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# Co-Teaching: A Win-Win Situation for All

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**Co-Teaching: A Win-Win Situation for All**

by

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## Chapter 1: Introduction

### Definition of Co-teaching

Co-teaching is defined as two or more professionals delivering instruction to a diverse group of students in the same space (Deiker & Murawski, 2003). Typically, this is made up of a general education teacher and a special education teacher. However, the second teacher can also be an English Language Learner (ELL) teacher, speech/language pathologist, school psychologist, or any other professional. For the purpose of this paper, co-teaching refers to a general education teacher and special education teacher delivering instruction in the general education teachers' setting and based on the general education teacher's curriculum to a heterogeneous group of students including both general education students and students with disabilities. The professionals that make up the co-taught team contribute equally to the teaching responsibility of all the students in the classroom. Both students with disabilities and general education students are included in the classroom. The students with disabilities will receive accommodations and modifications that will help them to be successful in the general education setting. The goals of the co-taught classroom should be to increase instructional options for all students and give students with disabilities access to the general education curriculum. Another goal with co-teaching is to enhance participation and performance in the general education setting for students with disabilities (Peery, 2017). Other benefits for special education students that could result from participating in a co-teaching environment include social development and access to highly qualified teachers (Miller & Oh, 2013). Both teachers involved are responsible for instructing and planning. Each teacher brings his or her own expertise to the classroom and planning; the general education teacher is responsible for the content, while the special education

teacher is responsible for individualizing and differentiating instruction. The teachers are reflective and give each other feedback on teaching styles, content, behavior management, and any other items imperative to the classroom (Deiker & Murawski, 2003). Co-teaching is a service delivery model that allows special education students to not only remain in the general education setting, but to be successful learners in this challenging environment.

While co-teaching is the integration of students with disabilities into the classroom, there are times when groups of students may be separated into different settings. Reasons for separating could be, but are not limited to, testing in separate locations or multiple lessons happening in various locations; for example, one group is in the computer lab while the other is in the classroom (Friend, 2014).

## **History**

Before the 1970s students with disabilities were thought of as the sole responsibility of the special education teacher. They were taught in separate classrooms and separated from their peers (Packard, Hazelkorn, Harris, & McLeod, 2011). The idea of co-teaching originated from team teaching, which began in general education classrooms in the 1950s. In team teaching, two general education teachers were collectively responsible for one group of general education students (Friend, 2014). With the introduction of No Child Left Behind (NCLB) and the Individuals with Disabilities Act (IDEA), there became more of a push for students with disabilities to be included in the general education classroom and have access to the general education curriculum. These laws specified students with disabilities be placed in the Least Restrictive Environment (LRE) in which they could learn and have interactions with their same-age peers (Packard et al., 2011).

When students with disabilities were first introduced into the general education classroom, it was called mainstreaming. Often students were not given the support they needed to adjust to the general education setting, and many of the students with disabilities struggled (Peery, 2017). Later, mainstreaming evolved into inclusion. With inclusion, students with disabilities were included in the general education setting but they were given the support they needed to be successful. The definition of inclusion, according to Austin (2001), refers to the “instruction of all students, with and without disabilities, in the general education classroom, unless substantial evidence is provided to show that such a placement would not be in the student’s best interest.” This evolved into the term co-teaching to describe more accurately what is happening in the classroom (Peery, 2017). To provide students with a more inclusive setting with supports, co-teaching is increasingly becoming a more popular way to deliver service to all students (Packard, et al., 2011).

### **Types of Co-teaching**

According to Friend (2014) and Mastropieri and McDuffie (2007), there are six different approaches to co-teaching. They include: (1) one teach-one observe, (2) one teach-one assist (3) station teaching, (4) parallel teaching, (5) alternative teaching, and (6) teaming. The most common method is one teach-one assist in which the general education teacher teaches most of the time, while the special education teacher assists (Friend, 2014; Scruggs, Mastropieri, & McDuffie, 2007). Although this is the most common method, it is the least effective and should seldom be used (Friend, 2014). Too often, in this approach, students rely on someone there to help immediately and will often not try to accomplish a task on their own. When teachers fall into the routine where the special education teacher becomes the one assisting, the special

