Co-Teaching in the Age of Accountability: Secondary Student Teachers' and Mentor Teachers' Co-Teaching Experience

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Abstract

The No Child Left Behind Act (NCLB) of 2001 in the United States mandated standardized testing to measure student achievement. Over time, this act began close scrutiny and criticism of curriculum and instruction. As schools struggled with meeting the mandate, Race to the Top, a $4.35 billion United States Department of Education contest, was created in 2009 to spur innovation and reforms in state and local district K-12 education. States were awarded points for satisfying certain educational policies, such as implementing performance-based standards for teachers and principals, complying with Common Core standards, turning around the lowest-performing schools, and building data systems. In order to apply for this competitive grant, school districts had to demonstrate a systematic evaluation of teachers’ performance through their students’ achievement. This initiative has led to mandated teacher evaluation systems that include one component tying student test scores to teacher performance. With teachers’ yearly evaluations now being tied to student test scores, district administrators are weary of supporting student teachers in their schools. A way to allow teachers to continue to have a teaching presence with a student teacher placement is through co-teaching. This method of instruction allows the mentor teacher to collaborate with the student teacher in various instructional strategies. Committed to making co-teaching an integral part of our clinical practice, our faculty members trained in the co-teaching model and, in turn, trained student teachers, mentor teachers, principals, and college supervisors in the model. We will share the principles of co-teaching and their first efforts at co-teaching Spring 2014. We will explain why we adopted this model and how we formed partnerships with school districts. We will share what we learned, what curriculum changes we made, the assessment instruments we used, and our next steps. Finally, we will share the findings of a research study. This study included three in-depth interviews with six mathematics and social studies student teachers and their mentor teachers to study their perceptions of co-teaching.

Keywords: Co-Teaching, Secondary Education, Clinical Experience

JEL Classification I29, I23, I20
The No Child Left Behind Act (NCLB) of 2001 in the United States mandated standardized testing to measure student achievement. Over time, this act began close scrutiny and criticism of curriculum and instruction. As schools struggled with meeting the mandate, Race to the Top, a $4.35 billion United States Department of Education contest, was created in 2009 to spur innovation and reforms in state and local district K-12 education. States were awarded points for satisfying certain educational policies, such as implementing performance-based standards for teachers and principals, complying with Common Core State Standards (CCSSI, 2010), turning around the lowest-performing schools, and building data systems. In order to apply for this competitive grant, school districts had to demonstrate a systematic evaluation of teachers’ performance through their students’ achievement. This initiative has led to mandated teacher evaluation systems that include the component tying student test scores to teacher performance.

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We will share the principles of co-teaching and our teacher candidates’ first efforts at co-teaching Spring 2014. We will also share the findings of a research study. This study included three in-depth interviews with six mathematics and social studies student teachers to study their perceptions of co-teaching as they progressed throughout the semester.

Context

Our university is located in central Pennsylvania, United States. The campus enrolls more than 4,400 students and offers more than 65 associate, bachelor, master, and doctoral degree programs. The teacher education program prepares post-baccalaureate and undergraduate students for secondary (grades 7-12) certification in mathematics, English, and Social Studies. We also have certification for grades 4-8 in mathematics and language arts. The clinical experience is the culminating course that occurs in the last semester of the program and runs for 12 weeks in one classroom setting with one mentor, known as the cooperating teacher.

Student teachers, known as teacher candidates, are placed in schools in the surrounding suburban districts with average socio-economic status. Six teacher candidates, all middle class and white, were placed in middle-level or secondary classrooms for their clinical experience during the Spring 2014 semester. The University hires adjunct professors to serve as supervisors in the clinical setting. Supervisors are certified in the content areas and have had classroom experience, some have served as principals or superintendents for school districts prior to becoming a student teaching supervisor.
Our program implemented the research-based Co-Teaching Model that was developed at St. Cloud University, Minnesota, in 2003 (Bacharach, Heck & Dahlberg, 2010). The St. Cloud Teacher Quality Enhancement (TQE) Initiative defines co-teaching in the clinical experience as:

Two teachers (a cooperating teacher and a teacher candidate) working together in a classroom with groups of students; sharing the planning, organization, delivery and assessment of instruction, as well as the physical space.

