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An Examination of Co-Teacher's Instructional Practices and Social Validity Following Participation in Professional Development

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AN EXAMINATION OF CO-TEACHER'S INSTRUCTIONAL PRACTICES AND SOCIAL VALIDITY FOLLOWING PARTICIPATION IN PROFESSIONAL DEVELOPMENT

by

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ABSTRACT

AN EXAMINATION OF CO-TEACHER'S INSTRUCTIONAL PRACTICES AND SOCIAL VALIDITY FOLLOWING PARTICIAPTION IN PROFESSIONAL DEVELOPMENT

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Because co-teaching teams often lack the support to continue to implement the evidence-based strategy of co-teaching beyond initial training and coaching sessions, this project studies the affect of training and coaching on teacher implementation and social validity following participation in co-teaching professional development. The Utah State Board of Education – Special Education (USBE-SES), from years 2012-2019, along with the Utah Professional Development Network (UPDN), from years 2014-2019 provided training, support and coaching to secondary co-teaching teams tied to the content areas of secondary mathematics and secondary English language arts (ELA). This project studied the continued use of instructional components specific to co-teaching models one, two, and three years after participants completed a yearlong training and coaching professional development . The elements examined include (a) continued use of co-

teaching, (b) types and frequency of models currently used, (c) the use of co-planning and other forms of collaboration, (d) co-instructing throughout the class period and school year, and (e) the perceived improvement for general and special education students. Participants included secondary (grades 6-12) co-teaching teams from Utah districts and charter schools who participated in the USBE-SES and UPDN mathematics and English language arts (ELA) co-teaching yearlong training sessions between the 2015-2019 school years. Participating co-teachers completed an electronic survey which included questions related to their teaching demographics, the extent to which they were still implementing co-teaching practices described in the USBE-SES and UPDN trainings, and their views of co-teaching. The researcher predicted that the latency between participation in their co-teaching training session and the date of the survey would show less frequent use of co-teaching models. The opposite was observed in the collected data. The 2015-2016 cohort reported the highest mean of implementing two or more co-teaching models during their 2018-2019 school year. The researcher also predicted that co-teaching teams would report a noticeable benefit to students with disabilities (SWD) due to an increase of academic knowledge and prosocial behavior. Survey data showed that the two social validity statements addressing increased academic and prosocial knowledge for SWD were among the highest rated overall and across subgroups. Obtained results will be shared with USBE-SES and UPDN personnel involved in the co-teaching training delivery, so they may choose to incorporate this data on fidelity of implementation post training when designing instruction, support practices and coaching for future co-teaching trainings years.

Introduction

Since the reauthorization of the Individuals with Disabilities Education Act (IDEA) in 2004, states and districts across the nation have sought various ways to serve students with disabilities through evidence-based practices in the least restrictive environment. One practice that has increased in popularity in Utah public school districts and charter schools is co-teaching. Conderman (2012) defines co-teaching as "two or more educators working collaboratively to deliver instruction to a heterogeneous group of students in a shared instructional space" (p. 24). The increased implementation of co-teaching in Utah is partially due to Utah's State Systemic Improvement Plan (Gallo & Dickson, 2016).

As a component of the SSIP, the Utah State Board of Education's Special Education department (USBE-SES), developed and implemented a goal targeting middle school mathematics education for students with disabilities; "to increase statewide proficiency by 11.11% for students with SLD (Specific Learning Disabilities) or SLI (Speech Language Impairment) in grades six through eight on the State Assessment of Growth and Excellence (SAGE) end of level statewide mathematics test over a five year period (2014-2019)" (Gallo & Dickson, 2016). This goal is in response to data collected over a 5-year period specifically in the area of middle grades mathematics achievement, identifying a large gap (22.2%) in achievement between students with disabilities and their peers without disabilities. The data indicated three potential areas of need: (a) demonstration of high expectations and beliefs of progress for students with disabilities, (b) the need for mathematics content knowledge and effective instructional practices using Universal Design for Learning (UDL), and (c) a multi-tiered system of support that

includes fidelity of practices supported by infrastructure (Gallo & Dickson, 2016). In response, many local education agencies (LEAs) in Utah and the USBE-SES identified co-teaching in mathematics as an instructional strategy to address the above mentioned needs. As such, the USBE-SES created a professional development structure to specifically provide training in mathematics co-teaching instruction to secondary (middle and high school grades) special and general education teacher teams. The USBE-SES also coordinated with Utah Professional Development Network (UPDN) to provide these trainings with the goal of extending the reach of the professional development. After the initial success of the mathematics focused co-teaching cohorts and suggestions from participants who co-taught both mathematics and English language arts, it was decided to create a cohort specific to instructional strategies to support co-teaching secondary English language arts.

Co-teaching involves three separate joint practices: co-planning, co-instructing and co-assessing (Murawski & Boyer, 2008). To achieve fidelity of implementation in these three areas of co-teaching, USBE-SES organized year-long professional development cohorts of secondary mathematics co-teacher teams from districts and charter schools across the state of Utah. Each cohort received a series of five to 10 training sessions, which incorporated many topics including targeted direct instruction of the six co-teaching models (Friend & Cook, 1992). The six models of co-teaching include (a) teaming (where both co-teachers instruct in tandum), (b) parallel teaching (where each co-teacher instructs half the class on the same topic), (c) stations (where co-teachers instruct in small groups while students rotate through stations), (d) alternative (where one co-teacher takes a small group for supplemental remedial or extention of instruction), (e)

one teach-one assist (where one co-teacher instructs while the other supports student learning), and (f) one teach-one observe (where one co-teacher instructs and the other observes to take data on teacher or student instruction). For further information on specific co-teaching models and their recommended use in the co-taught classroom, see Utah's co-teaching handbook (Shumway, Gallo, Dickson, & Gibbs, 2011). Other topics covered in the professional development included Universal Design for Learning (UDL), differentiated instruction, specially designed instruction (SDI), growth mindsets, and reflective teaching practices. Collaboration with USBE's Teaching and Learning department allowed for inclusion of specific mathematics content and strategy instruction. This mathematics instruction centered around the eight mathematical practices standards included in the Utah Core Standards for Mathematics. These co-teaching professional development cohorts have been active from 2012 to the present. In the 2011-2012 and 2012-2013 school years, the training model for the co-teaching teams consisted of intensive training sessions that occurred for one to two weeks during the summer. Starting in the 2013-2014 school year, the format of the professional development was adjusted to include two intensive summer professional days, on-going coaching, and additional professional development days that occurred approximately once per month throughout the school year. Mathematics and ELA cohorts differed slightly in their formatting of professional development in that the cohorts that were specific to mathematics instruction had ten professional development days throughout the cohort school year whereas the ELA specific cohorts had five to six professional development days throughout the school. This difference was largly due to organizational needs of the specific LEAs present at the ELA cohorts. Although these cohorts have been

active for at least 6 years, evidence had not been collected as to whether co-teaching is consistently implemented across participating LEA classrooms and continued over time.

Transfer of evidence-based practices to the classroom setting with fidelity and longevity takes more than just the initial training sessions. Full implementation of practices can take a minimum of 3 years to create a system where the intended practices have become instituted as standardized routines (Fixen, et. al., 2005). It is important for the districts and charters schools that dedicated time, personnel and monetary resources to the USBE-SES co-teaching cohort trainings to understand the current picture of implemented practices after the support of the training experiences has concluded. This valuable information could guide appropriate support for the use of co-teaching models in local education agency (LEA) co-teaching classrooms.

Most of the research on the topic of co-teaching centers around co-instructional practices, co-planning practices and the student outcomes from co-teaching experiences in the secondary classroom setting. In one study, Pearl and colleagues analyze the effects of the Arkansas co-teaching project 5 years after implementation (Pearl, Dieker, & Kirkpatrick, 2012). Pearl et al. found moderate effects in student outcomes (grades) in school districts who consistently used co-teaching across the 5 years of implementation with a supporting building-level team. The data and information from a similar study on Utah's co-teaching cohort trainings could offer insight and information that may increase implementation and support for teachers' use of co-teaching models, and increase favorable outcomes of students participating in secondary co-taught classes.

Literature Review

In researching implementation and coaching of co-teaching models in secondary settings, I conducted a search of the literature to identify relevant studies. I searched Education Source, ERIC and EBSCO for full text articles. Using the search terms *co-teaching, collaborative teaching, models, format, professional development, student outcomes, secondary mathematics* and *coaching* and combinations of these terms, the search yielded 129 possible articles. Of these 129 articles, only nine included studies of co-teaching models used in the classroom setting after teachers were provided with training or instruction on co-teaching at the secondary level (grades 7 through 12). From these nine articles, five were meta-syntheses of multiple co-teaching studies and one study reported data from a state's co-teaching project. To select from these nine articles, I reviewed abstracts of each to determine which articles were most closely related to the specific co-teaching professional development provided in Utah by the USBE-SES and UPDN. Therefore, I limited my literature review to two meta-syntheses (Murawski & Swanson, 2001; Scruggs et al., 2005), an article examining the "additive effect" of special education teachers (Magiera & Zigmond, 2005) and an article analyzing the study of a state's co-teaching project (Pearl, Dieker, & Kirkpatrick, 2012) for a total of four articles.

With the increased push from various state and federal initiatives such as IDEA and the Every Student Succeeds Act (ESSA) to provide services for students with disabilities in their least restrictive environment (LRE), there is a complex need to provide specially designed instruction and apply this instruction in the general education setting. Co-teaching, or collaborative teaching, includes an arrangement of a special

education teacher and general education teacher in the same physical space. Due to the complexity of two educators using sometimes different pedagogical approaches to students with a range of abilities and needs, conflicting results in the research are present.

