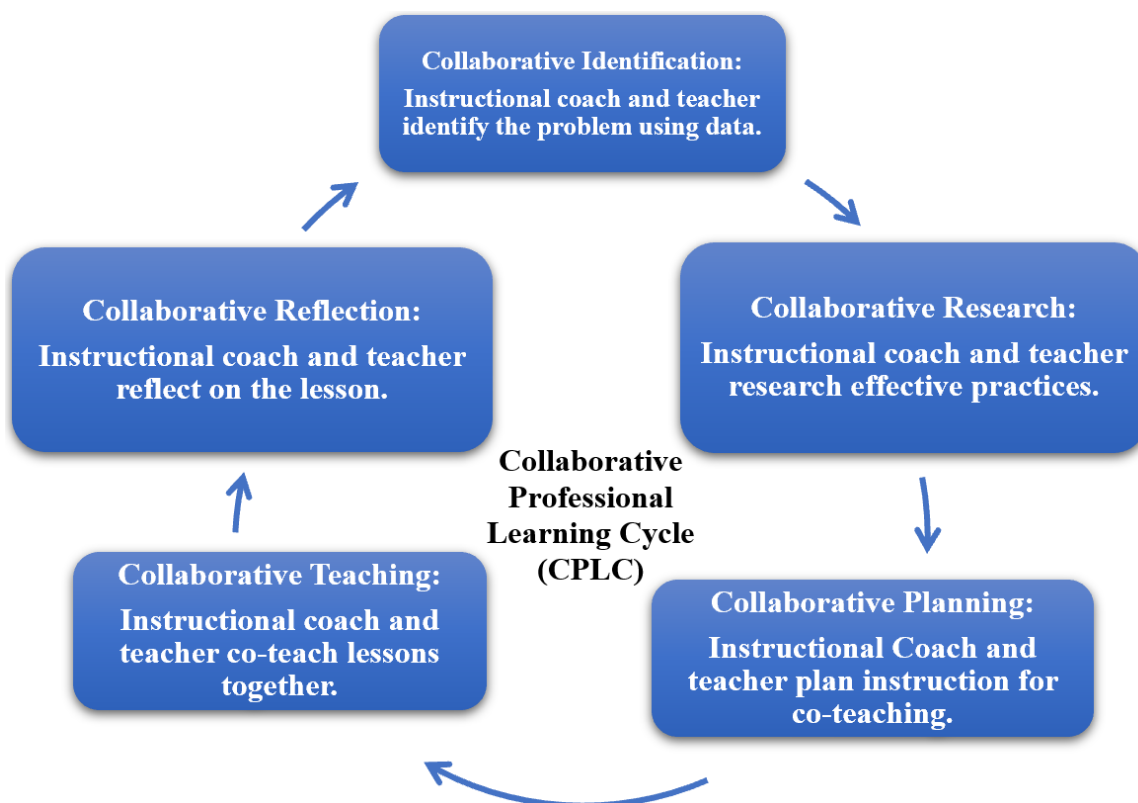


Figure 4. Review of Collaborative Professional Learning Cycle Model. This Figure Represents the Process of the CPLC That Teachers and Coaches Utilize. Source: Lupton (2019).

### **Experience 1: Identify the Problem**

In creating the CPLC, I understood that teachers and instructional coaches needed to work collaboratively to identify the problem of practice. At the beginning of the implementation of the CPLC, teachers worked collaboratively with instructional coaches



to discuss, analyze, and identify problems with practice or instruction that they felt needed addressing in order to foster learning in their classroom. During this time, Ms. Adams expressed to her coach, Ms. Cross, what her needs were. Ms. Cross was able to assist Ms. Adams by collaborating on ideas and research-based practices. I was able to observe their dialogue and collaboration to see the active role both participants had in this beginning stage. Ms. Bryans and Ms. Yang also utilized data analysis to confirm the problem of practice with their teachers. This first part of the process is very intentional, and research by Aguilar (2013) expresses the importance of this component because when instructional coaching is unfocused, or the purpose is not clear, the teacher tends to be unsatisfied with the experience. During CPLC implementation, the coach was there to help the teacher think and learn about the planning process rather than doing it for them. Teachers taking an active role in their professional learning is vital (Killion & Harrison, 2017). Aguilar (2013) defines the coach's task as listening carefully and engaging in the process of exploration and assessment with the teacher. Ms. Adams discussed during her mid-interview that she "accomplished more during planning with the coach" and how important it was for her to be invested in the professional learning experience because it related to her needs.

During the implementation of the CPLC, the instructional coaches were able to collaborate effectively with the teachers by providing support in planning and never planning *for* the teacher. Ms. Cross discussed during her post-interview that she felt having the original established goal helped them focus and reflect as they planned and taught together. Ms. Cross expressed how she would "constantly go back to the

beginning goal.” When the teacher and coach identified the focus and created a plan, it created energy, excitement, and focus between the teacher and coach (Aguilar, 2013).

### **Experience 2: Research**

During CPLC implementation, the instructional coach worked collaboratively to allocate resources and identify recent research based on the problem of practice identified in order to help the teacher grow professionally and intentionally. Working collaboratively, the instructional coach and teacher created a plan. Research expresses that a plan should be created through multiple conversations in order to explore the gaps in knowledge, skill, or capacity a teacher has to implement (Aguilar, 2013). The instructional coach and teacher were actively engaged in the CPLC during the research and planning. The experiences and knowledge of the coach helped identify research and effective instructional practices. The instructional coaches were crucial in isolating existing research that problem-solved the teachers’ instructional needs. This component allowed the instructional coaches to be able to identify a variety of research-based practices and present them to the teachers who then isolated the practice they wanted to implement. This experience was intentional and collaborative.

