What Makes Co-Teaching Work in Higher Education? Perspectives from a Merged Teacher Preparation Program

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Abstract

This exploratory case study (N=18) took place within a merged special education and elementary education teacher preparation program in which all coursework was co-taught by university faculty. Through interviews and focus groups, participants described their perceptions of the benefits of co-teaching; candidates reported participating in models of co-teaching as they learned through multiple perspectives, and faculty felt they grew through collaboration. They also experienced challenges, which included increased time commitment, coordination, and consistent use of co-teaching strategies. Participants indicated that positive relationships, co-planning practices, balanced roles and

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responsibilities, and administrative support make co-teaching work. Implications suggest approaches to magnifying benefits while minimizing challenges, such as pairing co-teachers with intentionality, developing communities of practice, and providing compensation for increased workload.

Keywords: merged teacher preparation, special education, inclusion, co-teaching

Introduction

Since the passage of PL 94-142 (1975), there has been increased effort to serve students with disabilities in general education settings with consideration for least restrictive environments (Chitiyo & Brinda, 2018). Reauthorization of the Individuals with Disabilities Education Act (IDEA, 2004) and Every Student Succeeds Act (ESSA, 2015) further supported inclusion in the classroom. Today, approximately 63% of students served by IDEA spend most of their school day (80% or more) in general education classrooms (McFarland et al., 2019). Supporting students in inclusive general education settings requires effective collaboration between special education teachers and general education teachers, and co-teaching is one model often utilized to allow students with disabilities to access the general education curriculum while still receiving specialized instruction that meets their specific needs (Cook & McDuffie-Landrum, 2020; Solis et al., 2012). Research suggests co-teaching is a promising practice in international contexts, across disciplines, and for a range of levels (e.g., Bauler & Kang, 2020; Gokbulut et al., 2020; Hurd & Weilbacher, 2018; Iacono et al., 2021; Ricci & Fingon, 2018).

As collaboration in K-12 classrooms increases (Knackendoffel et al., 2018), so does the need to prepare educators with knowledge, skills, and dispositions for effectively implementing co-teaching methods (Chitiyo & Brinda, 2018; Ricci & Fingon, 2018). According to Friend and Cook (2010), co-teaching is significantly different from traditional teaching, therefore teachers need a different kind of preparation. Yet research shows that both general and special education teachers are underprepared to be effective co-teachers because they lack models and opportunities to practice (Braunsteiner & Mariano-Lapidus, 2014; Brendle et al., 2017; Chitiyo, 2017; Chitiyo & Brinda, 2018).

The purpose of this exploratory case study, therefore, is to inform approaches to co-teaching based on faculty, administration, and candidate experiences within a merged teacher preparation program in which all coursework is co-taught by university faculty. The three research questions ask: (1) What makes co-teaching work in higher education?; (2) What are the benefits of faculty co-teaching?; and (3) What

are the challenges of faculty co-teaching? Although this study is not a program evaluation, reflections on these broad questions support an iterative dialogue on problems of practice and program improvement.

Co-Teaching Practices

Co-Teaching in K-12 Classrooms

In K-12 inclusion classrooms, co-teaching is defined as "general and special education teachers planning, delivering, and assessing instruction together in a single classroom" (Brown et al., 2013, p. 85). Effective co-teaching requires strong partnerships in which both members are fully engaged and commit time and space for negotiated meanings (Rytivaara et al., 2019). Friend (2014) defines commonly utilized co-teaching practices in K-12 inclusive settings as:

> *1. One Teach, One Observe*: one teacher leads instruction while the other teacher collects academic, social or behavioral data to monitor student progress.
>
> *2. Station Teaching*: students rotate between stations led by each teacher.
>
> *3. Parallel Teaching*: each teacher provides the same instruction to half of the students to increase student participation.
>
> *4. Alternative Teaching*: one teacher instructs most students while the other works with a small group of students for a specific purpose, such as remediation or differentiation.
>
> *5. Teaming*: both teachers deliver instruction together with the whole group of students.
>
> *6. One Teach, One Assist*: one teacher leads instruction while the other teacher circulates through the classroom to provide students individual assistance as needed.

There is neither hierarchy nor sequence to the use of these strategies; co-teachers deliver instruction based on learning objectives and students' needs in a classroom setting where all are valued and included (Friend & Cook, 2010; Friend & Bursuck, 2012). In K-12 classrooms, co-teaching supports academic achievement for students with and without disabilities (Lehane & Senior, 2020; Losinski et al., 2019).

Co-Teaching in Higher Education

In contrast to the scholarship that addresses co-teaching in K-12 settings, examples of co-teaching in higher education are limited. Some

universities have begun to focus on collaboration in merged special education and general education programs, but these often fall short of implementing a co-teaching model of delivery (Fullerton et al., 2011). Some general and special education preparation programs engage in co-teaching through enhanced relationships with partner schools during clinical practice in order to support the development of student teachers (e.g., Guise et al., 2017; Hoppey & Mickelson, 2017; Oh et al., 2017; Nissim & Naifeld, 2018; Rabin, 2019). Other programs model co-teaching practices by merging two methods courses into one, combining faculty and candidates from separate, discrete general and special education programs (Cossa & Brooksher, 2018; Ricci & Fingon, 2018).