This innovative model provides a comprehensive and rigorous experience for teacher candidates, allows the cooperating teachers to remain actively involved in the classroom decision-making and activities, and enhances the K-12 students’ learning.

**Traditional Versus Co-Teaching Models**

In the traditional student teaching model, the cooperating teacher and teacher candidate have little opportunity to build a relationship prior to the start of the semester. Teacher candidates typically observe (often from a stationary position) for a period of time, eventually taking over a variety of tasks or portions of lessons. They frequently create lessons in isolation and are expected to present them for feedback from the cooperating teacher before the lesson is taught. The teacher candidates take full control of one class in the second week of the placement and add more classes weekly until they acquire the entire class load. After three to four weeks teaching the full load, they relinquish one class per week to the cooperating teacher until the end of the clinical experience.

Cooperating teachers are required to mentor the teacher candidate in addition to their classroom responsibilities. They are held responsible for their students’ learning and must uphold new teacher evaluation criteria, which tie student achievement to teacher effectiveness. In addition, they receive nominal financial compensation and mentoring in preparation for their role.

In the co-teaching model, the cooperating teachers and teacher candidates have the opportunity to meet prior to the start of the clinical experience. This meeting gives the pair the opportunity to establish a professional relationship. University faculty members provide instruction in co-teaching strategies, collaboration, and communication. This preliminary workshop allows teacher candidates to become involved in the classroom immediately. Both the cooperating teacher and the teacher candidate plan and teach lessons so that students see the teacher candidate as a “real teacher” from the beginning of the experience. In co-taught classrooms, the cooperating teacher and the teacher candidate plan and deliver instruction collaboratively from the beginning of the experience. Cooperating teachers are taught to make their instructional decisions explicit in order to make the invisible workings of the classroom more visible to the teacher candidate. As the experience continues, the pair alternates seamlessly between assisting and/or leading the planning, teaching, and evaluation. Instead of giving all responsibility to the teacher candidate,
the cooperating teacher becomes a partner in the teaching experience. As the weeks progress, the teacher candidate assumes more responsibility, ultimately taking the lead in planning, teaching, and assessing.

Pairs of cooperating teachers and teacher candidates are not expected to use co-teaching for every lesson but determine collaboratively when and which strategies would be most useful in assisting student learning. The cooperating teacher may leave the classroom, allowing the teacher candidate to handle the classroom responsibilities alone.

This helps the teacher candidates develop their own teaching and management skills, thereby assuring they have the ability to meet the challenges of their own classroom.

As part of a state department of education grant, we were able to compensate the cooperating teachers who participated in a co-teaching setting. They received stipends to remunerate them for the additional time to attend after-school workshops and trainings related to co-teaching. The after-school workshops focused on reviewing the different strategies related to co-teaching. These strategies include: One Teach, One Assist; One Teach, One Observe; Team Teaching; Parallel Teaching; Station Teaching; Alternate Teaching; and Supplemental Teaching (see Appendix A). The workshops provided opportunities for pairs of co-teachers to share how they were implementing the co-teaching strategies in their classrooms with co-teaching pairs from other school districts. Co-teachers from the various school districts, principals, university supervisors, and university teacher education faculty participated in the discussions to share ideas for effective implementation of the co-teaching model.

**Methodology**

**Participants**

This study involved a suburban institution in Central Pennsylvania in the United States of America. The co-teaching initiative was comprised of 20 teacher candidates and 20 cooperating teachers. The placements included elementary, middle school, and high school placements in three different school districts.