### **Experience 3: Planning**

The planning phase was where the teacher and instructional coach discussed the teacher’s pedagogy and teaching style, and defined possible boundaries, expectations, or needs during co-teaching. Successful co-teaching requires intentionality. To be intentional, the instructional coach and teacher needed to agree about what model of co-teaching they would use; formality of time, interruptions, and dealing with mistakes; and

clarity and purpose of what is practiced (Killion & Harrison, 2017). Planning should also be considered flexible (Aguilar, 2013). The teachers and coaches during CPLC implementation took a collaborative approach to planning. It was not rigid when they planned; instead, it was complimentary.

Ms. Adams, for example, discussed during her post-interview that she certainly thought the CPLC was beneficial for both her and her coach because of the partnership they experienced during planning and teaching. The way the teacher and coach would dialogue with each other about resources and instructional practices was effective. Ms. Bryans discussed during her post-interview about how planning with Ms. Yang has impacted her entire team because they have taken a new approach to how they plan. Ms. Bryans discussed how she has more time to plan now because of how intentional they have become during planning. Aside from co-teaching, the co-planning experience was the most praised component. Ms. Adams expressed how she “loved being able to co-plan with the instructional coach” and the activities and strategies they were able to plan together. Both coaches expressed how important it was to be able to plan with them consistently and how the continuation of planning made an impact. This component created partnerships that collaborated and conversed about the material in order to come to a consensus on how the practice would be modified and implemented into the teacher’s classroom. This experience was intentional, ongoing, and collaborative.

#### **Experience 4: Implementation**

Working together, the instructional coach and teacher co-taught to implement the change that they decided on together; they achieved this through multiple co-teaching

sessions in the classroom that allowed support for implementation and time for the teacher to deconstruct what they were learning. For co-teaching to have been successful, the process required both/all teachers' active involvement and that they demonstrate a true sharing of the work (Rytivaara & Kershner, 2012). Teams were encouraged to use the teaching together model as best practice for the CPLC. The teaching together model allowed the instructional coach and teacher to both teach to the whole class and monitor student work. Primarily the teacher and coach utilized each other for conversation, modeling, and presenting the information to students, which allowed both the teacher and the coach to be engaged throughout the lesson and to build off of each other. Each participant spoke about how, during co-teaching, they were able to "bounce ideas off of each other." The participants also all spoke about how they have conversations in the moment and adjust. This component permitted the coach to model, and the teacher to replicate what the coach was doing. During the co-teaching phase, the collaboration was evident, as was the intentionality that the teacher and coach set during planning. This collaborative experience was intentional, ongoing, and collaborative.

### **Experience 5: Reflection and Revision**

During the lesson and after it was co-taught, the instructional coach and teacher reflected on the lessons and decided on their effectiveness and further changes that they needed to make. Research shows that PD is more successful when teachers have more frequent opportunities to receive feedback on their instructional practices and pedagogy (Desimone & Pak, 2017). Feedback is most effective when it is explicit and uses multiple sources of data that teachers can gather from coaching observations or samples of student

work (Desimone & Pak, 2017). Ms. Cross discussed during her post-interview that she was able to provide “constant continuous support reflecting,” which happened during the lesson, after the lesson with a follow-up email and during planning. This component encourages coaches to give teachers immediate feedback either during the lesson or following the lesson so that the feedback is timely and usable. This ongoing support allowed teachers to make effective changes to their instructional practices; this was an ongoing, intentional, and collaborative experience. It is also crucial that the coach and the teacher had a relationship. Ms. Bryans discussed in her post-interview that because she was able to build a relationship with Ms. Yang over time, she was open to the feedback and reflections that Ms. Yang gave her.

### **Participants’ Overall Experiences of the CPLC and its Effects on Instruction**

It is important to note that the effectiveness of the CPLC relies on the effectiveness of the coach. Coaches need to be responsive to the needs of the teachers, patient with the varied learning processes of teachers, and accepting of where teachers currently are in their instructional practice (Killion & Harrison, 2017). The component of collaborative research allows coaches and teachers to work together in identifying the teachers’ instructional needs and intentional in planning for co-teaching. DuFour and Eaker (2009) state that nearly all teachers can develop mastery of instructional practices if the training they receive includes demonstration, opportunities for guided practice, prompt feedback, and sustained coaching. For example, Ms. Adams noted, “I feel like without it, my classroom wouldn’t have been successful because there’s just been so much with it that has been brought to the table that I really wouldn’t have thought of on

my own.” Ms. Adams discussed how collaboration with her coach impacted her instruction because she received resources that helped her to be successful with her students.

Ms. Bryans made similar remarks:

I feel that if we spent more of our efforts in collaboration with those who do our Professional Development rather than just listening and taking off we would see more of an effort made to internalize our professional development and we would actually gain knowledge.

She continued to say that “by sitting with her for an hour or two each week, I actually explore the resources with her rather than listening about them.” Ms. Bryans emphasized the importance of having time with an instructional coach and how more effective the time is when it is continuous. DuFour and Eaker (2009) state that professional development programs should be designed to develop thoughtful professionals who can assess and revise their actions in order to improve the likelihood of success; when we see that programs are not designed in this fashion, we see opinions that match Ms. Bryans’s frustrations.