Murawski and Swanson (2001) conducted a meta-analysis where six studies on co-teaching were chosen based on a search of the current literature spanning a 10-year period from 1989-1999. The authors' initial search yielded 89 articles; from those, the authors selected 37 articles that included a general education and special education teacher instructing in the same classroom setting. These 37 articles were then analyzed based on three criteria. These criteria include (a) inclusion of sufficient quantitative data to enable the researcher to calculate effect sizes, (b) inclusion of four identified characteristics of the co-teacher team (general and special education teachers instructing students, interventions occurring, co-planning and instruction delivered to a heterogenous group of students), and (c) the co-teaching treatment lasted longer that a 2-week period. Based on these criteria, Murawski and Swanson identified six studies to include in their meta-analysis. These six studies were coded based on four different factors. First, study characteristics such as date, location of study and length of study. Second, sample characteristics such as age, grade, gender, ethnicity, disabilities, and socioeconomic status of the student population. Third, outcome measures identifying the dependent measure such as student grades or social benefits of co-teaching. Lastly, the authors coded reported effect sizes for each study's target dependent measure.

As an overview, the characteristics of the included six studies are as follows. Two studies were from Florida, and one of each of the other studies were from Maryland, West Virginia, Minnesota and South Dakota. Five out of the six studies reviewed one

academic year and one reviewed co-teaching over a 3-week period. None of the studies used measures of treatment integrity, four out of six used grades as a dependent measure and two used social attitudes towards co-teaching among students as the dependent measure. Only three studies included aggregate data on students with disabilities separate from peers without disabilities. Three of the studies included students in the secondary setting and three included students in an elementary co-taught setting. Results from four out of the six studies demonstrated gains in reading achievement (related to either class grades or scores on state competency tests) for all students including students with disabilities in the co-taught setting. The effect sizes calculated showed a high of 1.59 in relation to reading/language arts achievement to a low of 0.08 in social outcomes. Students in grades K-3 co-taught classes yielded an effect size of 0.95, also a statistically significant high measure (Murawski and Swanson, 2001). The overall effect size calculated was 0.40, showing a moderate effect for co-teaching influencing positive student outcomes.

Murawski and Swanson (2001) identified two different research questions in examining data collected on the six chosen studies on co-teaching instruction. The first question addressed describes if the "magnitude of co-teaching outcomes carry as a function of grade, gender, length of study or severity or type of disability." (p. 264). There was insufficient data, mostly due to the number of identified studies and the lack of variability among the studies concerning the above-mentioned parameters, to answer the first research question. Few of the studies provided clear definitions of disabilities. Data did show a difference in effect size from elementary school setting (statistically significant with effect sizes ranging from 0.87 to 3.67) to secondary school settings

(statistically significant with effect sizes ranging from 0.08 to 1.59). The second research question identified by Murawski and Swanson asked if the "studies that produce the largest effect size vary from other studies as a function of the type of dependent measure of focus (e.g. grades, social outcomes, achievement)" (p. 264). Due to the degree of variability in the measures of the study and the small number of identified studies, it was difficult to give conclusive statistics specifically tied to effect size. Despite this variability, improvements in achievement in reading and language arts showed the largest effect size (1.59) followed by moderate effect sizes for improvements in achievement in mathematics and reductions in education referrals (0.45 and 0.43, respectively.

The authors concluded that for "co-teaching to be a valid service delivery option for students with disabilities in the general education or least restrictive placement, more experimental research must be conductive [comparing]… how co-teaching differs from other service delivery options" (Murawski & Swanson, 2001, p 265). Studies since this 2001 meta-analysis have attempted to include such comparisons, but with difficulty. This finding can be attributed to the complex nature of the co-taught classroom setting, and the difficulty of singling out co-teaching apart from other education practices to increase student outcomes.

The USBE-SES co-teaching cohorts are no stranger to addressing the complexities of evaluating the effectiveness of co-teaching among teachers and students affected by the professional development provided. Looking for the practices used with fidelity during year one (where professional development and limited coaching is provided) in comparison to subsequent years of co-teaching implication can help to shape

the professional development and support strategies utilized by the USBE-SES and LEA administrative support teams.

Scruggs, Mastropieri and McDuffie (2007) carried out a metasynthesis consisting of 32 qualitative investigations of co-teaching practices in inclusive classrooms. The qualitative research coded for four categories including, (a) benefits of co-teaching, (b) needs for success in co-teaching, (c) special and general education teacher roles in co-teaching, and (d) delivery of instruction in co-taught classes. When collecting the research materials to be included, no specific time limits were set, although the earliest references were dated in 1989 and the latest included was from 2007. From theses 32 studies, participants included 454 co-teachers, 42 administrators, 142 students, 26 parents and five support professionals representing all major areas of the united states and all grade levels.

Results of Scruggs et al. (2007) addressed each one of the four categories identified in the coding process. Benefits to co-teaching teams were identified as being dependent on the compatibility of the co-teachers. With compatibility comes a mutual trust and understanding which translates to ease in adapting curriculum and teaching practices to the need of all students in the co-taught classroom. Benefits to all students included noted increased cooperation among students and positive social models for students with disabilities. Increased effort in students with disabilities was a characteristic noted across 25 out of the 32 studies. Needs of co-teachers identified in the 32 studies all seemed to stem from the inclusion of administrative support. Administrative support was the gateway to provide other identified necessary supports for co-teaching. Some of these other necessary supports identified included volunteerism among the co-teachers,

common planning time, and need for training and coaching support through the development of the co-teaching environment. Out of all the supports mentioned, common co-planning time was mentioned in all 32 studies, emphasizing the need to have preparation time to address the needs of the students and delivering the structure of co-teaching. The results also identified the most frequent model of co-teaching used as one teach, one assist. This correlated with the general education teacher taking the lead instructing role and the special education teacher taking the supporting role in classrooms according to observations in 27 out of the 32 studies. Other models of co-teaching, such as teaming and parallel teaching, were observed but considerably less frequently.

The conclusion based on the Scruggs et al. (2007) data include the general belief that co-teaching was beneficial to general education and special education students in both social and academic areas. Also, teachers identified specific conditions needed to foster the success of co-teaching including sufficient common planning time, training and compatibility between co-teachers. Another conclusion indicated that the one teach, one assist model was the most frequent due to many factors including special education teachers generally taking a subordinate role in delivery of instruction to students in the co-taught classroom. The last conclusion drawn demonstrated a difference in pedagogy style between general education teachers, which used whole class teacher-led instruction, and special education teachers who accommodated instructional skills within the structure of the existing classroom context.

Further issues suggested that special education teachers often encountered an uphill battle, as they typically entered the classroom of the general education teacher to co-teach.

> "The general education teacher – because of her ownership of the classroom, the curriculum, the content, and most of the students – is very often in the dominate role, regardless of experience, expertise, or judgement. Therefore, the overall tilt of the classroom is typically in the direction of the general education teacher, where whole class, teacher led instruction is the rule and the special education teacher applies assistances only within the context of the existing classroom" (Scruggs et al., 2007, p. 412).

It is because of this factor that the USBE-SES co-teaching cohorts coupled specific content instruction (in secondary mathematics and ELA) along with co-teaching as an instructional delivery model, and provided the professional development to co-teaching teams made up of a general education teacher and special education teacher. In the Scruggs et al. (2007) meta-synthesis and the Murawski and Swanson (2001) meta-analysis, not one study identified professional development in co-teaching delivered alongside content specific (e.g. mathematics or ELA) instructional strategies to help address common ownership and parity in the classroom setting for students with disabilities. A study of the state of Utah's co-teaching cohorts and the continued effect will add to the current literature regarding the effectiveness of co-teaching as a service delivery model.

The initial purpose for the use of co-teaching in many states and LEAs has been to increase access to the general education curriculum while providing specially designed instruction to students with disabilities. Magiera and Zigmond (2005) identified this reasoning with regard to co-teaching as the "additive effect." In this study, the researchers examined the instructional experience of students with disabilities with the

addition of the special education teacher in the general education setting. The authors centered their study using time sampling methods to document how students with disabilities spent their time in 11 co-taught middle school classes.

Participants in the Magiera and Zigmond (2005) study included students in grades five through eight from a total of four schools within three school districts in Western New York. One district was identified as rural, one was identified as small urban and the third was suburban. Class sizes ranged from 18 to 27 students. One school had an average of 60% of students identified as students with disabilities (SWD), two schools had an average of 25% of students identified as SWD and the last school had 33% of students identified as SWD. There was a total of eight co-teaching pairs within 11 classes during observations. The eight co-teaching pairs had a range of experience teaching and co-teaching from their first-year teaching and/or co-teaching to 5 or more years' experience teaching with 3 years co-teaching. Four co-teaching pairs received previous training and only two out of eight pairs had dedicated weekly co-planning time. These factors were included due to the literature review of the article indicating years of experience co-teaching, training and co-planning time as indicators of effective implementation of the co-teaching model of instruction.

As procedure for the study, 18 SWD were identified and relevant data were collected from their Individual Education Plans (IEPs). Fifteen students were classified with a learning disability and three were classified with other health impairment. Sixteen out of the 18 students functioned academically below grade level and there were 10 males and eight females. Observations with both co-teachers present and then observations with only the general educator present were conducted. The observers collected time-sample

data in 10-second intervals during each of the 84, 45-minute class periods and were trained to code the instructional experience of the SWDs. These codes included:

> "students working alone, students working in small groups, students working as part of a whole class, students on-task behavior, no teacher interaction, general education teacher interaction with students, special education teacher interaction with students, interaction with other students, content-related group instruction, content-related individual instruction, group directions, individual directions, and student participation." (Mageria & Zigmond, 2005, p.82)

The target of the study was to "examine the instructional experience of students in co-taught and solo-taught classes to determine if there was instructional advantage to students with disabilities when a special education teacher was present in the classroom under routine conditions" (Mageria & Zigmond, 2005, p. 83). The study did not specifically look at best practices, and so found the conditions of limited professional development and limited co-teacher team planning time as possible factors to the inconclusive data showing additive effects for SWDs. Results of the observations showed that only 2 out of the 13 recorded variables were statistically significant. The first revealed that SWDs received more instructional interaction during the co-taught classroom observations. This included an increase in small group class activity which embedded individual content-related instructions and individual directions. The second variable identified that when special education teachers were present in the classroom, the general education teachers interacted less often with SWDs. SWD did not receive more attention during co-taught classes, the attention was instead given by the special educator versus the general educator. Overall, Magiera and Zigmond (2005) concluded

that their results showed no substantive additive effect to the presence of the special educator. They hypothesized that with these specific classrooms and co-teachers, that a lack of co-teaching professional development experiences could have added to the improper implementation of the co-teaching model. More than half of the co-teachers had no professional development within the past 3 years. Another conclusion the authors identified was the absence of co-planning time for the co-teaching teams which could also attribute to the teachers being insufficiently prepared to employ the model with fidelity. These two indicators that affected the co-teaching of the pairs in the Mageria and Zigmond (2005) study point to the importance of organizational and leadership drivers to support the instruction within the co-taught environment. These organizational and leadership factors are supported by administrative knowledge and structure to sustain use of the co-teaching model. Pearl, Dieker and Kirkpatrick (2012) studied the statewide co-teaching effort in Arkansas. A main focus during the 5-year initiative to implement co-teaching across the state focused on the training and support of the building level team, including administration, to provide variable such as training, coaching, and co-planning time.

