



Continuum of co-teaching implementation: Moving from traditional student teaching to co-teaching[☆]



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HIGHLIGHTS

- Examination of co-teaching implementation by eight pairs during field experience.
- Existence of a continuum of co-teaching implementation.
- Community of practice critical for successful co-teaching.

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ABSTRACT

This mixed methods study examines the implementation of co-teaching as a model for the teacher education field experience. Participants included eight co-teaching pairs with the goal of determining the extent to which co-teaching occurred, conditions for success, and barriers to implementation. The authors posit that a continuum exists relative to co-teaching implementation with the cooperating teacher's view of his/her role and the purpose of the field experience contributing to where each pair fell on this continuum. This study provides insight into the conditions necessary for coteaching as well as factors that inhibited pairs from moving beyond traditional student teaching.

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1. Introduction

Due to the influence of the field experience on pre-service teacher development, teacher education programs look to enhance this aspect of their programs. For over 200 years, traditional student teaching has been a global approach to the field experience, typically involving a master teacher releasing instruction responsibilities to the student teacher, often with an extended period of “solo time” (Fraser & Watson, 2014). In its infancy in Australia in the 1850s, this approach was known as the ‘pupil teacher’ system (Hyams, 1979). Recognizing perceived limitations of this approach, education stakeholders have argued for the reform of field experiences (Cochran-Smith, 1991; Cornu & Ewing, 2008; Darling-Hammond, Pacheco, Michelli, LePage, & Hammerness, 2005; The National Council for the Accreditation of Teachers,

2010; Zeichner, 2002).

Co-teaching is one reform effort that allows a pre-service teacher to co-teach alongside a cooperating teacher – collaboratively planning, instructing, and assessing. Drawing on the work of Badiali and Titus (2010) and Bacharach, Heck, and Dahlberg (2010), we define co-teaching as:

Both the pre-service and cooperating teacher are engaged in student learning at all times through daily co-planning, co-instructing,¹ and co-assessing.

Co-teaching during the field experience can potentially develop future teachers who are “able to function as members of a community of practitioners who share knowledge and commitments, who work together ... and collaborate in ways that advance their combined understanding and skill” (Bransford, Darling-Hammond, & Le-Page, 2005, p. 13).

This mixed methods study occurred during the 2014/2015

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¹ For a description of co-instructional strategies, see Bacharach et al. (2010).

school year of a yearlong post baccalaureate teacher education program in the United States. Pre-service teachers simultaneously completed three quarters of coursework and a yearlong field experience that progressed from a practicum experience (observing and assisting in a secondary classroom) to a co-teaching placement (teaching side-by-side with a cooperating teacher, first half and then full days). Research participants included eight single subject pre-service teachers (four English and four science) and their cooperating teachers.

The study's goal was to investigate co-teaching implementation and conditions necessary for co-teaching to occur. We were eager to determine the extent to which co-teaching occurred with each pair since this field experience model was different from traditional student teaching and required a certain level of understanding and buy-in to implement with fidelity. We argue that a continuum existed relative to co-teaching with the cooperating teacher's view of his/her role as a co-teacher and the purpose of the field experience contributing to where each co-teaching pair fell on this continuum. We provide recommendations for teacher education programs to support co-teaching pairs to move them further along the continuum as they implement co-teaching.

2. Literature review

2.1. Cooperating & pre-service teacher roles

Traditional student teaching. Historically in countries such as Australia, Canada, and the United States, cooperating teachers provided a space for pre-service teachers to implement and receive feedback on what they learned in their teacher preparation coursework. In this traditional model at its most basic level, the cooperating teacher's role is "classroom placeholder," where the pre-service teacher "exchanges places with the cooperating teacher who then exits to the staffroom" (Clarke, Triggs, & Nielsen, 2014, p. 8).

Additionally, the cooperating teacher within traditional student teaching serves as "supervisor of practica" (Borko & Mayfield, 1995, p. 9), overseeing the field experience as an evaluator and positioning the cooperating teacher as a superior rather than mentor (Beck & Kosnik, 2002; Koerner, Rust, & Baumgartner, 2002). Research on cooperating teachers in the role of evaluator rather than mentor conclude that pre-service teachers in these environments tend to bend toward their cooperating teacher's methods, often assuming a subordinate role (Rozelle & Wilson, 2012; Valencia, Martin, Place, & Grossman, 2009). Although cooperating teacher as evaluator is one version of traditional student teaching, this model can also include cooperating teachers who view themselves as mentors employing effective mentoring practices.

Transforming cooperating and pre-service teacher roles. Pushing upon this traditional view of cooperating teacher as classroom provider and evaluator, Zeichner (2002) posits, "Being a good cooperating teacher is more than providing access to a classroom or modeling a particular version of good practice. It involves active mentoring" (p. 59). Zeichner (2002) elaborates, "The important thing to consider in thinking about classroom placement sites is whether the teachers in those classrooms are learners, questioning and examining their practices, and continually seeking to improve their practices" (p. 62).

Additional research conducted in Canada and the United States highlights the importance of a collaborative cooperating teacher (Beck & Kosnik, 2002; Borko & Mayfield, 1995; Cochran-Smith, 1991; Graham, 2006) with the goal of negotiating meaning and developing understanding together through reflection (Goodnough, Osmond, Dibbon, Glassman, & Stevens, 2009). Cornu and Ewing (2008) posit that "high-quality professional experiences

should have dual outcomes" (p. 1799) including value to the pre-service and mentor teacher. Co-teaching supporters value the peer learning experience and the opportunity for shared learning about teaching through co-generative dialogue.

Cooperating teacher as mentor/coach. Building on Zeichner's and Cochran-Smith's call for a reconceptualization of the cooperating teacher's role, Cornu and Ewing (2008) contend that a shift in field experience models has occurred, moving from traditional student teaching with the goal of "mastering skills, techniques and methods of teaching" (p. 1801) in a supervision hierarchy to "more shared learning and joint construction of what it means to teach" (p. 1803). Research on mentoring during the field experience has identified effective mentoring practices including support and autonomy; opportunities for genuine dialogue; and collaborative planning, teaching, and reflecting (Tomlinson, Hobson, & Malderez, 2010). Additionally, reciprocity is crucial for successful mentoring for both teachers should have a voice and should grow professionally (Ambrosetti & Dekkers, 2010).

Viewing the field experience as a collaborative, mutual learning experience, the field experience's value moves beyond "having a laboratory for practice but in having knowledgeable others to guide and support learning" (Valencia et al., 2009, p. 314). During co-teaching, cooperating teachers position themselves as mentors – focusing on supporting the growth of the pre-service teacher – while simultaneously developing their own practice (Valencia et al., 2009). Co-teaching as a field experience model shows promise in re-envisioning the purpose of the field experience and the cooperating teacher's role.

2.2. Co-teaching during field experience

Although co-teaching has its origins in special education, in the 1980s teacher education programs began to appropriate the practice of co-teaching as a model for the field experience (Darragh, Picanco, Tully, & Henning, 2011). Numerous studies have been conducted on what co-teaching is, what it looks like in the field experience, its impact on learning for pre-service teachers and K-12 students, and co-teaching challenges.

