Co-Teaching in a Year-long Professional Development School

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ABSTRACT: While there is considerable research concerning co-teaching among special educators and regular classroom teachers, little work has been published regarding co-teaching that involves teacher candidates and their cooperating teachers. During the last three years, two middle level education faculty members involved in their University's Professional Development School (PDS) program made a concerted effort to promote co-teaching among cooperating teachers and their respective teacher candidates. This qualitative study used interviews with five pairs of cooperating teachers and teacher candidates to examine how co-teaching influenced their professional development and their instructional practices. Results of the study suggested that co-teaching was useful in meeting the needs of middle school students and seen as a strong form of both teacher preparation and professional development for cooperating teachers and student candidates alike.

NAPDS Essentials Addressed: Essential #2/A school–university culture committed to the preparation of future educators that embraces their active engagement in the school community; Essential #3/Ongoing and reciprocal professional development for all participants guided by need; Essential #4/A shared commitment to innovative and reflective practice by all participants; Essential #5/Engagement in and public sharing of the results of deliberate investigations of practice by respective participants; Essential #6/Work by college/university faculty and P–12 faculty in formal roles across institutional settings.

Introduction

The term co-teaching is generally defined as a partnership between regular classroom teachers and special educators that involves including students with disabilities in the activities of the regular education classroom. Evidence indicates that co-teaching has been on the rise in the last decade (Dieker & Murawski, 2003; Kamens & Casale-Giannola, 2004; Patel & Kramer, 2013). Hildenbrand (2009) reported that the increased attention to the inclusion of students with special needs and mandates related to Response to Intervention (RtI) has made such pairings more common. According to Arne Duncan, Secretary of the U.S. Department of Education, as many as "60 percent of students with disabilities today spend 80 percent of their time in the regular school environment" (2011). Clearly, new teachers entering the schools will be expected to be able to co-teach during at least a portion of their day, and their teacher preparation programs need to provide experiences to prepare them for such collaborative settings.

The list below, developed from the work of St. Cloud State University, Teacher Quality Enhancement Center (2012) describes a variety of co-teaching formats:

One Teach, One Observe - One teacher has primary responsibility while the other gathers specific observational information on students or the (instructing) teacher.

One Teach, One Assist - One teacher has primary instructional responsibility while the other assists students with their work, monitors behaviors, or corrects assignments.

Station Teaching - The co-teaching pair divides the instructional content into parts. Each teacher instructs one of the groups, groups then spend time at each station.

Parallel Teaching - Each teacher instructs half the students but they address the same instructional material using the same teaching strategy.

Supplemental Teaching - This strategy allows one teacher to work with students at their expected grade level, while the other teacher works with students who need the information and/or materials retaught, extended or remediated.

Alternative (Differentiated) - Alternative teaching strategies provide two different approaches to teaching the same information. The learning outcome is the same for all students however the instructional strategy is different.

Team Teaching - Well planned, team-taught lessons, exhibit an invisible flow of instruction with no prescribed division of authority. Using a team teaching strategy, both teachers are actively involved in the lesson. From a students' perspective, there is no clearly defined leader.

Part of the foundation for our study is embedded in the recognition of the importance of and models for co-teaching.

However, instead of seeing co-teaching as a partnership between special and regular educators, our work studies co-teaching as a collaboration between teacher candidates and their cooperating teachers. As stated previously, the predominant literature on co-teaching references partnerships between special educators and regular classroom teachers (Conderman, 2011; Friend & Bursuck, 2011; Miller, 2008; Villa, Thousand, & Nevin, 2008). Our goal is to add to the rather limited number of studies that examine the benefits of co-teaching between teacher candidates and their cooperating teachers (Casale-Giannola & Wilson, 2004; Kamens & Casale-Giannola, 2013).

Co-teaching and Teacher Education

One such study examined teacher candidates who were scheduled to receive dual certifications in elementary and special education. Kamens and Casale-Giannola (2004) found that these dual certification students received valuable "exposure to collaboration and varied teaching styles, ongoing opportunities to plan for diverse needs, and awareness of the effective components of co-teaching" (p.30) by being placed in co-taught classrooms during student teaching.

Goodnough, Osmond, Dibbon, Glassman and Stevens (2009) placed pairs of pre-service teachers with single cooperating teachers for a 12-week clinical experience. Strengths of this model included mutual learning, professional support, benefits for the K-12 students involved, gains in pre-service teacher confidence, and ample feedback in teaching. One of the major problems encountered with this approach was related to competition between pre-service teachers. In addition, both the cooperating teachers and pre-service teachers were concerned about becoming co-dependent, losing of individuality, and creating confusion regarding classroom management.

Badiali and Titus (2012) reviewed six different models of co-teaching and provided examples of how cooperating teachers, pre-service teachers, and the students benefited from engaging in co-teaching in a PDS setting. Work by Heck, Bacharach, and Mann (2010) indicated that students who were English Language Learners, qualified for free and reduced lunch, and received special education services had higher math proficiency scores when placed in classrooms that utilized co-teaching during the student teaching experience.

There are studies that report clear benefits for including co-teaching in teacher preparation programs. Both cooperating teachers and teacher candidates gain valuable collaboration skills, mutual professional support, and the ability to learn from each other. In addition, there is evidence to suggest that students in co-taught classrooms are also positively impacted. The motivation for our study was to determine if similar benefits were evident in our PDS program. More specifically, we explored the question, "What impact does co-teaching have on teacher candidates and cooperating teachers during a year-long PDS experience?"