education teacher often loses value to the students. Another precaution for this method is when the support teacher begins assisting specific students more frequently. This will give the other students in the class the perception that the students being given the assistance and the teacher are not true members of the class but separate on their own (Villa, Thousand, & Nevin, 2013). In addition, the co-teaching pair could begin to have resentment toward each other; this is the case too frequently. The classroom teacher could feel as though the support teacher is not doing their share of the work, and the support teacher could feel as though their teaching skills are not being valued (Villa et al., 2013). Often this method of one teach/one assist will be used at the beginning when teachers are adapting to teaching together. Other situations where one teach one assist would be an appropriate method would be when conducting a lab or an experiment and informal observations are necessary (Friend, 2014). One teach-one observe is used to gather data. This method should be used frequently, but for short periods. The observing teacher may gather data for different reasons; for example, which students are raising their hands and participating, or which students seem to be understanding a concept or need more clarification. When using the one teach/one observe model, both teachers should have the role of being the observer at times and once the observation data is collected go back to their prior role. Another advantage, if both teachers are comfortable, is they can observe each other to advise on improving his or her practice. In the station teaching method, students are placed into three groups: each teacher is leading one group in a different lesson or activity, while the third group is working independently or as a group. Each co-teacher is responsible for the instruction and monitoring of their group with all students rotating through each station (Friend, 2014; Villa et al., 2013). It is recommended that station teaching be used frequently. In parallel teaching, the

class is divided into two heterogeneous groups and each teacher leads one group in the same lesson, keeping the same group for the entire lesson. It is recommended to use this method frequently. With the students being placed in smaller groups, they are able to get more attention from the teacher because of the smaller student-to-teacher ratio. Alternative teaching is where a small group of varied students are being taught a different lesson, while the remainder of the class is being taught a separate lesson by the other teacher. In alternative teaching, one of the teachers works with a small group of students. This small group could take place either in the classroom or in a different setting. Students placed in the small group have a common need which could include: re-teaching, additional practice, enrichment, pre-teaching, making up for from an absence, and assessment of student progress. Alternative teaching could also be used to work on student behaviors. A small group of students who would not respond to inappropriate behaviors could be placed with a student struggling with behaviors. This would help keep the student in the classroom. Alternative teaching should only be used occasionally. Teaming is when both teachers are instructing at the same time; teachers will interchangeably contribute to the instruction. In teaming both teachers plan and design the lesson and then deliver the lesson together (Friend, 2014).

## **NCLB**

No Child Left Behind Act was put into action in 2002 because Congress felt the United States was behind academically compared to other countries. The law emphasized increasing the academic success of different groups of students whose achievement tended to trail their peers, such as students receiving special education services, English language learners, low income, and minority students (Klein, 2015). Each state closely monitored their own schools for

adequate yearly progress. If the school fell short of the goal of the state for 2 or more years, the school received repercussions. Consequences included the loss of Title One funds or state interventions, a requirement to offer free tutoring or, worst-case scenario, getting shut down (Klein, 2015). Other parts of the law required teachers and paraprofessionals hired with Title One money to be “highly qualified.” Being highly qualified for teachers meant they needed a bachelor’s degree in the subject in which they were instructing along with state certification. Highly qualified paraprofessionals have a minimum of 2 years of college, have earned an Associate Degree, or have passed an evaluation to demonstrate knowledge and teaching ability (Klein, 2015).

## **ESSA**

Every Student Succeeds Act (ESSA) is the current K-12 public education law; in 2017 it replaced No Child Left Behind. ESSA allows states to have more control over how schools measure student achievement, including students that fall into the disadvantaged categories, such as minority students, students in poverty, students in special education, and students with limited English language skills (National Council on Disability, 2018). Although states are given more control, there are guidelines for measuring school performance. Each state is required to choose a minimum of five ways to measure school performance; however, the first four academic criteria are mandatory. They are the following: academic achievement, academic progress, English Language proficiency, and high school graduation rates. The fifth criterion is selected by the state and can be chosen from the following areas: kindergarten readiness, access to and completion of advanced coursework, college readiness, discipline rates, and chronic absenteeism (Every child succeeds act: What you need to know, 2014-2019).

## **IDEA**

The Education for All Handicapped Children Act of 1976 provided federal funds to states for the education of students with disabilities. All youth, including infants, were protected under this law. Schools were required to provide free and appropriate public education to all students with disabilities including infants. In 1990, the law was renamed to Individuals with Disabilities Education Improvement Act (IDEA). All state education agencies and public schools were required to follow IDEA; this also includes publicly funded charter schools, private special education schools, residential placements, special services school districts, the Department of Human Services, and Juvenile Justice education services for students with disabilities. IDEA requires students with disabilities to be placed in the least rest environment that is appropriate for them. They should only be removed from the general education setting when their needs are not being met through accommodations and modifications, such as a paraprofessional. All children with special needs should have opportunities to interact with other students from the general education setting, even if they are not able to participate in the general education setting; for example, attending field trips, attending assemblies, or eating lunch in the cafeteria (Statewide Parent Advocacy Network [SPAN], n.d.).

## **Research Questions**

The following questions guided this literature review:

1. What are the benefits of co-teaching for all students?
2. What are the necessary components of a successful co-taught classroom?

### **Focus of the Review**

I examined eight studies for the literature review in Chapter 2 published between 2005-2013. Studies included participants in a co-taught or inclusion setting between fifth and twelfth grade.