The researchers identified six teacher candidates in mathematics and social studies in middle and high school placements to take part in this research study. The sample was both purposive and convenient. The purpose of this sampling was to describe and illustrate what was typical of those new to the program—not to generalize about the experiences of all participants (Patton, 1990). Also, the convenient sample gave the researchers the opportunity to interview teacher candidates who were in proximity to each other and the University and had the same pedagogical training prior to student teaching.

**Data Collection**

The researchers conducted three structured interviews (Seidman, 2005). (Appendix B contains the protocols for the three interviews.) The first interview took place during the first week of the
twelve-week clinical placement. The purpose of this interview was to establish background information and to build rapport. Midway through the experience, the researchers conducted the second interview. This interview focused on the concrete details of the participants’ experience. The third interview, which focused on meaningfulness of the experience, was conducted during the last week.

Our analysis of the interviews is framed around the stages of concern theory (Fuller, 1969; Hall & Loucks, 1978). Fuller studied groups of student teachers and found their initial concerns were more “self-centered” and they shifted to “pupil-centered” concerns towards the end of the semester. Fuller and Case (1972) cite seven categories of teacher concerns experienced by pre-service teachers during their student teaching placement: 1) non-teaching concerns, 2) role as a teacher, 3) subject matter and discipline adequacy, 4) personal/social/emotional relationships with students, 5) teaching methods and evaluating pupil learning, 6) student learning of the material, and 7) improving oneself as a teacher.

Fuller, Parsons, and Watkins (1974) grouped the categories of teaching concerns into three stages: self-adequacy, teaching tasks, and teaching impact. Fuller and Case’s stages of concern (1972) are based on the perception that student teachers’ concerns shift over the semester in a linear predictable pattern. Hall and Loucks (1978) conducted research that verified Fuller and Case’s seven categories of concerns of student teachers.

Data Analysis

After each interview, the researchers listened to the tapes and watched the videos. We also read the interview transcripts. When the research study was completed, we listened, watched, and read the interview data. The first step of analysis was to utilize the data, called “open coding” by Strauss and Corbin (1990). We coded for provisional categories, either putting ideas into one category or creating new ones. The next step was to axial code, which means to put the data back together in new ways by making connections among the categories. Finally, we engaged in Selective Coding, which created the final categories reported below.

Findings

The major themes identified related to the shifts in the perceptions of secondary student teachers through their co-teaching experiences include co-planning, uncertainty, and collaboration. Each theme is described below with data from the interviews to support the perceptions. All student names used are pseudonyms.

Co-Planning

The most prominent theme that emerged from this study was the benefits of co-planning. Teacher candidates’ initial concerns (Interview #1) were that they would not be treated as an equal and would have to compromise their ideas. Casey, a social studies middle school teacher
candidate, succinctly asked, “Would my ideas be taken into consideration?” Doris, a middle school mathematics teacher candidate ruminated, “Can I contribute enough to the co-teaching process in planning because co-teaching has so many facets. I know I can do well co-teaching, but planning I worry about. I don’t have their [cooperating teachers] pre-knowledge” (Interview #1, page 8). Valerie, another middle school mathematics teacher candidate, worried about the ability to plan with another person. She said, “If we disagree on something, that may be an issue, because I know she has her ideas and I have my ideas, if maybe we don’t agree on something, there could be an issue, but I don’t…I mean, I’m very easy to work with, so I don’t see an issue being with that, but there could be potential for it” (Interview #1, page 6).