Theoretical Framework

Theoretical underpinnings for our study are grounded in our prior experiences as middle level educators. Middle level educational frameworks have historically championed collaborative forms of teaching (Carnegie Council, 1989; NMSA, 1995). Exemplary middle schools use interdisciplinary teaming, which often involves co-planning and co-teaching with two or more teachers who are certified in different subject areas (Arnold & Stevenson, 1998). Jackson and Davis (2000) detail the processes that effective middle school teams use to grow professionally:

> The ongoing dialogue of teachers on a team, especially when it is regularly focused on looking at student work to assess student learning and guide instructional strategies, is potentially the most powerful source of professional development for middle grades teachers. The shared insights, critique, conjecture, search for evidence, discussion of lessons learned, prodding, probing, and small celebrations of success that permeate the conversation of effective teams are the primary means by which teachers *create* their professional knowledge about teaching (p. 128).

The belief that teachers grow professionally by working collaboratively with each other is a central tenet in our decision to study co-teaching.

In addition, the current attention to differentiated instruction and curriculum demands that new teachers be proficient in meeting the needs of every student. Given that middle level philosophy, inclusion practices, and demands for differentiation are all dependent upon teachers working together, researching the presence of co-teaching within our teacher training program is grounded in both current educational policy and foundational theories of middle level education.

Background

The Middle Level Education program at Illinois State University (ISU) has been providing specialized teacher preparation for education majors learning to teach young adolescents for over fifty years. The program is accredited by the Council for the Accreditation of Educator Preparation (CAEP), and its goals are aligned with the Association for Middle Level Education (AMLE) standards. Students enrolled in the program are middle level education *majors*, meaning they are endorsed in two subject areas. These students complete a total of 39 credit hours of specialized course work in young adolescent development, middle school practice and philosophy, and participate exclusively in clinical experiences and student teaching placements in middle grades schools.

One option for middle level education majors who desire a more clinically intensive senior year is the middle level Professional Development School program. The PDS program consists of partnerships with four school districts and involves

seven middle grades schools. Teacher candidates can choose to be placed in schools within socio-economic contexts categorized as rural and small urban.

During the first semester, teacher candidates begin the school year as members of a team of practicing teachers. They attend district in-service days and help their cooperating teachers prepare for the arrival of their students. The first semester allows teacher candidates to acquire 350 to 600 student contact hours and complete a minimum of 12 university credits in middle school curriculum, pedagogy, assessment, and current issues.

Teacher candidates spend the entire first two weeks of the semester in their assigned classrooms in order to get to know their students and the school routine. During weeks three through ten, candidates attend their assigned schools on Monday, Tuesday, and Wednesday, as Thursday and Friday are reserved for university classes. In late October, the university classes cease, allowing candidates to be in the schools during a four-week clinical experience. A semester-ending conference between the university supervisor, teacher candidate, and cooperating teachers allows time to review successes and concerns from the first semester, and to set goals for student teaching, which occurs in the same setting during the second semester.

Encouraging Co-Teaching in the PDS

At the beginning of the fall semester, PDS faculty members meet with each teacher candidate and their cooperating teachers to answer questions and discuss the program requirements. We encourage them to try co-teaching and review the different types of co-teaching available (Teacher Quality Enhancement Center, 2012). According to the research, this can be a challenging message to convey as many veteran teachers were "trained" in programs that lacked co-teaching experiences:

> In traditional programs, it is common practice for cooperating teachers to leave the candidates alone in the classroom to sink or swim. As a result, many sink, to the great detriment of children's learning. Others may swim, but awkwardly at first without much support. The practice of letting teacher candidates go "solo" is rationalized by two arguments. First, cooperating teachers feel they deserve some down time for being generous enough to open their classroom to a teacher in training. The solo is a kind of "pay back" for access to their classroom. Second, many veteran teachers feel that a new teacher must carry the burden of an entire class load to prove that she will be able to be successful in the profession (Badiali & Titus, 2012, p. 75).

While the majority of cooperating teachers listened politely to our request for co-teaching, relatively few embraced co-teaching and imbedded into their practice. Those who did indicated that they remember how difficult it was for them when their cooperating teachers left them to "sink or swim". They took seriously their role of mentor rather than looking for the "down time" mentioned above and welcomed the loss of isolation that can be common to teaching.

Method

School Settings

The five interns and their respective cooperating teachers taught in three different schools. Oakdale Junior High School is the only middle grades school in a district that has one area career center high school, one comprehensive high school, one early childhood center, and six elementary schools serving approximately 5,605 students. According to the 2011 Interactive Report Card, the enrollment at OJHS is 1,161 students. Demographically, the population is 54% White, 25.5% African American, 10.7% Hispanic students, 2% Asian/Pacific Islander, and 7.2% bi/multiracial. The free and reduced lunch population at OJHS is 56%. Just over 55% of OJHS students met or exceeded the standards, meaning that the school did not meet federal education standards.

The Two Rivers School District is an Early Childhood Education-12 district located in a bedroom community seven miles south of a larger community in central Illinois. The population consists of a mix of students whose families are mainly involved in farming and white-collar employment. Demographically, Two Rivers Middle School (TRMS) is almost 97% White, with Asian, Hispanic, and African American populations forming 3% of the total population. Approximately 9% of the students qualify for free/reduced lunch. Standardized test scores are typically some of the highest in the region.

Dillon Middle School (DMS) is the sixth through eighth grade school for one of the largest geographical districts in the state. DMS can be described as a predominantly rural school that serves students living in or near eight small communities. Of the 424 students who attended DMS in 2011, approximately 95% were White and one third of the students qualified for free and reduced lunch (2011 ISBE report card). Performance data on all state tests indicated that 93.5% of OMS students either met or exceeded the state benchmarks, placing them approximately 11 percentage points higher than the state average.