Google Scholar and Education Resource Information Center (ERIC) databases were used to locate the studies. In order to effectively research my question, I used a variety of keywords, phrases, and a combination of keywords. These included but were not limited to *co-teaching*, *collaborative teaching*, *inclusion*, *benefits*, *educational benefits*, *special education*, *middle school*, *team teaching*, *perceptions*, *studies*, *Friend (author)*, *Cook (author)*, and *Murawski (author)*.

### **Importance of the Topic**

As a special education teacher of students in middle school with specific learning disabilities (SLD), other health disabilities (OHD), autism spectrum disorder (ASD), and emotional or behavioral disorders (EBD), I am responsible for providing services to help my students make academic gains in the least restrictive environment possible for them. For the past 4 years, I have co-taught an English class, and this year I am also co-teaching a math class. Our school had attempted co-teaching in the past and struggled with getting teachers' schedules to match up and also with common prep times. I am one of three special education teachers that are part of the co-teaching process. One challenge schools have implementing co-teaching is making sure the teachers have a common prep. Our school is no different in this struggle. However, our district has made co-teaching a priority, so the prep schedules are matching up better. Even with the common prep time, meeting and collaborating is not scheduled, therefore,

our students are not getting the full benefit of co-teaching. Even though we continue to have struggles, we are seeing positive results, like improved state test scores. I want to continue to see all students grow as learners and therefore chose to focus on this topic. I am hoping to learn some strategies that I can implement in the classes I teach and also share some new knowledge with my co-workers. All too often, our classes will fall in the structure of one teach one assist with the special education teacher being the one assisting. This is a very common situation for co-taught classrooms (Friend, 2014; Scruggs et al., 2007). I am hoping to learn some strategies to prevent this from being the case. I have seen some positive outcomes with co-teaching in my school and would like to see students continue to grow. I am hoping to discover some new insights and strategies that I can bring into my classrooms and share with my co-workers.

## **Chapter 2: A Review of the Literature**

The purpose of this literature review was to determine the benefits of co-teaching for all involved and determine what are the necessary components for a successful co-teaching. This chapter is organized into two major sections: studies that address the benefits for all students and staff involved in the co-teaching experience, and best practices and strategies school staff should implement to ensure a successful co-teaching experience for all.

### **Benefits of Co-teaching for All Involved**

Murawski (2006) examined the effects of co-teaching in a ninth-grade English classroom on student outcome compared to mainstreaming and special resource classes. They documented the teachers' actions in each of the academic settings. The study was conducted in an urban high school outside of Los Angeles and consisted of 72 general education students and 38 students with learning disabilities (LD). There were also four teachers involved in the study: three general education English teachers and one special education teacher, all of whom had more than 3 years of teaching experience. However, this was the first year of co-teaching for the teachers. The classes in the study consisted of one classroom with only general education students, two co-taught classes, two mainstream classes with no special education teacher present, and one resource English class. The two general education teachers teaching the co-taught classes were the same ones teaching the mainstream classes. In this case, the mainstream class consisted of both general education students and students with special needs. The resource English class followed the same curriculum but was taught at a slower pace and the expectations were based on the students' abilities. The researcher conducted a training session for the participating

teachers on the characters and essentials for successful co-teaching. Although attempts were made for teacher pairs to have common planning time, the schedule did not permit this to occur.

The researchers collected information on academic gains through a pre- and post-test; they also conducted several observations throughout the study. The student participants were given a pre-test at the beginning of the 10-week quarter and a post-test at the end. The test consisted of four parts from a standardized test which consisted of spelling, writing, reading comprehension, and vocabulary, plus mathematics as a control part. Student “achievement” was measured using the results of the standardized test and report card grades from the 10-week and 20-week grading period. The observation was conducted to make note of the instruction presented, the activities being conducted, and the interactions between instructors and students.

The results showed no academic significance between the groups from the pre-test and post-test or grades. While there was no significant difference in grades for any of the groups, the students with LD in the co-taught setting maintained their overall grade, while the students with LD in the mainstream setting grades decreased. The grades decreased only slightly and it was not a significant difference. The observations did not find much of a difference in instruction methods used from co-teaching to mainstreaming or general education only. All of the settings used whole group instruction the majority of the time. The main difference between the co-taught and the other general education setting was the added special education teacher which the main role was to monitor the students while rotating around the classroom. The teachers were in the beginning stages of co-teaching of the general education teacher doing the instruction and the special education teacher monitoring. While this is not an ideal situation, it is what is often occurring in classrooms that consider themselves to be implementing co-teaching instruction.

The student interviews resulted in positive feedback overall. Students with LD preferred being in the general education classroom and having the support in the difficult classes. The teachers' interviews resulted in four common outcomes:

1. Teachers enjoy having another teacher in the room.
2. Very little co-planning time was given for curriculum or instruction.
3. The quality of discussions and student activities improved in co-taught classes.
4. Relationships developed over time.