Yet, researchers suggest that co-taught university courses provide authentic models for novice educators (Drescher, 2017; Gladstone-Brown, 2018; Guidry & Howard, 2019). In these environments, teacher candidates gain knowledge about co-teaching, collaboration, and communication while learning course content from multiple perspectives (Graziano & Navarrette, 2012; Guidry & Howard, 2019; Wehunt & Weatherford, 2014). They also develop positive attitudes, interest, and confidence with respect to co-teaching (Pancsofar & Petroff, 2013). Teacher candidates who attended co-taught courses favored the overall experience, reporting positive shifts in attitudes and beliefs about co-teaching (Drescher, 2017; Ricci & Fingon, 2018), as well as increased use of co-teaching strategies in clinical practice (Nissim & Naifeld, 2018; Stobaugh & Everson, 2019).

Results have not been uniformly positive, however. For example, Harter and Jacobi (2018) identified drawbacks as undergraduates found the non-traditional structures of co-teaching confusing and did not report a difference in cognitive learning. In other studies (Dugan & Letterman, 2008; Morelock et al., 2017; Vogler & Long, 2003), participants felt concerned about possible conflicts between faculty (e.g., grading expectations or behavior management). In addition, those who were not familiar with co-teaching questioned why the course was being co-taught (Morelock et al., 2017). Moreover, some faculty have reported that co-teaching was time-consuming as they built new partnerships, balanced roles and responsibilities, and made decisions as a team (Lock et al., 2016; Morelock et al., 2017).

Finally, research on co-teaching in higher education is still limited (Morelock et al., 2017; Weiss et al., 2014), and, thus, we still have more questions than answers. Extant studies often reflect the realities of short-term, single co-taught courses (e.g., McHatoon & Daniel, 2008; Weiss et al., 2014), rather than those that occur within a merged program of coursework, co-taught over time. The potential costs and ben-

efits of co-teaching in teacher preparation programs warrant further investigation.

Theoretical Perspective

Our approach to this study is informed by symbolic interactionism; through a series of small-scale, personal exchanges we contribute to a co-constructed understanding of an important development in our profession. By focusing on individual relationships and subjective perceptions, we explore a range of dynamics that define co-teaching in higher education. Mead (1934), suggested the "self" evolves through personal exchanges as one explores the perspectives and actions of others. Blumer (1969) further developed symbolic interactionism by asserting that humans ascribe subjective meaning to objects, events and behaviors that they constantly edit. This study utilizes the lens of three primary tenets that guide symbolic interactionism: (1) co-teaching partners enact co-teaching according to their prior experiences; (2) co-teachers derive further meaning during social interactions with others; and (3) co-teachers are constantly modifying the meaning of their co-teaching through ongoing interactions. We present the experiences and interpretations of our participants in order to challenge those who co-teach to reflect upon and modify the meanings they ascribe to their actions.

Methods

Context

We examined co-teaching in higher education within the boundaries of a merged general elementary (GEN) and special education (SPED) program, one of five undergraduate, initial licensure programs at a university that enrolls approximately 15,000 undergraduates each year. A merged program is one in which "faculty in general and special education come together to offer a single undergraduate curriculum for their general and special education students. Students entering a merged program are all prepared to teach in both fields" (Blanton and Pugach, 2007, p. 14). The essential difference between a dual program and a merged program is that the latter presents a *single* curriculum forged through careful collaboration among faculty. The program in this study utilizes a cohort model in which 17-25 teacher candidates progress together through three semesters of coursework aligned with co-requisite field experiences, followed by a final semester of full-time student teaching. In addition to co-teaching, the program features multi-tiered systems of support, evidence-based practices, Universal Design for Learning

(UDL), and culturally responsive instruction. Program faculty attended training provided by the Academy of Co-Teaching and Collaboration of St. Cloud State University, which laid the foundation for common vocabulary, shared understandings, opportunities to develop relationships, and an introduction to the K-12 co-teaching models (Friend, 2014). Table 1 lists the sequence of coursework (excluding field experiences which were structured differently from co-taught courses held on campus).

Table 1
Co-Taught Classes Throughout Program

Semester	*Course Title*	*Co-Teaching Partners*
S1: Fall	Learner in the Environment I: Social & Cultural Contexts for Learning	GEN, SPED
	Assessment I: Foundations of Assessment	GEN, SPED
	Planning & Instruction: Introduction to Inclusive Teaching	GEN, SPED
	Planning & Instruction Literacy I: Teaching Reading, K-3	GEN, SPED
S2: Spring	Learner in the Environment II: Classroom and Behavior Management	GEN, SPED
	Assessment II: Formal Assessment	SPED, SPED
	Planning & Instruction: Science	GEN, SPED
	Planning & Instruction: Math	GEN, SPED
	Literacy II: Teaching Reading, 4-6	GEN, SPED
S3: Fall	Learner in the Environment III: Behavior Implementation Project	SPED, SPED
	Planning & Instruction: STEM	GEN (Math), GEN (Science)
	Planning & Instruction: Integrating Social Studies and the Performing Arts	GEN (Social Studies), GEN (Performing Arts)
	Literacy III: Integrating Writing and Visual Arts	GEN, SPED
S4: Spring	Student Teaching Seminar	GEN, SPED

Participants

Selection criteria for participants stipulated active involvement in the preparation of a single cohort within the first three semesters of the program. Participants included two administrators, eight faculty members, eight teacher candidates, and the three authors who were participant observers. All participants consented to share their experiences according to the approved IRB protocol. Below, we provide demographics for each group, which broadly reflect the population of the university where the study took place. Each individual's response to the question, "How do you identify your race?" reflects terminology used by the United States Census Bureau (2021).