Participants

Barb, Cathy, and Kate were veteran cooperating teachers at Oakdale in the sense that they were used to working with teacher candidates in their classrooms and all had been at OJHS for at least ten years. Barb taught Language Arts on a five-person, seventh grade team that provided inclusion services to students with disabilities and English learners. Much of her classroom focus involved using Language Arts to help her students understand social justice and equity issues. Mary, a twenty-one year old white woman from the suburbs of northern Illinois, was the teacher candidate chosen to work with Barb, in part because

Table 1. Themes and Sub-Themes

Theme	*Sub-Themes*
Strong form of teacher preparation	Sense of security Developing mentorships Comfort of cooperating teachers Risk-taking
Good for middle school students	Increased individual attention Flexible grouping Modeling collaboration
Professional development	New ideas Technology
Areas of concern	Importance of compatibility Intern dependence Sense of loss

her Spanish minor was seen as a valuable asset for some of the English Learners on Barb's team.

Cathy was in her twelfth year of teaching seventh grade science at Oakdale. For the last six years she had been involved in predominantly a *one teach, one assist* partnership with a special educator and was looking forward to expanding her co-teaching with Kelly. Kelly, a twenty-two year-old teacher candidate, had an understated classroom presence that fit in well with the special needs students assigned to Cathy. She was also White and had attended an exemplary middle school in northern Illinois.

Kate, an eighth grade math teacher in her 29th year at Oakdale, was a proponent of hands-on, manipulative instruction. She had numerous teacher candidates during her career and was regarded as a strong mentor. Kate was looking forward to additional classroom assistance because she had four different preps related to the ability grouped math program starting this year. Dee Dee was the 24 year-old White woman from central Illinois who was placed with Kate. She consistently demonstrated strong planning skills but had struggles in connecting with students and classroom management.

Anna was in her fifth year of teaching language arts at Dillon middle school. Anna had a quiet classroom demeanor that complimented her student-centered philosophy. She frequently used literature circles and writer's workshop to engage her students. Molly, the twenty-one year old White teacher candidate could be described as a more vocal version of Anna. As a team, they consistently provided numerous project options for students to demonstrate their knowledge.

Sherry chose teaching math as a second career after spending years in the business world. She was starting her sixth year at Two Rivers Middle School, her third teaching seventh grade math. Sherry promoted multiple ways of understanding but was nervous about using technology as an instructional tool. Tara, a twenty-one year old White woman from the western part of the state, had a high-energy classroom presence and was an advocate for technology. Of all the pairs, Sherry and Tara had the most opposite classroom demeanors, yet they probably had the strongest bond.

Data Gathering and Analysis

This study used semi-structured, individual interviews to gather qualitative data from the participants (Rubin & Rubin, 2005). Interviews were chosen because the researchers are former public school teachers who spent numerous hours supervising teacher candidates and working in public school settings and have what Mischler (1986) called "ordinary language competence" (p.7). Ordinary language competence is a "critical but often unrecognized precondition for effective research practice" that involves using "culturally shared assumptions about how to express and understand beliefs, intentions, experiences, and feelings" (p.7). In other words, because the researchers were accustomed to the language, intentions, and experiences related to schools they also understood the language and instructional methods used by practicing teachers.

Interviews were conducted during the spring of 2011 at the respective schools. All interviews were audio-recorded and transcribed by the researchers. Transcriptions were sent to each participant in an effort to confirm the narrative accuracy of their individual responses. Each researcher independently coded the interview transcripts (Rubin & Rubin, 2005). The researchers met to share and discuss their initial, independent codes and collaboratively agreed upon the names and definitions of the codes or developed new names for codes when necessary. This collaboration resulted in five main themes that emerged from the data: types of co-teaching, strong form of teacher preparation, good for middle school students, professional development, and areas of concern. Sub-themes were evident in four of the five themes, as depicted in Table 1.

Additional data were gathered during observations of the teacher candidates teaching lessons throughout the course of the school year. Non-participant observation was the predominant form of observation used although there were times when both of us were drawn into brief periods of participation within the classroom, such as answering a middle grades student's question about the lesson being taught (Hennink, Hutter, & Bailey, 2011). It is important to note that the primary purpose of these observations was for evaluating and mentoring the teacher candidates as we were both employed as university supervisors, making it imperative that we evaluated the teacher candidates' performance. However, observing classrooms allowed us to see the types of co-teaching that the participants were using and to witness the interactions between the teacher candidates, cooperating teachers, and the middle grades students. These classroom observations also provided a sense of how the middle grades students responded to co-teaching when it took place during our observations.

Results

This section examines both cooperating teacher and teacher candidate self-reports regarding the kind of co-teaching that occurred in addition to the researchers' observation of the kinds of co-teaching we witnessed (Table 2). The voices of the

Table 2. Types of Co-Teaching Used

CT/TC Names	*One Teach One Observe*	*One Teach One Assist*	*Station Teaching*	*Parallel Teaching*	*Supplemental Teaching*	*Alternate Teaching*	*Team Teaching*
Barb (CT)	yes	Yes	yes	yes	yes	no	yes
Mary (TC)	yes	Yes	yes	no	yes	no	yes
Observed	1	2	3	0	0	0	1
Cathy (CT)	yes	Yes	yes	yes	yes	yes	yes
Kelly (TC)	yes	Yes	yes	no	No	no	yes
Observed	1	1	2	0	0	0	2
Kate (CT)	yes	Yes	no	yes	yes	no	yes
DeeDee (CT)	yes	Yes	no	no	yes	no	no
Observed	2	3	0	0	1	0	0
Anna (CT)	yes	Yes	no	yes	yes	no	yes
Molly (TC)	yes	Yes	yes	no	yes	yes	yes
Observed	0	2	1	0	0	0	3
Sherry (CT)	yes	Yes	no	yes	No	no	yes
Tara (TC)	yes	Yes	yes	no	No	no	Yes
Observed	0	2	1	0	0	0	3

participants are highlighted in order to discuss the themes that emerged from the interviews. In order to aid the reader in distinguishing between the participants, we took the liberty of adding the parentheticals *CT* – cooperating teacher and *TC* – teacher candidate, next to the names of the participants.