Co-teaching and teacher learning. Recent co-teaching research has moved beyond gains for K-12 students and has focused on affordances and challenges for the development of pre-service and cooperating teachers, specifically examining the notion of co-generative dialogue. Roth and Tobin (2004) – seeking to capture the nature of a cooperating and pre-service teacher debriefing – coined the term co-generative dialogue to encompass "the collective and generative nature of theorizing praxis together" (p. 2). Drawing on Roth and Tobin (2004), researchers such as Scantlebury, Gallo-Fox, and Wassell (2008) define co-generative dialogue as "... when co-teachers discuss the issues that impact teaching and learning and collectively generate solutions to any problems" (p. 971). Since its initial inception, co-generative dialogue now includes not only post-lesson debriefings, but also "huddles" in the middle of a lesson when co-teachers reflect in the moment of teaching (Roth & Tobin, 2004).

Co-teaching research in the United States and Australia has found value in co-generative dialogue because it provides an opportunity to reflect on a shared experience (Badiali & Titus, 2010; Beers, 2008) and "examine their [teachers'] schema and practices in the presence of the other stakeholders in the classroom" (Beers, 2008, p. 447). The power of co-generative dialogue is found in how these reflective discussions provide a space to "articulate unintended and unconscious practices and, thereby, bring them to a conscious level; in the process, the power relationships and roles of participants can also be discussed" (Tobin & Roth, 2005, pp. 318–319). In the quest for teacher education programs to reform

and create quality field experiences, co-teaching shows promise through the use of co-generative dialogue.

Co-teaching and student learning. Co-teaching research has also documented positive results for K-12 students. In the four-year research study by Bacharach et al. (2010), differences in math and reading achievement of K-6 students in co-taught and non-co-taught settings were explored. Findings revealed that co-teaching positively impacted learning, using gains on high-stakes exams as one measurement (Bacharach et al., 2010). Similarly, Hang and Rabren (2009) analyzed differences in reading and math scores for students with disabilities. Comparing scores on the SAT National Curve Equivalents from the 2003/2004 school year without co-teaching to the 2004/2005 school year with co-teaching, statistically significant achievement differences were identified.

An additional benefit includes “enhanced instruction, rather than just a second set of hands” (Beninghof, 2015, p. 13). By strategically using the expertise of each member of the co-teaching pair when planning, instructing, and assessing, co-teachers can support struggling students, implement various scaffolds, and differentiate instruction (Beninghof, 2015; Friend, 2015; Hartnett, McCoy, Weed, & Nickens, 2014; Heckert, Strieker, & Shaheen, 2013; Mandel & Eiserman, 2015; Murdock, Finneran, & Theve, 2015; Tomlinson, 2015). An additional benefit can include a lower student-to-teacher ratio (Hartnett et al., 2014).

Co-teaching challenges. Although research has shown favorable results (e.g., increasing student test scores and providing opportunities to engage in reflective dialogue), co-teaching during the field experience includes challenges. For example, pre-service teachers surveyed by Darragh et al. (2011) wondered whether it was realistic to have two teachers in the room when employed and whether solo time was needed. An additional challenge is achieving cooperating teacher buy-in and ensuring both teachers have an understanding of co-teaching and their role (Darragh et al., 2011; Guise, Thiessen et al., 2016; Heckert et al., 2013). Furthermore, research recognizes challenges associated with fostering a co-teaching relationship of co-respect and co-responsibility (Darragh et al., 2011; Guise, Habib et al., 2016; Scantlebury et al., 2008). Finally, co-teaching pairs are challenged to find time to co-plan and engage in reflective dialogue (Badiali & Titus, 2010).

2.3. Models similar to co-teaching

Peer placement benefits. Variations of co-teaching during the field experience exist such as peer placements – the pairing of two pre-service teachers with one cooperating teacher. Research on peer placements in the United States and Canada has identified the development of collaborative skills as one benefit (Bullough et al., 2003; Gardiner & Robinson, 2009; Goodnough et al., 2009). An additional benefit to peer placements is that both teachers bring multiple perspectives to teaching, leading to variety in instructional approaches (Nokes, Bullough, Egan, Birrell, & Hansen, 2008). Additional studies conducted in the United States, Canada, and the United Kingdom have found that the pre-service teachers’ bolstered confidence resulted in a willingness to take teaching risks (Bullough et al., 2003; Forbes, 2004; Gardiner & Robinson, 2009; Goodnough et al., 2009; Nokes et al., 2008; Smith, 2004). Similarly, peer placements often eliminate the power differential, creating an environment where peers provide non-threatening feedback to each other, cultivating reflective practice (Bullough et al., 2003; Forbes, 2004; Goodnough et al., 2009; Smith, 2004). Other benefits to peer placements include fewer classroom management issues due to a lower student-to-teacher ratio (Nokes et al., 2008) and emotional support (Bullough et al., 2003; Goodnough et al., 2009).

Peer placement challenges. One challenge of peer placements

is the extent to which collaboration occurs (Gardiner & Robinson, 2009; Nokes et al., 2008). In the peer placement study conducted in the United States by Gardiner and Robinson (2009), although collaboration occurred with their peer, there were limited opportunities to collaborate with the cooperating teacher on planning.

Another peer placement challenge is breaking the hierarchical model of “lead” and “backup” teacher (Gardiner & Robinson, 2009), which sometimes is further compounded by unclear role communication (Gardiner & Robinson, 2009; Nokes et al., 2008; Smith, 2004). Nokes et al. (2008) observed a reduction in the power differential between two peers; however, the pre-service teachers still struggled to implement collaborative instruction, with the most common collaborative instruction being trading lead roles. Gardiner and Robinson (2009) also identified the challenge of breaking the power differential and encouraging collaboration, recognizing the importance of providing peer placements with structures that promote collaboration.

An additional challenge is finding time to plan and reflect with the cooperating teacher (Gardiner & Robinson, 2009; Nokes et al., 2008). Gardiner and Robinson (2009) discovered that in peer placements, the cooperating teacher often played less of a mentoring role and when collaboration did occur in planning and reflecting on teaching, this occurred peer-to-peer and not with the cooperating teacher.

3. Theoretical framework

3.1. Teacher development in communities of practice

The co-teaching model for the field experience is informed by Lave and Wenger’s (1991) notion of situated learning and social constructivism (Bruner; Vygotsky), positioning learning as taking place in interactions with others in a community of practice. In his seminal text *Communities of Practice: Learning, Meaning, and Identity*, Wenger (1998) articulates a social learning theory. According to Wenger (1998), “engagement in social practice is the fundamental process by which we learn and so become who we are” (p. 1). Wenger’s (1998) learning theory includes assumptions about what constitutes knowledge, knowing, and knowers, and he provides four premises that articulate these assumptions. These premises stress the social nature of human beings as well as knowing and meaning resulting from learning that occurs through active engagement (Wenger, 1998). In a co-teaching model, teachers are situated in the social and cultural setting of a school for an extended period of time, “being active participants in the *practices* and constructing *identities* in relation to these communities” (Wenger, 1998, p. 4).

Wenger’s (1998) conceptual framework argues for a rethinking of learning and what it means for individuals, communities, and institutions. For individuals, learning occurs through “engaging in and contributing to the practices of their communities” while learning in communities is “an issue of refining their practice and ensuring new generation of members” (Wenger, 1998, p. 7). This conceptualization of learning aligns with the co-teaching model where pre-service teachers engage in the community of the school while cooperating teachers refine and simultaneously mentor the pre-service teacher.

