Playing Well with Others: Co-Teaching in Higher Education

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Traditionally, co-teaching is discussed with Kindergarten through 12th grade teachers. Recently, researchers have been exploring the concept of co-teaching within institutions of higher education (IHEs). Co-teaching in IHEs can promote effective teaching for teacher educators and their teacher candidates. The following article will examine co-teaching in IHEs experiences through an auto ethnographic lens. Specifically, the authors will define co-teaching and delineate various co-teaching models. Next, the authors will highlight challenges and benefits of co-teaching. Then, the authors reflect on personal co-teaching experiences in IHEs. Finally, the authors will discuss future directions of co-teaching in higher education.

Vygotsky (1978) once quoted that “social interaction and cooperative learning are paramount in positive learning experiences.” Currently, all levels of educators are increasingly being asked to work collaboratively to meet the needs of today’s Kindergarten to 12th grade (K-12) learners (Bacharach, Heck, & Dahlberg, 2008; Forbes & Bilet, 2009; Kroeger et al., 2012). It is common practice for public school teachers to work together with content or grade-level educators, special educators, and paraprofessionals to implement curriculum that meets the needs of individual students. Co-teaching is one strategy found to positively impact K-12 student achievement (Bacharach et al., 2008; Cook & Firend, 1995; Graziano & Navarrete, 2012). In its most effective form, co-teaching offers all students positive learning opportunities (Cook and Friend, 1995).

Originally, Cook and Friend (1995) presented co-teaching as a realistic solution that special and general educators could utilize together in mainstream classrooms. Although research strongly supported co-teaching in K-12 settings to meet the learning needs of students with and without disabilities, the degree of co-teaching at the university level has been much less common (Bacharach et al., 2008; Kroeger et al., 2012; McHatton & Daniel, 2008). Even though implicitly addressed in numerous teacher preparation programs, many teacher candidates are not explicitly taught the necessary skills for successful collaboration. There has been a growing need for new approaches for preparing teacher candidates in collaborative interactions (Ball, 2009). Arne Duncan (2009), U.S. Secretary of Education, has called for teacher preparation program reform in order to increase K-12 student achievement. Training teacher candidates to be effective co-teachers must be an important element of teacher education programs in higher education (Graziano & Navarrete, 2012).

Within teacher training programs in institutions of higher education (IHEs), faculty must collaborate to teach pedagogy, content, and supervise clinical experience, thus preparing candidates with the necessary foundation of theory and practice for teaching diverse student populations. With this in mind, this article examines our own co-teaching experiences through an auto ethnographic lens. First, we, the authors, define co-teaching and delineate various co-teaching models. Next, we highlight challenges and benefits of co-teaching. Then, we reflect on personal co-teaching experiences (a) within discipline/between institutions, (b) within discipline/within institution, and (c) between disciplines/within institutions (i.e., dual certification programs). Finally, the authors discuss future directions of co-teaching in higher education.

Definition and Models of Co-Teaching

Co-teaching has been defined as “occurring when two or more professionals jointly deliver substantive instruction to a diverse, or blended, group of students in a single physical space” (Cook & Friend, 1995, p. 1). Wenzlaff et al., (2002) add that co-teaching should enhance what cannot be done alone. Table 1 delineates the different models of co-teaching proposed by Cook and Friend (1995). All co-teaching models have variations and no one approach is better than another. Additionally, the models may be used alone or with another model in any session of a co-taught class.

Co-Teaching in Higher Education

In the fields of teacher and special education, co-teaching is generally discussed regarding K-12 school settings; however, IHEs also find needs for modeling co-teaching. In fact, as federal legislation addresses the need for accountability in American schools, the ideas for improving teacher preparation programs proliferate. For example, the No Child Left Behind Act (NCLB; 2001) states that all students, including students with disabilities, have rights to the general curricula and general educators are accountable for all student
Table 1. Models of Co-Teaching.