Types of Co-Teaching

The chart above lists each pair of cooperating teacher's and teacher candidate's recollection of the kinds of co-teaching they indicated that they used during the school year. Table 2 also indicates the number of times the different kinds of co-teaching were observed by the researchers ("observed" row):

It is interesting to note that at least one discrepancy existed between each pair of participants regarding the self-reported kinds of co-teaching they used during the year.

By the end of the school year we had observed all seven kinds of co-teaching at one time or another—although not by every pair. The most frequent types of co-teaching we saw during teacher candidate observation sessions were, *one teach one observe*, *one teach, one assist* and *team-teaching*. In addition, three of the *station teaching* sessions were especially powerful as they involved Barb teaching with Mary, a special education teacher, and the ESL teacher in a classroom that contained five students with special needs and seven English Learners.

For the most part, *one teach, one observe* situations involved teacher candidates teaching the lesson while being observed by their cooperating teacher (and by one of us, making such periods more like *one teach,* ***two*** *observe*). At the end of the lesson, we reviewed the experience with the candidate and cooperating teacher, which meant that the majority of the professional growth was directed towards the candidate. If cooperating teachers needed to teach the next class, such collaborative debriefing sessions were short, but as supervisors we continued to discuss the lesson with the candidates for as long as was necessary.

One teach, one assist was the most common form of co-teaching that we saw throughout the year and these situations typically involved the teacher candidate taking the lead while the cooperating teacher assisted with the lesson. Many of the pairs used terms like "butting in" or "just jumping in" in order to embellish the lesson or assist the candidate during a challenging part of the class period. While Tara's (TC) terminology ran counter to her professional demeanor, her summary illustrated how teacher candidates and cooperating teachers frequently used *one teach, one assist:*

> So most of the time we just unconsciously butt into each other's lessons. This is how she'll [reference to Sherry (CT)] butt in when I'm teaching: "This is how I remember to divide by 25." And I'll say: "This is how I remember it guys – so how many quarters is that?" It's things that the students relate to, and if they can come up with any other way to relate to it, because there are many different possibilities, then the butting in is beneficial because probably at least one of those ways will stick with them.

Cooperating teacher assistance often took the form of asking a clarifying question, providing an additional explanation or example to the candidates' initial presentation of a concept, aiding structural procedures like helping students form groups, or assisting individual students who were struggling. We found it interesting that when it came time for the candidates to give the classroom back to the cooperating teachers, the candidates provided the same kinds of assistance that the cooperating teachers had – in other words, they had switched roles.

During *one teach, one assist* observations, it was rare for cooperating teachers to provide classroom management or disciplinary assistance. Most of the cooperating teachers indicated that they wanted their candidate to deal with such

issues so as not to show them up in front of the students. Cooperating teachers tended to step in as disciplinarians only during the first few months of the semester, typically taking over the class until the students were settled, and then gradually returning the lead-teaching role back over to the teacher candidate if time allowed them to do so.

The evaluation sessions after such lessons typically focused on ways of addressing disruptive student behaviors. One specific example occurred when Dee Dee (TC) did not understand how important it was for her to take the lead on disciplinary issues. Kate (CT) indicated that Dee Dee could be seen as weak in front of the students. This, Kate claimed, could ultimately lessen Dee Dee's credibility as an authority figure. Two major benefits of using *one teach, one assist* in these kinds of situations was that the students still learned because the room did not erupt into total chaos. Further, teacher candidates observed strategies that they could use to stem disruption.

Based on participant self-reports and our own observations, *team-teaching* was the second most common form of co-teaching. Four pairs of teacher candidates and cooperating teachers became adept at team-teaching. Three of the pairs spent considerable time making specific plans that described which member would teach the distinct parts of team-taught lessons. They described how critical their common planning time was in allowing them to make the kinds of plans that were necessary to make their team-teaching effective. Anna (CT) summarized the importance of common planning for those who were committed to team-teaching:

> I think common time is absolutely necessary so you have time to touch base and figure out what you are doing, and also to divvy up the lesson. There were times when Molly (TC) would work on part of the lesson, I'd work on another part of the lesson and then we would come together. And that was the strength of it because I think we were able to do more with our time and develop better lessons because of that. It would have been too much for one person for the kinds of units we were creating.

Anna and Molly taught Language Arts using a writers' workshop approach, and they both reported that team-teaching allowed them to differentiate their instruction and assessment. For instance, they provided their students with eleven different project choices for one of their units– something that both of them said they could never have done if teaching alone. In other words, team-teaching went beyond the sharing of instructional duties and was portrayed as a significant part of planning lessons, designing projects, and assessing students.

Because four of the pairs taught students with special needs, four of the teacher candidates gained valuable team-teaching experiences with special education teachers. It was not unusual to observe candidates leading lessons with three or more adults in the classroom who were helping the candidate and the students – sort of a *one-teach, two, three, or four* assist arrangement. We observed three lessons where the special education teacher also had a clinical student, which resulted in team-teaching sessions where two teacher candidates – one special education major, one middle level major – were acting as lead teachers while their cooperating teachers assisted. An unexpected outcome of these experiences was that they led to a collaborative effort between the middle level and special education programs to deliberately increase these types of team-teaching opportunities for our respective students. The major goal of this initiative was to get special education majors and middle level majors to understand that regular education and special education partnerships are valuable, hopefully increasing the possibility of them co-teaching when they have their own classrooms.