We posit that successful implementation of co-teaching involves mutual engagement, joint enterprise, and shared repertoire, three aspects of a community of practice. According to Wenger (1998), mutual engagement refers to interactions between participants in a community of practice where meaning is negotiated and relationships are built. Joint enterprise in a community of practice involves establishing a common purpose and engaging in ongoing negotiation and accountability for that purpose. Finally, shared

repertoire constitutes development of a shared language, approaches, and other tools for engagement in the community. These three elements of a community of practice highlight its collective nature with participants arriving at meaning through dialogue and interaction, all essential co-teaching elements.

3.2. What our study contributes

Co-teaching shows promise in preparing collaborative, reflective practitioners due to the emphasis placed on collaboration and dialogue about teaching as a vehicle for supporting pre-service teacher development (Craig, 2007). Cornu (2005) posits, “Teacher learning is facilitated in collaborative cultures, as teachers learn with and from one another” (as cited in Nokes et al., 2008, p. 2169). In order for teacher development to occur in “collaborative cultures,” we believe – like Wilson and Beren (1999) – a deep level of collaboration is needed: “Collaboration adequate to produce shared understanding, shared investment, thoughtful development, and a fair, rigorous test of selected ideas” (as cited in Nokes et al., 2008, p. 2173). With the goal of *shared* investment and development in a community of practice, our study examines the implementation of co-teaching and the extent to which this shared investment and development occurred for the co-teaching pairs.

Although studies around the globe have documented positive gains for students (Bacharach et al., 2010; Hang & Rabren, 2009) and pre-service and cooperating teachers (Badiali & Titus, 2010; Beers, 2008; Roth & Tobin, 2004; Scantlebury et al., 2008; Tobin & Roth, 2005) when participating in a co-teaching model, fewer studies have researched what it looks like when a teacher education program adopts co-teaching, investigating the extent to which pairs buy-in to the model, implement it with fidelity, and how a program supports improved implementation. Investigating the extent to which the eight pairs described in this study implemented co-teaching, we delineate a four-category implementation continuum – ranging from traditional notions of student teaching to collaboration throughout the experience resulting in growth for both pre-service and cooperating teacher. By categorizing the eight pairs into four continuum categories, our study provides insight into contributing factors necessary for co-teaching implementation and factors that inhibited implementation. These findings can help teacher education programs identify the extent to which co-teaching occurs and provide support to move pairs along the continuum.

4. Methodology

4.1. Research context

This study occurred during the 2014/2015 school year of a yearlong post baccalaureate teacher education program along the west coast of the United States. Participants included eight co-teaching pairs (four English and four science) and the university supervisors responsible for observing the pairs. Pre-service teachers enrolled in the program simultaneously completed three quarters of coursework and a yearlong field experience that progressed from practicum to part- and full-time co-teaching.

Cooperating teacher selection was based on cooperating teacher interest and principal support. Other factors included efforts to place multiple pre-service teachers at the same school for support and collaboration, feedback received on returning cooperating teachers, and extenuating circumstances (i.e., lack of pre-service teacher transportation). Although the program had limited say in cooperating teacher selection, three co-teaching workshops were provided to pairs to clarify the role of the cooperating teacher and develop mentoring dispositions. The workshops explored various

topics, such as fostering the co-teaching relationship; defining and exploring co-planning, co-instructing, and co-assessing; planning a gradual release model of leadership while still emphasizing collaboration; and discussing co-teaching successes and challenges. Co-instructional strategies (e.g., team teaching) were modeled.

We chose to recruit pairs from English and science to have the humanities and sciences represented in our data set in case subject matter influenced co-teaching implementation. After our first co-teaching workshop, we invited all English and science pairs who attended to participate in the study, excluding pairs if only one member attended the workshop. Our reasoning was to ensure that participants had received foundational training and eliminate lack of attendance at workshops as one variable that could impact findings. A research team staff member sent separate emails to eligible English and science pre-service and cooperating teachers, explaining the focus of the study and including the informed consent form. Individual teachers responded via email expressing their participation interest.

4.2. Research team & ethical issues

The research team consisted of two School of Education staff members responsible for conducting interviews. The staff members interviewed participants because they did not teach within the program nor had contact with participants outside the interviews. The remaining two members of the research team were an associate professor of English education and an undergraduate research assistant both responsible for data analysis. Members of the research team met monthly during the study to discuss data collection protocol and emerging findings.

To account for bias and prevent potential distortion of research outcomes, the research team employed four primary strategies to achieve trustworthiness. First, the team engaged in reflexivity – “engag[ing] in explicit self-aware meta-analysis” (Finlay, 2002, p. 209) – during monthly meetings, examining potential bias brought to interview and data analysis. Although a reflexive journal was not maintained by the research team and could be a possible limitation of this study, reflexivity did occur orally in research team discussions. Second, the research team engaged in quarterly peer debriefings (Lincoln & Guba, 1985) where non-research team members provided feedback on interview transcripts and preliminary findings. Furthermore, member checking (Athanasos & Heath, 1995; Carspecken, 1996; Emerson, Fretz, & Shaw, 1995; Spradley, 1979) occurred with interviewers bringing preliminary findings and data to interviewees to validate the accuracy of interpretations. By collecting multiple and varied data sources, the research team triangulated data, identifying agreements and discrepancies to further investigate.

4.3. Data

Data consisted of weekly pre-service teacher reflections, bi-monthly university supervisor observations, and three individual semi-structured interviews with the pre-service teacher, cooperating teacher, and university supervisor.

Weekly reflections. Pre-service teachers submitted weekly written reflections for part- and full-time co-teaching, totaling approximately 20 reflections. The weekly reflection had three open-ended prompts (e.g., Please provide a specific example of how co-teaching was implemented in your classroom this past week. If co-teaching did not occur, what do you see as the barriers?). If the pre-service teacher responded that he/she had co-taught that week, he/she would also respond to a series of close-ended questions that asked for more details about co-teaching implementation.

Bi-monthly university supervisor observations. Each pair was assigned a university supervisor responsible for observing the pair approximately ten times over the course of 20 weeks. For each lesson observed, the university supervisor submitted an observation report, including quantitative data (e.g., ranking lesson plan quality, classroom management) and qualitative data (e.g., what worked, recommendations for improvement). Additionally, specific co-teaching questions were included, asking the university supervisor to describe the implementation of co-teaching (e.g., extent to which co-instructional strategies were delineated on the lesson plan, extent to which a shared space was created).

Semi-structured interviews. Each member of the pair was individually interviewed on three occasions by a research team member: a month before the practicum to part-time transition, a month before the part-to full-time transition, and at the conclusion of the experience. Interviews lasted approximately one hour and were guided by an interview protocol.

The goal of interviews was to obtain a nuanced understanding of each pair's co-teaching implementation – highlighting both successes and challenges. Interview questions included learning more about the background of each teacher; the relationship between the co-teachers; and the implementation of co-planning, co-instructing, and co-assessing. Member checking (Athanasos & Heath, 1995; Carspecken, 1996; Emerson et al., 1995; Spradley, 1979) occurred during interviews two and three consisting of preliminary findings and data being shared with participants for feedback. Additionally, the final two interviews included participant-specific questions in order to verify and gain insight into preliminary findings.