Pearl, Dieker and Kirkpatrick (2012) collected data on five cohorts which included 143 school districts, 208 schools, 789 teachers and 3920 students. Through their research of literature ranging from 1989 to 2005, the Arkansas Department of Education (DOE) recognized the large amount of inconclusive results stems from the lack of in building support for the co-teaching model, restricting it from being implemented consistently. The goal of the Arkansas DOE was to increase inclusion of SWDs in the general education department and to increase proficiency on state standardized tests.

They worked to design a professional development package to include the elements "common vision, incentives, skills and knowledge, resources and action planning" (Pearl et al., 2012, p. 574). The professional development package also included foundational and hands-on professional development centered on training and supporting building leadership teams to implement needed supports at the school level. Schools that chose to participate were "required to commit to participation in all components of the co-teaching implementation package and agree to take part in a process to evaluate their efforts including system support, classroom application and student outcomes" (Pearl et al., 2012, p. 574).

The building leadership teams participated along with their co-teacher's professional development before the beginning of each school year (years 2005-2010), conducted a needs assessment prior to the beginning of the school year, created an action plan individual to their school for implementation, designed on-going supports and submitted end of year assessments with student outcomes. Differences between Arkansas's co-teaching project and Utah's are that Utah's focuses exclusively on secondary (middle, junior and high schools) schools, co-teaching instruction occurred alongside instruction on content-specific practices and trainings occurred for between five and 10 sessions throughout the school year. The key difference in Arkansas's model was the focus on developing direction on co-teaching through the building leadership teams.

Outcomes of Arkansas's co-teaching project looked at state-level process outcomes, building leadership team process outcomes, co-teaching partnership process outcomes and student outcomes. State-level process outcomes noted that Arkansas'

students were 41% proficient, which was below the 50% national average in 2004. Data from 2008 indicated students at 51.8% proficient making a 10% increase. Schools who participated in the co-teaching project in the 2005-2007 school years showed higher than average student proficiency rate and almost twice the amount of SWDs receiving 80% or more of their instruction in the general education setting compared to schools who did not participate in the co-teaching cohorts.

Building leadership team process outcomes were collected through a needs assessment, administered in the Fall and Spring. This assessment was modeled after Colorado Assessment of Co-Teaching (Co-ACT) and included assessment in five major areas. These areas included a clear and common vision, incentives for implementing co-teaching, personnel possessing necessary knowledge and skills, availability of resources and a well-developed action plan. The Fall needs assessments over the 5 years studied showed that 75 % of the building leadership teams had average to high needs for supporting all five areas. Responses to the Spring needs assessment showed a decrease in need, to 24.5 % of building leadership teams needing average to high support in the five identified areas. The action planning area was further addressed with a 29-item checklist that guided building leadership teams to include essential pieces in their building co-teaching action plan. Four items showed as strengths across building leadership teams and cohorts. These include special educators included in the lesson planning process, including students without disabilities in co-taught classroom in the proper ratio (1/3 SWD 2/3 students without), co-teachers and administration involvement in professional development, and evidence of a plan for follow up professional development at the building level. Four items were identified as factors showing the most growth over the

five-year time of implementation: the building leadership team including a variety of stakeholders, special educator involvement in co-planning, school schedules alignment for co-taught classes, and availability of resources. Weaker items (and items that have not been clearly addressed) included: districts and schools having clear guidelines for implementation, a clear schoolwide definition of co-teaching, and parent and student involvement.

Co-teaching partnership process outcomes were also gathered through an adaptation of the Co-ACT specific to three areas; Personal Prerequisites, Professional Relationship and Classroom Dynamics. The co-teachers independently rated the degree to which different components were important and present in their current co-teaching environment during the 2008, 2009 and 2010 school years on a scale of one (strongly disagree) to five (strongly agree) for each of the three areas for a total high possible score of 15 points. Related to the degree to which the three components were present, results show an increase from Fall to Spring of 5.25 points, 8.92 points and 11.88 points, respectively. Significant differences in these presence indicators occurred between co-teachers in elementary (average increase of 19.68 points) versus secondary settings (average increase of 3.37 points). Strengths on specific indicators included increase in classroom teacher skills, increase in knowledge of curriculum and increase in co-teachers' respect and professionalism. Needs included monitoring student progress, having time to communicate and having a scheduled time to plan (are of highest need).

Student outcomes were collected starting the 2007 school year and included students' final class grade. Pearl et al. (2012) recognized the subjective nature of using grades as an outcome measure for students but statewide standardized tests on subjects

were difficult to relate specifically to the targeted co-teaching classes studied. Across all three school years, students without disabilities consistently outperformed SWDs in co-taught classrooms. Pearl et al. found that a majority (over 70%) of SWDs earned a grade of C or better in co-taught classes. Comparison to previous years where students did not attend co-taught classes indicated a narrowing of the gap between SWDs and their peers without disabilities.

Pearl et al. (2012) noted the absence or inconsistencies in some essential elements in Arkansas's co-teaching project, including inconsistent use of onsite coaching for teacher teams and onsite visits to support implementation of the building leadership teams' action plans. The absence of a consistent measure of student progress in the co-taught classrooms also make it difficult to directly connect the presence of the co-teaching model with increase of student performance. Despite these needs identified by the Arkansas DOE,

> "results of this study suggest that the professional development model developed for the ADE Co-teaching Project has had an impact on special education delivery in Arkansas by increasing statewide implementation of co-teaching, efficacy of co-teaching models, and positive outcomes for students with disabilities in co-taught classrooms." (Pearl, et al., 2012, p. 548)

Over the 5 years of the project, goals met included an increase in the number of students in their least restrictive environment (LRE), an increase in positive attitudes towards co-teaching and availability of resources, technical support and webinars for building support teams and co-teachers to implement the co-teaching model of instruction with fidelity. The authors concluded that future professional development needs to

include highlighting exemplar teams through recording, providing targeted visits, and emphasizing the role of feedback within coteaching teams, feedback within a school building and within a district to increase awareness of needs. Pearl et al. (2012) also specifically notes the difficulty of directly correlating a systematic change, like co-teaching, to student assessment results. Development of a specific assessment to help assess student outcomes would strengthen indicators of co-teaching affecting student growth and will add to the results in the literature about the effectiveness of co-teaching.

Purpose Statement and Research Question

Utah, like Arkansas in the Pearl et al. (2012) study, has responded to the reauthorization of IDEA, the ESSA and state and local data to increase the access SWDs have to the general education setting with meaningful opportunities of growth. One project USBE-SES has also decided to focus on is increasing the proficient implementation of co-teaching tied to a specific content area (mathematics or ELA) in the secondary (grades 6-12) setting. The purpose of this study was to identify the extent to which LEAs have continued implementing co-teaching as a method of instruction, the degree to which their implementation of co-teaching aligns with the content and strategies provided in the USBE-SES's professional development, and co-teachers' views of the acceptability of co-teaching. Co-teaching teams who continue to use co-teaching and implement multiple (two or more) co-teaching models in their instructional sessions with parity between both co-teachers would indicate continued implementation according to the content provided in the professional development sessions. To gather these data, a survey was created and distributed to the co-teaching professional development

participants and LEA administration participants since 2015. The following research questions are addressed:

Given a survey of co-teachers who participated in the USBE-SES and UPDN Co-Teaching Professional Development between 2015-2018, to what extent will teachers report the following:

1. Whether they are continuing co-teaching?

2. Their use of two or more co-teaching models in 80% of their class sessions as measured by self-reporting data in the 2018-2019 school year?

3. Their current use of instructional strategies that align with the content and strategies presented during the USBE-SES and UPDN Co-Teaching Professional Development?

4. Favorable social validity ratings on a social validity rating questionnaire, rating at a 3 or higher on a rating scale of 1-4 (strongly disagree to strongly agree) in the 2018-2019 school year?

Method

Participants and Settings

The participants for this study included 138 general education and special education teachers who participated in the USBE-SES and UPDN co-teaching professional development in 2015, 2016, 2017, or 2018. While the USBE-SES's professional development initiative for co-teaching began in the 2011-2012 school year, the 2011-2014 school year cohorts were excluded from this study because the USBE-SES used a different format for the professional development during those years. The 2014-

2015 cohort is also not included due to lack of participant registration information for that year's cohort. The general education and special education teachers were selected based on their participation in the USBE-SES and UPDN co-teaching cohorts. Participants taught in secondary settings (grades six through 12) during the year they attended the cohort trainings. The years chosen were the 2015-2016 to 2017-2018 school years and included three cohorts concentrating on statewide secondary mathematics co-teaching, two cohorts of district specific secondary mathematics co-teaching, and one cohort of statewide ELA co-teaching instruction. The participants included co-teaching dyads and triads where the teams taught and/or currently teach in middle and high school district and charter schools throughout the state of Utah.