Along the lines of having multiple adults working within one classroom is *station-teaching*, which involves moving groups of students through multiple stations. It was a key component of Barb's (CT) seventh grade language arts class that contained both English Learners and students with disabilities. This class of twenty-seven students often had six adults – Barb (CT), Mary (TC), the ESL teacher, the special education teacher and her two paraprofessionals – engaged in simultaneous co-teaching. Students rotated through stations in which the ESL teacher traveled with the English Language Learners while team-teaching with the adult leading the lesson at the particular station. The special education teacher and her paraprofessionals were team-teaching or using *one teach, one assist* arrangements with content teachers. Groups of no more than six students would move together among the three or four stations that were often being taught by two adults.

It is important to note that this group of adults was able to do stations because they had a block schedule consisting of 90-minute periods. While they did station teaching only three or four times each month, the individual attention it provided for the students made the extensive planning time well worth the effort. It was exciting to hear students come into their classroom, almost begging and asking "Do we get to do stations today?"

Benefits

Another theme that grew out of our interviews was tied to ways in which cooperating teachers and student teachers found co-teaching was beneficial. These benefits were divided into three different categories: co-teaching as a strong form of teacher preparation, co-teaching as good for middle school students, and co-teaching as a form of professional development for the cooperating teacher.

Strong form of teacher preparation. Teacher candidates and cooperating teachers described co-teaching as teacher preparation because it gave the teacher candidates a sense of security, which, in turn, encouraged them to be greater risk-takers. The cooperating teachers encouraged the teacher candidates to try new instructional strategies because they remained in the classroom to provide support when needed. Molly (TC) explained how she viewed the balance between support and trying new strategies or lessons:

> She [Anna, her CT] knows that I need to make decisions, sometimes on my own, and that they can't always be co-planned or co-taught. It was really helpful that she let me take chances and do things on my own and see, find out for myself how that would work or not.

Co-teaching was also viewed as a way to deepen the mentoring relationships between teacher candidates and cooperating teachers. A quote from Molly's (TC) interview was especially insightful here:

> I think team teaching definitely made the relationship stronger. I think working with someone that I look up to was very helpful and that we worked well together. And we really didn't have a lot of problems, so that definitely made our relationship even stronger. And to go through some of those mistakes together saying, 'Man, that didn't work! We need to try something totally different.' Just kind of laughing off those things and saying, 'We'll make it better the next time.'

Being respectful of one's mentor, not having problems, and working well together seem like strong components of a mentoring relationship. Even more telling is the power of mutual reflection regarding lessons that were less than successful, and then engaging in problem solving to improve each other's' practice.

Part of the role of mentor seemed tied to the notion that student teachers are often overwhelmed with the work involved in being a full time teacher. Once Sherry (CT) felt comfortable that Tara (TC) had a solid grasp of the content, she was eager to transition into co-teaching which enabled her to assist Tara:

> What led us to the *one teach, one assist* was just I probably felt it was a stronger learning experience for a student teacher just because there's so many roles as a teacher. And when you have to come in as a student and just simply 'Okay, now the class is yours from 8 am to 3:15,' it has to be an overwhelming feeling. I remember that feeling. And to me it wasn't beneficial. My thought about teaching is I can give and do so much more in the mentoring role if they have breaks during the day to actually take on a different role than the one in charge.

Barb (CT) also indicated the content knowledge of the student teacher was an important pre-requisite to her movement into co-teaching. Like Sherry, Barb addressed how overwhelmed Mary was with a plethora of tasks. In Barb's (CT) mind, co-teaching allowed her to help narrow the focus for Mary (TC):

> Sometimes I think professionally that any time you have someone that you can split the common tasks with them and you can share the work with them whether it makes the work lighter or it makes the work more comprehensive or in-depth. . .So I think professionally, co-teaching can make work easier or it can just make it better.

Comments from the pre-service teachers were similar to the cooperating teachers when viewing co-teaching as a strong form of teacher preparation. Both Tara (TC) and Mary (TC) shared their concerns about "missing" key content ideas in a lesson. They believed that working from a co-teaching model made contributions from their cooperating teachers less threatening and more supportive. Mary (TC) shared how that support played out in her placement classroom:

> I felt less stress because I knew that, you know, Barb (CT) would have my back if things were going wrong. . .but knowing you have that support, whether she'd be right next to you or in back of the classroom, or you're switching and you're in the back of the classroom, you know that she does have your back and that if anything does happen – that the students are shouting out and you can't get them to be quiet or to manage them, you have someone there.

While many pre-service teachers were rightly concerned about their own teaching performance, Sherry (CT) influenced Tara (TC) to be focused on what the students were learning:

> I think that us butting in as much as we do is like the most beneficial thing because we are just giving them as many ways, so I would say one teach one assist just because it's like having those kids get two different lessons rather than one lesson so they can cling to whichever one they want to cling to and they know that's okay for them to pick a different way of doing it.

Strong teacher preparation must be about providing learning opportunities for middle grades students and both Sherry (CT) and Tara (TC) were willing to share the spotlight in order to do so.

Good for middle school students. With the increased need to differentiate instruction, both cooperating teachers and teacher candidates found co-teaching a useful strategy. Having two adults in the classroom teaching the same concepts in different ways was seen as more engaging for students. Mary (CT) put the idea of student engagement this way:

> I think co-teaching is a way for students to be more engaged and not hearing the same teacher over and over again. Because sometimes students can get into that routine and become bored easily and I think that by having this it kind of spices up your classroom a bit because students are able to see different perspectives and are able to see different teaching styles.