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<th>Strategy</th>
<th>Definition</th>
<th>Benefits</th>
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| **One Teach, One Observe** | One teacher provides instruction while the other observes and collects data. It is decided in advance specifically what information will be gathered during instruction and a system for gathering data. Afterwards, teachers analyze information together. | • Allows a teacher to collect data.  
• Helpful when a student is on a behavior plan.  
• Teacher observing can see which students are staying on task. | • Observing teacher may feel like an observer and not a teacher.  
• Students may not see observer as an actual teacher. |
| **One Teach, One Assist**  | Although both teachers are present, one takes primary responsibility for teaching while the other observes students or walks around the room and provides unobtrusive assistance to students as needed.                             | • Simple  
• Limited teacher planning required  
• Provides basic support to all students | • Assisting teacher may feel like a glorified teaching assistant  
• Students may question teacher’s authority  
• May be best to alternate lead and support roles |
| **Station Teaching**       | Teachers divide instructional content into two or three stations and present their part of the material at separate locations within the classroom. If students are able, a third station can be used for independent or partner work.    | • Students benefit from lower a student-teacher ratio.  
• Students with disabilities can be integrated into groups instead of being signaled out. | • Noise and activity levels are high.  
• Teachers may have different pacing levels, creating issues with timing. |
| **Parallel Teaching**      | The teachers divide the class and simultaneously teach the same information allowing for a lower student-teacher ratio.                                                                                     | • Students have the opportunity to participate in hands-on activities or interact with each other.    | • Problems may be created due to noise level. |
| **Alternative Teaching**   | One teacher works with the small group (e.g., 3-8 students) while the other teacher is responsible for the large group. Small groups may involve pre-teaching or re-teaching material or enrichment opportunities. | • Students with disabilities benefit from smaller groups.  
• All students have the opportunity to interact with the teacher. | • May stigmatize students with disabilities who might repeatedly need re-teaching. |
| **Team Teaching**          | Both teachers provide the same instruction to students. The teachers may take turns delivering the instruction. One may speak while the other models note taking or demonstrates a concept. | • Many teachers find this strategy to be rewarding.  
• Teachers have reported renewed energy in their teaching.  
• Teachers may be prompted to try new ideas. | • Requires a high level of mutual trust between co-teachers.  
• Requires major commitment between teachers.  
• Some co-teachers may not be comfortable with this approach. |
achievement outcomes. Arne Duncan challenged teacher educators to implement innovative teaching strategies for teacher candidates (Duncan, 2009). He stated that these innovations at the university level would likely increase K-12 student achievement. In fact, there are instances in this country where special education teachers, particularly those teaching in secondary settings, are required to adhere to state certifications in both special education and a core academic area (i.e., a general education teacher certification; Blanton & Pugach, 2007). Consequently, traditional special education teacher preparation programs in higher education respond to these mandates using non-traditional, or creative, measures.

Even though co-teaching in higher education serves as a positive teaching strategy for teacher candidates to generalize in their own future classrooms, research is limited on co-teaching in IHEs (Bacharach et al., 2008). The authors understand that more empirically based research must be conducted on co-teaching in higher education.

Benefits of Co-Teaching in Higher Education

There are numerous benefits of co-teaching in IHEs. As education and other fields of study progress in complexity and technology, co-teaching utilizes a strength-based model of instructional delivery. The literature indicates benefits of co-teaching teams consisting of two faculty (Bacharach et al., 2008; Letterman & Dugan, 2004; Patel & Herick, 2010; York-Barr, Bacharach et al., 2004). The most noted benefits of faculty co-teaching in higher education are (a) students receive varying perspectives and instructional strategies, (b) students demonstrate increased outcomes and engagement, and (e) co-teaching faculty improve pedagogical practices through collaborative preplanning and reflection (Dugan & Letterman, 2008; Ferguson & Wilson, 2011; Patel & Herick, 2010). Since the inception of co-teaching at IHEs, leading benefits of the instructional model have been cited as pedagogical transparency (Annis, 1989), collegial support, and professional development (Gray & Meyer, 1997).

Challenges of Co-Teaching in Higher Education

As previously stated, there are numerous benefits to co-teaching in higher education; however, co-teaching in IHEs also presents various challenges. The following challenges include, but are not limited to (a) challenges among co-instructors, (b) resistance from students, (c) resistance from IHEs, and (d) issues related tenure and promotion.

Challenges among Co-Instructors.