Although there was no significant academic improvement in the co-taught classrooms, the interviews showed positive outcomes from the co-taught setting.

There were four main limitations in the study which included the duration of the study, sample size, teaching styles, and standardized tests. Standardized tests were used to measure student achievement. The standardized test was used because of the availability and ease of use. This is not an ideal type of test given the shortness of the study. The duration of the study was only 10 weeks which was not much time to give students to make gains on a standardized test. When using standardized testing, a longer duration would have been beneficial. The sample size was limited to one school and a small group of students. A larger group with students from various schools would increase the reliability of the study. The teaching styles were different from classroom to classroom and the different methods of co-teaching were not used to see how they would impact the students.

Wilson and Michaels (2006) surveyed 346 secondary students in various co-taught English classes about their perceptions of the benefits and drawbacks of co-teaching. Of the 346 students, 127 received special education services, and the remaining 219 students were general

education students. This qualitative and quantitative study consisted of students in seventh grade through eleventh grade from 17 different co-taught classrooms throughout the district. At the time of the study, the district had been implementing co-teaching for approximately 5 years.

Wilson and Michaels (2006), along with one of the high school English teachers from the study, created the questions for the survey. Before the surveys were given to the students, they were reviewed and edited by the district's collaboration board. The collaboration board consisted of administrators and both general education and special education teachers participating in co-teaching. The surveys were modified with all of the edits and modifications from the collaboration board before being submitted to the students. The survey consisted of yes/no questions, numerical value rating questions with a rating from 1 to 5, and three open-ended questions. The survey was given to the students during their co-taught class, yielding 100% student participation. The students took the survey anonymously during the last 2 weeks of the school year.

The students were asked to rate nine questions on a scale of 1 through 5 with 5 being the most favorable and 1 being the least. Each question was given its own detailed rating scale; for example: "in response to the question do you like being taught in a class with two teachers?" The students were given the following choices: "I couldn't pass without two teachers," "I did better with two teachers," "It didn't matter to me," "I did worse with two teachers," "I really disliked having two teachers." Of the nine questions asked, these five pertain to the topic of review.

1. Do you like being taught in a class with two teachers?
2. How often do you go for extra help?
3. Do you think your reading skills have improved?

4. Do you think your writing skills have improved?
5. Would you choose a class with two teachers next year?

The researchers used independent *t*-tests to compare the students' responses. The special education (SE) students and the general education (GE) students both rated Question 1 and Question 5 favorably. Overall, their scores indicated they enjoyed being in a class with two teachers (SE:  $M=3.67$ ,  $SD=0.93$ ; GE:  $M=3.26$ ,  $SD=0.76$ ) and would choose a class with two teachers the following year if given the choice (SE:  $M=3.98$ ,  $SD=1.36$ ; GE:  $M=3.49$ ,  $SD=1.34$ ). While both groups responded favorably, the special education students showed a significantly more positive response than the general education students ( $p < 0.01$ ). The special education students were also significantly more likely to seek extra help ( $M=2.6$ ,  $SD=1.4$ ) than the general education students ( $M=2.02$ ,  $SD=1.82$ ). Both groups of students felt their reading (SE:  $M=3.86$ ,  $SD=.83$ ; GE:  $M=3.65$ ,  $SD=.66$ ) and writing skills (SE:  $M=3.92$ ,  $SD=.80$ ; GE:  $M=3.99$ ,  $SD=.72$ ) improved during the school year.

The qualitative data from the three open-ended questions were sorted into categories with similar answers and also by the students with special education services and the general education students. The longer more complex answers were broken into multiple statements of similar content. The researchers worked together to create categories in which the responses could be sorted. The following table (Table 1) is an example of how the responses were divided for the question: "What do you think are the benefits of being taught by two teachers?"

Table 1

*Students' Survey Responses to the Benefits of Co-Teaching*

CATEGORY	RESPONSES
Availability of help	<ul style="list-style-type: none"> <li>● It is easier during individual or group work for everyone to get help</li> <li>● One teacher might be doing something so the other teacher can help you</li> <li>● I like it when there are two teachers in the room because you could ask them for help</li> <li>● You can always get help from one of them</li> </ul>
Structural support	<ul style="list-style-type: none"> <li>● There is a better chance your question is going to be answered</li> <li>● While one teacher teaches, the other makes sure you pay attention and take notes</li> <li>● It helps me because they explain things better</li> <li>● Two people are watching you, observing you, and checking up on you</li> </ul>
Multiple perspectives and styles	<ul style="list-style-type: none"> <li>● Teachers have different methods of teaching different things</li> <li>● You don't get tired of the same teacher all the time</li> <li>● Two minds can sometimes be better than one</li> <li>● Multiple perspectives and different opinions</li> </ul>
Skills and grades	<ul style="list-style-type: none"> <li>● You get a better understanding of the assignment</li> <li>● I learn better</li> <li>● It helps me get better grades</li> <li>● You are more likely to succeed</li> </ul>

*Note:* Adapted from “General and special education students’ perceptions of co-teaching: Implications for secondary-level literacy instruction.” Wilson & Michaels (2006), *Reading and Writing Quarterly*, 22(3), 205-225.