Being taught by two adults simultaneously also allowed students to use a problem-solving method that was clear or comfortable for them. Comments from Tara (TC) demonstrated differentiation in relation to learning style preferences:

> . . .for math [teaching] least common multiple and greatest common factor it was like, 'Okay, so we're going to do it my way and Mrs. P's way'. And that way those kids were okay doing it whichever way they wanted. If they came for help I would ask them, 'do you want to do it my way or Mrs. P's way?' And that gave them that sense of taking ownership, of doing things the way they wanted to instead of doing things the way they were *told* [emphasis in original] that they had to do it.

Especially revealing in her comments is the focus on empowering her students to own their learning and guiding them to the understanding that there are often multiple ways to solve math problems.

Differentiation also appeared to have a relationship or social component to it, as Cathy (CT) pointed out:

> It's just nice with the different personalities that we have in here because there are some students that just feel more comfortable going to Kelly (TC) and some students feel more comfortable coming to me.

We heard similar comments during observation debriefing sessions. During these conversations both cooperating teachers and teacher candidates questioned why certain students would work or not work for her, but would for her partner. The consensus seemed to be that having two different personalities and teaching styles working together in the same classroom gave students another teacher with whom to connect.

Those involved in consistent co-teaching also indicated that they were able to use more flexible grouping within their classes. Such grouping arrangements could occur within the classroom or in separate spaces but the underlying rationale for regrouping students was to meet their needs. For instance, Mary (TC) mentioned that struggling students and English Language Learners were often grouped in ways that would help them succeed academically. However, flexible grouping was not limited to helping students with academics, as Barb (CT) pointed out that interpersonal relationships also played a role when creating groups:

> Both of those classes were large so it was divide and conquer a little bit. Some of them didn't get along well together. We had lots of personalities, especially in the special education classes and sometimes we couldn't trust splitting up kids based only on needs. Then we wouldn't have this and that student in the same activities together, because they couldn't get along.

Related to flexible grouping was the idea that both pre-service teachers and cooperating teachers viewed co-teaching as a way to more effectively provide individual attention for their students. In fact, every pair of candidates and cooperating teachers made some type of comment regarding the relative ease of providing individual attention to students who needed it most. Kelly (TC) indicated that helping students who were absent was one type of individualized attention that could take place during class:

> It's like, 'Oh, my gosh, you've missed all these notes'. Or they're behind on a project, so we're able to split up. We did an animal project where we used the library and the classroom. So I was up in the library with those who missed class, helping them research on line and typing, and Cathy (CT) was down here with those who were ready to assemble their posters.

Along those lines, Dee Dee (TC) mentioned that "getting students to retake tests and pass them" while Kate (CT) was re-teaching a lesson provided time for one to one assistance. Most of the time, comments related to providing individual attention involved additional assistance the moment a lesson was taking place, especially when the co-teaching model being used was *one teach, one assist.*

While our study did not address the growth of the students in co-taught classrooms in any empirical sense, Cathy (CT) did mention that she saw more tangible results for students because of her collaboration with Kelly (TC):

> I feel like, well, I know that they [the students] are benefiting. They're learning more, um and, just from questioning when we're both in here. I feel like they're picking up the information faster and quicker. . .I'm really happy to see their test scores when I grade the tests and quizzes. But we haven't actually measured that, you know.

A final advantage of co-teaching mentioned by the pairs was the ability of the teachers to model collaboration for their students. There were many different ways that the pairs of cooperating teachers and interns described their collaborations. As cooperating teachers, Sherry and Barb mentioned the importance of not "contradicting each other in front of the students." Taking this idea of not being contradictory a bit further, Tara (TC) explained how Sherry (CT) made it a point to explain to her students that teachers can work together and remain unique individuals when she described a day when Sherry took over the classroom:

> I think she said something like 'the old lady's back in charge now, but Ms. B [Tara] has a higher noise tolerance than I do. I'm not saying that her teaching style is wrong. She can handle you guys shouting out but the old lady can't. So you need to raise your hands.' And she made it very clear to the kids that not one way was wrong and not one way was right, but it's a preference of style and her teaching style was different from mine.

Collaboration went beyond the two adults as every teacher candidate discussed the importance of being open to suggestions from all members of the classroom. Mary (TC) captured this attitude when she said:

> [I]f Barb (CT) or someone were to jump in and start saying something or adding to the conversation I was always welcoming of that. And I think you need to have that – that you're not like 'this is just my classroom.' You need to make sure that everyone is learning from each other because, you know, every day I learn from my students.

Sending messages to students that they can teach their teachers can be motivating for students, especially those who may not see themselves as capable students.

Professional development. Cooperating teachers spoke of the learning opportunities that co-teaching with the student teachers provided for them. Working as team teachers provided them with experiences that could be transferred to their work with other educational professionals in their classroom. Observing and working with the student teachers also provided the cooperating teachers with new ideas and strategies for classroom instruction.

Barb and Sherry are seasoned and talented teachers yet both appreciated what they learned from their pre-service teachers:

> I got to see lots of good things that she did and she has such a nice way of interacting with the kids. It was refreshing, you know coming up on my 20-year mark in my teaching career. You get jaded or less patient with some things. [Barb]

Technology is one area in which Tara (TC) really provided support for Sherry (CT). The school recently had several interactive whiteboards installed. Tara (TC) shared how she assisted Sherry (CT) in developing her technology skills:

> It's [co-teaching] helping me and technology wise, I'm helping her. I mean it's funny now because the class will give her a round of applause because she does something on the computer (laughs) because she's like 'Ms. B., come help me. I can't figure this out,' But now she knows how to use the search bar better than she did and now's she's 'look at me, I found it all by myself'.