As they move into another person’s domain, the teacher candidates’ concerns are legitimate. Roth, Lawless, and Tobin (2000) studied this transition for pre-service teachers in depth. They found a palpable tension from classroom learning to the day-to-day realities. They refer to this as the need to develop habitus, a term coined by Bourdieu (1980). Roth, Lawless, and Tobin explain:

Habitus can be viewed as a modus operandi that functions in praxis according to norms that are not explicit principles. It is a “feel for the game” that allows practitioners to do what they do in a situation and at the right moment without the need to make thematic what has to be done. This feel, characteristic of what Bourdieu (1980) calls the practical sense (sens pratique), articulates the sense (Sinn) that constitutes the background necessary to anything resembling cognition. It makes unnecessary knowledge of an explicit rule for a practice. By analogy, native speakers can speak and write correctly without being well versed in (able to state the rules of) grammar, the explicit rules that govern their own tongue. Competent practice does not require explicit theoretical knowledge. (Para 30)

By planning the lesson together, the teacher candidates felt they had a better understanding of the tacit knowledge the cooperating teachers possessed and an equal voice in the pedagogical practices to be included. They did view the cooperating teacher as the more knowledgeable person in the dyad. However, they wanted the opportunity to have input in how the knowledge was acquired and disseminated.

Uncertainty

Several of the teacher candidates voiced a concern regarding an inability to master the seven co-teaching strategies (see Appendix B). One said, “It’s one thing to read about them.” Others were concerned with the fast pace of learning new content and the time to plan effectively. Dezi, a middle school social studies teacher candidate, stated, “I guess a concern is that there’s not a lot of structure yet. It’s a pilot program. A concern is that it might just fall into a traditional model because there’s not a framework for it yet. Everything’s being felt out, so neither of us is familiar with the seven co-teaching models” (Interview #1, p. 14). Fullan (2007) refers to this phenomenon as the “implementation dip”: 
The implementation dip is literally a dip in performance and confidence as one encounters an innovation that requires new skills and new understandings.

All innovations worth their salt call upon people to question and in some respects to change their behavior and their beliefs — even in cases where innovations are pursued voluntarily. What happens when you find yourself needing new skills and not being proficient when you are used to knowing what you are doing? How do you feel when you are called upon to do something new and are not clear about what to do and do not understand the knowledge and value base of new belief systems? People feel anxious, fearful, confused, overwhelmed, deskilled, cautious, and — if they have moral purpose — deeply disturbed.

Through the course of the clinical experience, the teacher candidates became confident because of the co-teaching model. They were not left alone to “implement” new practices. Doris, a middle-level math teacher candidate explained:

I think I’ve become a much more confident teacher, a much more classroom confident teacher. I think some of my classmates might say I always seemed okay up there [in front of class], but there was a lot I was concerned about. You know, am I going to say the right thing? Am I going to have rapport with the students? Here I am walking into an established teacher’s domain and she’s still going to be there. So is there going to be a place for me? And there was and there is. I was just really able to find part of my teacher self. (Interview #2, p. 40)

**Collaboration and Reflection**

One of the most rewarding aspects of this experience was the collaboration that occurred on a daily basis. From planning to teaching, the teacher candidates felt they benefited greatly using the co-teaching model.

Even the cooperating teachers commented they became more reflective as the semester progressed. They were forced to articulate the tacit knowledge that is acquired over time. Andrew, Dezi’s cooperating teacher, reflected on how he grew professionally through the experience, “I think it [co teaching] made me think about my approaches. I think it’s made me even more reflective than I normally am because it made me look differently than I normally would have looked at it. Gives you a positive perspective” (Interview #3, p. 97).

Nolan, Casey’s cooperating teacher, commented on his professional growth, “Casey’s going to be finished tomorrow and people are like, ‘Oh, you’re getting your class back.’ My reply to that is, ‘No, I never gave it up.’ In this model it was no longer my classroom, it was our classroom. I didn’t lose it; it just became hers as well. …So, you look at things the teacher candidates are offering and you’re wondering is that more effective. I started to ask [Casey], Why did you do it this way? Could you have done it differently? What are your thoughts? I think the reflective pieces kind of rejuvenated the reflective part of being professional for me” (Interview #3, pp. 97-98).
The teacher candidates were surprised and grateful for the ability to be in a truly collaborative partnership with their cooperating teacher. John explains it most eloquently:

I honestly didn’t think that I was going to be treated as an equal with the cooperating teacher and kind of have the same, almost respect with ideas and different things. At first when it [co-teaching] was presented, before I met [cooperating teacher] or anything, I thought basically I’m going to be teaching the same lessons that they’ve been using for years and years and years, and I’m going to get to tailor them a little bit here and there and call it my own. I really wanted to try some different ideas that I had been working on. So when the opportunity can and it was time for me to start planning, I was really kind of surprised and grateful that I had an opportunity where I could not only use my ideas but [cooperating teacher] encouraged me with them. She’d say, “Okay, that’s a great idea. Here’s one thing to refine it a little bit.” There’s much more freedom to demonstrate creativity in different lessons that I really expected it to be. (Interview #3, page 84)

One type of tacit knowledge is practical professional knowledge, which refers to the rules, routines, and rituals needed to be an effective educator. However, it also refers to the teacher’s acquired knowledge of content and pedagogy over a period of time. Pedagogical content knowledge is knowledge about the best way to teach subject matter. Shulman (1986) opines that beginning teachers often concentrate on learning the form of teaching (the rules, routines, and rituals) first. When they have some degree of comfort, confidence, and classroom control, they are able to reflect on and spend time developing pedagogical, content, and pedagogical content knowledge they need. By sharing the pedagogical knowledge (i.e. curriculum planning, assessment, and instructional strategies) and content knowledge (i.e. subject matter’s key concepts and ideas) in the co-teaching planning, teaching, and reflecting, the cooperating teacher articulates pedagogical content knowledge, germane to a particular subject area (in this case mathematics and social studies). Shulman (1986) describe pedagogical knowledge as follows:

An understanding of what makes the learning of specific topics easy or difficult:

the conceptions and preconceptions that students of different ages and backgrounds bring with them. …"the most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, explanations and demonstrations-in a word, the ways of representing arid formulating a subject that makes it comprehensible to others. (Page 9)

Pedagogical content knowledge develops as a teacher moves from novice to expert through a complex, iterative process of reasoning and experience building from planning, teaching, adapting instruction, and reflecting on classroom experiences. The process, however, can be sped up through the co-teaching model. All the teacher candidates expressed their gratitude for the cooperating teachers’ ability and willingness to collaborate with them and help them transition into gaining confidence.
Metaphors for Co-Teaching

We asked the student teachers to reflect on the co-teaching experience and describe the experience using a metaphor. Many of the teacher candidates talked about making a growth transition from beginning stages to advanced, such as learning to swim, riding a bicycle, and running a race. Two candidates proposed a more partner-like metaphor, which captured the essence of co-teaching:

One candidate noted that co-teaching experience was like a marriage. He stated, “You have to communicate with your co-teacher and talk through every plan to be sure you both understand what each other will be doing.” (Interview #2, page 69)

Another candidate shared his experience was like a trust fall.

I don’t know if you’ve ever done a trust fall, but what it is, is you have one person stand on a chair and the other person has to catch them. That’s if they trust the person. Now, usually the person that’s more comfortable with falling starts first and the other person has to catch them. So, in the same sense with co-teaching. Usually, co-teaching starts off with the more comfortable person taking the fall, taking a lot of responsibility while the other person is trying to catch. As co-teaching ends, I’m finding myself as the one that’s ready. I’m confident now. …I know [cooperating teacher] can catch me. …I think I’m ready now to take that step, to take that fall. (Interview #3, page 92)

Implications

The study has important implications for teacher education programs. First, the study emphasizes the importance of listening to the concerns expressed by student teachers as they begin to engage in their first classroom teaching experience as a co-teacher, and addressing them by offering professional development or additional training that will match their needs (Hall & Loucks, 1978). Being able to identify where student teachers are and addressing the questions immediately is critical to helping them adapt and benefit from the co-teaching process. It will prevent the reliance on traditional student teaching methods or prevent student teachers from coping with frustration or changes in their attitude toward the profession.