As the cycle continued, the teacher and coach collaboratively planned with the lens of the teacher’s needs. The ability to co-plan with the instructional coach allowed teachers to have access to resources and ideas that they have not previously tried. The ability to then co-teach with the resources and implement the new ideas allowed for the teacher to experience a more successful implementation of instructional practices. Co-teaching was mainly a scaffolding technique for teachers, as they were able to implement

the instructional practices that they researched, planned, and executed with the coach in the classroom.

Ms. Adams emphasized her opinion on how the CPLC process works: “I loved the process, with having the time to co-plan and especially spend the time with an instructional specialist that can give me resources and activities and strategies to use in my classroom. It’s nice to co-plan and then co-teach.” Ms. Bryans, the other teacher participant, echoed the same opinion: “It has changed the way we’re planning reading. I can tell you that right now when we just planned, it’s getting us more to the activity focus, getting them to interact more amongst each other rather than just me being a leader.” Ms. Bryans is a veteran teacher who has been teaching for 19 years. Ms. Bryans’s change in practice was a result of effective coaching. Coaching allows for ongoing feedback and support, and it promotes sustained practice, reflection, and dialogue (DuFour & Eaker, 2009).

Ms. Adams’s experience with the CPLC allowed her to focus on her instructional strategies. This focus was a change from her PLCs, where she usually would have focused on what she was teaching and the activities she would have used, but rarely focused on her instructional practices. With her planning focused on instructional practices, she was able to improve her instruction:

Well, my instruction actually changed throughout, because I had begun with the beginning of the year the way that I had instruction the previous year. With collaborative planning, she gave me some ideas and a way to change my math workshop to make it easier on the kids and me not having as many things going on at once.

The continuous support that the teacher received was beneficial for potentially seeing long-term instructional changes in the teacher's practice. DuFour and Eaker (2009) refer to traditional professional development as a "potpourri approach" because it exposes teachers to "a little of this and a little of that," which has little or no impact on their practice.

Research has shown how mastery takes time, and teachers can significantly benefit from sustainable, multi-year professional development (DuFour & Eaker, 2009). Ms. Cross's experiences connect with DuFour and Eaker's (2009) findings, as well as many of Gulamhussein's (2013) five principles of effective professional development. Gulamhussein (2013) states that "the duration of professional development must be significant and ongoing to allow time for teachers to learn a new strategy *and* grapple with the implementation problem" (p. 3). Ms. Cross portrayed this principle by stating, "But I'm not going to just train you and leave you alone. I'm going to train you and we're going to guide through it and we're going to talk about it and we're going to reach together and then after that we're going to reflect." The second of Gulamhussein's (2013) principles is, "There must be support for a teacher during the implementation stage that addresses the specific challenges of changing classroom practice" (p. 3). Similarly, Ms. Cross stated, "And so I think that that is where we've got to move to, is where our professional development is scaffolding. We're going to give you a little information. We're going to implement it. We're going to reflect." Through the CPLC, Ms. Cross put Gulamhussein's ideas regarding collaboration into practice.



Several weeks after completing the last round of the CPLC, I held post-interviews with the teachers and Ms. Bryans discussed how even though she does not have Ms. Yang co-teaching with her, she was continuing the instructional practices on which she and Ms. Yang collaborated. Ms. Bryans stated that

She [Ms. Yang] was not here, but yet we're continuing on. That would be the biggest change. Our instruction has definitely changed with reading. Just our whole pathway leading into. I mean, we're purposeful now . . . I personally think that she's gotten us excited again.

To hear about how collaboration brought excitement back into a teacher's pedagogy speaks to the effectiveness of the professional learning. The instructional coach made a similar remark in her post-interview about continuation. Ms. Yang stated, "I support or give or offer as well as far as what she was incorporating within. So that collaboration piece, I think that's going to probably continue all year."

Darling-Hammond and colleagues (2009) have found that the ongoing nature of the instructional coach's visits is associated with a substantial impact on teacher and student learning. The CPLC allows for teachers to have multiple points of interaction with their coach frequently; in addition to communicating with them in a one-on-one setting, they may plan them in grade-level PLC meetings, district- or school-based PD, or other circumstances. The teacher participants discussed how they would also communicate with the coach via email or text. It is apparent that currently, with our coaches' role in the district, they cannot sustain the level of attention they gave the teacher participants. Ms. Yang reflected on her responsibilities as a coach as well as the process of the CPLC: "Time is the challenge with my schedule. I believe if I was school-

based and there full time, the process would be even more effective.” Currently, district-level coaches can serve up to nine schools. During the research, the coaches were able to collaborate so intensely because they decreased service time at their other schools to allow the research to take place.

Killion and Harrison (2017) found that, when co-teaching, coaches need to use their knowledge of curriculum and instruction, along with coaching skills of sharing responsibility with a partner teacher, when co-teaching a lesson. Ms. Yang discussed how she managed co-teaching: “we always fed off of each other and were each able to add in stuff as it was actually going on because you can have the perfect plan, but it’s always in the moment in what the student’s responses are and what they produce.” Ms. Yang continues to discuss collaboration by stating, “just having another person in there, able to truly have some of that in-depth, sustained conversation with the students and listen in and then get even more feedback.”

Through my observations and interviews with the participants, I saw and heard how the teacher and coach would interchange with one another during lessons. Through the CPLC, coaching promotes the implementation of learning and reciprocal accountability (Aguilar, 2013). Through the ongoing cycle, there is a system of checks and balances to help the coach and teacher stay intentional. From the beginning, with research through the end of the cycle with reflection, teachers and coaches were continually reminded of their focus. Effective coaching frameworks promote a collaborative culture where the coach and teacher can feel ownership and responsibility

for leading improvement in their practice (Aguilar, 2013). It was inspiring to see how the CPLC made such an impact on the teachers and coaches.