Areas of Concern

While the majority of participants' responses portrayed co-teaching in a positive light, some potential concerns were also discussed. *Potential* is the key word here because none of the pairs reported problems that prevented them from co-teaching. Most participants mentioned a lack of compatibility between teacher candidates and cooperating teachers as a factor that could make co-teaching a negative experience. Sherry (CT) indicated that while she and Tara (TC) were compatible, she also stated how important that trait was for successful co-teaching:

> Well, I just find it [co-teaching] a win/win for everyone but I just want to stress this again: as long as you are compatible. And just from this side of the desk looking out I've never gone to match.com or any of those matching sites, but that's kind of what I envision if you're going to have this be successful. I think you have to have some kind of format where you can actually pair them by teaching styles.

Our program does not use match.com to arrange placements but we do have cooperating teachers interview prospective teacher candidates before placements are finalized. The goal is to provide both parties with the chance to indicate whether or not the potential pairing seems viable. These interviews appear to be effective as we have only changed four placements in thirteen years; and, we have had only two teacher candidates denied access to the PDS program because a match could not be arranged after they were interviewed by multiple cooperating teachers.

Compatibility seemed tied to relationships characterized by respect and trust. An excerpt from Cathy's (CT) interview summarized the importance of trust and respect:

> I see Kelly more as a co-teacher – not so much as a student teacher. And it's also the same for other teachers on the team because she is good. She's very professional and the other teachers on the team respect her and treat her as a co-teacher. . .Because she was so good, I just really trust her. I guess trust was the big factor.

In contrast, Dee Dee (TC) provided an obvious example of when co-teaching could be unsuccessful:

> If the relationship between the teachers isn't very good I don't think the co-teaching will work very well. Because we have such a good relationship co-teaching doesn't offend either one of us. It doesn't make us anxious. It's not like "Oh my God, I'm going to break down and stop teaching if Kate (CT) says something." So I think if that relationship isn't there you could try it but I don't think it will work out so well.

Sherry (CT) provided additional insights into relationship dynamics that would make co-teaching undesirable:

> I would not want to be in a co-teaching situation where power was an issue. Because if you have two people fighting for either the favorite teacher or the smartest teacher or something where they want to send the balance of the scale off, I wouldn't want to find myself in that. So I don't think that would help the situation because then I think the students are being put in a situation where they have to choose between two teachers.

Sherry's mentioning of power seemed particularly appropriate as it related directly to work by Goodnough, Osmond, Dibbon, Glassman and Stevens (2009) that cited competition among co-teachers as problematic. In contrast, a comment from Kate (CT) exemplified how power issues were often mitigated

among the pairs and particularly during co-teaching with Dee Dee:

> I'd say stuff to the class from the very beginning of the year like, "There are two teachers in this room. I am not in charge and Ms. M [Dee Dee] is not in charge. We are both here to help you, both hear to answer questions and we are both here to teach you.

In short, the pairs demonstrated compatibility by trusting and respecting each other and presenting a unified front to the students.

Both groups of participants were also concerned that teacher candidates might become dependent upon the cooperating teachers, making them less ready to face taking over their own classrooms when that time came. Four of the five cooperating teachers reported that they gave teacher candidates time to be alone with their students in order to foster independence. Kate (CT) explained why she was reluctant to leave her classroom for extended periods of time:

> Well the ISAT (Illinois Standard Achievement Test) (laughs). Oh yeah, I'm scared to death to leave the room (laughs). . . . You know, I think it's mainly my rear end on the state tests and ultimately it is my rear end anyway. State test or no state test. And I have to be ready if an incident does happen or a parent call, which has happened and if I'd have been out of the room when the parent called, I would have had a 'he said/she said' type thing. But I was able to say to that parent that I was in the room when it happened and that Dee Dee (TC) did this and the kid did this and there was no question.

Interestingly, Kate (CT) also indicated that she believed that Dee Dee (TC) "never found her own style" of teaching, legitimizing the notion that in some cases co-teaching may inhibit the development of a teacher candidate.

Fortunately, all of the teacher candidates indicated that they grew in both co-teaching sessions and when they taught solo, four of the five candidates indicated that they were most comfortable co-teaching. All of the five said that they preferred co-teaching to teaching alone primarily because it was best for meeting the needs of the students.

One final finding of this study related to a sense of loss that was felt by some of the participants at the conclusion of school year. Simply put, two of the pairs had an especially difficult time saying "good-bye" to each other. To witness two of the five pairs break down into tears during the final student/teacher conference was heart wrenching. Tara (CT) related a conversation that she and Sherry (CT) had with their principal:

> Like now, because it's approaching the end of the year, I'm like I don't know what I'm going to do without Sherry in my room next year. And Ryan [her principal] came in and told us we had to do something in May, and Sherry said, "But . . . Tara . . . won't . . . be . . . here . . . for . . . that . . . [the long pauses between words were because she was crying]. So Ryan catches us all of the time looking at each other all sad. It's just one of those things that you grow on each other so much that we really have become a team of teachers. I have that support.

Strictly describing the sense of loss as a negative factor for co-teaching would be simplistic, as an alternative way to examine the participants' feelings is that the powerful relationships formed from co-teaching changed their lives. That being said, our research suggests that there is a tangible grieving process that some pairs endured at the end of the year.

Conclusions and Implications

This study found that teacher candidates considered co-teaching arrangements effective in providing them with relevant and engaging teacher preparation experiences. Teacher candidates and cooperating teachers indicated that co-teaching provided them with multiple opportunities to support each other's professional growth.