Dependent Variable and Response Measurement

The student researcher developed survey questions based on the content delivered in the USBE-SES and UPDN co-teaching cohorts (see Appendix 1). These topics included (a) the six models of co-teaching, (b) development of parity through roles and responsibilities of co-teaching partners, (c) content specific instructional strategies, (d) differentiated instruction, (e) universal design for learning, (f) specially designed instruction, (g) use of summative and formative assessments, and (h) Marzano reflective teaching practices. The dependent variables included the average number of co-teaching models teachers reported using per week of instruction during the current 2018-2019 school year. Other dependent variables included respondents' ratings of the use of co-instruction, co-planning and co-assessing on a scale of zero to four. To help clarify the numeric rating scale on the survey for participants, the following measures were embedded into the instructional practice section of the survey. In the instructional

practice section of the survey, participants rated their use of each presented instructional practice in their co-teaching classes during the 2018-2019 school year. Participants rated a 1 for almost never present, 2 present in some lessons, 3 present in most lessons and 4 present in almost all lessons.

The survey questions asked respondents for information regarding their current and past use of co-teaching. Additionally, the questions asked participants to indicate how many of the six co-teaching models of instruction they used on average per week during the current 2018-2019 school year. The six co-teaching models of instruction include (a) teaming, (b) parallel teaching, (c) station teaching, (d) alternative teaching, (e) one teach one assist, and (f) one teach one observe. This information directly addressed the first research question: given a survey of co-teachers who participated in the USBE-SES and UPDN Co-Teaching Cohorts between 2015-2018, to what extent will teachers report use of two or more co-teaching models in 80% of their class sessions as measured by self-reporting data over term four in the 2018-2019 school year?

Survey questions also included self-reporting of ratings on a 4-point scale on three portions of co-teaching, including (a) co-instructing, (b) co-planning, and (c) co-assessing during the current 2018-2019 school year. Co-instructing was defined as two teachers, a general and special education teacher, instructing a homogeneous group of students in the same setting over a given period of time. Co-planning was defined as co-teaching team members meeting outside of classroom instruction time (after school, before school, prep period, etc.) to review short term and long term academic and social/behavior instructional goals with the use of student data. Co-assessing was defined as common formative and summative assessments given to a homogenous group of students

connected to content specific learning goals supported and established by a co-teaching team. These definitions were included in the survey for clarification. Information from these questions directly addressed the second research question: given a survey of co-teachers who participated in the USBE-SES and UPDN Co-Teaching Cohorts between 2015-2018, to what extent will teachers report parity in co-instruction, co-planning and co-assessing, rating at a 3 or higher on a 4-point scale in the 2018-2019 school year?

The survey also included questions, adapted from Hang & Rabren (2009), specifically asking participants to rate the social validity of co-teaching on a 4-point scale. Five questions included rating the statements (a) in a co-taught classroom, I enjoy teaching more, (b) in a co-taught classroom, I learn from my co-teacher, (c) in a co-taught classroom, teaching is less work, (d) teaching in a co-taught classroom has improved my understanding of how to support students with disabilities and other students who struggle, and (e) students with disabilities learn more in a co-taught classroom than in a single-teacher general education classroom. Questions addressing parity in co-instruction, co-planning and co-assessing according to a 4-point rating scale current 2018-2019 school year included (a) my co-teacher and I use two or more co-teaching models in about 80% of our class sessions each week, (b) my co-teacher and I have adequate common planning time, and (c) my co-teacher and I use formative and summative assessment data to make instructional decisions. In the social validity section of the survey, participants rated their perception of each of 10 social validity statements on a 4-point scale. Participants rated a 1 for strongly disagree, a 2 for disagree, a 3 for agree and a 4 for strongly agree. See Appendix 1 for complete survey format and all questions.

The student researcher analyzed data on independent survey responses using average scores across various demographic categories. The demographic categories included general education teachers, special education teachers, co-teaching teams still intact from instructional year, middle and high school settings, teachers one, two, three and four years from co-teaching cohort instructional year, mathematics and ELA teams, general and special educators, and district and charter school settings (see Table 1). The researcher calculated average scores for each category of responses for co-teachers' instructional year and the 2018-2019 school year (see Tables 1, 2, 3, 4 and 5).

Experimental Design and Procedures

The student researcher used a self-reporting online survey across all participants as the instrument to gather data for this study. Although self-report survey ratings are subjective, direct observation of co-teaching models and evidence of co-instruction, co-planning and co-assessing across multiple LEAs and schools was too logistically difficult to arrange, given the limited resources available for this study.

Rather than independent variable in a treatment, the design of the survey gathered data on dependent variables from co-teachers. The survey was presented to participants though Qualtrics, an online survey system. At the beginning of the survey, a document explaining the nature of the survey, risks involved in participation and intended use of the data collected from participation was included to address informed consent. Participants indicated informed consent by choosing they agree on a prompted question and proceeding with the survey. Participants answered demographic information keeping their name anonymous. Demographic questions included general or special education teacher, year participated in USBE-SES or UPDN co-teaching cohort, subject area taught

during co-teaching cohort training, school district or charter setting, grade level of co-taught class(es) during co-teaching cohort participation year, grade level in current 2018-2019 school year, whether currently co-teaching, how many current co-taught classes, content and grade level of current co-taught classes. See Appendix 1 for a copy of the survey.

Survey distribution. After obtaining university Institutional Review Board (IRB) approval, the student researcher contacted the USBE-SES to request email addresses of co-teaching professional development participants from the USBE-SES and UPDN from 2015-2018. Based on the current USBE-SES policies, the USBE-SES was unable to provide the student researcher with the names or email addresses of co-teaching professional development participants, but was willing to send out an email for the student researcher to distribute the survey. The student researcher sent a contact at the USBE-SES the text of the email to be sent to the co-teaching professional development participants, which included a link to the Qualtrics survey. The contact at the USBE-SES confirmed that the email was successfully sent to the co-teaching professional development participants for whom contact information was available (a total of 64 people).

In addition to distributing the survey to the USBE-SES cohorts, the student researcher also contacted LEA personnel to distribute the survey to teachers who had participated in LEA-specific co-teaching professional development offered by the UPDN. The student researcher called and emailed the co-teaching contacts for the five school districts and six charter schools from LEA specific co-teaching cohorts. The student researcher sent the contact person for each district and charter school the text of the email

to be sent to the co-teaching professional development participants, which included a link to the Qualtrics survey. The contacts at the school districts and charter schools confirmed the email with link was sent to 74 total past participants, bringing the total survey sent to 138 co-teachers.

The student researcher originally planned on sending reminder emails two weeks following the initial survey distribution. The student researcher emailed the contact person from the USBE-SES two weeks following initial survey distribution to request that they send a reminder email, but did not receive a reply as to whether the reminder email was sent. The student researcher also contacted district and charter personnel to send a reminder email one week after the original email was sent. The student researcher received confirmation of a reminder email from one school district and two charter schools.

Approximately eight weeks following initial survey distribution, the survey was closed and the student researcher analyzed the results to identify the overall average number of co-teaching models used during participating co-teaching cohort year and current 2018-2019 school year, and averages across identified sub areas identified through demographic information collected. A description of these results follows.

Results

Twenty-two percent (31 co-teachers) who received the survey completed it. Of those, the student researcher included 19% (26 co-teachers) of the responses. The other five surveys were either completely blank (indicating consent and then not answering any given question) or the participants did not indicate consent. Three surveys were

incomplete and unable to use during data analysis (only included 3 or fewer responses to the demographic and survey questions), resulting in a total of 23 responses used during data analysis, or 17% of the co-teachers sent the survey.

Participant Demographics

The participant demographics on table 1 refer to the variety of characteristics from the responding participants. Of the 26 responses, 23 responses were used for the results. From these 23 responses, 13 (56%) responses were from general education teachers and 10 (44%) responses were from special education teachers. Sixteen (70%) of participants were from the 2017-2018 co-teaching cohorts, four (17%) of participants were from the 2016-2017 cohorts, and three (13%) of participants were from the 2015-2016 cohorts. Of the 16 participants from the 2017-2018 cohort, 12 participants were general educators and only four were special educators. There were 17 (74%) participants teaching in public school districts and six (26%) participants teaching in public charter schools. Of the 23 participants, 19 reported currently co-teaching and four reported currently no longer co-teaching. Nine (69%) general educators and eight (80%) special educators from public districts participated in the survey. Four (31%) general educators and two (20%) special educators from public charter schools participated in the survey. Sixteen (70%) of participants were from the middle school setting with 9 middle school general educators and 7 middle school special educators. Seven (30%) of participants in the study were from a high school setting with four general educators and three special educators. Of the 19 participants who reported that they were currently co-teaching, all 19 participants (100%) report currently co-teaching mathematics courses with four (17%) also co-teaching ELA courses. Participants were asked to report how many co taught

courses they are assigned. Six participants (26%) report co-teaching one class, four participants (17%) report co-teaching two classes, six participants (26%) report teaching three classes and 7 participants (30%) report co-teaching four or more classes.

Research Question One

The first research question the survey addressed was, to what extent will teachers report that they are continuing co-teaching? In the survey, question three asked if co-teachers were currently co-teaching. Questions 3a and 3b prompted the participants to disclose a primary reason for not co-teaching and asked for how many years following the USBE-SES or UPDN Co-Teaching Professional Development did the participants continue to co-teach (see Table 2). Overall, 83% of participants (19 out of 23) currently co-taught in the 2018-2019 school year. Of the 17% (4 out of 23) not currently co-teaching, three of the four reported the primary reason was due to district or school schedule changes preventing co-teaching from occurring. A secondary reason that was reported was a lack of administration support for the right balance of students with and without special education needs and support in providing co-planning time. There was a low response rate to question 3b addressing the average number of years co-taught after the professional development. One participant recorded zero years of co-teaching after the professional development and four reported 1-2 years. Yet we know from the reported year participants participated in the given professional development cohort that 17 participants (74%) participated in the 2017-2018 cohort, showing they had zero years in between the professional development year and the school year surveyed. The remaining six participants, 26%, report participating in the 2015-2016 and 2016-2017 cohorts,

giving them 1-2 years since their professional development year and the year participating in the survey (see Tables 1 and 2).