4.4. Data analysis

Coding and interpretation. As in most interpretive and qualitative research, analysis was ongoing and reiterative. First, we separated data into episodes – “a series of turns that all relate to the same topic or theme” (Lewis & Ketter, 2004, p. 123). After demarcation of episodes, we conducted first and second cycle coding, using analytic memoing and interim case summaries to inform additional data collection and analysis (Miles, Huberman, & Saldana, 2014). All data were double coded and inter-rater reliability was at or above 85%. Agreed-upon codes for the data set were put into NVivo for additional analysis.

Having conducted a pilot study the previous year, we approached first cycle coding deductively based on *a priori* codes about co-teaching, reworking codes as a research team and allowing additional codes to emerge. For example, an interview episode was first coded for a broad theme of *co-planning*, *co-instructing*, or *co-assessing*. After coding an episode as *co-instructing*, a sub-code was identified for the specific co-instructional strategy described (e.g., *one teach/one observe*). When coded as *one teach/one observe*, additional sub-codes were applied that identified how one teach/one observe was implemented (i.e., which co-teacher observed, what was the observation focus). Finally, simultaneous coding also occurred, coding for additional themes related to teaching and co-teaching (e.g., *student engagement*, *rapport with students*).

The research team then engaged in second cycle coding, looking for patterns within codes and across participants, focusing on emerging themes. This second cycle of coding helped to identify patterns in what participants had in common and where their experience and views on co-teaching differed, resulting in the emergence of the co-teaching continuum of implementation. For example, for pairs who primarily relied on the strategy of *one teach/one observe* with the pre-service teacher as observer, a simultaneous code of *power differential* was also noted with the

cooperating teacher as expert.

In addition to first and second cycle coding, the research team engaged in analytic memoing, consisting of “brief or extended narrative that documents the researcher's reflections and thinking processes about the data” (Miles et al., 2014, p. 95). Given that data collection and analysis were concurrent, the analytic memos allowed the research team to “collect new data to fill in gaps” and to “test new hypotheses that emerg[ed] during analysis” (Miles et al., 2014, p. 70). These analytic memos helped the research team further define each co-teaching continuum category and resulted in participant-specific interview questions as a means of exploring our hypotheses.

Finally, the research team wrote interim case summaries for each pair prior to conducting the second and third interview. These interim case summaries were a “first attempt to derive a coherent, overall account of the case – a synthesis of what the researcher knows about the case and what may remain to be found out” (Miles et al., 2014, pp. 131–132). Participant-specific interview questions were developed out of these interim case summaries.

5. Results

Both quantitative and qualitative data revealed that across the eight pairs, different degrees of understanding and buy-in to the co-teaching model were evident. In addition, the eight cooperating teachers had different views of the purpose of the field experience and their role, impacting the implementation of co-teaching. Furthermore, a continuum of co-teaching implementation existed across the eight pairs, with implementation for each pair falling into one of four continuum categories (See Appendix A for category descriptions).

In the following sections, we provide quantitative data showing the primary co-planning and co-instructional strategies characterizing each of the four co-teaching continuum categories (see Table 1 for co-teacher demographic information). We draw from interview and reflection data to support our description of how the positioning of the cooperating teacher (e.g., role, power dynamic) also characterized each continuum category.

5.1. Traditional student teaching

Three of the eight pairs fell into this continuum category where the field experience resembled “traditional student teaching” – defined as a master teacher who gradually releases responsibility of classroom instruction to the student teacher, often with an extended period of “take-over.” In analyzing quantitative data from weekly reflections where pre-service teachers reported the planning and instructional practices implemented during the previous week, Elliot,² Grace, and Stacey – three science pre-service teachers who fell into this continuum category – implemented one teach/one observe and one teach/one assist as their primary co-instructional strategies (see Table 2). Furthermore, these three pre-service teachers either used the original plans of their cooperating teacher (e.g., Elliot never created a lesson on his own and only once collaboratively designed a lesson with his cooperating teacher) or one co-teacher was responsible for planning with few instances of collaborative planning (in the case of Grace and Stacey) (see Table 3). Within this continuum category, there was variation in who was in the lead. Following his cooperating teacher's direction, Elliot never planned his own lesson whereas Grace and Stacey had opportunities to develop their own lessons. Despite this variation, all three pairs in this category reported limited collaboration

² Names used are pseudonyms.

Table 1
Description of co-teaching pairs & school sites.

Science pairings						
Site description	Name	Role	Age	Ethnicity	Gender	Highest level of education
Suburban, 7th & 8th Grade Biology and Life Science	Elliot	Pre-Service Teacher	Early 20s	Caucasian	Male	BS
	Sarah	Cooperating Teacher • 25 years teaching • 7 years hosting	55	Caucasian	Female	BS & Credential
Urban, 10th Grade Biology, Marine, & Forensic Science	Stacey	Pre-Service Teacher	24	Caucasian	Female	BS in Biology
	Rebecca	Cooperating Teacher • 32 years teaching • 15 years hosting	58	Caucasian	Female	BS & Credential
Urban, 9 th -12th Grade AP Bio & Environmental Science	Grace	Pre-Service Teacher	23	Caucasian	Female	BS
	Ignacio	Cooperating Teacher • 19 years teaching • 6 years hosting	50	Caucasian	Male	MA
Suburban/Rural, 11th & 12th Grade Physics	John	Pre-Service Teacher	23	Caucasian	Male	BS
	Don*	Cooperating Teacher • 32 years teaching • 31 years hosting	57	Caucasian	Male	MA

English Pairings						
Site Description	Name	Role	Age	Ethnicity	Gender	Highest Level of Education
Urban, 7th Grade English Language Arts	Lexie	Pre-Service Teacher	23	Caucasian/German	Female	BA
	Liz*	Cooperating Teacher • 10 years teaching • 3 years hosting	33	Hispanic	Female	MA
Urban, 7th & 8th Grade English Language Arts	Molly	Pre-Service Teacher	22	Hispanic	Female	BA
	Christine*	Cooperating Teacher • 13 year teaching • 10 years hosting	35	Caucasian	Female	MA
Suburban, 9th & 10th Grade English Language Arts	Lisa	Pre-Service Teacher	21	Caucasian	Female	BA
	Robin	Cooperating Teacher • 5 years teaching • 1 year hosting	Late 20s	Caucasian	Female	BA & Credential plus units toward an MA
Suburban/Rural, 11th Grade English Language Artss	Carol	Pre-Service Teacher	22	Caucasian	Female	BA
	Julie*	Cooperating Teacher • 16 years teaching • 6 years hosting	42	Caucasian	Female	MA

*Indicates that the cooperating teacher has previously participated in hosting a teacher candidate with the co-teaching model.

Table 2
Elliot, Grace, & Stacey co-instructing.

Pre-service teacher	One teach/one observe	One teach/one assist	Team teaching	Station teaching	Parallel teaching	Differentiated teaching
Elliot	21/21 weeks 100%	14/21 weeks 67%	0/21 weeks 0%	0/21 weeks 0%	1/21weeks 5%	0/21 weeks 0%
Grace	10/15 weeks 67%	13/15 weeks 87%	12/15 weeks 80%	2/15 weeks 13%	2/15 weeks 13%	7/15 weeks 47%
Stacey	20/20 weeks 100%	19/20 weeks 95%	8/20 weeks 40%	1/20 weeks 5%	1/20 weeks 5%	2/20 weeks 10%

Table 3
Elliot, Grace, & Stacey planning.