The most common benefit reported by both groups of students was more help available to them when needed; 55% of the special education students and 47% of the general education students rated this as a benefit. The students were also asked what they felt the drawbacks were. Table 2 shows some of the student responses for “What do you think are the drawbacks of being taught by two teachers?”

Table 2

*Students' Survey Responses to the Negative Effects of Co-teaching*

CATEGORY	RESPONSES
Structural supports	<ul style="list-style-type: none"> <li>● If one teacher is reading to a student while you are trying to do work, it is distracting</li> <li>● It is annoying to have one teacher teach and the other pacing the room scanning our papers to find out if we understand</li> <li>● Can't get away with much</li> <li>● You can't do your homework for other classes because they are watching you</li> </ul>
Multiple perspectives and styles	<ul style="list-style-type: none"> <li>● Different methods of teaching</li> <li>● They might disagree on certain things</li> <li>● One might say one thing and the other could say something else</li> <li>● The teachers may contradict each other</li> </ul>
Skills and grades	<ul style="list-style-type: none"> <li>● A little more homework</li> <li>● They grade harder</li> <li>● They give you more work</li> <li>● Grading is harder</li> </ul>

*Note:* Adapted from "General and special education students' perceptions of co-teaching: Implications for secondary-level literacy instruction." Wilson & Michaels (2006), *Reading and Writing Quarterly*, 22(3), 205-225.

Wilson and Michaels (2006) concluded both students of the general education and students with special needs had positive outcomes from the co-teaching experience. Both groups felt the co-teaching setting was a more favorable learning environment. Students felt they made improvements in their literacy skills, even though improvements did not reflect on their report cards. Both student groups also reported growth in their personal confidence.

The authors noted several limitations of this initial attempt in gathering data on student perceptions. Use of a convenience sample rather than a random sample and students from a single school district limited the study by reducing the variety of perceptions. In addition, the student surveys were the only focus of the study. There was no follow-up to see what was

actually happening in the classrooms, nor were any tests conducted to verify student performance. Finally, no other stakeholders were surveyed other than the students.

Packard et al. (2011) investigated whether ninth-grade students with learning disabilities (LD) achieved better in a co-taught setting or resource setting. This study was done at a high school that had been using co-teaching for the last 6 years. The sample included 14 ninth-grade students with LD, nine of whom which received services through a co-taught class setting and the other five received services through a pullout resource room setting. The students were pre-selected due to the classes they were enrolled in. The teachers involved in the study were interviewed to ensure they used instructional teaching practices considered essential for co-taught classes. These practices included the following: a) both teachers were responsible for the instruction of the students, b) teachers used the teaching strategies of parallel teaching and alternative teaching, and c) the teachers were provided with and utilized a common planning time of a minimum of 1 day a week.

The researchers administered a pre-test and post-test to students with LD to determine the growth they made over a 12-week period. The test questions came from an End of Course Test (EOCT) for ninth grade. The EOCT was selected because it was a test used by the state's Department of Education to determine the achievement ability of students. On average the EOCT consisted of 75 questions, the pre- and post-test used 40 of the 75 questions from the original test. The same tests and procedures were used for both the pre-test and the post-test. Twelve weeks later, students who had testing accommodations in their Individual Education Program (IEP) received the same accommodations during the pre- and post-test.

The results showed no significant difference in the test results between pre- and post-tests. However, the students who received services in the resource room had higher growth than those in the co-taught class. This study goes against the assumptions of co-teaching being a better placement for students. The students with LD in the resource setting made more academic gains than students with LD in the co-taught setting.

Although the sample size was a big limitation in this study, there were several other limitations. The students were not from a random sample, therefore, there was not the same level of control used in true experimental design. The teachers' classrooms in which the students were placed in for co-teaching were interviewed to determine if they were knowledgeable of various co-teaching strategies; however, they were not observed to ensure they were using these strategies. Finally, students were aware they were not being graded on the tests used for the study. Students often are not motivated to do well on tests when the test did not count toward their grade.

Bouer (2013) examined inclusion in secondary schools from the perspectives of general education teachers, special education teachers, and administrators in southern California. She hypothesized that while all groups perceived inclusion as beneficial, special education teachers would perceive a greater benefit. An email survey was used to anonymously collect data from a variety of schools including 85 general education teachers, 30 special education teachers, and 29 administrators. The survey did not differentiate co-teaching from simple inclusion. The three groups were surveyed in four areas: psychological benefits, behavioral benefits, academic benefits, and overall benefits. The questions were rated on a 6-point Likert scale: 1=Strongly Disagree, 2=Disagree, 3=Not sure, but tend to disagree, 4=Not sure, but tend to agree, 5=Agree,

6=Strongly Agree. To examine the strength of responses, the author set a median score of 3.50 and calculated the distance from the median for each of the groups examined.