Research Question Two

The second research question, which examined the extent that teachers reported use of two or more co-teaching models in 80% of their class sessions as measured by self-reporting data over term four in the 2018-2019 school year, was addressed with the fifth question on the demographic section (see Table 3) and the fifth question on the instructional practice statements section of the survey (see Table 4). The fifth demographic question asked co-teachers to identify the number of times on average each week during the 2018-2019 school year they use each of the six models of co-teaching; teaming, parallel, stations, alternative, teach/assist and teach/observe. The mean number for each model used was (a) teaming 5.17 times per week, (b) parallel 0.78 times per week, (c) stations 2.17 times per week, (d) alternative 1.03 times per week, (e) teach/assist 4.44 times per week, and (f) teach/observe 1.19 times per week (see Table 3).

In taking the data from the same question and looking at it across various demographic categories, the following results were recorded (see Table 3). District Co-teachers reported higher usage of all co-teaching models (as compared to reported charter schools) except parallel and teach/observe, resulting in the following: teaming (6.17 times per week), stations (2.67 times per week), alternative (1.17 times per week), and teach/assist (5.08 times per week). Co-teachers currently in charter school settings reported higher usage of parallel teaching (0.81 times per week) and teach/observe (3.0 times per week) that their district counterparts. There were variations in which classes and subjects were co-taught by special and general education teachers. All responses used

indicated the teacher co-taught either only mathematics or mathematics and ELA (ELA n=4 and Mathematics n=23), therefore all special education and general education teachers co-taught at least one secondary mathematics class and at least one secondary ELA class or they co-taught only secondary mathematics classes. When comparing co-teachers who taught mathematics during the 2018-2019 school year with co-teachers who taught ELA during the same school year, we see a higher frequency of reported use of teaming (5.17 times per week), station teaching (2.17 times per week), and teach/assist (4.44 times per week). While co-teaching ELA classes during the 2018-2019 school year co-teachers reported a higher frequency of parallel teaching (1.00 times per week) and teach/observe (1.25 times per week). Co-teachers in either subject reported almost the same frequency of using the alternative co-teaching model, 1.03 times per week in mathematics classes and 1.00 time per week in ELA classes.

The survey results compared general education teacher responses to special education teacher responses for frequency of co-teaching models during the 2018-2019 school year. The results showed higher frequency of all the co-teaching models used by special educaton teachers; teaming (5.44 times per week), parallel (0.89 time per week), stations (2.78 times per week), alternative (1.33 times per week), teach/assist (5.56 times per week), and teach/observe (2.11 times per week).

The second section of the survey consisted of statements that co-teachers rated reflecting on their current use of taught instructional practices during the 2018-2019 school year. Statement 4 states “My co-teacher and I use two or more co-teaching models in 4/5 classes per week (or 2/3 for block schedule).” On a rating scale of 1-4 (see survey for criteria for each measure on the rating scale), co-teachers reported an overall mean

score of 3.47, falling in between the “Most Lessons” and “Almost All Lessons” categories (see Table 4). When looking at co-teaching cohorts specific to the year of participation in the training series, we see that the 2015-16 cohort (recorded mean 3.67) reported the highest use of two or more co-teaching models in at least 80% of their co-taught classes. The co-teachers from the 2017-18 cohort (recorded mean 2.73) reported the lowest overall usage of two or more co-teaching models in at least 80% of their classes during the 2018-2019 school year. Co-teachers teaching at charter schools and in school districts reported similar means (2.83 and 2.87, respectively) during the 2018-2019 school year in regard to using two or more co-teaching models in 80% or more of their courses. Co-teachers who reported teaching secondary mathematics courses during the 2018-2019 school year reported a higher frequency of using two or more models in at least 80% of co-taught classes (recorded mean 3.47). Co-teachers who reported teaching secondary ELA courses during the 2018-2019 school year reported a lower mean rating, of 2.75. General and special education co-teachers reported a similar mean in regard to using two or more co-teaching models during class instruction during the 2018-2019 school year with reported means of 3.15 and 3.10, respectively.

Research Question Three

The third research question the survey addressed was, to what extent will teachers report current use of instructional strategies that align with the content and strategies presented during the USBE-SES and UPDN Co-Teaching Professional Development? The instructional practice statement section on the questionnaire addressed seven common instructional practices delivered in professional development sessions to co-teachers who participated in the USBE-SES and UPDN Co-Teaching

Cohorts between 2014-2018. These included (a) collaborative planning, (b) differentiated instruction, (c) Universal Design for Learning (UDL), (d) co-teaching models (e) growth mindset, (f) formative and summative assessment and (g) Marzano's reflective practices (See Table 4).

Participants were asked to rate their frequency of use by estimating how frequently they used these practices in their co-taught lessons in the 2018-2019 school year. The rating scale is as follows (1) almost never, (2) some lessons, (3) most lessons, and (4) almost all lessons. It was reported that co-teaching models (3.47 mean), formative and summative assessment (3.38 mean), and differentiated instruction (3.32 mean) were the most frequently used instructional practices during co-taught lessons overall in the 2018-2019 school year. Collaborative planning also was reported above the 3.0 marker with an overall mean of 3.04. Reflective practice and growth mindset were reported with the lowest overall mean, at 2.30 and 2.73, respectively.

Looking at the survey data across identified demographic groups, we see subgroups reporting some instructional practices higher than the mean. Co-teaching models and differentiated instruction were reported with the highest usage in the 2015-2016 cohort with a mean of 3.67 and 4.00, respectively. General education teachers reported the highest usage of formative and summative assessments with a mean of 3.85. Growth mindset was reported highest among special education co-teachers with a mean of 3.50, compared to the overall mean of 2.73. Reflective practice was highest among general education co-teachers (3.00 mean) and lowest among the 2015-2016 cohort (1.00 mean).

Research Question Four

The last research question the survey addressed was, to what extent will teachers report favorable social validity ratings on a social validity questionnaire, rating at a 3 or higher on a rating scale of 1-4 in the 2018-2019 school year? The survey had 10 statements which were rated on a scale of one to four, in which a rating of one indicated strongly disagree and a rating of four indicated strongly agree (see social validity statements on questionnaire, Appendix 1). Social validity statements are summariezed in Table 5.

Statements 2 (co-teachers learning from one another), 7 (students with disabilities learn more in a co-taught setting), and 8 (SWD show more prosocial behaviors) showed the highest overall means with 3.43, 3.39 and 3.48, respectively. Statements 3 (co-teaching is less work) and 9 (adequate planning time) showed the lowest overall means with 1.78 and 1.91, respectively. Statements 1, 2, 4, 5, 6, 7, 8 and 10 all were reported with overall means of 3.0 or higher on the social validity rating scale, indicating these statements were typically rated favorably by respondents. These statements addressed enjoying teaching more, learning from co-teachers, ease of collaborating together, co-teaching support for struggling learners including SWD, co-teachers increased knowledge in mathematics and ELA concepts, SWD learning more in a co-taught classroom, an increase of prosocial student behaviors, and co-teachers desiring to continue co-teaching in the future.

Means were compared across different subgroups from the social validity portion of the survey as well. General education teachers reported a mean lower than the overall for statement 1, enjoy teaching more, with a mean of 2.77 as compared to special education teachers with a mean above the overall with a mean of 3.40. All subgroups showed a mean at 2.00 or lower for co-teaching being less work. Charter school co-1collaborate with co-teacher, with a mean of 2.67. The cohort from the 2015-2016 school year, charter school co-teachers and special education co-teachers all reported a mean under 3.0 concerning statement 5, co-teaching supports struggling learners, with means of 2.33, 2.83 and 2.80, respectively. The 2015-2016 cohort also reported a mean higher than the overall concerning statement 6, an increase in mathematics or ELA concepts and instructional strategies, at 3.67. Both the cohort form 2016-2017 and ELA co-teachers reported a high mean for statement 8, SWD show more prosocial behaviors, with means of 4.00 for each group. The cohort from 2017-2018 and district co-teachers reported the highest means for statement 9, having adequate co-planning time, with means of 2.13 and 2.20 respectively. All subgroups showed means above 3.0 concerning statement 10, given the opportunity teachers would co-teach in the future, with general education teachers with the lowest mean of 3.00 and co-teachers from the 2015-2016 cohort at the highest mean, 4.00 (see Table 5).

Discussion

Much effort from the USBE-SES and UPDN staff went into training and supporting co-teachers during the 2015-2018 cohorts. It would be in the interest of these organizations and co-teaching professional development providers to know with what degree of fidelity are the co-teaching models and other instructional practices currently

being used. This knowledge may aid professional development providers in designing and implementing professional development to support the needs of co-teachers in various school and classroom settings.

One topic addressed in this survey is whether participants were able to utilize a variety of co-teaching models, which aligns to one of the goals of the professional development. During the professional development, co-teachers were recommended to use teaming, parallel teaching and station teaching as the most frequent models of co-teaching with alternative teaching, teach/assist and teach/observe to be used less frequently. The student researcher predicted that the teach/assist model would be reported as being used most frequently. The results of this survey indicated the teaming and teach/assist models were preferred models of co-teachers during the 2018-2019 school year, used an average of 5.17 and 4.44 times per week, respectively. Instruction included in the co-teaching professional development highlighted that the teach/assist model is to be used sparingly and in the presence of other co-teaching models. While we know from the data that co-teachers report consistently using a variety of co-teaching models throughout instruction (see table 4, 3.47 overall mean), we do not have enough information to know whether participants' used the teach/assist model in the presence of other co-teaching models such as teaming, parallel and stations. Based on the instructional materials presented to the co-teachers through the co-teaching cohorts, if the special education teacher is the teacher consistently in the assist role during the teach/assist model, there is a risk of both the teachers and students viewing the special education teacher as less of an equal teaching partner. Magiera & Zigmond (2005) identified the teach/assist model as the most frequent model of co-teaching. Yet in the

Magiera & Zigmond study, a lack of consistent professional develop was suggested to be the cause of heavily using this model, creating a subordinate role where the special education teacher was the teacher assisting. However, if both the special and general educators consistently switch who is in the assist versus lead teaching role, both teachers and students may view the co-teachers as holding the same status, playing an equal role in instruction, assessing and planning for student needs. Thus, while it is encouraging to see the teaming co-teaching model reported with such high frequency, it is unclear whether the high frequency of the teach/assist model reported indicates more or less parity between the special and general educators.