Faculty: We invited all 16 faculty who taught coursework in the program to participate, and eight accepted. We chose to interview the faculty individually rather than in focus groups to encourage candid responses, and to minimize self-censorship that could occur while in dialogue with colleagues (Yanos & Hopper, 2008). Of the eight who participated, four specialized in SPED and four specialized in various GEN content areas, such as math, science or literacy. Four faculty participants taught multiple courses, with multiple partners throughout the program. Three participants were men, and five were women. Four self-identified as White, and four self-identified as Asian. Experience range included non-tenured adjunct faculty, faculty in the first years of tenure-line contracts, tenured faculty, and one full professor.

Administrators: Two administrators, chairs from the SPED and GEN departments, agreed to be interviewed for this study. These two were the only administrators who met the criteria for inclusion. They assigned co-teaching partners, sponsored training, allocated planning time, and monitored the success of each pair. In addition, they executed practical considerations such as the schedule of course offerings, classroom assignments, budget, and evaluation. Both self-identified as White women, were ranked full professor, and were senior faculty in their respective departments.

Teacher Candidates: Eight teacher candidates from a single cohort participated in one of two focus groups. Although we invited all 24 members of the cohort, others could not participate due to scheduling conflicts. Participating teacher candidates were all in their third semester of studies and had experienced 13 out of 14 co-taught courses in the merged program. All candidate participants were female (no males enrolled in the program that year). A majority fell between the ages of 20-27, with one non-traditional student in her 40s. When asked to

self-identify race, candidates responded as follows: three White, two Asian, and three multiracial combinations including Native Hawaiian or Pacific Islander, White, and Asian.

Participant/Observers: Author one is a general elementary educator and partnered closely in the program with Author two, a special educator. Both are White women. Author three, a specialist in instructional and assistive technology, was a newly hired faculty member in special education at the time of this study, and is a Korean woman. Each author began the co-teaching journey with different concerns: (a) author one was invited to co-teach by her chair and chose to engage as a matter of professional responsibility, but worried about losing autonomy; (b) author two was an original author of a grant that supported co-teaching in the program and was committed to modeling parity because her prior experience as a K-12 special educator often rendered her a glorified assistant; and (c) author three was hired with the expectation that she would co-teach in the program, but had little exposure to co-teaching at the university level, and was skeptical about how SPED and GED faculty could teach together effectively.

As participant observers, we found ourselves learning through our involvement in the day-to-day activities of the research setting (Schensul et al., 1999). We were natural members of the group being studied, committed to the success of the merged program and the co-teaching model because we filled multiple and intersecting roles as program coordinators, cohort coordinators, field supervisors, and course instructors. Thus, our connections with this work required reflexivity, a critical awareness of our experiences to avoid becoming overly entangled in them (Reason, 1994). As participant/observers we have endeavored to problematize our positions, perspectives, and opinions through ongoing dialogic engagement with each other (Palaganas et al., 2017).

Data Collection and Analysis

The first two authors interviewed participants in various private offices on campus. We spent 30-45 minutes with individual faculty and administrator interviews, and 60 minutes with two focus groups composed of four teacher candidates each. We asked all participants prompts aligned with our research questions but followed up with probes specific to each role (see Table 2). Transcription followed each recorded interview and focus group. We asked participants about transcription sections that were unclear, or meanings that were ambiguous, through face-to-face member checks.

Author one took the lead on data interpretation, utilizing *Dedoose*

software to organize and analyze transcripts, creating line-by-line excerpts and assigning codes in an iterative process. Patterns evident in extant literature informed initial codes but did not prescribe them. This approach to categorizing transcript excerpts with similar content was akin to constructivist grounded analysis (Charmaz, 2006). Next, author two and author three reviewed a subset of six transcripts independently to confirm or challenge the initial analysis. Author one then returned to the data for axial coding by attending to review comments, patterns, and relationships; she rearranged, collapsed, and re-named codes with flexibility, as is typical in descriptive, interpretive analysis (Elliott & Timulak, 2005). The authors reviewed final themes together and wrote personal reflections to examine our own relationships to the themes, comparing our experiences and assumptions with those of our participants. Table 3 illustrates the partial evolution of one theme based on interactions between the literature, data, initial coding, and review.