Planning practices	Elliot	Grace	Stacey
You were given lesson(s) or page(s) to teach without discussion	2/21 weeks 10%	2/15 weeks 13%	0/20 weeks 0%
You were given lesson(s) to teach with discussion and/or clarifying questions asked and answered	21/21 weeks 100%	12/15 weeks 80%	9/20 weeks 45%
You were given lesson(s) and jointly modified with your cooperating teacher	17/21 weeks 81%	8/15 weeks 53%	9/20 weeks 45%
You were given lesson(s) and you modified on your own	6/21 weeks 29%	7/15 weeks 47%	2/20 weeks 10%
Beginning with a standard/objective, you and your cooperating teacher jointly developed a new lesson	1/21 weeks 5%	5/15 weeks 33%	6/20 weeks 30%
Beginning with a standard/objective, you developed your own lesson	0/21 weeks 0%	3/15 weeks 20%	16/20 weeks 80%
Beginning with a standard/objective, you provided your cooperating teacher with a lesson for him/her to teach	0/21 weeks 0%	1/15 weeks 7%	0/20 weeks 0%

and teaching occurring in isolation with one teacher in charge.

In addition to implementing practices that positioned one teacher in the lead rather than in collaboration, there was also a power differential between the pre-service teacher and his/her cooperating teacher. This power differential was categorized by the numerous years of teaching experience and strong content knowledge of the cooperating teacher often positioning the pre-service teacher as less knowledgeable and therefore wedded to previously developed plans because the cooperating teacher had years of success with those plans. During Interview 1, Elliot described this power differential: “She’s been doing it for so many years ... it’s not always that my input is welcomed.” Elliot elaborated further and said, “I have to really try to match her level, which I know realistically I can’t do. She’s far above me.” Both quotes illustrate how Elliot found himself inferior in terms of experience and content knowledge and saw this as one reason why they “don’t really deviate too much” from the lessons that Sarah had implemented for twenty-five years (Elliot, Interview 1). This finding replicates previous research characterizing traditional student teaching as “unidirectional” with the cooperating teacher having expertise to offer the pre-service teacher (Clarke et al., 2014, p. 9).

Another common characteristic of these three pairs was that the collaborative relationship was not fostered outside of the classroom. During the interviews, the pre-service and cooperating teachers attributed this to a difference in age and interests. Ignacio, Grace’s cooperating teacher, explained their different interests mentioning, “I’m not gonna tell her about some chick-flick or something that I went to go watch, so we have some differences” (Interview 1).

Finally, interview responses and weekly reflections from Elliot and Grace indicated an awareness that they were not implementing co-teaching as they had been trained, recognizing that their experience aligned more with traditional student teaching. Furthermore, Elliot and Grace expressed a desire to implement more co-teaching, including co-planning and co-instructing. Elliot explained, “Honestly, any time I got to do the co-teaching ... I understood why it’s so cool” (Interview 3).

Although all three pairs aligned primarily with a traditional student teaching approach, each pair had at least one instance of co-teaching implementation, which suggests the potential to move pairs along the continuum if provided with the appropriate conditions (see Guise, Habib et al., 2016).

5.2. Blended experience: co-teaching guidance needed

One of the eight pairs (pre-service teacher, Lisa, and cooperating teacher, Robin) fell into the “blended experience” category, characterized by a mixture of traditional student teaching and co-teaching. While Elliot, Grace, and Stacey more closely aligned with traditional student teaching, Lisa and her cooperating teacher had numerous instances of co-teaching – both co-planning and co-instructing – and positioned themselves farther along on the implementation continuum. Despite some success with co-teaching, their teaching schedule, lack of planning time, and limited understanding of the co-teaching model resulted in this pair often aligning with traditional student teaching. Robin, a first time cooperating teacher, expressed in interviews that she needed additional support to understand how to implement co-teaching.

Lisa’s weekly reflections indicated implementation of various approaches to planning, primarily using lessons that Robin had created or a lesson that Lisa created. However, there were instances of collaboratively planned lessons, which differed from the co-planning practices of the three pairs falling into the traditional student teaching continuum category. Table 4 provides Lisa’s weekly reflection data, identifying her co-planning practices.

Interview data provided insight into what these planning practices looked like, confirming that Lisa and Robin took a traditional approach to planning (one teacher plans a lesson) though they also had instances of more collaborative planning. During practicum, Robin created all of the lessons. When they moved into part-time co-teaching, Lisa and Robin met to discuss a unit’s big picture and Robin made her previous materials available to Lisa; Lisa would then modify and add her own ideas. Robin described this planning approach during Interview 3:

For *Romeo and Juliet*, I usually have a pretty good idea of how long it’s gonna take, so I gave her a monthly calendar. And that’s how we’ve done all of our units. I have monthly calendars for each of the units already set out But then, she would go through and ... decide what activities she wanted to do, how she wanted to get through the text that day, how she wanted to teach specific things, add supplementary stuff.

In addition, Lisa and Robin collaboratively generated new units together. Lisa described this approach in a weekly reflection: “[We] co-planned most of the unit together this week. We co-planned specifics and broad ideas of what we want the class to look like and where we would like it to go this semester. Together, we made a unit calendar and specific lesson plans to guide us for the next month” (Reflection, Week 1). Through this collaborative planning, Lisa and Robin engaged in co-generative dialogue, with Robin bringing to a “conscious level” the planning process, modeling her thinking and co-constructing a unit together (Tobin & Roth, 2005, p. 318).

Similar to the previously mentioned pairs, Lisa and Robin also relied heavily on one teach/one observe and one teach/one assist, both co-instructional strategies being used every week of the field experience. Lisa and Robin also used team teaching and referred to it as “tag teaming,” primarily alternating the lead co-teacher for a portion of the lesson. Lisa and Robin also experimented with parallel and differentiated teaching, but these were used infrequently compared to one teach/one observe and one teach/one assist. See Table 5 for Lisa’s co-instructional data.

In addition to having elements of both traditional student teaching and co-teaching, Lisa and Robin differed from Elliot, Grace, and Stacey in that Lisa developed a relationship with Robin outside of the classroom. Lisa attended an overnight field trip with Robin and upon reflection, mentioned that this was a time when they connected on a more personal level, which helped when collaborating.

Another distinguishing factor was Robin’s expressed desire to learn more about co-teaching, recognizing that she was implementing some aspects of co-teaching but could learn more about the model to enhance implementation. Specifically, Robin desired a better understanding around the leadership transition: “The concrete timeline. I just wanna see it ... so I can gauge myself ... especially for a newbie like me ... ‘Are we doing this right?’” (Interview 3). As a new cooperating teacher, Robin questioned whether she was implementing co-teaching effectively and in alignment with the program’s vision. Additionally, she desired a timeline for the level of involvement both teachers should play in the classroom. Robin’s desire for more support in developing as a mentor and co-teacher aligns with previous research on mentoring, which has described the complexity of mentoring pre-service teachers and how little training is often provided (Ambrosetti & Dekkers, 2010).

5.3. Forward momentum: lessons learned

Two of the eight pairs fell into this continuum category. When

Table 4
Lisa planning.