The student researcher predicted that the most recent cohort (2017-2018) would report using more of a variety of co-teaching models, including the parallel teaching, teaming and station teaching models. These three models were recommended to be used more frequently according to Cook & Friend (1996) and the Utah Co-Teaching Handbook (Shumway et al., 2011) due to both teachers actively instructing all students. According to the results of the survey, the frequency of co-teaching models used by the 2017-2018 cohort was similar to the overall sample. Participants of the 2017-2018 cohort used the following co-teaching models from most frequent to least frequent: teaming, teach/assist, stations, teach/observe, alternative and parallel. Based on the overall means and the means for each subgroup, the parallel teaching model was reported the least or second least frequently used model of instruction despite professional development around this modeling being one that more dually involves co-teachers. The apprehension of using th is particular model could be due to a need for further direct training and

coahin, in particular if co-teachers perceive this instructional mondel as unnatural in a classroom setting.

Co-teaching is not an instructional strategy that is solely supported in the classroom setting. It is a system structure that requires support of many administrative and supportive roles, such as scheduling, building resources, instructional resources, funding resources and more. All these need to be organized and in place along with the actual training and instructing of the co-teachers to support the effective use of co-teaching for increased student outcomes. This administrative and organizational support needs to come from the charter, district or school, since they have the power to execute structures specific to the needs of their school(s). In Scruggs et al. (2007), all 32 studies from the meta-analysis identified needs based on inclusion of the administrative support team. The most frequent needs recorded were common planning time and consistency with training. The results of this study are consistent with those of Scruggs et al. (2007). Co-teachers reported the primary reason they are not currently co-teaching as district or school schedule changes preventing co-teaching for that particular teacher. The results also show that a lack of adequate co-planning time was by far the highest identified reason for not continuing co-teaching (see table 2, 50% of participants chose this response). Additionally, in this survey participants indicated that they did not have adequate common planning time; social validity statement 9, addressing the presence of adequate common planning time, was rated the lowest at 1.91. Scheduling time for co-teaching pairs to co-plan is one of the key responsibilities of administrators; it is challenging for co-teachers to find time to co-plan if they are not assigned prep periods and/or days. Often the USBE-SES and UPDN co-teaching cohorts would create time

during their sessions to provide some co-planning time, but it is likely that the most effective, on-going co-planning time occurred in co-teachers' school setting. Although the presence and practice of co-planning is an essential component to implementing co-teaching with fidelity, it is inferred from the reported data that some schools, districts and charters lack the organizational supports to facilitate common planning time within contract hours. In order for effective co-teaching to be sustained, it is important for school building administrators to recognized the value of co-planning and problem solve ways to provide the time and effective structures to do so.

There were interesting findings when results from charter vs. district schools were compared. Based on these results, there was more variety in the models of co-teaching reported in school districts versus charter school (see table 3). Charter school co-teachers reported the highest use of the teach/observe model (3.0 times per week) and high use of the teach/assist (2.8 times per week) and teaming models (2.8 times per week), where co-teachers in districts showed using teaming (5.77 times per week), stations (2.67 times per week) and alternative (1.0 time per week) models higher than their charter co-teacher counterparts. This may be attributed to the increased availability of organizational supports at district level and school level for co-teachers in a district school setting. Charter schools may have less available support staff and programs, such as instructional coaches, teacher mentoring programs, and building level administrators. The lack of this organizational support can affect the ability to support instructional practices from being performed with fidelity in the classroom without the presence of continued coaching, support sessions or professional learning community (PLC) groups.

In addition to the difference between charter school and district organization that can affect leadership and organizational support, the results showed that co-teachers who identify teaching mathematics courses in the 2018-2019 school year reported higher rating scores for most instructional practices than co-teachers instructing ELA courses. Universal Design for Learning (UDL) and use of formative/summative assessment were both scored higher among ELA co-teachers. The co-teaching cohorts led by the USBE-SES totaled 10 sessions throughout the school year with five focusing solely on mathematics best practices. The cohorts led by UPDN averaged six sessions, with shorter length pieces of instruction focused on best mathematics practices over 5 of the 6 sessions. The one ELA cohort and combined ELA and mathematics cohort held six sessions throughout the cohort year and focused on ELA specific instructional practices for 2-3 hours during 5 out of the 6 sessions. The increased amount of time given to co-teachers participating in the mathematics cohort could attribute to the higher rating score on the surveyed instructional strategies. These co-teachers were able to practice and give/get feedback on specific instructional strategies during their cohort year more so than co-teachers of ELA courses. The results of this survey could suggest scheduling more training sessions with embedded content based instructional practices. It may also be beneficial to transfer some of these training sessions to the district or charter level in order to incorporate opportunities for administrators and other leadership team members to instruct and support co-teaching specific to individual school needs.

USBE-SES and UPDN mathematics and ELA co-teaching cohorts addressed specific instruction based on co-instruction, co-planning and co-assessment to enhance the use of co-teaching models with fidelity and to yield improved student outcomes.

Achieving this level of collaboration is challenging, but may be more likely to be sustained if co-teachers view co-teaching and its outcomes positively. In this survey, we assessed the social validity of several different aspects of co-teaching, including co-instruction, co-planning, and co-assessment. When looking at reported data from social validity statements addressing co-instruction, co-teachers reported increased student learning in a co-taught classroom setting (social validity statement 7, average 3.39 out of 5). Yet co-teachers viewed co-teaching as more work (social validity statement 3, average 1.78 out of 5). One possible reason is the amount of co-planning time to deliver the co-instruction does not lessen the load, but either keeps the load the same or increases it over all. This happens when planning for classroom instruction includes heterogeneous groupings to accommodate some models of co-teaching, such as stations and alternative teaching. This may also imply there appears to be less parity in responsibility of instruction if co-teachers are not perceiving the work required to deliver instruction to be less, or at least equal to a single teacher classroom. For these reasons, the student researcher recommends that adaptations to the co-teaching cohort structure should be considered to include more or different district/charter level organizational supports for co-teaching as a vehicle to create sustainability beyond the co-teaching training year.

The second element of co-teaching social validity addressed in the survey pertains to co-planning. Co-planning time outside of the co-teaching training sessions is in the hands of the co-teaching teams and their district or school supportive teams. When looking at parity and social validity concerning co-planning, instructional practice statement 1 addressed collaborative planning (3.04) and social validity statements 4 and 9 discussed the presence of adequate and quality co planning (3.13 and 1.91). Both in

content and pedagogical practices (instructional practice statement co-teaching models, 3.47, and social validity statement 2, 3.43), co-teachers reported an increase in their knowledge of co-teaching which may transfer to planning. The development of a good relationship between co-teachers affects their ability to plan and instruct using co-teaching models. The results of Scruggs et al. (2007) ranked compatibility of co-teachers as one of the highest for success with co-teaching. In this meta analysis, 25 out of 32 studies identified a compatible set of co-teachers with increased benefit for all students, including SWD. In this study, when participants were asked primary reasons they would continue co-teaching, 18% responded with collaboration with their co-teacher. Also, when asked primary reasons to not continue co-teaching, 15% noted that a difficult relationship with a co-teacher would discourage them from co-teaching (see table 2, questions 6 and 7). These results indicate that the relationships between co-teachers may affect the sustainability and effectiveness of co-planning and co-teaching.

A third element of co-teaching social validity addressed in this survey pertains to giving and using co-assessments. From the survey statements, co-teachers reported that students with disabilities learned more academic and prosocial behaviors in a co-taught classroom (social validity statement 7, 3.39, and social validity statement 8, 3.48) and that co-teachers frequently used formative and summative assessments to gauge student progress on academic and social/behavioral expectations and make informed instructional decisions as a team (Instructional practice formative/summative assessment, 3.38). With the use of formative assessments comes the need for co-teachers to make time to review data and make instructional decisions together. Without co-planning time to support the analysis of co-assessments, the use of assessments is not as effective. This also allows co-

teachers to see which content instructional practices are more effective for various students. With the teaming of co-teachers comes the ability to use various models of co-teaching (such as alternative teacher and teach/observe) to specifically take student-centered data on academic and social/behavioral classroom tasks. Co-teachers involved in the co-teaching cohorts had periodic support from the USBE-SES or UPDN staff. When these training and coaching sessions ceased, this embedded support was no longer there. The need to have a district and/or school level support team that understands the dynamics of co-teaching may be a factor in how successful co-teaching teams are able to implement co-teaching practices and content specific instructional strategies based on student data.

Limitations

The results of this study should be interpreted in light of several limitations. First, registration information, including email addresses and names, were not available for cohorts that occurred prior to 2015. In the future, this need could be addressed by researchers gathering contact information of participants while they attend professional development, in order to contact them at a future date to gather information.

Second, it was the intention of the student researcher to handle the electronic survey distribution as well as reminders through email, rather than burdening the identified points of contact with this extra task. Based on existing policies, the USBE-SES was not allowed to release the names and contact information of people who had participated in their professional development cohorts. However, points of contact for various educational organizations (USBE-SES, district, charter school contacts) were able to send along the provided email and survey link to 138 total participants. It is

unknown whether a higher response rate would have occurred if the student researcher was able to handle the survey distribution and reminder emails.

Another limitation identified in this study is the nature of self-reported data. Self-reported data is often limited in general because it cannot be directly verified; the researcher must take the reported information at face value. Self-reported data can also demonstrate bias, such as exaggeration of outcomes and selective memory, especially where this study had participants remembering their experiences from professional development occurring up to three years prior. Including different types of research designs that more directly observe implementation of co-teaching along with survey or interview data would help to clarify questions arising from simply using self-reported data as the experimental design.