Ms. Bryans has experienced ample amounts of professional development, but her excitement with working in the CPLC framework was like no other. She explained, “Having that new enthusiasm coming from new ideas that I got from her and actually doing them together instead of just going to a workshop and getting them where they tell you I liked doing rather than being told.” Overall, through the implementation of the CPLC, participants had a positive experience with professional development that led to impactful outcomes.

### **Question 2: How Do Teachers’ Instructional Practices Change Through the Implementation of the Collaborative Professional Learning Cycle?**

Earlier in the study, I defined “teacher success” as the idea that a teacher has been successful if they changed instructional practices in their classroom that benefited their students’ learning as measured by the Instructional Quality Assessment (IQA). In a discussion regarding teaching standards, the NRC (2001) describes this teaching standard in context to student learning/achievement:

The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners. The teacher understands and can identify differences in approaches to learning and performance, including different learning styles, multiple intelligences, and performance modes and can design instruction that helps use students’ strengths as the basis for growth . . . The teacher believes that all children can learn at high levels and persists in helping all children achieve success . . . The teacher identifies and designs instruction appropriate to students’ stages of development, learning styles, strengths and needs. (p. 25)

This standard expresses the importance of teachers understanding how students learn, which in turn can lead to student success. The IQA can assess this standard through approximately 20 rubrics/rated items that focus on the Principles of Learning (Resnick & Hall, 2001) mainly in academic rigor, clear expectations, self-management of learning, and accountable talk (Junker et al., 2005).

My research focused on how two coaches could help two teachers better understand this standard and adjust their teaching practices to benefit student learning; in adjusting their practices, the teacher themselves could find success. First, regarding Ms. Bryans, instructional change was not just apparent in my observations and the IQA; she stated it herself in her post-interview. She noted, “I have learned more. I feel like I will implement in my room. You can come visit me in 10 years and I promise you my reading, unless something different comes, I will be doing the five-day one story. I have bought hook line and sinker into this.” For Ms. Bryans, data from the IQA (Table 5), my interviews with her, and her survey results demonstrate that the Collaborative Professional Learning Cycle was very beneficial to her. She was able to implement and change her instructional practices.

For example, the IQA results show that Ms. Bryans’s instructional practices increased by 124%. Her instructional practices increased most in contributions and interpreting the text. Within her instruction, she provided more opportunities for students to make contributions, and she consistently asked students to provide evidence of their contributions. During the post-IQA, I saw students engaging with the underlying meaning of the text and interpreting the text. She required students to evaluate the text and provide

references from the text to support their claims. Her statement that she “bought hook line and sinker” into her new professional learning is evidence that her instruction and mindset changed about how she teaches reading. Research demonstrates that coaching promotes learning; as administration provides coaching as an embedded support, coaches can respond to students’ and teachers’ needs in an ongoing and dedicated way. Coaching can also increase the likelihood that teachers will use new learning (Aguilar, 2013).

Regarding Ms. Adams, during the post-interview, I asked her if she felt like her instructional practices had changed. She stated, “Well, my instruction actually changed throughout . . . there were some flaws and things that weren’t working out for me with our new group. With collaborative planning, she gave me some ideas and a way to change my math workshop.” Research supports Ms. Adams’s reflection; for example, DuFour and Eaker (2009) assert that when professional learning is effective, it will provide adequate time for inquiry, reflection, and mentoring as a part of a typical workday. In a separate interview with Ms. Adams’s instructional coach, Ms. Cross stated nearly the same thing about Ms. Adams’s instruction: “Her instruction changed in that at the beginning, it was good instruction and the standards were being taught, but there wasn’t that deep connection.” Ms. Cross emphasized how her participation in the CPLC impacted Ms. Adams’s depth of instruction. Ms. Adams was able to implement more effective questioning techniques and encourage student conversation, which the IQA shows (see Table 6).

The IQA results show an increase of 157% in Ms. Adams’s instructional practices. Ms. Adams increased the most in supporting students in proving a response,

questioning, and mathematical residue. During my observation of her for the post-IQA, Ms. Adams asked her students to create a presentation and evidence from a division problem they were solving. She required the students to provide evidence of their thinking and problem-solving. During the presentation, Ms. Adams would continue questioning students to provoke more dialogue and reflection around their claims. During the activity, she asked academically relevant questions and utilized the Math Talk Moves she had been implementing. The discussion of the students' tasks allowed for critical mathematical concepts and connections to occur, which helped solidify students' understanding of interpreting remainders.

Through the IQAs and the post-interviews, I captured the effects of the CPLC. Both teachers and both coaches stated that they saw a change in the instructional practices with strong implementations and sustainability of those practices. Research from Killion and Harrison (2017) shows that coaching, when matched with feedback, practice, demonstration, and theory, generates an effect size of 1.68 in the transfer of training. My research adds co-teaching to that lens. I would expect the effect size to match, if not increase, the effect size in Killion and Harrison's study if this study were to be done to calculate the effect size.