Results

The following themes resulted from the analysis of participant transcripts, arranged according to the research questions. Table 4

Table 2
Sample Interview and Focus Group Questions

ALL	*Faculty*	*Administrator*	*Teacher Candidate*
In your experience, what makes co-teaching work?	How has co-teaching influenced your own teaching practice?	Based on the program evaluation, how do you define successful co-teaching?	Share examples of co-teaching from classes where it really works.
What do you perceive are the benefits of co-teaching?	What have you personally gained from co-teaching?	Describe any programmatic or systemic benefits of co-teaching.	How has co-teaching supported your learning?
What do you perceive are the challenges of co-teaching?	What do you find most difficult about co-planning and co-teaching?	Share some of the problems you have encountered around co-teaching systems.	How has co-teaching hindered your learning?

summarizes the themes and corresponding perspectives that contributed to the supporting evidence.

What Makes Co-Teaching Work?

Participants of this study discussed dynamics that made co-teaching work for them, including: (1) positive relationships; (2) co-planning practices; (3) well-defined and balanced roles and responsibilities; and (4) administrative support.

When You Click—Positive Relationships. All faculty in this study attributed successful co-teaching to positive relationships, and seven suggested the intangible influence of chemistry. One faculty participant proposed that co-teaching is "like dating." Another commented on the importance of "meshing" with her partner's personality, and

Table 3
Example of Three Codes Evolving Toward the Theme of "Positive Relationships"

Literature	*Transcript Data*	*Initial Code*	*Review*
Compatibility (Pratt, 2014)	So definitely sharing personality traits. To equal each other. Opposites are not necessarily a good thing in co-teaching. (Teacher Candidate)	Chemistry	Chemistry is only one part of the equation. Data show it takes more.
Communication (Conderman et al., 2009)	If you have a good relationship, you can talk and have open communication, you can change it, you can make it better. (GEN Faculty)	Negotiation	Data show strength of the relationship supports communication, especially when negotiating is difficult.
Trust (Parker et al., 2010)	It takes a lot of trust to really share leadership and work as partners. I think trust is the big thing, if you don't really have that trust in someone, it's hard to have trust come across in the classroom. (SPED Faculty)	Respect	Trust appears often in the data. Should this be an in vivo code? Or is it a subset of a larger issue of respect? Or even something larger?

another felt he was "in sync" with his partner as a person (not just as a professional). One faculty member said, "There is not a real recipe, but I think when you click with somebody it makes the experience more effective for everyone, more enjoyable."

Beyond chemistry, seven co-teachers described practicing intentional behaviors to develop and maintain trust in their relationships. Of these, five alluded to the importance of communicating carefully with teaching partners who held contrasting epistemological orientations. One described a conversation she had with a new literacy partner who taught through constructivist approaches while she centered her practice on explicit instruction:

> Our philosophies did not change, but the end result was the same - we

Table 4
Summary of Themes and Corresponding Perspectives

Question	*Theme*	*Perspectives*
What makes co-teaching work?	Positive relationships	Faculty Administration Teacher Candidates
	Co-planning practices	Faculty Administration
	Well-defined and balanced roles and responsibilities	Faculty Teacher Candidates
	Administrative support	Administration
What are the benefits of co-teaching?	Modeling co-teaching and collaboration	Administration Teacher Candidates
	Multiple and Integrated Perspectives	Administration Faculty Teacher Candidates
	Faculty Development	Faculty
What are the challenges of co-teaching?	Time	Administration Faculty Participant/Observers
	Coordination	Faculty Teacher Candidates
	Uneven use of co-teaching strategies	Administration Faculty Teacher Candidates

> want [children] to be able to read. But how we approach it was different. And she understood my side and I understood her side, and we tried to make that explicit [to the candidates].

Another faculty member felt he developed his relationship with his partner by engaging in differences: "It's not like you just say 'I'll tolerate you teaching that way.' But it's more, 'Yeah, I'm interested in hearing what you are saying about that.'" Alternatively, one faculty member suggested her co-teaching relationship improved when she adopted a listening stance: "I don't constantly have to preach all that I know for the sake of sharing all that I know."

Similarly, one of the administrators believed effective co-teaching was a relationship grounded in communication: "I think that it is critical that the pairs who are trying to work together can communicate with one another openly and honestly." Alternatively, the other administrator described her role as "match maker" when pairing compatible personalities, and explained her approach to "trying my hardest to put people together based on my knowledge of their working styles and their personalities that I think would hopefully work well together." Both emphasized how they used candidate feedback about faculty communication in the classroom to inform how they created teams.

When asked, "What makes co-teaching work?" teacher candidates in both focus groups immediately discussed relationships between co-teaching faculty. In one group, the first respondent said, "When the teachers are collaborating with each other well, and when they are communicating well. So, when one jumps in and adds to the other ones' information, there is no awkwardness." A candidate in the second focus group had a similar response: "I think that relationships between the professors always made a really big difference. Like if they were on the same wavelength." Teacher candidates in this group explained how they felt more comfortable and believed they learned better in classrooms where the instructors had positive relationships, as opposed to those where they perceived undercurrents of tension.

Hash out the Details—Co-Planning. Each faculty participant described how co-planning transpired for them, starting with the development of the syllabus prior to the start of the semester. Four emphasized how syllabus development was their most intense planning period. One described it as a time to "sit and hash out the details." To them, the document became a road map and a contract for both faculty partners and candidates to align expectations. Six participating faculty detailed how they established routines of face-to-face planning during the semester. One said, "Monday was teach, Tuesday was de-

brief, and Thursday was plan, so we could have enough time to prep all the things we needed to prep." The remaining two faculty participants said they met their partners primarily through videoconferencing. All co-teachers in this study listed co-planning routines that made them feel successful, such as allocating regular meeting times, honoring internal deadlines, preparing individually prior to meetings, and establishing file sharing systems.