Due to self-reported data, it was also difficult to control receiving an even distribution of responses across various demographics, such as the cohort years, general education and special education teachers or ELA and mathematics co-teachers. Thus, one of the limitations experienced in this study had to do with the widely varing n sizes. All respondents co-taught mathematics and a few (n=4) co-taught both mathematics and secondary ELA. Due to this, it is difficult to make accurate comparisoins between mathematics co-teaching and secondary ELA co-teaching experiences. Another huge variation in n-size exists with the representation of cohort years. Co-teachers participating in professional development in the 2017-2018 school year made up 70% of the responding co-teachers (n=16). Other lower n-sizes were reported from high school co-teachers (n=7 or 30%) and public charter school participants (n=6 or 26%). One low

response would have more weight within these specific demographic categories, making assumptions difficult to generalize.

An additional limitation is that definitions of various instructional strategies and co-teaching models were not provided on the survey. Had this information been included, participants' responses might have been different. While it is likely that participants were exposed to the terms included on the survey during their professional development experiences, participants might have benefited from being able to refer to definitions to refresh their memories. Future survey research on this topic should include definitions of key terms in a glossary or on the survey itself to help ensure accuracy of responses.

The last limitation identified was the 19% response rate to the survey. Many factors contributed to this including the first two limitations: difficulty in collecting direct contact information of participants and the resulting survey distribution process. Surveys in general typically have a low response rate, especially when delivered through an outside agent. Response rates delivered internally tend to have slightly higher response rates. It was desired that two reminder emails were to be sent to participants to help increase the response rate to the desired 30%-40%. Future research on co-teaching professional development should address this limitation by collecting contact information from professional development participants directly. If that is not possible, researchers should apply to obtain contact information from professional development providers through external researcher agreements or other processes.

Implications for Research and Practice

One of the many purposes of collecting and analyzing data is to find further needs and implications for both research and for practice in the classroom setting. These both can increase desired student learning and teacher learning outcomes. From looking at the results of this survey, we have several recommendations for future research, including the use of a variety of experimental designs such as interviews of co-teachers, students and administrators, as well as conducting direct and video classroom observations of co-teaching and distributing co-teacher, student and administrator surveys. From the data collected we can see more practical implications for practice in the professional development and school coaching/ implementation settings.

Implications for research. In terms of future research, there were no identified studies through the literature review in which a co-teaching professional development series coupled the teaching of co-teaching as an instructional strategy alongside content specific instructional strategies. Since Utah's co-teaching cohorts are so unique in tying these two essential pieces together during professional development, conducting further research in this area may result in benefits internally (within Utah's co-teaching professional development system) and externally in others seeking professional development specific to co-teachers. While reflecting on the data collected in the survey, having the knowledge of conducting data collection, survey, observations and analysis will help with keeping track of participant contact information to make collection of information easier. Using direct observation of co-teaching in action in the classroom settings along with co-teacher self –reports would help to validate the actual implementation of a variety of co-teaching models and the instructional strategies presented in training sessions. Also regarding research, video based observations can be a

less invasive way to track and identify co-teaching models and instructional practices used in the classroom.

In regard to collecting data during furture research, it would be good to include in surveys a question in which respondents could indicate their name, as well as the name of their co-teacher(s) to make it possible to compare co-teachers' responses within pairs. It would be interesting to explore whether special and general educator co-teachers have similar responses compared to their co-teachers. Additionally, sharing this information with co-teaching partners could affect implementation and practice of co-teaching and content-specific instructional practices. Additionoally, incorporating survey questions related to the class size of co-taught classes would give further research insight on whether class size influences participants' willingness to continue co-teaching. Questions on class size may also impact co-teachers' use of different co-teaching practices and instructional practices, which is important information for designing and implementing future professional development.

Implications for practice. The use of video observation can play a dual role in aiding both research and implementation practice of co-teaching when reviewed by co-teachers, trainers, coaches, administrators, and researchers. With the implementation practice of co-teaching, video-based observation can help to widen the availability of coaching and feedback to increase the ability of co-teachers to use the intended strategies. Each of these strategies may increase positive student academic and prosocial behavior outcomes.

Another topic professional development trainers may want to address based on the reported data is whether or not to increase or create supports for building level

administration teams and co-teaching teams beyond the initial co-teaching professional development year. Many of the frustrations recorded on this survey and in past research may be addressed by giving time and effort to create school-based teams that include the co-teachers and administrative/ coaching support. Also, creating one to two booster sessions annually, available for past co-teaching cohort participants, could help the trainers and the teachers to consistently implement co-teaching, problem solve instructional and organization needs, and provide awareness of implementation success and demands beyond the initial year of instruction. These booster sessions could be organized regionally across the state (possibly Northern Utah, Salt Lake County, Utah County and Southern Utah regions) to help increase availability to all past participants. Each year a new cohort benefits from the co-teaching professional development, an increase in the pool of co-teachers are in the LEAs. Regional booster sessions are one suggestion that may help in keeping them true to the taught strategies and maintaining consistency throughout the state.

Another practice suggestion to help increase the use of teaming, parallel teaching and station teaching as primary models of co-teaching instruction, is to use data from this study, from the Utah co-teaching cohorts, and from each district during future instruction of co-teachers. Consistently using current data would provide new co-teachers and their support teams (e.g. administrators and instructional coaches) relevance to use these models as intended and with fidelity. Presenting the collected data specifically with building and district level support teams, including administrators and instructional coaches, could help building level support teams develop action plans to support co-

teachers in using teaming, parallel teaching and station teaching with more fidelity and frequency.

From the results, co-teachers currently teaching mathematics courses during the 2018-2019 school year reported higher usages of teaming, stations, and teach/assist models. This can be attributed to the nature of teaching mathematics where using small groups during stations lends itself more easily to having targeted and specific concepts in mathematics. This is not to say that it cannot and was not used in ELA courses; station teaching was recorded as the third most popular co-teaching model for ELA co-teachers. Yet with ELA being a more subjective content area, co-teachers may have found it more difficult to pull targeted station groups. This information contributes to the need to problem solve at the professional development trainer level how to present the co-teaching models to support continued use of teaming, parallel teaching and station teaching. In particular, co-teachers may benefit from more instruction in how to use co-assessments to identify student needs and differentiate instruction.

Another implication for practice that stems from the results of this survey is the need for development of school and/or district level co-teaching support teams to continue the use of co-teaching models and other instructional practices taught through the cohorts with fidelity. In the information reported concerning Arkansas's retrospective of co-teaching training, we see the emphasis on organizational supports in the training in and creation of building level support teams (Pearl, Dieker, & Kirkpatrick, 2012). The USBE-SES and UPDN co-teaching cohorts structured training to focus on directly instructing co-teachers on content-based instructional practices embedded within the practices of effective co-teaching. It may be beneficial for the professional development

trainers to invest in developing leadership and organizational supports to best serve charter, district and building level teams to provide continued coaching and feedback to co-teachers.

It is the hope that the data from this survey can help professional development providers incorporate effective instructional supports to increase lasting implementation fidelity of co-teaching. Providing instructional support beyond the one year of co-teaching instruction could be one possible solution. Another would be to train a building-based team at schools which can include an instructional coach or peer coaching program to continue the availability of quality feedback on the models and elements of co-teaching. This could be after the fashion of the state of Arkansas's co-teaching professional developmental practices (Pearl, Dieker & Kirkpatrick, 2012). The extent of the use of co-teaching models and the extent to which co-teachers report use and parity in co-instruction, co-planning and co-assessment should prompt a change to increase improvement and increase the rate of implementation. Identifying and analyzing student outcomes after co-teacher training would be the true testament of effective implementation of co-teaching. After all, the whole point of any effective instructional practice, including co-teaching, is to increase academic and social/behavioral outcomes to show educational benefit of students.

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Table 1

Demographics of Survey Respondents

Variable	Total Sample (N = 23)		General Educators (n = 13)		Special Educators (n = 10)	
	n	%	*n*	%	*n*	%
Year of PD Cohort						
2015-2016	3	13%	0	0%	3	30%
2016-2017	4	17%	1	8%	3	30%
2017-2018	16	70%	12	92%	4	40%
School Type						
Public District	17	74%	9	69%	8	80%
Public Charter	6	26%	4	31%	2	20%
School Level						
Middle School	16	70%	9	69%	7	70%
High School	7	30%	4	31%	3	30%
Subjects Co-Taught						
Mathematics	23	100%	13	100%	10	100%
ELA	4	17%	2	15%	2	20%
Number of Classes Co-taught						
1	6	26%	4	31%	2	20%
2	4	17%	2	15%	2	20%
3	6	26%	2	15%	4	40%
4	3	13%	3	23%	0	0%
5	4	14%	2	15%	2	20%

Note. PD = Professional Development; ELA = English Language Arts. N and percentage for Mathematics at 100% due to all participants indicating co-teaching mathematics and 4 participants indicating teaching both mathematics and ELA.

Table 2

Respondents' Current Co-Teaching Status with Reasons Provided

Survey Question and Possible Responses	N	%
3b. Average number of years co-taught after PD		
0 years	1	20%
1-2 years	4	80%
3. Co-teachers currently co-teaching		
Yes	19	83%
No	4	17%
6. Primary reasons participants would continue co-teaching		
Positive academic and behavioral outcomes for all students	12	27%
Ability to provide more differentiated instruction for all students	10	23%
Collaboration with co-teacher	8	18%
Students able to engage in rich, deep content	6	14%
Positive academic and behavior outcomes for SWD	5	11%
Co-teaching assignment mandated by administration	2	5%
Co-teaching increases resources for all students	1	2%
3a. If not currently co-teaching, primary reasons why not		
District or school schedule changes prevent co-teaching	3	75%
Lack of support from administration	1	25%
7. Primary reasons participants would not continue co-teaching		
Lack of adequate co-planning time	17	50%
Lack of support from administration	6	18%
Difficult relationship with co-teacher	5	15%
Inadequate academic outcome for all students	2	6%
Inadequate prosocial behavior outcomes for all students	2	6%
Ratio of students with needs too high in classroom demographic	2	6%

Note. N's and percentages for survey item 6 may sum to more than the total Ns or 100%, due to participants being able to indicate more than one response. SWD = students with disabilities.