Individual differences prove problematic in co-teaching scenarios. Instructors may have different opinions regarding what is important to teach (Harris & Harvey, 2003; Letterman & Dugan, 2004). Multiple instructors face challenges in navigating how to focus one’s time and attention in class. Co-instructors take different approaches to tasks and processes. For example, one instructor may emphasize the process of teaching and group dynamics while another values content and tasks. In order to prevent conflict during co-teaching from creating potential problems in the classroom, instructor should address differences and work proactively toward compromise.

Engaging in reflection-in-action, a concept introduced by Schöll in 1983 meaning that co-instructors work together to construct new knowledge, trust and openness will likely result in an environment of discovery and learning for the instructors (Harvey & Harris, 2003; Letterman & Dugan, 2004). Depending on the interpersonal skills and personalities of the co-instructors, a foundation of trust and openness may be difficult to attain. If the co-instructors are reluctant to learn from one another, there may be limited experiences for learning and growth. Just as hooks (1994) encourages faculty to be vulnerable and take risks in their classrooms, Harvey and Harris (2003) encourage co-instructors to do the same with one another - “the more room there is for active risk taking and construction of knowledge in the work of the faculty team, the greater the likelihood is for a classroom environment that encourages risk taking and knowledge construction” (p. 31).

Co-teachers likely share similar perspectives, worldviews, educational philosophies, and values (Letterman & Dugan, 2004). A challenge may lie in determining how to create opportunities that will allow co-teachers’ unique differences to be evidenced. Co-instructors should be mindful of this aspect of team teaching and create opportunities to dialogue about valuable teaching and learning experience differences. Disagreements in the classroom are valuable learning experiences. Co-instructors facilitate students’ understanding of how considering conflicting points of view and a range of perspectives develop one’s own point view.

Resistance from students

Instructors may expect a degree of resistance from students in the initial stages of a co-taught course (Zapf, Jerome, & Williams, 2011). Students see their college educa-
tion as a means to employment. Moreover, students may be more interested in completing the course in an efficient manner than in the personal growth and transformation that often accompanies co-taught learning environments and may perceive courses as more legitimate when taught by one instructor. Introducing a course taught by multiple instructors causes apprehension among students who are being compelled to move beyond the traditional patterns and expectations of higher education. Subsequently, students may feel frustrated and overwhelmed at the beginning of a team-taught course. Co-instructors should strive to make expectations clear and specific for students who feel uncomfortable with a co-taught course.

Resistance from the college/university

Just as some students demonstrate a reluctance to accept the structure of co-taught courses, IHEs resist the idea of multiple instructors teaching a single course (Zapf et al., 2011). Administrative support for faculty collaboration is often tangled within university policy and structure. Kezar and Lester (2009) discovered that it is critical for faculty to understand university structure and the role it can play in preventing effective collaboration. Indeed, co-taught courses prompt reconsideration of structure inherent in higher education. For example, traditional course evaluations are based upon one instructor per course. In co-taught courses, the effect of the interaction of multiple instructors needs to be evaluated. Regarding tenure and promotion, the effort involved in co-teaching is not easily evidenced in traditional faculty workload calculations (Partridge & Hallam, 2005). Administration generally assumes that in co-taught courses, the work is simply divided evenly amongst the instructors. The reality however, may be quite different. Teaching is not a profession in which duties can be evenly divided into individual unit. Instead, creative, fluid processes foster dynamic, learner-centered environments. Throughout the time when a given course is co-taught, instructors invest varying amounts of time designing, delivering, and managing instruction. Some faculty members see this as a threat to academic freedom (Kezar & Lester, 2009). Open communication between faculty and administration is a key element to overcoming these challenges.

Tenure and promotion

The trend toward discrete, specializations within education also impacts tenure and promotion within academe. Tenure, as it is traditionally imagined, favors a strong individualistic system. Individual faculty members earn rewards based on publications and teaching evaluations, not on collaborative contributions to the department or university (Kezar & Lester, 2009). This systematic structure is a strong challenge against collaborative efforts as most systems of merit do not recognize, nor place a great deal of importance on, collaborative initiatives. Professors may be reluctant to enter into a co-teaching classroom due to current faculty evaluation process, which prove difficult; students may be confused over how to fairly appraise each professor. Kezar and Lester (2009) proposed that one way to overcome this challenge is to revise the tenure and promotion process. Long standing beliefs about rewards within academe must be re-evaluated by university administrators to include a system which values interdisciplinary collaboration because “rewards signal where people’s values lie.” (p. 134). Unless value is placed on the collaborative process, faculty will be reluctant to spend time and effort on innovative ways of thinking about co-teaching.