Planning practices	
You were given lesson(s) or page(s) to teach without discussion	0/20 weeks 0%
You were given lesson(s) to teach with discussion and/or clarifying questions asked and answered	3/20 weeks 15%
You were given lesson(s) and jointly modified with your cooperating teacher	9/20 weeks 45%
You were given lesson(s) and you modified on your own	15/20 weeks 75%
Beginning with a standard/objective, you and your cooperating teacher jointly developed a new lesson	17/20 weeks 85%
Beginning with a standard/objective, you developed your own lesson	16/20 weeks 80%
Beginning with a standard/objective, you provided your cooperating teacher with a lesson for him/her to teach	11/20 weeks 55%

Table 5
Lisa co-instructing.

Pre-service teacher	One teach/one observe	One teach/one assist	Team teaching	Station teaching	Parallel teaching	Differentiated teaching
Lisa	20/20 weeks 100%	20/20 weeks 100%	9/20 weeks 45%	0/20 weeks 0%	1/20 weeks 5%	7/20 weeks 35%

looking at quantitative data for planning and instructing, this category was characterized by implementing a variety of co-planning and co-instructional strategies and by trying most strategies at least once. This variety enabled the pre-service teacher to experience assisting, leading, and collaborating.

For planning, pre-service teachers Molly and Carol had approximately the same number of opportunities to jointly develop a lesson plan with their cooperating teacher as they did to develop a lesson on their own. In addition, Molly's and Carol's cooperating teachers made previous lesson plans available, which they jointly modified together. These data reveal that not only did Molly and Carol experience a variety of planning practices with their cooperating teachers, but the practices chosen also varied in terms of leadership. See Table 6 for Molly's and Carol's planning practices.

For co-instructing, Molly and Carol implemented multiple strategies and while one teach/one observe and one teach/one assist were used frequently, they moved into implementing more collaborative co-instructional strategies such as differentiated teaching for Molly and team teaching for Carol. In addition, Carol and her cooperating teacher implemented all six of the co-instructional strategies on more than one occasion throughout the experience. See Table 7 for details about co-instructional strategies implemented by these two pairs.

A common characteristic between cooperating teachers in this continuum category was that they had previously hosted a pre-service teacher under the co-teaching model (whereas Sarah, Ignacio, Rebecca, and Robin either had no experience hosting a pre-service teacher or had hosted under the traditional student teaching model). Having previously experienced co-teaching, cooperating teachers Christine and Julie made strategic decisions about how to approach co-teaching based on lessons learned from previous experience. For Julie, these strategic decisions included involving the pre-service teacher actively in the classroom from day one and having an equal power dynamic: "And it is really only with a year's experience at it that I feel like I am managing it effectively. That I have worked her into the classroom more effectively ... to have that more equitable pairing so that she can be stronger in the classroom earlier" (Interview 1). Julie recognized the importance of students seeing both teachers as authorities in the classroom. She also chose to oscillate between who was in the lead (depending on the particular unit), talking openly with Carol about these strategic decisions.

Similarly, Christine also learned how best to establish the pre-service teacher in the classroom after years of hosting a co-teacher: "Looking back at every year that I've done this, I've gotten much better at establishing that [two teachers in the

Table 6
Molly & Carol planning.

Planning practices	Molly	Carol
You were given lesson(s) or page(s) to teach without discussion	0/19 weeks 0%	2/18 weeks 11%
You were given lesson(s) to teach with discussion and/or clarifying questions asked and answered	5/19 weeks 26%	3/18 weeks 17%
You were given lesson(s) and jointly modified with your cooperating teacher	7/19 weeks 37%	4/18 weeks 22%
You were given lesson(s) and you modified on your own	4/19 weeks 21%	4/18 weeks 22%
Beginning with a standard/objective, you and your cooperating teacher jointly developed a new lesson	12/19 weeks 63%	10/18 weeks 56%
Beginning with a standard/objective, you developed your own lesson	13/19 weeks 68%	10/18 weeks 56%
Beginning with a standard/objective, you provided your cooperating teacher with a lesson for him/her to teach	5/19 weeks 26%	2/18 weeks 11%

Table 7
Molly & Carol co-instructing.

Pre-service teacher	One teach/one observe	One teach/one assist	Team teaching	Station teaching	Parallel teaching	Differentiated teaching
Molly	17/19 weeks 89%	19/19 weeks 100%	3/19 weeks 16%	0/19 weeks 0%	0/19 weeks 0%	17/19 weeks 89%
Carol	11/18 weeks 61%	15/18 weeks 83%	17/18 weeks 94%	2/18 weeks 11%	4/18 weeks 22%	4/18 weeks 22%

classroom]. I think at this point in the year, this is the most established co-teaching that I've had with my ... co-teacher in the eyes of the kids ... I think she feels a lot more confident about making certain decisions and stepping up into a more co-teach role" (Interview 1). Christine explained that the transition to more fully understanding the co-teaching model occurred after exploring outside resources (e.g., video clips on co-instructional strategies) and recognizing that there was more to co-teaching than co-instructing.

5.4. Scaffold and grow: lifelong learners

The final continuum category included two of the eight pairs. Pairs in this category had many similarities with the previous continuum category, including implementing a variety of co-planning and co-instructing strategies so that both teachers had opportunities to assist, lead, and collaborate at different moments in the field experience. See Tables 8 and 9 for a summary of the pre-service teacher weekly reflection data for planning and co-instructing. In addition, both cooperating teachers in this category (Don and Liz) had previously hosted pre-service teachers under the co-teaching model, refining their implementation and making changes based on previous experiences.

One defining characteristic of cooperating teachers in this category was that they approached their role as a cooperating teacher similarly to how they approached teaching in their classroom, focusing on creating a carefully scaffolded, differentiated experience based on the needs of the individual pre-service teacher. This approach was described by Don, a cooperating teacher to John, during Interview 2: "They're [pre-service teachers] all different, but I think that's the point ... I have to see where they are and help them get to an improved area. Not obviously where they're going to be at the end of their growth because I'm still growing as a teacher. Just help them to understand that we're always growing and trying to improve and do better." Previous mentoring research validates Don's practices, arguing that "mentoring is most effective where it addresses and responds to the needs of the learner/mentee," taking into account the individual's

needs and learning styles (Tomlinson et al., 2010, p. 8).

Another defining characteristic was that the cooperating teachers displayed a growth mindset (Dweck, 2006), positioning themselves as learners right alongside their pre-service teachers and recognizing the potential reciprocal relationship mentoring can provide (Cornu & Ewing, 2008). This growth mindset was displayed through openness to new ideas, specifically around integrating technology into the classroom and aligning instruction with Common Core and Next Generation Science Standards. During Interview 3, Liz – Lexie's cooperating teacher – commented, "So this year, there was a lot of new things being created. I really enjoyed it. I think Lexie loved it too, to be able to start from scratch and just teaching everything fresh and brand new based on the standards." Liz made a decision to use "zero materials from the past" and found enjoyment in creating new materials: "It's been a great process for Lexie and me because she's bringing in a lot of great new ideas. She's really creative. She's really intelligent" (Interview 2). Not only does this reveal that Liz was open to co-planning new curriculum and that she was learning by co-teaching with Lexie, it also reveals a more equal power dynamic than is typically associated with traditional student teaching (Beck & Kosnik, 2002; Koerner et al., 2002). Liz praised Lexie for her creativity and intelligence and valued Lexie's ideas, illustrating how a cooperating teacher can recognize "the potential role that each student teacher has to play in others' learning" (Cornu & Ewing, 2008, p. 1803). By Liz positioning herself as a learner who can learn from Lexie, the power dynamic created was collaborative and both teachers were engaged in reflective practice (resembling active mentoring and collaborative reflection advocated by Zeichner, 2002 and Valencia et al., 2009).