One administrator emphasized the importance of pairing co-teaching partners who embraced the work of planning with equivalent vigor and rigor: "I think work style is the most important. Personality certainly is important, but if you don't have similar working styles that can make or break it." She went on to explain, "There are some people that feel they can wing it a little bit more than other people, who want everything perfectly planned out and thought through." She acknowledged that each co-teaching pair had a different rhythm to co-planning, but to her, the key lied in matching two faculty with similar approaches.

Who's Running the Show—Well-Defined and Balanced Roles and Responsibilities. Six faculty members reported experiencing effective co-teaching when partners understood how to share authority, course content, and assessment of student work. One said, "We know it's important, especially for the candidates to see the equal balance of leadership, or who's running the show here." The four faculty members from the SPED department were especially cognizant of parity. One explained:

> As SPED faculty, I really want to see some balance, you know, leadership in the class… because in inclusive settings, usually that's one of the problems. Many SPED teachers feel like, 'I am a teaching assistant. Not a real one of the teachers.' We don't have real equal leadership in the [K-12] classroom.

This particular faculty member said she struggled to assert her authority because she was new to teaching at the university level, while her partner was very experienced. She felt her partner strove to create the space for her to make decisions: "He always said, 'What do you want to do? We'll do it together.'" Meanwhile, she reported spending long hours studying and preparing to be able to contribute equally to planning and instruction.

Candidates in both focus groups discussed how they experienced the balance of authority between co-teaching partners. One described a pair who were "definitely connected, committed to decision making together" and another described this pair as "Siamese twins." One candidate commented, "Some of the teachers come into a class and they've

talked about it, and they presented the material together. I like side by side—it really works." Another candidate sensed a more subtle definition of roles: "When one teacher is talking the other isn't just sitting there—they really listen." Conversations among candidates in both groups reflected how grading was a key concern for them. One expressed appreciation for co-teachers who were "on the same page" with assessments and one described a team that "took that extra time to grade together." Teacher candidates cited multiple examples from classes where they felt it was clear that both teachers had clear roles to fulfill and were making decisions together.

Additional Resource Expenditure—Administrative Support. The two administrators suggested they supported co-teaching by striving to create a culture where collaboration was the norm. One explained that the pool of co-teachers needed to include high ranking, experienced professors so co-teaching could be seen by other faculty as a prestigious endeavor that could be sustained over time. One administrator shared how she began to include co-teaching requirements in job descriptions for new hires: "So they know that coming in. And I do tell them up front, there is a time commitment and it's a little different, but there are benefits that come with the program." She said she emphasized the value of a "two heads are better than one" type of collaboration, while setting realistic expectations for increased planning time. Both administrators believed fostering a positive attitude about co-teaching within their departments helped them recruit and assign highly qualified faculty.

One administrator acknowledged, "obviously the co-teaching can be seen as an additional resource expenditure," and the other offered a corresponding insight: "It's going to have to come in the form of workload and compensation, with a little more credits given to someone who is in a co-teaching situation." She went on to describe how they utilized a grant to provide annual training on-campus for all faculty, and compensated individuals with a three-credit buy-out to co-design new courses. The two chairs continued to assign a three-credit load for each teaching partner as compensation for co-teaching a single three-credit class, even after the grant cycle was complete. Both administrators advocated for additional compensation for new teams to co-plan. One explained how this would be advantageous "for new people coming into the program, and for the old people that are experienced. Because if I have a new co-teaching partner then it's all new to me."

What Are the Benefits of Co-Teaching?

Participants of this study reflected on the benefits they experienced from co-teaching including: (1) models for co-teaching and collaboration; (2) multiple and integrated perspectives on education; and (3) faculty development.

Seeing It—Models for Co-Teaching. According to both administrators, the program achieved one of its primary goals—to model inclusive practices that candidates would later implement in their field settings. Over the course of the program, all candidates participated in a range of general, inclusion, and resource classrooms in public schools. One administrator concluded, "They can really see what [co-teaching] looks like in practice. So that they can go out into the host schools and demonstrate that to the mentor teachers and the school faculty."

Candidates in both focus groups made similar comments about transferring co-teaching to their field settings. One explained:

> I think seeing it modeled in my own classes has helped me and my mentor, or helped me know better how to co-teach. For example, I spent a lot of time the first few weeks in my field placement in the back of the classroom, just because I was kind of new. But slowly I noticed like, "Oh, if I just stand in the front of the classroom, it makes a difference." Because when [my professors] are both standing in the front, I feel like they are co-teaching and I see both of them as my professor and not like, one is assisting in the back.

A group of four candidates discussed how they began to value collaboration by experiencing it in in their university courses. One reflected:

> I feel like, before starting the program, collaboration was a scary thing. But now after seeing it modeled, and not just one classroom, but collectively seeing all the co-teaching practices, it's like, "All right, if I don't collaborate, it's gonna go downhill." So, in my future classroom, as an elementary or SPED teacher, I know collaboration is key.