The overall findings of this study indicate that the Collaborative Professional Learning Cycle can be impactful in implementing and changing teachers' instructional practices. The CPLC aligns with the research based on the five effective practices of professional development and contains the central elements that teachers identified as most desirable. The findings of this study provide educational leaders with knowledge of

the kind of professional learning that should exist within a school, the conditions that should be in place to support teachers, and the focus on continuity that is needed to change teachers' practice in order to sustain instructional change. The voices of the teachers involved in this study speak loudly, as they identify the keys to implementing a Collaborative Professional Learning Cycle. If the capacity of the CPLC is a one-to-one professional development, I do not have any changes that I would make. In reflecting on the components of the CPLC and the alignment they have to the central elements, I have found that the process was effective in changing the instructional practices of the two teachers involved. The data from interviews, observations, and the IQA all suggest that the CPLC was effective in meeting the teachers' needs; at this time, I do not see changes that I would make to the process.

### **Research Limitations**

I believe that no study is without limitations; with that, I expected there to be some with this study. Since my study was qualitative and greatly depended upon each participant's perspective, I was limited in completely capturing their experience and perspectives throughout the entire implementation. There were limitations around time, given that the study would follow participants for only a few months, and within those months, we missed schools on multiple occasions due to adverse weather. Thus, I could not portray an entire duration of a possible CPLC cycle. For this study, I focused on a one-to-one relationship with instructional coaches and teachers, which can limit the understanding of how impactful the CPLC cycle could be for an entire PLC consisting of several teachers and an instructional coach. Expectations are that there would be events in

which the teacher and instructional coach do not have the same relationship connections that the participants in this current study had. If in the case that the instructional coach and teacher do not have a relationship, then it would be necessary for the instructional coach to focus on relationship building before full implementation of the CPLC. Another expectation is that many teachers may have had different experiences that have shaped their professional learning and may have not wanted an instructional coach in their room. It is in those situations that it is more important to build relationships with teachers and with the PLC to establish a framework upon which to build.

### **Implications**

#### **Future Research**

This study will add to the sparse research that currently exists on teacher-presenter relationships, co-teaching as a form of professional learning, and implementation of the CPLC. This research study also adds to the existing literature by confirming effective professional learning practices. The study aligns with existing literature in that professional development needs to be ongoing, collaborative, and intentionally planned. I believe that although this concept is similar to some currently researched models, the uniqueness of consistent collaboration and co-teaching for professional development makes it different and adds to the research on professional development. There is a movement in research from defining the aspects and components of a professional development program to studying implementation of a PD program and the relationships developed within the PD program. This movement allows researchers to move beyond determining whether or not a PD model possesses the characteristics of



effectiveness to instead examining how teachers and instructional coaches can effectively co-teach for professional learning.

This study could be replicated to include student experiences. One of the reflections I had was a wish to answer the questions, “What impact did the CPLC have on student outcomes” and “What were student experiences of co-teaching?” This study could also be implemented on a larger scale, over a longer duration, and researched to determine the effect size of the CPLC model. Finally, this study could be conducted to include other data, such as assessment data, to measure a change of instructional practices, as well as a change in student outcomes.

### **District Implementation**

Practically speaking, this study can provide districts with another modality of professional development. The study can also aid district leaders in reconsidering duties of current and future district roles and their commitment to the process of creating professional development. The CPLC can be utilized to build relationships among teachers and district staff through collaboration. It can be impactful for districts to have instructional coaches who serve in the role of CPLC specialists to help implement district initiatives. This role could also help “low-performing” or “turnaround” schools in supporting teachers. In my experience, there can be friction between teachers and district leadership because each party feels as if the other does not “understand” their situation. The CPLC model can keep both teachers and district coaches informed on current instructional practices and what is effective for student learning.

### **School-level Implementation**

Within a school, the collaborative nature of the CPLC promotes growth and creates practices to provide an outstanding education for all teachers, which in turn should create positive learning practices for students. The CPLC is an ongoing process of knowledge creation and acquisition, lived experience, and interaction with others. I believe that instructional coaches working collaboratively with educators within shared/collaborative experiences will also help instructional leaders with curricular decisions they make, keeping them current in practices in the classroom.

Principals can utilize this research to inform their practice by providing professional learning and the use of staff. To have a dedicated staff member as an instructional coach who utilizes the CPLC could provide powerful results in implementing effective instructional practices. Implementing a CPLC process with an instructional coach can strengthen PLCs because of collaboration and ongoing professional learning.

### **Professional Learning for Teachers**

The CPLC allows teachers a different modality of professional learning. It is an experience that keeps them in the classroom and focuses on their needs. Teachers work with current instructional coaches to help them in identifying and creating practices within their classrooms to provide effective and equitable instruction for all students. The cycle works with educators, giving them voice and choice in decisions made about their instructional practices, which can ultimately affect how they provide opportunities to students with voice and choice.

It is important to note that not all teachers may volunteer or desire to participate in the Collaborative Professional Learning Cycle. If we find that teachers do not want to participate, I think it is important to understand their rationale for not wanting to be involved. Once we can identify the why, then it is important to problem-solve that particulate situation and to provide encouragement and reasoning for participation. For example, if a teacher does not want to participate because the teacher does not want someone in his or her classroom, it is important to understand why the teacher does not want someone in their classroom. Administrators need to act as instructional leaders and address barriers that may prohibit students from accessing content, even if that barrier is the teacher themselves. Teachers need to see the CPLC as a form of professional learning, not as a measure of success, an observation or evaluation, or as a critique of their ability, but rather a way to collaborate with other educators to increase students' access to curriculum. The success of professional learning is grounded in the environment of a school; it is important that administrators understand how they can impact professional learning for better or for worse. Just as instructional coaches need to build relationships with teachers, it is just as important that administrators have relationships with their staff to have honest and open communication concerning professional learning.