Experiences Co-Teaching in Higher Education

We, the authors, explain our personal co-teaching experiences or models, which include (a) within discipline/between institutions, (b) within discipline/within institution, and (c) between disciplines/within institutions (i.e., dual certification programs). For the purposes of this paper, the authors define discipline as a field of study. Furthermore, authors in the discipline of special education write the following reflections; however, we believe that knowledge can be gained from teacher educators from all disciplines.

Within Discipline/Between Institutions

The following explored co-teaching model was a result of a federal teacher preparation grant that called for “innovative collaboration.” The co-principal investigator/co-teacher and I researched and discovered that co-teaching in IHEs was only being implemented successfully in a few states across the U.S. We teach master’s level special education candidates at separate Council for Accreditation of Educator Preparation (CAEP) and Council for Exceptional Children (CEC) granting IHEs in the same state. Naturally, we thought that co-teaching in IHEs was innovative and collaborative, aligning with the mission of our teacher preparation grant.

Preparation

With co-teaching a master’s level course in special education as our ultimate goal, my co-teacher and I spent nearly eight months preparing for our first class. The co-teacher had previously taught the course, and it was a new preparation course for me; therefore, prep-
paration was a key component. Some elements of the course we prepared in advance of the start of the semester included instructional resources, syllabus ideas, guest speakers, recommendations, textbooks suggestions, and course design format options. We also discussed the various co-teaching models we would like to emulate during our class, which included all models from Table 1 except for the Alternative Teaching model. During this preparation period, there were many incidences of agreement yet there were a few circumstances when we had differences of professional opinions. For example, each of us constructed our own syllabus for the course; however, we wanted our syllabi to align as much as possible to decrease confusion among our students. When constructing the syllabi, I learned that the co-teacher accepts some late work from students; however, I do not accept any late work. We discussed each side and both could not come to a consensus; therefore, we decided that we would put the different expectations in our separate syllabi. We made sure on the first day of class we articulated to our students that expectations were different and students were to meet to the expectations for their respective university’s syllabus.

One important point we decided during the preparation of this course was the course design format. We decided it would be more affordable and equitable to host our course completely online. This format would allow students from both universities to attend more easily and would keep the cost of the course down for both universities. We drafted in writing all details of the course design format and presented these ideas to our university administrators.

Administrative challenges

In addition to preparing materials for class, the co-teacher and I had to prepare our administrators for this innovative collaboration. My co-teacher’s department chair and dean were immediately supportive; however, my department chair and dean needed extra time and rationale from me. After roughly five meetings with my administration, they agreed to pilot this format. The primary concern of the administrators pertained to the financial aspect of this endeavor. My co-teacher and I prepared a budget of expenses and explained how these expenses were going to be paid, which was incidentally mostly by the federal grant. Administration was invited to virtually visit the class at any time for further confirmation of this idea.

Co-teaching

With preparation completed and administrative challenges conquered, my co-teacher and I were ready to co-teach. We understood that we both had diverse professional experiences and we utilized those professional strengths during our teaching. For example, my professional experience is mostly in educating children and youth with challenging behaviors. The week our class discussed social and emotional behaviors of students with disabilities, I volunteered to provide additional resources, helped educate my co-teacher on specific points we wanted to address on this topic during class, offered guest speakers who have made significant impact in this area, and disseminated the research to the co-teacher and students about these specifics and other valuable instructional options for this particular section. During our class time, we took turns answering all students’ questions and addressing their concerns. Additionally, we made a concerted effort to ensure all students felt they were all our students, regardless of which university they enrolled in.

Grading

During preparation, the co-teacher and I agreed we would expect our graduate students to complete three major assignments related to the coursework in the class with no formal exams. In addition, we expected our students to complete weekly assignments. Early in the planning process, we decided we would each grade our own students’ work, especially when grading the major assignments. However, some weekly assignments were very specific and did not allow for subjectivity from the grader. When these weekly assignments arose, I often graded the assignments for both the co-teacher and myself. Since the co-teacher had previously taught the course and helped give numerous resources for this class, I felt grading was one small token of my appreciation.