In addition, candidates in both groups explored ideas for transferring their experiences as learners into their teaching. One candidate articulated her ideas for differentiation: "You know how kids have different levels of academic achievement, so when you have a co-teacher you can break them into small groups by strengths." Another candidate suggested the co-teaching strategies supported her with language development, memory, and engagement: "[In Station Teaching] actually being able to practice the language and the action helped me remember it." A third candidate discussed how stations provided her with more opportunities to "get hands-on experience with different strategies and

methods." Comments such as these suggest candidates believed that if co-teaching supported them as learners, it would also be effective for their future students.

Having Two Minds—Multiple and Integrated Perspectives. All eight faculty participants articulated benefits of exposing candidates to multiple perspectives on a range of topics and pedagogies. One faculty suggested, "I think they see that different views can exist in the same space, at the same time, but in different ways." Another detailed how this approach especially benefitted candidates receiving both GEN and SPED licensure: "[Candidates] actually see the integration of the two different perspectives and they are able to understand like, 'Okay, this is what would happen in a GEN setting for students without disabilities, and then at the exact same time, here is how you modify it.'" This faculty member was a special educator who had not received this kind of preparation, and felt he had some serious gaps in the general education curriculum when he was a K-12 classroom teacher.

Both administrators also made comments about how the interdisciplinary approach prepared candidates to embrace responsibilities for multiple settings. One reflected on how the dual program used to be integrated, but not merged, and candidates saw GEN and SPED as "two separate worlds" where "they saw these multiple views almost as a tension between one must be right and one must be wrong." However, both administrators concluded that the new merged program placed perspectives in the same room where co-teachers articulated contrasting practices not as an either/or situation, but as a more complex evaluation based on contextual factors.

Candidate observations in both focus groups confirmed what faculty and administrators expressed about the value of multiple perspectives. One candidate explained, "Having two minds in there and two different perspectives. It's huge. It really adds a whole different level of understanding and thinking." Another expressed value for the opportunity "to see different teaching styles" and another noted that when two faculty provided feedback on the same assignment, candidates were "able to hear two voices." Candidates felt multiple perspectives amplified their learning.

Expanding Our Bag of Tricks—Faculty Development. All co-teaching faculty participants reported experiencing professional growth from their mutual exchanges. Seven suggested they learned new teaching strategies from the co-teaching training, four reported that they learned new curricular content, such as Math or Science, while five faculty members said they practiced new pedagogical ap-

proaches, such as differentiation or behavior management. One faculty participant shared that by working closely with others, both she and her partner "increased our skill set…we were expanding our bag of tricks." Three faculty members suggested that through co-planning, they often had to articulate why they chose one approach over another. One said that in doing so, she became more "mindful of choices and purposes." Another faculty member found her dispositions shifting:

> I probably tend to be a lot more rigid, and I worked with partners who were a lot more flexible and understanding and accommodating. So, it's kind of pushed me to be a little bit more accommodating to students, maybe.

Three faculty members commented on how formal faculty presentations helped them integrate common features in the merged program, such as UDL, and how structured exchanges would go even further to support faculty development.

Faculty also collaborated as scholars; one team published a manuscript together and three other teams co-presented at conferences. One generalist faculty member reported:

> We ended up having a manuscript come out of our co-teaching experience, which is really valuable. We wrote about science and writing, and that would've never been on my radar, but from having that [co-teaching] experience I was like, "Wow, kids with disabilities really do need this."

She believed co-teaching opened up opportunities for scholarship while broadening her focus on the needs of K-6 students.

What Are the Challenges of Co-Teaching?

While each teaching pair experienced their own unique challenges, three strong patterns arose across participant groups: (a) time; (b) coordination; and (c) uneven use of co-teaching strategies.

An Extra Step in Everything You Do—Time. The need for more planning time was a constant refrain in the faculty transcripts. All eight faculty cited a variety reasons for this, including time for developing relationships, time for negotiating, time for communicating, and time for researching. One faculty member described the way time increased for her:

> There are things that you don't really quantify, right? Like responding to emails. In another class you can just check your email and respond. But when you are co-teaching, typically we'll always first write

> to each other, come up with our response, and then write back. So just add this layer, an extra step in everything you do.

Another faculty member suggested that co-teaching assignments posed a significant drawback for those in early stages of their careers: "For them to have that much time and sit and plan stuff while also doing the work that they need to do for tenure and promotion."

Both administrators acknowledged how time required for co-planning was intense, and characterized this as a major disadvantage. One explained,

> It takes more time. You've got two people who have to come to agreement on what and how things are going to be taught. Whereas if you're just teaching your own class, in your own way, it's a lot less time consuming. You have to discuss everything with your co-teacher and you know, come to consensus on things.

The other administrator adamantly expressed how co-teaching is not about teaching half a course or teaching half the students: "You gotta know what's going on with the other half." Yet, she suggested one additional time investment:

> For this program to continue, I think it's going to be critical that all of the faculty get together—whether it's just once a month or something—to keep fine tuning. It's supposed to be a completely merged program, not just individual courses that are paired together, but the entire program.