The mean scores of each group of participants are listed in Table 3. The researcher identified four areas for three groups yielding a total of 12 scores. Of the 12 scores, only two were above the median score of 3.50 and those were only slightly elevated. ANOVA results exploring the between-group differences for each area of benefits are displayed in Table 4.

Table 3

*Mean Scores of Participants' Perceptions of Benefits of Inclusion*

	PERCEIVED PSYCHOLOGICAL BENEFITS	PERCEIVED BEHAVIORAL BENEFITS	PERCEIVED ACADEMIC BENEFITS	PERCEIVED OVERALL BENEFITS
Special Ed Teachers	3.29	3.24	2.78	3.61
General Ed Teachers	3.13	3.13	3.1	3.29
Administrators	3.43	3.11	2.78	3.72

*Note:* Adapted from “Is inclusion really beneficial for students with mild to moderate disabilities? An examination of perspectives from secondary general education teachers, special education teachers, and administrators.” Bouer (2013) Unpublished Dissertation. Long Beach, CA: California.

Table 4

*Results of ANOVA Examining Between-Group Differences for Perceived Benefits*

	SIGNIFICANCE	EFFECT SIZE	NOTES
Psychological Benefits	yes	small	Gen Ed low
Behavioral Benefits	no		
Academic Benefits	yes	small	Gen Ed higher
Overall Benefits	yes	small	Gen Ed lower

*Note:* Adapted from “Is inclusion really beneficial for students with mild to moderate disabilities? An examination of perspectives from secondary general education teachers, special education teachers, and administrators.” Bouer (2013). Unpublished Dissertation. Long Beach, CA: California.

Some of the reasons the researcher noted for the negative academic outcomes were perceptions of teachers and administrators and test score results. Teachers and administrators might have a previous misconception that students in need of special education services should receive the services in a special education setting. Also, students with disabilities may have scored lower on standardized tests and this may lead to believe it is due to their placement. The low rating of behavior could be due to targeting the more moderate to severe disabilities.

While the survey was distributed to many schools across southern California, and a variety of teachers and administrators were included, Bouer (2013) also saw limitations in the participant sample. The sample size was small; only 113 participants were included in the final analysis. This was a small sample for generalizing. Also, both special education teachers for students with mild-to-moderate disabilities and teachers for students with moderate-to-severe disabilities were surveyed, but the survey results did not separate the findings for these groups. Another limitation could have been the survey tool used to gather the information. The

researcher used a modified version of Scales of Teachers' Attitude Towards Inclusive Classrooms. The populations for which this survey was not intended for may affect the results.

Miller and Oh (2013) studied the effects of professional development on co-teaching among 35 seventh- and eighth-grade students and 22 teachers from a large public school in California. Fifteen of the 35 students received special education services and the other 20 students were general education students. The teachers involved in the study had all participated in the professional development of co-teaching. The students were selected if they were part of the co-teaching classes and received special education services if they were general education students who received a "below basic" score on at least one standardized test.

The purpose of the study was to design professional development for successful co-teaching by identifying the components of co-teaching valued by special education and general education teachers and students participating in a co-teaching program. The authors hypothesized that students with special education services would benefit from more time spent in an inclusive setting and experience a higher level of academic achievement. The general education students were also expected to benefit in academics due to the additional support in the class.

The participants were surveyed before and after a co-teaching experience. The students and teachers were given a pre-survey at the beginning of the year and a post-survey at the end of the semester. The teachers involved in the study were instructed on three essential elements of effective co-teaching: strategies for co-assessing, co-planning, and co-instructing. The teachers scheduled co-planning time with their partners and followed the instruction they received on how to co-teach.

All students were asked questions about demographics and their exposure to co-teaching. General education students were also asked about their perceptions of special education students, while the special education students were asked about their self-perception of receiving special education services. Table 5 shows the results of the student surveys.

Table 5

*Pre- and Post-Survey Results from Both Groups of Students*

<b>Have you ever had two teachers teach one of your classes?</b>		
<b>SPECIAL EDUCATION STUDENT RESPONSE</b>	<b>PRE-SURVEY (First Week of School)</b>	<b>POST-SURVEY (Last 2 Weeks of the First Trimester)</b>
Yes	80%	80%
No	20%	20%
<b>GENERAL EDUCATION RESPONSE</b>	<b>PRE-SURVEY (First Week of School)</b>	<b>POST-SURVEY (Last 2 <u>W</u>eeks of the First Trimester)</b>
Yes	75%	100%
No	25%	0%
<b>Did you enjoy having two teachers or would you enjoy having two teachers? 1-7 Likert Scale</b>		
<b>STUDENTS</b>	<b>PRE-SURVEY MEAN</b>	<b>POST-SURVEY MEAN</b>
Special Education	4.7	5.2
General Education	6	5.4

*Note:* Adapted from “The effects of professional development on co-teaching for special and general education teachers and students. Miller & Oh, 2013. Journal of Special Education Apprenticeship, 2(1), 1-17.