The study also serves as a model to “facilitate processes that engage self and others in critiquing the way things are, exploring the way life should be in moral and just communities, and stimulating action directed toward achieving the latter” (The University of North Carolina at Greensboro, 2018, “ELC Statement of Commitments,”

para. 6). The CPLC helps facilitate conversation throughout different roles in education and analyzing the practices within it. Teachers should advocate for professional learning that is similar to the CPLC because it allows professional learning to take place within their classroom and focused on their needs. As an educator myself, I wish I had the opportunity to receive professional learning in my classroom and with my students.

### **Conclusions**

Future work of the CPLC may include implementation to support turnaround schools, implementation to support programmatic frameworks, and continued implementation in my previous district to continue supporting teachers with instructional coaches. As I continue my work with other school districts in North Carolina, they have expressed interest in the CPLC. I am currently discussing the implementation of the CPLC with the Director of Turnaround schools at a school district in North Carolina. He feels as if this modality of professional development is needed to support teachers in turnaround schools. In a new role that I am taking on next year, I intend to utilize the CPLC to support school improvement in implementing strong core practices with teachers. The instructional coaches with whom I have worked are being restructured to work with individual schools rather than multiple schools so that the instructional coaches can continue to implement the CPLC to support teachers. The district is restructuring the district level positions to ensure that each school has an instructional coach to support teachers. The district has even renamed the positions from instructional program specialists to instructional coaches to focus their work on teacher support.

Through reviewing the various professional development models, district impact on professional development, and democratic practices, I was able to create a professional learning model. The CPLC focuses on the needs of teachers where professional learning happens with instructional coaches as outlined by the needs of teachers. We know that there is a need for how we provide professional development in order for instructional practices and mindsets to have a high rate of change. I believe that the CPLC model will help teachers advance their classroom practices, and this study is one indicator that shows how teachers view professional development.

If we expect teachers to improve their practices, then districts and schools will need to provide opportunities for professional learning that aligns with the effective practices of professional development. The study indicated that the use of the Collaborative Professional Learning Cycle (CPLC) creates an environment for teachers to generate their research-based professional development while improving the implementation of practices gained through their professional development. I created the CPLC model through research of effective professional development and a combination of other existing models. The CPLC differs from existing research and professional development models in that it extends the professional learning into the classroom with co-teaching between an instructional coach and a teacher. The teacher is receiving professional development in the most impactful setting—their classroom. It allows the teacher to be in attendance of their classroom; it neither takes instructional time away from the teacher nor does it add to a teacher's professional day. We need democratic processes like the CPLC to provide teachers with efficient, individualized, and effective

professional development. The CPLC allows for ongoing and intentional collaboration between a coach and teacher for better implementation of effective instructional practices.

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## APPENDIX A

### SURVEY FOR PARTICIPANT SELECTION

#### Survey for Participant Selection (Interest Form):

Teacher:

Name: \_\_\_\_\_ Grade Level \_\_\_\_\_ Years in Education: \_\_\_\_\_

Area of concerns with teaching practices: \_\_\_\_\_

Content area of concern with teaching practices: \_\_\_\_\_

I am willing to participate in a collaborative planning, co-teaching, and reflecting on instruction with a researcher/district level curriculum specialist/graduate student YES NO

My availability for planning is: \_\_\_\_\_

Coach:

Name: \_\_\_\_\_ Position: \_\_\_\_\_ Years in Education: \_\_\_\_\_

Content area of expertise with teaching practices: \_\_\_\_\_

I am willing to participate in a collaborative planning, co-teaching, and reflecting on instruction with a researcher/district level curriculum specialist/graduate student YES NO