This administrator recognized a demand for time to support co-teaching pairs and for co-teaching practices across the program as a whole.

They Really Didn't Mesh—Coordination. Faculty recognized the importance of coordination, but also felt frustrated by it. Five made comments to suggest they struggled to coordinate the use of class time and content. For example, one faculty member described how she and her partner would both race to cover their content priorities, regularly negotiating a shortage of class time in the moment. Another said he felt something was lost in the process of "not being able to spontaneously just make that decision and go with it" during class. A third faculty member mentioned how difficult it was to change an instructional decision once she had made an agreement with her partner: "I'd have to sorta to get permission to do it." An additional faculty member confessed that during Station Teaching, "I kinda' don't know what my partner was doing" because they had not coordinated in advance.

Candidates in both focus groups also commented on their perceptions of poor coordination between co-teachers. In one group, candi-

dates discussed classes where they would ask questions that one partner could not answer, notice that presentation slides were contradictory, and hear teaching partners "call each other out" about unexpected content. One candidate described a class in which one partner seemed to dominate while the other rushed through content: "You would get a ten-minute burst at the end with all the ways to modify for special ed." The candidate felt this dynamic did not specifically pertain to the SPED/GEN balance, but to coordination of class time between one partner who was more talkative and the other who was less so. In both focus groups, candidates discussed their frustration when one partner was a rigorous evaluator, while the other was more lenient, exemplified by one candidate's comment: "You compare the grades with another person and you do about the same work (you think) and get completely different grades because of that." Also in both focus groups, teacher candidates mentioned a class where they perceived no interaction between their co-teachers. One candidate explained, "The GEN teacher taught their stuff and SPED teacher taught their stuff. And it was completely separate, they didn't really mesh them at all." Another candidate summed up a similar experience by sharing how poor coordination impacted her learning: "It was harder to remember stuff when they didn't co-teach in an integrated way. You were like, 'Okay, that was that, and that was that, but how were they related?'"

One Teach, One Sit—Variation in Co-Teaching Strategies. In addition to experiencing difficulties with time and coordination, seven faculty acknowledged utilizing co-teaching models in a manner inconsistent with their training. One faculty member said she and her partner primarily used Station Teaching for every class, throughout the semester, because they could easily plan and deliver independent content. Another faculty reported using One Teach—One Assist consistently because he and his partner had little time to plan and prepare outside of class, so this allowed them to take turns. Three faculty members described scenarios in which one would teach throughout a class session while the other would observe, but did not refer to this as One-Teach—One Observe, because the observer was not taking data or observing with a purpose. According to six faculty participants, Alternative Teaching did not find its way into the college classroom at all, unless it was a simulation of a K-6 learning scenario. One faculty explained, "You don't necessarily want to create that situation where it's obvious someone needs extra help." Four faculty members felt it took a great deal of trust and time to prepare Parallel Teaching content, and therefor reported using it rarely. One

of them justified, "because of the difference in expertise. We couldn't really teach the same thing." Finally, one faculty member described how he preferred a more "organic" approach to co-teaching, and did not explicitly apply any of the models.

Candidates in both focus groups were critical in their observations about the co-teaching models they experienced in some of their courses. For example, two candidates discussed experiencing unrelated content, monotonously structured in a class that relied heavily on Station Teaching. A candidate characterized the model where one faculty taught while the other observed, as "one teach—one sit." Four candidates sensed that on the rare occasions when they worked in parallel, groups received different instruction. One candidate explained, "The purpose was the same, but when they actually implemented [Parallel Teaching], it went in two different directions." Candidates in both focus groups observed a difference between purposeful Team Teaching and haphazard teaming; one characterized the latter as "one teach – one pipe in." Finally, a candidate described the class that did not utilize the models as "not co-teaching at all."

Discussion & Implications

Purposeful Pairings

All participants in this study prioritized the importance of positive relationships in co-teaching, reflecting a pattern in the literature (Gladstone-Brown, 2018; Parker et al., 2010; Rytivaara et al., 2019). Many attributed natural compatibility to successful relationships, much like studies that acknowledge how pre-existing similarities (Pratt, 2014) or shared beliefs (Guidry & Howard, 2019; Lock et al., 2016) promote collaboration. At the same time, this study incudes examples of faculty who felt that talking together with their partners about their preferences, practices, and philosophies led to increased trust. Likewise, literature suggests co-teachers should deliberately engage in ongoing conversation and reflection (Conderman et al., 2009; Lock et al., 2016; Oh et al., 2017). Given what our participants said about effortless affinity for one another, combined with effortful strides to understand one another, we contend that successful co-teaching relationships combine chemistry with co-intentionality, and are purposefully nurtured over time.

What's more, administrators in this study reported utilizing their own instincts and candidate feedback to create pairs, but a system of information gathering about faculty could also support enduring relationships. An inventory might include factors our participants identified as essential commonalities (such as work-styles and levels of expe-

rience), as well as factors participants discussed as fruitful differences (such as teaching philosophies and content area knowledge). Armed with both sets of criteria, administrators might consider purposeful pairings when establishing new partnerships (Hedin & Conderman, 2019; Morelock et al., 2017).