Communication

Communication became a fundamental piece of this experience. There were two different components of communication during this co-teaching model - communication between the two co-teachers and communication among the two co-teachers and the students. During this experience, the co-teacher and I regularly scheduled meetings before and after class, emailed, and called each other. We also discussed our travel schedules during the semester, other classes we were teaching, and other potential issues that might interfere with communicating about the class for a period of time. Finally, we provided each other with feedback after each class.

Communication among the two co-teachers and the students was also essential. We informed all students that each co-teacher would hold “virtual office hours” approx-
imately an hour after class each night. These virtual office hours consisted of the student asking both co-teachers specific questions related to the coursework. If the student requested to speak to a co-teacher privately, then the co-teacher would move the conversation to a private virtual chat room. In addition, both co-teachers would mass email all students, from both universities, if there were specific announcements related to the class. Finally, all students always had the option to schedule a meeting with a co-teacher in her individual office on campus, if necessary.

**Student data**

Students varied in their opinions on the format of this course; however, they seemed to be positive about the co-teaching represented. In fact, one student commented, "I would prefer meeting the professors in a face-to-face class; however, I enjoyed learning the different perspectives from each professor." In addition, another student remarked, "There was so much great information in the course, but I think the format would be better served in a traditional format. I loved the enthusiasm from both professors during the instruction." In addition, there are numerous students' comments made about the powerful impact of observing a co-teaching model through IHEs.

Overall, my co-teacher and I felt our collaborative experience in higher education was a successful one. In addition, our students seem to enjoy the innovative teamwork created by the two of us. Even though minor improvements are necessary, we plan to continue this co-teaching process to explicitly benefit students with disabilities.

**Within Discipline/Within Institution**

This particular instance of within discipline/within institution co-teaching model was the result of serendipity carried out by an adjunct professor and me, a faculty member. Our program is a graduate level master's degree and endorsement for people seeking a teaching opportunity in special education. A condition for acceptance to our program is that the candidate must have a Bachelor's degree, a valid initial teaching certificate, and 3.0 grade point average. Many of our students are hired on an emergency teaching waiver for special education, which requires them to take university classes in addition to their professional teaching duties.

Last year, our beginning level methods course for students completing the waiver requirements was overflowing with students. This three credit hour course covers introductory assessments, curriculum differentiation, and behavior related to students with mild and moderate needs. At 35 master's students enrolled, this was far too large a class for one faculty member to teach. These educators are already teaching in a special education classroom, some of them for the first time in their educational career. Needless to say, there is much more to this class than academics.

The week before the semester began; we received approval to hire an adjunct professor for a second section of the class. My department chair suggested that it would expedite matters if we added this adjunct professor to the existing class and consider the co-teaching process. It was then the adjunct professor/co-teacher and I began our co-teaching adventure.

We decided to split the class in two groups; Group A and Group B. One week, Group A would meet on campus and Group B would complete an online module, and they would switch the next week. Our thoughts were that the academic aspect would occur online and then the pragmatic, contextual activities would happen the week they were on campus. The adjunct professor, who was a retired special education administrator, would plan the on-campus class and I, who was professional trained in online course development and long-time special education faculty, would prepare for the online portion. We presumed our combined years of experience would be a unique benefit for the students. Throughout the process, there were several challenges; however, we had much hope and enthusiasm for this course.

In an end-of-course survey, it was clear the students were sharply divided in their opinions of the course. For example, one student commented, "The most useful aspect of the course was having two perspectives of the class (meaning the teachers) to provide different insight into teaching special education." Other positive comments were, "Thanks for the Panopto video lectures and for guiding instruction discussions with the heart of a true veteran and caring teacher as well as providing the administration perspective." "I liked having 2 instructors and their different points of view." and "The hybrid of meeting and working online was the best of both worlds. Also, the co-teaching model both instructors was an excellent combination!"

However, not all of the students were as optimistic as evidenced by these comments, "This class SUCKED being taught like this. One person would tell our class one thing and the other would tell us another. The left hand was not talking to the other and we had
twice as much work to complete," and "I think having two different instructors not in the same place at the same time is difficult. If the instructor teaching didn't know the answer or said something different than what was told by the other instructor there is mass confusion."