There was no statistically significant difference between the pre-survey and post-survey results for enjoying having two teachers.

The general education students were asked about their perception of special education. The results for the survey are shown in Table 6.

Table 6

*General Education Students' Perceptions of Special Education*

<b>Do you know anyone at school who is receiving special education services?</b>		
	Yes	No
pre-survey(first week of school)	18%	72%
Post-survey (last two weeks of the trimester)	45%	55%
<b>Could someone in special education be your friend?</b>		
	Yes	No
Pre-survey (first week of school)	55%	45%
Post-survey (last two weeks of the trimester)	84%	16%

*Note:* Adapted from “The effects of professional development on co-teaching for special and general education teachers and students. Miller & Oh, 2013. *Journal of Special Education Apprenticeship*, 2(1), 1-17.

These results identified a positive interaction when students were exposed to diverse groups of students. General education students were asked why someone in special education could be their friend. In the pre-survey, 27% of the students' responses were related to having an inclusive philosophy toward their peers, and in the post-survey the percentage increased to 61%. In the pre-survey, 4% of the students indicated they would be friends with someone in special education “because someone in their family has special needs” and in the post-survey no one gave this as a reason. Also, in the pre-survey, 23% of students indicated they would be friends with someone in special education because they wanted to show good character traits, and in the post-survey this number decreased to 17%. One-third of the general education student participants said they would socially accept peers with disabilities because it is their intrinsic

right to be included. The authors concluded, exposure to students different from themselves increased inclusivity and acceptance of differences in students.

The special education students were also asked questions about their perceptions of special education and how it helps them in school. In the pre-survey, 92% of the students responded that being in special education helped them in school, and in the post-survey, that number decreased to 64%. Although, the decrease seemed to be a negative impact; the authors reasoned it could be a result of students receiving services in more inclusive settings and having the perception they were not necessarily receiving special education services.

The special education and general education teachers were asked the same questions regarding the sources from which they received information on co-teaching. The special education teachers had many areas in which all of them have received information on co-teaching including articles, books, observations, experience, and colleagues. However, the general education teachers received information on co-teaching from fewer sources with 54.55% of the teachers gaining knowledge through professional development and the next highest area being through colleagues, with 45.45% of the teachers having gained information in this way. The teachers were also asked 11 questions about their beliefs on co-teaching. There were no statistically significant changes from their responses in pre-survey to post-survey. Table 7 shows the mean from 1-3 scale scores from the pre- and post-surveys on the teachers' beliefs on co-teaching.

Table 7

*Teachers' Beliefs on Co-teaching*

QUESTIONS	SPECIAL EDUCATION TEACHERS' MEANS		GENERAL EDUCATION TEACHERS' MEANS	
	Pre-Survey	Post-Survey	Pre-Survey	Post-Survey
How much do you know about co-teaching?	2	2.5	2.083	2.182
I have received formal training on co-teaching.	1.5	2	1.474	1.545
I believe co-teaching is a good teaching option.	3	3	2.658	2.727
I think co-teaching can help with content delivery.	3	3	2.764	2.727
I think that co-teaching can help with classroom management.	3	3	2.711	2.272
I think anyone can co-teach.	2.5	1	2.263	1.545
I think co-teaching is a good idea for college classes.	2.5	2.5	2.176	2.091
I think co-teaching is a good idea for K-12 classes.	3	3	2.412	2.545
I am interested in co-teaching myself.	3	3	2.421	2.455
I am excited about co-teaching in the future.	3	3	2.444	2.364
I am nervous about co-teaching in the future.	2	2	1.944	1.727

*Note:* Adapted from “The effects of professional development on co-teaching for special and general education teachers and students. Miller & Oh, 2013. *Journal of Special Education Apprenticeship*, 2(1), 1-17.

The overall scores from both groups of teachers were very similar. There were no statistically significant differences between the groups or the pre- and post-surveys. Overall, both groups gave positive feedback on both surveys. They both felt strongly that using co-teaching across all grades was beneficial to students.

The one question in which both groups decreased by 0.5 or more was: “I think anyone can co-teach.” Special education teachers decreased their mean score by 1.5 and general

education teachers mean score decreased by 0.718. All teachers appeared to have developed a new respect for the challenges co-teaching presented.