Diverging and Converging Perspectives

All participants in this study identified divergent perspectives as an asset in co-teaching partnerships, and several teacher candidates reported they learned how to respect and mediate multiple pedagogies for a range of learners and contexts. Such benefits are also evident in the literature (Lock et al., 2016; Pratt, 2014). Simultaneously, some faculty who subscribed to contrasting worldviews ended up viewing their partnerships as a form of professional development which brought coherence to their ideas, a finding also apparent in co-teaching scholarship (Graziano and Navarrete, 2012). Based on these reports, we contend it is possible for teaching teams to achieve points of convergence, growing through each other's practices, while maintaining each partner's diverse strengths in co-teaching.

It is important to note, however, that a small number of faculty desired a way to formally address differences, and some candidates craved stronger coordination between co-teaching faculty. In addition, an administrator suggested regular meetings for all faculty could strengthen the fabric of the merged program, as a whole. These comments indicate a need for ongoing professional exchange, and scholars agree that highly functional collaboration is characterized by a dedication to further developing teaching practices (Gladstone-Brown, 2018; Härkki et al., 2021; Lock et al., 2016, p. 32). With more than a dozen faculty engaged in co-teaching at any given time, programs with multiple co-teaching dyads could benefit from Kelly's (2018) suggestion to develop a community of practice around co-teaching, with a team that: "regularly delivers workshops and training sessions, shares teaching experiences, and discusses issues relating to teaching delivery" (p.184).

Compensated Co-Planning Time

The voices of our participants conveyed how dedicated time for co-planning makes co-teaching work, ringing in chorus with the literature (Guidry & Howard, 2019; Morelock et al., 2017; Nevin et al., 2009; Pratt, 2014; Ricci & Fingon, 2018; Rytivaara et al., 2019; Weiss et al., 2014). Yet, several faculty members explained how they struggled to carve out enough co-planning time, and as a consequence, grap-

pled with course and content coordination, applied co-teaching models unevenly, or experienced tense moments in their relationships. When teacher candidates felt insecure about inconsistent messages (e.g., grading expectations), critical about the application of co-teaching models, or perceived conflicts between their teachers, they reported feeling stressed – a dynamic also reflected in prior studies (Dugan & Letterman, 2008; Morelock et al., 2017). Dedicated time for co-planning presented one of the most pressing challenges for co-teachers in this study, and there is a dearth of practical solutions evident in the literature, especially beyond K-12 contexts (Alsarawi, 2019, Howard & Potts, 2009; Pratt et.al, 2016.)

The administrators in this study acknowledged their role in mitigating the strains of co-planning. Both felt they needed to defend the co-teaching model against widespread faculty perceptions that time for co-planning is onerous. They believed prospective faculty preferred less demanding instructional practices, an observation consistent with literature (Chitiyo, 2017). One administrator acknowledged that if training, planning, and ongoing communication surpasses that which is required in the delivery of a traditional university course, then adjusted workload and/or compensation should support co-teaching. She advocated that all levels of administration seek creative methods for compensating co-teachers, creating a culture in which the unique contributions of co-teachers are valued and rewarded. Such institutional support for co-teaching is also advanced by extant literature (Lang & Bell, 2017; Morelock et al., 2017).

Conclusion

This study asked exploratory questions about co-teaching which revealed a range of perceptions from faculty, teacher candidates and administrators. Their insights can inform co-teaching practices that can be amplified (i.e., positive relationships, strong co-planning practices, and administrative support), and provide direction on those which can be rectified (i.e., ample time required for careful coordination and consistent application of co-teaching models). While faculty and candidates generally reported personal benefits (i.e., learning from each other and from experiencing models of co-teaching), the ultimate benefits to classroom students have yet to be addressed. Subsequent inquiry might go beyond perceptions with a tighter focus on correlations between teaching and learning. How does faculty co-teaching influence teacher candidate growth in the profession, and subsequent effect on student learning? In addition, our participants commented

only on demographic variables related to tenure and university teaching experience. A critical examination of other demographic variables such as race, gender, and age would add dimension to the question of what makes co-teaching work at the tertiary level.

As an exploratory case-study limited to one teacher preparation program, this study may not be replicable within other contexts. We acknowledge the unique circumstances surrounding the merged program; we were able to compare and contrast experiences across multiple courses, with multiple co-teaching partners who all shared the same objective of preparing teacher candidates with tools for navigating instructional challenges in both SPED and GEN settings through collaboration. In addition, department chairs compelled many faculty to co-teach, but paid for extra planning time with a grant that supported the pilot work and encouraged experimentation. Others in higher education who may be interested in co-teaching may struggle to do so because of social, financial, logistical, or ideological challenges – realities that parallel difficulties in K-12 settings (Kluth & Straut, 2003). While this study alone may not be generalizable, it is a member of a growing body of scholarship that examines co-teaching for special educators (Gladstone-Brown, 2018; Graziano & Navarrete, 2012; Hoppey & Mickelson, 2017; Weiss et al., 2014, Williams, et al., 2018). When taken as a whole, this scholarship begins to assert patterns such as the importance of relationships, the need for professional learning communities, and the challenges of compensating co-teachers for their planning time.

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