Overall, the students in the class gave high rankings in the course evaluation. I especially liked what one person stated, "While there may still be some 'bugs' to be worked out, I liked the aspect of the course being team taught. It gave me some insight into co-teaching in the school systems now that is the direction special education are headed, at least for this week."

Giving the students an opportunity to see how a co-teaching model works was a priceless experience for us.

Adjunct professor's perspective
As an adjunct professor with many years of teaching experience and retiring from my position of as an administrator for our city's alternative school, I was surprised at how many students struggled to follow the printed schedule for groups A and B. After we worked out those types of difficulties, the class went much smoother. We balanced different grading techniques by having some assignments graded by one of us and other assignments graded by the other. This alternating approach allowed us to reach a balanced way to evaluate the students. We talked often, comparing notes, complaints, and concerns. This prevented students from being able to triangulate us, meaning that some students would go to one instructor for directions even if the other had stated something different. The experience of being able to concentrate on hands-on techniques and not worry about the textbook learning was a big plus for me. I knew the faculty member was taking care of the direct instruction allowing me to concentrate on practical classroom activities the students could use immediately.

If we were to do this again, I would ask for more planning time to avoid some of the confusion at the beginning of the semester. I would also suggest that we plan the curriculum differently to ensure that all students receive adequate textbook instruction and practical classroom each week. Overall, I enjoyed getting to know the students on a more personal level and this co-teaching process.

Between Discipline/Within Institution.
In my respective state, all general education candidates must have at least nine credit hours in special education during their teacher training (22 Pa. Code § 49.13). One common response to this state regulation is to offer teacher candidate training in collaborative or dual certification programs (i.e., preparation for certification in both general and special education; Blanton & Pugach, 2007; Blanton & Pugach, 2011; Pugach, Blanton, & Correra, 2011). In order to develop teacher certification programs resulting in effective preparation in both general and special education teaching practices, diverse areas of expertise are necessary (Blanton & Pugach, 2007). Blending two traditionally different perspectives (i.e., general and special education teacher preparation) can prove challenging, yet provides an ideal environment for utilizing the co-teaching model (York et al., 2004). The most obvious co-teaching stage to be included in dual certification programs is co-programming or co-planning.

Co-programming
Faculty in IHEs have to navigate multiple governing and accrediting bodies in order to meet national, state, university, college, and departmental regulations. Furthermore, regulations for general education and special education teacher preparation programs often differ quite significantly, causing faculty to employ creative solutions (Blanton & Pugach, 2011). One recent example of general education and special education faculty co-programming to create a dual certification program takes place at my corresponding university.

Our dual certification faculty group (i.e., faculty representing early elementary general education and special education) had to consider several accrediting bodies. First, we had to meet the accreditation standards of our national specialized professional associations in order to prepare the proposed dual certification program to meet CAEP standards and, consequently, be eligible for national accreditation and recognition. In addition to co-programming to meet national requirements, we also considered teacher competencies and guidelines for each discipline. Next, we co-designed a dual certification program that adhered to the number of credit hours allowed in a program offering according to our state. At this point in the co-planning process, we engaged in many discussions to determine how to meet the necessary requirements of each discipline and our state's credit hour requirements without diluting the training necessary for each certification area. Faculty from both disciplines diligently navigated theoretical chasms (i.e., constructivism versus behaviorism) by reconfiguring perspectives and maintaining an open mind about instructional practices. Consequently, we were able to reach agreements through creative
problem-solving and programmatic concessions from members of each discipline. Time, planning, reflection, concessions, and diligence were necessary components to our dual certification program planning team.