My availability for planning is: \_\_\_\_\_

**APPENDIX B**  
**TEACHERS PRE-PROCESS INTERVIEW GUIDE**

*Demographic Questions:*

**Tell me about your professional background**

*Opening Questions (Grand Tour):*

**Tell me about your experience with Professional Development**

**Take some time to tell me about how you feel about Professional Development**

*Dive Deeper:*

**Tell me about your favorite Professional Development session that you participated in**

*Probing Question:*

**Can you tell me more about that?**

**What made that experience different than others?**

**Tell me about some challenges with Professional Development**

**In your opinion, how can Professional Development change?**

**Tell me about a time you worked with a teacher/group of teachers**

*Probing Question:*

**Do you view that work with the teacher or group of teachers as professional development? Why/Why not?**

**What do you think about collaboration between researchers and teachers?**

*Probing Question:*

**How would that look like?**

**Tell me what you think about co-teaching as a form of Professional Development**

**Do you think that if you co-taught with someone that it can help your instructional practices?**

*Closing Question:*

**Is there anything else you would like to add to what you have said?**

## APPENDIX C

### INSTRUCTIONAL COACHES PRE-PROCESS INTERVIEW GUIDE

*Demographic Questions:*

**Tell me about your professional background**

*Opening Questions (Grand Tour):*

**Tell me about your experience with Professional Development**

**Take some time to tell me about how you feel about Professional Development**

*Dive Deeper:*

**Tell me about your favorite PD session that you led**

**Tell me about your favorite Professional Development session that you participated in**

*Probing Question:*

**Can you tell me more about that?**

**What made that experience different than others?**

**Tell me about some challenges with Professional Development**

**In your opinion, how can Professional Development change?**

**Tell me about a time you worked with a teacher/group of teachers**

*Probing Question:*

**Do you view that work with the teacher or group of teachers as professional development? Why/Why not?**

**What do you think about collaboration between researchers and teachers?**

*Probing Question:*

**How would that look like?**

**Tell me what you think about co-teaching as a form of Professional Development**

*Closing Question:*

**Is there anything else you would like to add to what you have said?**

**APPENDIX D****TEACHERS AND INSTRUCTIONAL COACHES  
MID-PROCESS INTERVIEW GUIDE**

*Opening Questions (Grand Tour):*

**Tell me about your experience so far with the Collaborative Professional Development Cycle**

**Take some time to tell me about how you feel about the process**

*Dive Deeper:*

**Tell me about how the collaborative planning has affected your instruction**

*Probing Question:*

**Can you tell me more about that?**

**What made that experience different from other PLCs?**

**Tell me about some challenges with the process so far**

**Tell me about how the co-teaching experience has been?**

*Probing Question:*

**What has been the most beneficial part of co-teaching?**

**What is something you would like to change?**

**How do you now view collaboration between researchers and teachers?**

**Tell me what you think about co-teaching as a form of Professional Development**

*Closing Question:*

**Is there anything else you would like to add to what you have said?**

**APPENDIX E****TEACHERS AND INSTRUCTIONAL COACHES  
POST-PROCESS INTERVIEW GUIDE**

*Opening Questions (Grand Tour):*

**Tell me about your experience with the Collaborative Professional Development Cycle**

**Take some time to tell me about how you felt about the process**

*Dive Deeper:*

**Tell me about how the collaborative planning has affected your instruction/coaching**

*Probing Question:*

**Can you tell me more about that?**

**What made that experience different from other PLCs?**

**Tell me about some challenges with the process**

**Tell me about how the co-teaching experiences?**

*Probing Question:*

**What has been the most beneficial part of co-teaching?**

**What is something you would like to change?**

**How did the process change overtime?**

**How did your (the teachers) instruction change over time?**

**How do you now view collaboration between coaches and teachers?**

**Tell me what you think about co-teaching as a form of Professional Development**

*(Teacher Question)* **Do you feel that you made positive instructional changes?**

*(Coach Question)* **Do you feel that you influenced positive instructional changes?**

**Would you participate in the Collaborative Professional Development Cycle again?  
Why?**

*Closing Question:*

**Is there anything else you would like to add to what you have said?**



**APPENDIX F**  
**TEACHER PRE-SURVEY DRAFT**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Collaborative planning with an instructional coach will be beneficial.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Collaborative planning will assist me with identifying students' misconceptions and needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Collaborative planning will provide me with rich instructional resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I believe that I can co-plan with an instructional coach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I feel that I can voice my needs during planning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I believe that I can co-teach with an instructional coach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I believe that I will learn valuable instructional practices from co-teaching.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I believe that co-teaching will help me implement changes in my classroom.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## APPENDIX G

### TEACHER MID-SURVEY DRAFT

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Collaborative planning with an instructional coach is beneficial.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Collaborative planning is assisting me with identifying students' misconceptions and needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Collaborative planning is providing me with rich instructional resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I feel comfortable planning with the Coach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I feel that my needs are addressed during planning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I am comfortable co-teaching with the instructional coach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I am learning valuable instructional practices from co-teaching.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I continue to implement the changes made from this experience when I am not co-teaching.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I feel more knowledgeable as a result of the co-teaching.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I am better able to implement change of instruction because of co-teaching.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## APPENDIX H

### TEACHER POST-SURVEY DRAFT

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Collaborative planning with an instructional coach was beneficial.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Collaborative planning assisted me with identifying students' misconceptions and needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Collaborative planning provided me with rich instructional resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I felt comfortable planning with the Coach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I felt that my needs were addressed during planning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I was comfortable co-teaching with the instructional coach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I learned valuable instructional practices from co-teaching.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I will continue to implement the changes made from this experience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I feel more knowledgeable as a result of the co-teaching.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I was better able to implement change of instruction because of co-teaching.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I feel that this process helped me change my instructional practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I feel that this process was more beneficial than traditional PD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**APPENDIX I**  
**RECRUITMENT SCRIPT**

Recruitment Script

Hello, my name is Tina Lupton. I am a graduate student at UNCG in the Educational Leadership Department, many of you know me as the Coordinator of Testing, Accountability and Research here in Davidson County. I am conducting research on Professional Development, and I am inviting you to participate because you all have experience with participating in many professional development activities. I will implement the Collaborative Professional Development Cycle with 2 teachers and 2 coaches. This professional development cycle pairs a teacher with an instructional coach to work collaboratively in the teacher's classroom on a problem of practice that the teacher identifies.

Teachers and instructional coaches will work collaboratively with each other over a 4-month time span where they will work through the collaborative cycle of professional development for approximately 4-6 lessons together. Together you will identify a problem of practice that they will address collaboratively. In my role, I will serve as a researcher, coach and observer. I intend to assist coaches and teachers as needed with the co-teaching aspect and other forms of collaboration as necessary.

Participants will receive training on co-teaching prior to implementation of the co-taught lessons. Participation in this research includes being paired with an instructional coach to co-plan and co-teach a series of lessons. Several of the planning sessions and lessons will be observed. The instructional coach will work with a teacher on a problem of practice that the teacher determines they need help with. Participants will also take 3 surveys and 3 interviews about their experience during the implementation of the Collaborative Professional Development Cycle. I estimate that participation in this study will take 15-20 hours over a 4-month time span from August through November.