Second, the study emphasizes the importance for teacher education programs to address the implementation model. Engaging pre-service teachers in learning through co-teaching experiences in their education and methods courses will help them see the models in action and help them recognize the benefits as a learner. Workshops or training sessions prior to the first classroom experience will help the student teachers learn ways to implement the seven strategies of co-teaching and understand that certain co-teaching strategies may work better for different subject areas. This exposure may help ease some of the uncertainty with respect to the co-teaching model that was common among the student teachers in this study.
Conclusion

Our research comports with Fuller and Case’s (1972) findings regarding student teachers’ perceptions of their student teaching experience. In the co-teaching experience, our candidates’ perceptions of planning, uncertainty, and collaboration shifted in a linear predictable pattern over the course of the 12 weeks. As the student teachers planned, instructed, and assessed collaboratively with their cooperating teachers, they were provided with constant mentorship and support. This support enabled them to learn the intricacies and challenges related to providing high-quality instruction in today’s classrooms. Cooperating teachers who have mentored traditional teacher candidates noted they observed the rate at which this shift occurred more quickly in the co-teaching environment. Their observations suggest the need for further research on the difference in the rate of change in the stages of concern (Fuller & Case, 1972) between traditional and co-teaching student teaching experience.

References


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**Appendix A**

**Co-teaching strategies**

**One Teach, One Observe**: One teacher has primary instructional responsibility while the other gathers specific observational information on students or the (instructing) teacher. The strategy focuses on the observation observing specific behaviors. It is important to remember that either the teacher candidate or the cooperating teacher could take on both roles.

**One Teach, One Assist**: One teacher has primary instructional responsibility while the other assists students with their work, monitors behaviors, or corrects assignments, often lending a voice to students or groups who would hesitate to participate or add comments.

**Station Teaching**: Station teaching occurs when the co-teaching pair divides the instructional content into parts. Each teacher instructs one of the groups, groups then rotate or spend a designated amount of time at each station – often independent stations will be used along with the teacher led stations.

**Parallel Teaching**: Each teacher instructs half the students, yet they are addressing the same instructional material. The greatest “benefit” is the reduction of the student-to-teacher ratio and improving the overall learning environment.

**Alternative Teaching**: This teaching strategy provides two different approaches to teaching the same information. The learning outcome is the same for all students however the avenue for getting there is different.
**Supplemental Teaching:** This strategy allows one teacher to work with students at their expected grade level, while the other teacher works with those students who need the information and/or materials extended or remediated.

**Team Teaching:** Team Teaching incorporates well planned, team taught lessons, exhibiting 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 student’s perspective, there is no clearly defined leader in team teaching – as both teachers share the instruction, are free to interject information, and available to assist students and answer questions.

**Appendix B**

**Interview Questions**

**Interview #1: Background and Rapport Building (FIRST WEEK)**

1. What are your greatest fears and concerns about co-teaching?

2. What are your greatest hopes concerning co-teaching with a student teacher?

3. What do you anticipate as the biggest stumbling blocks to implementing co-teaching?

4. What factors do you see as having a major positive impact on implementing co-teaching?

5. Is there anything I haven’t asked that you’d like me to know?

**Interview #2: Focus on the Transition (WEEK 6)**

1. What is your current thinking about the value of co-teaching?

2. To date, what have been the most positive aspects of this experience from your point of view?

3. To date, what have been the most disappointing aspects?

4. What analogy or metaphor would you use to describe what the implementation of co-teaching has been like to you so far?

**Interview #3: Focus on Meaningfulness (LAST WEEK)**

1. To what extent was the student co-teaching experience what you expected it to be? What was different? (Probe about initial concerns.)

2. How did co-teaching affect you personally and professionally? Did you see any changes in yourself?
3. How happy are you with the way co-teaching worked this semester? What changes would you recommend if you were to participate again?

4. What effect, if any, do you think co-teaching had on the students in your classroom?

5. What metaphor or analogy would you use to describe the experience? Why?

6. Do you want to add anything?