Table 3

Results: Reported Average Use of Co-Teaching Models Per Week Across Demographic Categories

Co-Teaching Model	Overall Mean (N=23)	2015-16 Cohort Mean (n=3)	2016-17 Cohort Mean (n=3)	2017-18 Cohort Mean (n=17)	District Mean (n=16)	Charter Mean (n=6)	Math (n=23)	ELA (n=4)	General Ed Teacher (n=13)	Special Ed Teacher (n=10)
Teaming	5.17	4.67	3.00	5.77	6.17	2.80	5.17	3.50	5.44	4.89
Parallel	0.78	1.50	0.67	0.69	0.75	0.60	0.78	1.00	0.89	0.67
Stations	2.17	2.00	1.33	2.38	2.67	0.80	2.17	1.25	2.78	1.56
Alternative	1.03	1.75	0.67	1.00	1.17	0.80	1.03	1.00	1.33	0.72
Teach/ Assist	4.44	4.50	1.67	5.07	5.08	2.80	4.44	3.50	5.56	3.33
Teach/ Observe	1.19	0.75	0.67	1.53	0.50	3.00	1.19	1.25	2.11	0.28

Note. ELA = English Language Arts. Results represent an average of the reported number of times per week the respondents used the specified model of co-teaching For example, teachers reported the number of times each of the six co-teaching models were used in an average week of instruction during the second semester of the 2018-19 school year.

Table 4

Results: Instructional Practices Across Demographic Categories

Instructional Practice Statement	Overall Mean (n=23)	2015-16 Cohort Mean (n=3)	2016-17 Cohort Mean (n=3)	2017-18 Cohort Mean (n=17)	District Mean (n=16)	Charter Mean (n=6)	Math (n=23)	ELA (n=4)	General Ed Teacher (n=13)	Special Ed Teacher (n=10)
Collaboratively plan	3.04	3.00	3.00	2.88	3.20	2.50	3.04	2.25	3.00	3.10
Differentiated instruction	3.32	4.00	3.00	3.31	3.47	3.00	3.32	3.25	3.31	3.70
Universal Design for Learning	2.94	4.00	3.67	2.93	3.20	2.67	2.94	3.25	3.00	3.60
Formative/ summative assessment	3.47	3.67	3.00	2.73	2.87	2.83	3.47	2.75	3.15	3.10
Co-teaching models	3.38	3.33	2.67	2.93	3.33	2.83	2.73	2.75	3.15	3.50
Growth Mindset	2.73	3.67	3.33	3.20	3.47	3.00	3.38	3.50	3.85	3.30
Reflective practice	2.3	1.00	2.67	2.33	2.73	1.17	2.3	1.75	3.00	2.40

Note. ELA = English Language Arts. Results represent the average frequency of use for each instructional practice, indicated on a likert scale of 1-4 where 1 indicates almost never, 2 indicates some lessons, 3 indicates most lessons and 4 indicates almost all lessons.

Table 5

Results: Social Validity Means Across Demographic Categories

Rating Statement	Overall Mean (n=23)	2015-16 Cohort Mean (n=3)	2016-17 Cohort Mean (n=3)	2017-18 Cohort Mean (n=17)	District Mean (n=16)	Charter Mean (n=6)	Math (n=23)	ELA (n=4)	General Ed Teacher (n=13)	Special Ed Teacher (n=10)
1. Enjoy teaching more	3.13	4.00	3.33	2.75	3.00	3.17	3.13	3.00	2.77	3.40
2. Learn from Co-teacher	3.43	3.67	3.67	3.31	3.47	3.17	3.43	3.75	3.31	3.60
3. Less work	1.78	2.00	2.00	1.75	1.80	1.67	1.78	1.75	1.69	1.90
4. Easy to collaborate	3.13	3.33	3.67	3.00	3.33	2.67	3.13	3.00	3.08	3.30
5. Support struggling learners	3.13	2.33	3.33	3.19	3.33	2.83	3.13	3.00	3.38	2.80

Rating Statement	Overall Mean (n=23)	2015-16 Cohort Mean (n=3)	2016-17 Cohort Mean (n=3)	2017-18 Cohort Mean (n=17)	District Mean (n=16)	Charter Mean (n=6)	Math (n=23)	ELA (n=4)	General Ed Teacher (n=13)	Special Ed Teacher (n=10)
6. Increase math or ELA	3.04	3.67	3.00	2.94	3.07	3.00	3.04	3.00	2.92	3.30
7. SWD learn more	3.39	3.00	3.33	3.44	3.60	2.83	3.39	3.25	3.46	3.40
8. SWD better behaved	3.48	3.33	4.00	3.38	3.60	3.33	3.48	4.00	3.54	3.50
9. Adequate planning time	1.91	1.00	1.67	2.13	2.20	1.33	1.91	1.00	1.77	1.80
10. Co-teach in future	3.30	4.00	3.33	3.19	3.27	3.17	3.30	3.50	3.00	3.40

Note. ELA = English Language Arts. SWD= Students with Disabilities. N and percentage for Mathematics at 100% due to all participants indicating co-teaching math and 4 participants indicating teaching both math and ELA. Results represent the average each social validity statement was reported on a likert scale of 1-4 where 1 is strongly disagree, 2 is disagree, 3 is agree, and 4 is strongly agree.

APPENDIX I

Co-Teaching Social Validity and Instructional Practice Questionnaire

Directions: Do not include your name on this questionnaire. Circle the number that best matches your agreement or disagreement for each of the statements below.

Demographics:

1. I am a **(choose one option)**: General Education Teacher Special Education Teacher Other

2. I participated in a USBE or UPDN Co-Teaching Cohort Professional Development during one of the following school years **(choose one option)**:

2014-2015 2015-2016 2016-2017 2017-2018

2a. During the Co-Teaching Cohort, I taught at _____ school, district or charter. (Select and fill in below)

2b. I am currently teaching: Yes No

2c. I am currently teaching at: _____ (school, district/charter)

3. I am currently co-teaching: Yes No

(If no, given questions 3a, 3b, Instructional Practice Statements and Social Validity phrased as such, During the time you co-taught rate the following Instructional Practice and Social Validity statements)

3a. The primary reason I am not co-teaching is (select, or please specify with other) A. a scheduling conflict not allowing me to co-teaching, including assignment change. B. a lack of administrative support. C. a lack of professional development and/or coaching support. D. difficulty in coordinating instruction with assigned co-teacher. D. Other, please specify.

3b. How many years did you co-teach following your participation in the USBE or UPDN Co-Teaching Professional Development? _____

4. I am currently co-teaching (mark all that apply): Math 6, Math 7, Math 8, Math I, Math II, Math III, English 6, English 7, English 8, English 9, English 10, English 11, English 12, other, _____

4a. How many class periods are you co-teaching during the 2018-2019 school year?: _____

5. During this school year, my co-teacher and I estimate using the following co-teaching models on average how many times each week during the 2018-2019 school year: (fill in blank next to model name with the estimated number of times co-teaching model is used each week)?

Example:

_4_ Teaming _1_ Parallel _1_ Stations _1_ Alternative _5_ Teach/Assist _2_ Teach/Observe

_____Teaming	_____Parallel	_____Stations
_____Alternative	_____Teach/Assist	_____Teach/Observe

(Questions 6, 7 and 8 come after Instructional Practice and Social Validity sections)

6.What are two primary reasons I would continue co-teaching? Collaboration with co-teacher, positive academic and behavior outcomes for all students, positive academic and behavior outcomes for students with disabilities, students able to engage in rich, deep content, ability to provide more differentiated instruction for all students, other, please specify_____.

7.What are two primary reasons I would continue not co-teaching? Lack of support from administration, lack of adequate co-planning time, difficult relationship with co-teacher, inadequate academic outcomes for all students, inadequate pro-social behavior outcomes for all students, other, please specify _____.

8. If presented with an opportunity to co-teach, would you co-teach again and under which conditions? Mark yes or no, and indicate any conditions that would influence your decision. Yes _____ No _____

Instructional Practice Statements: Estimate how often you and your co-teacher use the following practices	Almost Never	Some Lessons	Most Lessons	Almost All Lessons
1. My co-teacher and I collaboratively plan lessons & instruction.	1	2	3	4
2. My co-teacher and I use differentiated instruction to meet students' needs.	1	2	3	4
3. My co-teacher and I use Universal Design for Learning practices to meet students' needs.	1	2	3	4
4. My co-teacher and I use formative and summative assessment data to make instructional decisions.	1	2	3	4
5. My co-teacher and I use two or more co-teaching models in 4/5 classes per week (or 2/3 for block schedule).	1	2	3	4
6. My co-teacher and I intentionally used growth mindset techniques to meet students' needs.	1	2	3	4
7. My co-teacher and I use Marzano's Reflective Practice to meet students' needs.	1	2	3	4
Please write any comments you would like to share about your experiences using the various instructional practices listed above.				

Social Validity Statements	Strongly Disagree	Disagree	Agree	Strongly Agree
1. In a co-taught classroom, I enjoy teaching more.	1	2	3	4
2. In a co-taught classroom, I learn from my co-teacher.	1	2	3	4
3. In a co-taught classroom, teaching is less work.	1	2	3	4
4. I find it easy to collaborate with my co-teacher.	1	2	3	4
5. Teaching in a co-taught classroom has improved my understanding of grade level core math or ELA concepts.	1	2	3	4
6. Teaching in a co-taught classroom has improved my understanding of how to support students with disabilities and other students who struggle.	1	2	3	4
7.Students with disabilities learn more in a co-taught classroom compared to a single-teacher general education classroom.	1	2	3	4
8. Students with disabilities engage in more on task and pro-social behavior in a co-taught classroom.	1	2	3	4
9. My co-teacher and I have adequate common planning time.	1	2	3	4
10. If given the opportunity to co-teach in the future, I would do so again.	1	2	3	4
Please write any comments you would like to share about your past and current experiences regarding co-teaching.				

Adapted from: Hang, Q. & Rabren, K. (2009). An examination of co-teaching: Perspectives and efficacy indicators. *Remedial and Special Education, 30*(5), 259-268.