A specific example of professional growth occurred when the cooperating teachers, teacher candidates, and we, as university supervisors, were able to discuss together lessons led by the teacher candidates. We felt that longer, collaborative review sessions were especially useful when cooperating teachers provided details related to the classroom context that we as supervisors did not know. For example, cooperating teachers suggested ways to approach particular students that may help future lessons be more successful. Being privy to such information helped us develop a deeper understanding of classroom behaviors and dynamics, which, in turn, allowed us to provide more relevant feedback to the candidate in subsequent observations. In addition, candidates who heard similar comments from both their cooperating teachers and supervisors about ways of improving their teaching may have understood that making such improvements was more urgent than if they only heard such suggestions from one source.

It would be difficult for professional, mentoring relationships to form among university supervisors, cooperating teachers, and teacher candidates if not for the year-long clinical experiences that our PDS provided. Spending extended time in public schools interacting with teachers, attending team-meetings, consulting with principals, and observing multiple teaching events provided us with insights into the work-lives of our students and their cooperating teachers that would have been unavailable had we remained on the college campus. The National Council for Accreditation of Teacher Education (currently known as the Council for the Accreditation of Educator Preparation) summarized what we hoped to accomplish within our PDS program:

> Only when preparation programs become deeply engaged with schools will their clinical preparation become truly robust and will they be able to support

> the development of candidates' urgently needed skills and learn what schools really need (NCATE, 2010, p. 3).

The "deep engagement" with our partner schools led to our own "robust" professional development by 1) keeping us aware of changes in teacher evaluation procedures, 2) engaging us in the piloting of the Partnership for Assessment of Readiness for College and Careers (PARCC) assessment, 3) revealing implementation challenges of one-to-one lap top initiatives, and 4) helping us understand how teachers were planning to incorporate the Common Core State Standards into their teaching. Learning such lessons in the public schools allowed us to inform our on-campus students as well as our fellow faculty members.

However, it is important to note that learning lessons that only public schools can teach comes with a professional cost. Time spent in schools is time spent away from writing for publication, preparing for classes, and providing service to the university. In order for teacher educators to safely move towards deeper engagement with public educators and their schools, universities need to rethink faculty loads, allocation of resources, and the ways in which they reward faculty performance (NCATE, 2010). In other words, administrative action that supports and values faculty who develop such programs must tangibly support the rhetoric of valuing strong forms of teacher preparation.

Along these lines, providing cooperating teachers with benefits that are more relevant than graduate course vouchers and less insulting than double figure vouchers may help create a larger pool of willing mentors for teacher candidates. While our experiences have convinced us that most teachers do not become mentors for tangible benefits, we have witnessed firsthand the dedication and effort required to effectively guide a teacher candidate into becoming a teacher. Exemplary cooperating teachers are the key to the success of our program and they deserve more respect than they currently receive.

We would argue that the most important finding of our work is that both cooperating teachers and teacher candidates believed that co-teaching is in the best interests of their students as it fosters a range of pedagogical variety and flexibility that is typically unavailable when co-teaching is absent from classrooms. While this study did not measure student growth, the participants repeatedly stated that co-teaching was valuable for students. Additional empirical studies, similar to Heck, Bacharach, and Mann's (2010) that linked co-teaching to student growth would provide valuable research regarding the impact of co-teaching.

As a result of our interactions with co-teachers in PDS settings, we have come to the conclusion that it is essential that teacher candidates be provided with field experiences that accurately reflect the settings in which they will be teaching. To prepare teacher candidates for co-teaching, it is advised that teacher education programs integrate the concepts of co-teaching into the coursework leading up to and supporting the student teaching experience. Until courses in collaboration are the norm for general education students the way they are for special education majors McKenzie (2009), teacher candidates may not be adequately prepared for the kinds of teaching environments that they will face after graduation. Of course, the limitations of such coursework are clear. Clinically intensive PDS programs may be viable structures to provide teacher candidates with opportunities to collaborate with cooperating teachers who view co-teaching as a valuable growth experience for themselves, their student teachers, and their students. More studies of such programs seem advisable. SUP

Appendix A

In looking at the descriptions of the kinds of co-teaching, which types have you used during this school year?
Which types have you used most often? Why?
Which types do you believe have been the most rewarding in?

a. Increasing student engagement/knowledge
b. Providing professional growth as a teacher

What personal/professional characteristics do you believe that you possess that helps make co-teaching appealing to you?
How are issues of classroom power addressed when co-teaching takes place – planning wise and while teaching? Is someone always in charge? Is it always the same person? How do/do power negotiations take place?
Have you uncovered barriers to co-teaching? If so, what are some of them? If not, what may be some factors in your setting that promote it?
Describe the nature of reflection and discussion you had with each other after co-teaching sessions.
What were some of the motivations for engaging in co-teaching?
What do you see as the benefits of co-teaching?
Would sessions on how to co-teach be helpful? Explain.
In what situations is co-teaching not appropriate? Most appropriate?
Did you do anything deliberate to build relationships with your partner in an effort to make co-teaching more effective?
What role does planning together play in co-teaching sessions?
When planning for co-teaching did you discuss different roles that you would play during the lesson? What were some of these roles?
In what ways did you deal with conflicts or differences in opinion?
Describe the mentoring relationship between coop and intern. In what ways did co-teaching impact this relationship?

FOR INTERNS ONLY: IN WHICH SETTING WERE YOU MOST COMFORTABLE – CO-TEACHING OR SOLO? EXPLAIN.

- Which setting(s) provided you with opportunities to?
- Feel that you were in charge of the lesson?
- Gain the kinds of confidence needed to become a teacher?

- Realize your strengths/weaknesses/characteristics as a teacher?
- Appreciate what it felt like to be in charge of the classroom setting?

What factors influenced the model of co-teaching that you used? (lesson type, student behavior, skill set of teammates, testing pressure?)

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