If you have any questions or would like to participate in the research, I can be reached at 336-944-2574 or [tmcoulom@uncg.edu](mailto:tmcoulom@uncg.edu).

**APPENDIX J****CONSENT TO ACT AS A HUMAN PARTICIPANT****UNIVERSITY OF NORTH CAROLINA AT GREENSBORO****CONSENT TO ACT AS A HUMAN PARTICIPANT**

Project Title: The Collaborative Professional Learning Cycle (CPLC): Implementing a Voice and Choice Approach to Teacher PD

Principal Investigator and Faculty Advisor: Tina Lupton and Dr. Craig Peck

Participant's Name: \_\_\_\_\_

**What are some general things you should know about research studies?**

You are being asked to take part in a research study. Your participation in the study is voluntary. You may choose not to join, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. There may not be any direct benefit to you for being in the research study. There also may be risks to being in research studies. If you choose not to be in the study or leave the study before it is done, it will not affect your relationship with the researcher or the University of North Carolina at Greensboro.

Details about this study are discussed in this consent form. It is important that you understand this information so that you can make an informed choice about being in this research study.

You will be given a copy of this consent form. If you have any questions about this study at any time, you should ask the researchers named in this consent form. Their contact information is below.

**What is the study about?**

This is a research project. Your participation is voluntary. The purpose of the study is to implement a process of professional learning that allows teachers to have voice and choice in professional development. The Collaborative Professional Learning Model (CPLC) relies heavily on instructional relationships. The purpose of this multi-case qualitative study is to explore the following research questions:

1. What are central elements of a Collaborative Professional Learning Cycle?
2. How do teachers' perceptions of professional development change through the implementations of the Collaborative Professional Learning Cycle?

3. How do teachers' instructional practices change through the implementation of the Collaborative Professional Learning Cycle?

**Why are you asking me?**

I am selecting participants who have 5-10 years of experience as an Elementary classroom teacher that is willing to receive instructional coaching in an area of their choice. I am also selecting instructional coaches that are willing to coach teachers over the course of 4 months that have experience with a teacher's problem of practice.

**What will you ask me to do if I agree to be in the study?**

Teachers and coaches will be asked to co-plan, co-teach, reflect and assess with a problem of practice that the teacher wishes to receive coaching in over the course of 4 months. Teachers and coaches will participate in a confidential pre- and post-survey, three interviews, two instructional quality assessments completed by the researcher, and multiple classroom observations completed by the researcher. Overall, I estimate that this study will take 15-20 hours of your time over the course of 4 months.

**Is there any audio/video recording?**

The interviews will be audio recorded for the purpose of transcription and coding to identify commonalities in data. Names will be kept confidential, however, because your voice will be potentially identifiable by anyone who hears the recording, your confidentiality for things you say on the recording cannot be guaranteed although the researcher will try to limit access to the recording as described below.

**What are the risks to me?**

The Institutional Review Board at the University of North Carolina at Greensboro has determined that participation in this study poses minimal risk to participants. Teaching itself can be emotionally distressful with additions to visitors in your classroom. However, I expect that there will be infrequent experiences of emotional distress throughout the research study as you become more familiar with their new roles. Whenever anyone is being observed it can cause for embarrassment if someone feels as if something didn't go as planned. I expect that embarrassment will happen infrequently as you build relationships with other participants and become more comfortable throughout the process. I will be available to discuss any concerns that may arise and find solutions, if necessary, to help all participants feel comfortable throughout the study.

If you have questions, want more information or have suggestions, please contact Tina Lupton or Dr. Craig Peck who may be reached at (336)-944-2574 or (336)-908-7262.

If you have any concerns about your rights, how you are being treated, concerns or complaints about this project or benefits or risks associated with being in this study please contact the Office of Research Integrity at UNCG toll-free at (855)-251-2351.

**Are there any benefits to society as a result of me taking part in this research?**

Through researching practices of professional development, it may be beneficial if this study is effective, that teachers are able to improve their pedagogy.

**Are there any benefits to *me* for taking part in this research study?**

Through participation in this study, the teacher participants may experience instructional coaching that positively effects their instructional practices/pedagogy and provide them with a greater knowledge base with particular content. Instructional coaches may be provided with more experiences that grant them a more effective approach to instructional coaching.

**Will I get paid for being in the study? Will it cost me anything?**

There are no costs to you or payments made for participating in this study.

**How will you keep my information confidential?**

Data will be stored physically in a locked file cabinet. Digital data will be password protected. All data will be kept through confidential measures as to not identify participants by name when data are disseminated. The researcher will use an alias for participants for confidential data collection procedures. Data will be kept secured for 5 years as outlined by university data policies. All information obtained in this study is strictly confidential unless disclosure is required by law.

**What if I want to leave the study?**

You have the right to refuse to participate or to withdraw at any time, without penalty. If you do withdraw, it will not affect you in any way. If you choose to withdraw, you may request that any of your data which has been collected be destroyed unless it is in a de-identifiable state. The investigators also have the right to stop your participation at any time. This could be because you have had an unexpected reaction, or have failed to follow instructions, or because the entire study has been stopped.

**What about new information/changes in the study?**

If significant new information relating to the study becomes available which may relate to your willingness to continue to participate, this information will be provided to you.

**Voluntary Consent by Participant:**

By signing this consent form, you are agreeing that you read, or it has been read to you, and you fully understand the contents of this document and are openly willing consent to take part in this study. All of your questions concerning this study have been answered. By signing this form, you are agreeing that you are 18 years of age or older and are agreeing to participate, in this study described to you by Tina Lupton.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_