Don also explained how he learned from his pre-service teacher during the field experience, mentioning how implementing one teach/one observe afforded him this opportunity. On certain occasions, Don would teach Period 1 and have John observe his teaching. Then, Don and John would switch roles during Period 2 and Don would notice that John would add something new to his instruction: "The coolest thing is I'd teach it and he'd get up and teach it and I'd go, 'Wow! He added that. That was really good!'"

Table 8
John & Lexie planning.

Planning practices	John	Lexie
You were given lesson(s) or page(s) to teach without discussion	0/20 weeks 0%	0/16 weeks 0%
You were given lesson(s) to teach with discussion and/or clarifying questions asked and answered	3/20 weeks 15%	1/16 weeks 6%
You were given lesson(s) and jointly modified with your cooperating teacher	9/20 weeks 45%	2/16 weeks 13%
You were given lesson(s) and you modified on your own	11/20 weeks 55%	1/16 weeks 6%
Beginning with a standard/objective, you and your cooperating teacher jointly developed a new lesson	12/20 weeks 60%	15/16 weeks 94%
Beginning with a standard/objective, you developed your own lesson	15/20 weeks 75%	4/16 weeks 25%
Beginning with a standard/objective, you provided your cooperating teacher with a lesson for him/her to teach	6/20 weeks 30%	0/16 weeks 0%

Table 9
John & Lexie co-instructing.

Pre-service teacher	One teach/one observe	One teach/one assist	Team teaching	Station teaching	Parallel teaching	Differentiated teaching
John	13/20 weeks 65%	14/20 weeks 70%	17/20 weeks 85%	0/20 weeks 0%	3/20 weeks 15%	2/20 weeks 10%
Lexie	8/17 weeks 47%	10/17 weeks 59%	10/17 weeks 59%	0/17 weeks 0%	0/17 weeks 0%	3/17 weeks 18%

(Interview 1). Often what John added was a technology component (e.g., using an iPad to display his notes on the board to allow for circulation), which Don stated helped enhance his own technology use. As a cooperating teacher, Don positioned himself as a participant in a community of practice, mutually engaged in learning about teaching alongside his pre-service teacher (Wenger, 1998).

6. Discussion

Reforming the field experience is a challenging endeavor since traditional student teaching has a long history of implementation with results producing effective teachers. This study's findings suggest challenges a teacher education program may face when implementing the co-teaching model, including variation in the extent to which co-teaching is understood and implemented. By describing four different categories on the co-teaching implementation continuum, this study provides insight into the pre-conditions necessary for successful co-teaching.

Findings reveal that to successfully support co-teaching implementation, attention to framing the field experience around notions of teacher learning and communities of practice is necessary: "Rather than training teachers to implement given practices, the interest is in having teachers come to see themselves as ongoing learners, seeking classroom practices that are responsive to the needs of the students and continually evaluating and adapting classroom practice" (Franke, Carpenter, Levi, & Fennema, 2001, p. 658). Moving beyond an emphasis on the six co-instructional strategies that in past practice has been the focus of co-teaching workshops to a greater emphasis on theories of teacher learning, the role of the cooperating teacher in mentoring a pre-service teacher, and the creation of a community of practice may help a teacher education program implement co-teaching with fidelity.

In examining the three pairs who aligned with traditional student teaching, practices included solo teaching and unidirectional learning rather than a community of learners characterized by mutual engagement, joint enterprise, and shared repertoire (Wenger, 1998). The roles adopted by the co-teachers (expert/novice) also made it challenging to engage in co-generative dialogue (Roth & Tobin, 2004) and build a community of learners. These pairs relied on traditional notions of apprenticeship with the cooperating teacher in the master role and the pre-service teacher in the student role (Wenger, 1998). As posited by scholars such as Cochran-Smith and Lytle (1999), Dewey (1904), and Schon (1987), there is a difference between coaching reflective practice – a characteristic of co-teaching during the field experience – and "coaching as a way of experts training nonexperts to use teaching or cognitive strategies that are already worked out" (Cochran-Smith & Lytle, 1999, p. 269). As seen in the mentoring practices of Sarah and Ignacio, these cooperating teachers mentored by providing "tried-and-true" lessons that had already been "worked out" rather than engaging in the level of reflective practice of other pairs in the study. Although sharing these lessons was helpful to the pre-service teachers in that they saw a model of effective practice, the pre-service teachers were limited in their ability to engage in reflective practice with their cooperating teacher as a result of the expert/novice dynamic.

Teachers within the final continuum category positioned learning as social practice – "learning, thinking, and knowing are relations among people in activity in, with, and arising from the socially and culturally structured world" (Lave & Wenger, 1991, p. 51). In addition, the traditional concept of apprenticeship was discarded and legitimate peripheral participation occurred creating a space for "changing participation and identity transformation in a community of practice" (Wenger, 1998, p. 11). Co-teachers within this final category aligned themselves with the notion of "knowledge-of-practice" – as articulated by Cochran-Smith and Lytle (1999) – in which there were limited distinctions between expert/novice and the goal of the field experience was not to develop knowledge that was already known by the cooperating teacher but rather to collaboratively construct knowledge together, viewing "knowledge [as] constructed collectively within local and broader communities" (p. 274) and cooperating teachers "function [ing] as fellow learners and researchers rather than experts" (p. 278).

In pursuit of implementing co-teaching with fidelity and creating a community of practice, cooperating teachers in the two middle categories of the continuum prioritized dismantling the power differential often typically associated with traditional student teaching, working toward positioning themselves as mentors and striving to create opportunities for dialogue. Recognizing that in order for a community of practice to be achieved and co-teaching practices to be implemented in that community of practice, the dismantling of the power differential must occur first because this could be a limiting factor in creating a space for learning through interaction. Co-teaching pairs in these two categories of the continuum, however, recognized the challenge of limited "opportunities for more open and ongoing dialogue," a similar finding to challenges of peer placements (Gardiner & Robinson, 2009, p. 88).

Ultimately, for co-teaching to be implemented with fidelity, a shift in perspective on teacher learning needs to occur. Focusing on creating a community of practice – aligned with constructivist and sociocultural notions of learning – will provide co-teaching pairs with a framework for understanding how to structure the field experience, what roles each member of the pair can play, and how to create a shared focus on learning and growth. Wenger (1998) when describing communities of practice states: "the perspectives we bring to our endeavors are important because they shape both what we perceive and what we do" (p. 225). In regards to implementing co-teaching as a model for the field experience, co-teachers need to be supported in understanding larger notions of learning and how these apply when learning how to teach.