**Modeling**

At our university, we are still in the embryonic stages of co-teaching; however, we anxiously anticipate using co-teaching as a modeling strategy (Bacharach, Heck, & Dahlberg, 2008; Patel & Herick, 2010). Our dual certification program provides the optimal opportunity to model and frequently practice various co-teaching models in the K-12 classroom (see Cook & Friend, 1995). As a result, we hope our students will feel better prepared for collaborating and engaging in co-teaching models when they enter the K-12 classroom (Bacharach et al., 2008). Moreover, it is our hope our students will observe how we, as co-teaching faculty, negotiated conflict and collaboratively present content and experiences. For example, we have already discussed the different theoretical approaches that our respective disciplines use as a pedagogical framework. My special education colleagues and I often employ behavioral strategies to prepare our teacher candidates because this is very similar to how our teacher candidates will work with students once they are in the classroom. My general education colleagues utilize constructivist strategies to educate teacher candidates because this is often the framework used in K-12 classrooms. While our different approaches need not be contrasted as incompatible approaches to learning, it will likely require thinking differently about our counterpart’s framework when planning and presenting material. We fully intend to share this process with our students, both through dialogue and classroom experiences.

In the previous sections, the reader assumes there are various ways faculty can co-teach in higher education. It is important to reflect on the varied co-teaching experiences and how these experiences may affect your work with teacher candidates. The authors understand that preferences change as your co-teaching experiences may change.

**Future Directions**

Similar to the establishment of the Vienna Circle in 1924, co-teaching in higher education allows a diverse group of experts to collaborate and advance the community it seeks to serve through unique instructional practices. Interdisciplinary studies seem an obvious parallel as it was founded on the premise that as systems become more complex, the seminal work and study of those systems also becomes more complex (Newell, 2001). Analogous to the origination of interdisciplinary studies, co-teaching offers a unique vehicle to transport the study of new or evolving disciplines. Furthermore, co-teaching used as a model for mentoring or enculturating graduate students into their respective field of study is a clear implication for any advanced field.

Typically, teacher education has been categorized by fragmentation, exclusion, isolation, and insularity (Ball, 2009); however, in order to inform a developing culture of interdisciplinary practices, teacher educators must alter their department priorities, curriculum, and teaching. An innovative culture of education necessitates teachers having the ability to cross boundaries to meet the needs of students who are difficult to reach, and cross personal and professional barriers.

To increase K-12 student achievement, educational reform must begin with effective teacher preparation programs that include curricula for academic and social needs of a diverse population of students (Graziano & Navarrete, 2012). Evidence has shown that co-teaching practices positively impact educational outcomes for all students (e.g., McHatton & Daniel, 2008; Graziano & Navarrete, 2012). It is crucial that schools and university faculty be encouraged to utilize co-teaching strategies.

Modeling is a fundamental aspect of teacher education; yet, when it comes to co-teaching, our candidates are prepared individually and in isolation (McHatton & Daniel, 2008). Training through modeling is an essential element of training teachers (Bashan & Holsblat, 2012; Graziano & Navarrete, 2012). Individuals, graduating from teacher preparation programs where co-teaching is modeled and taught in pedagogy courses, are desirable candidates for teaching positions (Graziano & Navarrete, 2012). Furthermore, producing teachers with proficiency and confidence in their ability to deliver instruction in a collaborative setting will not only increase student achievement, but also positively impact teacher retention (McHatton & Daniel, 2008).

Exposing teacher candidates to co-teaching at the pre-service level offers the opportunity to discover the roles and responsibilities of general and special education teachers who must collaborate to ensure academic success for all students (McHatton & Daniel, 2008). Moreover, with an emphasis on inclusion, general educators need a greater knowledge base of disabilities. Additionally, it is necessary for special educators to gain an understanding of the general education standards and curricu-
lum across content areas. However, it is essential that both general and special educators gain a better understanding of how to collaborate effectively as equal partners.

Conclusion
Research on co-teaching is limited; however, what is available is typically positive (Bacharach et al., 2008; Forbes & Billet, 2009; Letterman & Dugan, 2004; Patel & Herick, 2010; York-Barr & others, 2004). Existing research demonstrates that co-teaching often benefits teacher candidates and positively affects faculty. It is imperative to systematically plan and implement programs involving co-teaching (Cook & Friend, 1995). Furthermore, deliberate and continuous communication between everyone involved is fundamental. Co-teaching is dependent on several factors that must be determined by faculty involved at the university. For co-teaching to be successful, preparation, administrative support, and opportunities to cultivate collaborative relationships is critical. The use of co-teaching in teacher preparation programs is a promising practice for promoting collaborative skills and improving classroom instruction (Bacharach et al., 2008).

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