6.1. Implications

Striving to establish a community of practice through co-teaching, we provide the following suggestions for moving pairs along the co-teaching continuum. When framing co-teaching workshops, it is important to focus on presenting a learning theory that prioritizes teacher learning through collaboration and inquiry in a community of practice. One such theory of teacher learning is *inquiry as stance*, what Cochran-Smith and Lytle (1999) argue dismantles the expert-novice distinction and prioritizes

lifelong learning of *all* teachers. In respect to teacher training and the field experience, inquiry as stance

... assumes that beginning and experienced teachers need to engage in similar intellectual work. Working together in communities, both new and more experienced teachers pose problems, identify discrepancies between theories and practices, challenge common routines, draw on the work of other for generative frameworks, and attempt to make visible much of that which is taken for granted about teaching and learning. (Cochran-Smith & Lytle, 1999, p. 292–293)

At co-teaching workshops, teacher education programs could have pairs examine inquiry as stance (Cochran-Smith & Lytle, 1999), growth mindset (Dweck, 2006), and communities of practice (Wenger, 1998), exploring infographics, articles, and videos. Through discussion, connections could be made to the field experience and the benefits within a co-teaching context could be made explicit.

Related to carefully framing teacher learning, it is important that co-teaching support guides pairs to see the purpose of the field experience and understand their role as collaborative co-teachers. If a cooperating teacher approaches the field experience with the mindset that the pre-service teacher should come to the experience with teaching skills and that a space for implementation is being provided, there may be fewer opportunities for learning through mistakes and failures. Guiding co-teaching pairs through a discussion of the purpose of the field experience (i.e., it is about more than just providing a space as articulated by Zeichner, 2002) might help to identify and challenge some preconceived notions that may be counterproductive to successfully implementing co-teaching. For example, when exploring inquiry as stance and communities of practice as frameworks for teacher learning, co-teachers could explore what the role of each co-teacher looks like in these models and how it might be different from what cooperating teachers experienced when learning how to teach.

In an effort to further position both teachers as learners, teacher education programs could provide opportunities throughout the field experience for co-teachers to set goals. Often in teacher education programs, the pre-service teacher is evaluated and asked to set teaching goals because the focus is on his/her professional growth. However, with co-teaching, it is important to frame the experience as a way for both teachers to grow professionally and goal setting might help communicate this framing.

In regards to logistics, the eight co-teaching pairs – regardless of where they fell on the continuum – expressed a desire to be provided with a clear definition of co-teaching and case studies of what the leadership progression might look like to ensure that both teachers were actively engaged in some aspect of teaching. Cooperating teachers understandably had questions about what the power dynamic should look like in co-teaching, with leadership being an example of this dynamic. Teacher education programs could provide a roadmap for leadership progression, showing how roles shift and evolve over the experience in respect to co-planning, co-instructing, and co-assessing. Pairs could collaborate to create their own leadership transition plan, receiving feedback from the university supervisor and revising this plan throughout the experience.

Furthermore, while common interests are not essential to successful co-teaching, providing opportunities for co-teachers to get to know each other could be useful in fostering the relationship. For example, research on peer placements have found that a personality clash between peer teachers created a challenge difficult to overcome, especially if they had strong and differing beliefs about teaching and learning (Smith, 2004). Keeping this research in mind,

teacher education programs could implement education-related events (e.g., screening of a movie about an issue in education, professional development workshop) or social events (e.g., barbeque, sporting event) in order to provide opportunities for informal, social conversations. Co-teaching as a community of practice “can become a tight node of interpersonal relationships” (Wenger, 1998, p. 76), and it is important that teacher education programs help foster these interpersonal relationships.

Finally, it is evident that with multiple opportunities to co-teach, cooperating teachers can learn from their experience and implement co-teaching differently the next time. Teacher education programs could encourage first-time co-teachers to reflect on the process (what is working, what is not working) to make changes in the immediate field experience or to be better prepared to host future pre-service teachers. Providing co-teachers with an opportunity to self-assess their co-teaching implementation – perhaps creating descriptors for each of the four continuum categories described in this article – could help pairs and university supervisors recognize when additional support is needed. This recommendation for implementing a co-teaching self-assessment tool is in alignment with previous research on teacher implementation of standards-based mathematics teaching in which Ross and Bruce (2004) argue that when striving for teacher learning and teacher change, “What matters is not the absolute level of classroom success but teachers’ interpretation of experience. Self-assessment contributes to expectations that guide goal setting and effort” (p. 6). In addition to self-assessment, veteran cooperating teachers could provide advice to those who are hosting for the first time. Empowering seasoned cooperating teachers to provide guidance to first-timers might help make first-timers more receptive to the ideas since the veteran is standing behind the co-teaching model.

It should be noted that although we argue for moving pairs along the co-teaching continuum, we do not mean to over-generalize or create a false dichotomy that identifies only negatives with traditional student teaching. Our own teacher preparation program previously resembled that of traditional student teaching, so we know firsthand how effective mentoring practices – such as carefully scaffolding the student teaching experience, engaging in conversation about teaching with the pre-service teacher, modeling “best practices” – can occur in this model. However, we believe that the co-teaching model – that positions learning as socially situated – has the potential to amplify effective mentoring practices that can be seen in traditional student teaching.

Having experienced problematic aspects to the “sink or swim” model when preparing our pre-service teachers, our program chose to adopt the co-teaching model. With this adoption, it is imperative to support its implementation. Supporting co-teaching pairs to engage in a community of practice and implement co-teaching with fidelity is not an easy task. The co-teaching model of teacher preparation requires a commitment of time, thought, and openness on the part of the co-teaching pair. Teacher education programs will need to be cognizant of the potential opportunity cost when additional efforts are put into refining co-teaching implementation.

7. Conclusion

Moving to a co-teaching model of the field experience is rife with challenges given the long history of traditional student teaching. However, if teacher education programs find value in the co-teaching model and the opportunity for engagement in a community of practice, it is important to ensure pairs have a clear understanding of co-teaching and identify early in the field experience which pairs are excelling and which pairs need additional support. Early intervention and support can ensure that co-teaching is being implemented with fidelity and that students,

pre-service teachers, and cooperating teachers all reap the potential benefits of this approach to the field experience.

Appendix A

Co-teaching implementation continuum categories

Traditional student teaching

- Planning primarily done individually (either the pre-service teacher or the cooperating teacher took the lead)
- Co-instructional strategies primarily used included one teach/one observe and one teach/one assist in addition to solo time
- Pre-service teacher received feedback on his/her teaching from the cooperating teacher

Blended experience: co-teaching guidance needed

- Planning, instructing, and assessing occurred individually and in collaboration with the cooperating teacher
- Co-instructional strategies primarily used included one teach/one observe, one teach/one assist, and team teaching
- Pre-service teacher received feedback on his/her teaching from the cooperating teacher

Forward momentum: lessons learned

- Co-teachers implemented various approaches to co-planning, co-instructing, and co-assessing
- Co-teachers were strategic with when to implement co-teaching and when to implement solo time
- Co-teachers reflected on lessons collaboratively, moving beyond feedback on just the pre-service teacher's practice

Scaffold and grow: lifelong learners

- Co-teachers implemented various approaches to co-planning, co-instructing, and co-assessing
- Co-teachers were strategic with when to implement co-teaching and when to implement solo time
- Co-teachers reflected on lessons collaboratively, moving beyond feedback on just the pre-service teacher's practice
- The cooperating teacher showed openness to new ideas and was learning alongside the pre-service teacher

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