The teachers were also surveyed on their own abilities and tolerance levels for different aspects of the classroom, rating themselves on a 1-7 Likert scale. There was no statistically significant difference between the groups or between the pre- and post-surveys. However, interesting trends appeared in a number of areas. Regarding abilities to modify instruction, previous research showed special education teachers were more likely to be experts in the ability to make modifications and differentiation. In the Miller and Oh (2013) survey, special educators rated their ability on an average of 5.5 on the Likert scale, whereas general education teachers rated themselves at 4.7 on the pre-survey and 5.2 on the post-survey. Regarding content knowledge, previous research showed general education teachers were experienced in content knowledge. In the survey general education teachers rated themselves on average 6.125 on the pre-survey and 6.25 on the post-survey on a Likert scale and special education teachers rated themselves on average 3.0 on the pre-survey and 4.5 on the post-survey. These results are consistent with previous research and showing the two teacher groups have different skill sets they bring to the table and they can learn important skills from each other.

Overall, Miller and Oh (2013) identified benefits for both the special education and general education students along with the special education and general education teachers. The students gained acceptance of each other and helped with a shift toward inclusion. The teachers learned different skills from each other.

While there were benefits for both groups of students and teachers, the authors reported limitations to the study. It was difficult to get student participants due to the logistics and the

lack of relationship the researcher had with the students. There was also a small sample size for special education teachers, as many were not available to attend the professional development and were therefore not included in the study. The teachers were from a convenience sample and not a random sample. They were teachers who participated in the professional development on co-teaching and were willing to participate in the survey. Finally, the authors questioned if all of the students receiving special education services were able to understand the questions on the survey as some of their responses were not consistent with what was true on their Individual Education Plans.

### Summary

This section presented the findings of five studies which discussed the benefits of co-teaching for everyone involved. Table 8 provides a summary of these findings.

Table 8

#### *Summary of Benefits of Co-teaching for All*

AUTHOR/DATE	PARTICIPANTS	METHOD/ PROCEDURE	RESULTS
Murawski (2006)	Urban high school out of Los Angeles ninth-grade students 72 general education students and 38 special education students	The general education students were put into three groups (co-taught, mainstream, and general education only). The special education students were put into three groups (co-taught, mainstream, and special education only). All students were given a pre-test at the beginning of the quarter and a post-test at the end of the quarter.	There was no significant difference in the delivery method. However, students with disabilities that participated in the co-teaching setting did improve more on the spelling and reading comprehension portion of the test than the students with disabilities in the other settings.

Table 8 (continued)

AUTHOR/DATE	PARTICIPANTS	METHOD/ PROCEDURE	RESULTS
Wilson & Michaels (2006)	Three hundred forty-six secondary students in 17 co-taught English classes in middle school and high school in grades 9-11, 127 of the students were classified as special education students and 219 were general education students from a large suburban school district	Surveys were distributed to all students during their co-taught English class during the last 2 weeks of the school year. Surveys were anonymous and completed in class, 100% of the surveys were returned.	Results of the survey indicated both general education and special education students indicated they were favorable toward a co-taught class. Both groups of students also indicated they would choose a co-taught class the following year. Both groups of students also indicated that they felt their reading and writing skills improved.
Packard, Hazelkorn, Harris, & McLeod (2011)	A metropolitan area in a southern state 14 special education students of which some were receiving services in a co-taught classroom and some were receiving services in a resource room setting	Students were given a pre-test and post-test with a 12-week span in between. The students were given 40 questions taken from the End of Course Test for a ninth-grade literature course.	The results of the independent t-test showed no significant difference between the two groups. However, the mean score of students in the resource room was higher than the mean scores of the students in the co-taught.
Bouer (2013)	Administrators, special education teachers, and general education teachers in seven school districts in southern California	Surveys were given out to administrators and teachers in seven districts. Questions on the surveys pertained to the benefits of inclusion in the areas of psychological, behavioral, academic and overall benefit	There was no significant difference in the groups overall. However, particular groups showed significant differences. Administrators perceived a higher psychological benefit.
Miller & Oh (2013)	Teachers who participated in a professional development on co-teaching and students from their classes. Thirty-five students were selected from two groups group one 35 students from the general education population who received "below basic" on at least one standardized test. Group two 15 students were students receiving special education services.	Pre- and post-surveys were given to teachers and students. Teachers completed a pre-survey at a training in August and a post-survey in December of the same year. Students were given a pre-survey during the first week of the school year and a post-survey during the last 2 weeks of the semester.	There were no statistically significant changes in the pre-survey and post-survey results.

### **Best Practices and Strategies for Implementing Co-teaching**

Gerber and Popp (2000) conducted a study to identify recommendations to improve co-teaching. The team conducted extensive interviews with co-teachers both general education and special education co-teachers, administrators, students with and without disabilities, and parents of students with and without disabilities in 10 schools from five school districts. In all, there were a total of 309 participants, 14 administrators, 103 teachers, 53 general education students, 70 special education students, 32 parents of students in general education, and 37 parents of students in special education. The participants were from four elementary schools, four middle schools, and two high schools which had implemented co-teaching programs for at least 2 years. The middle school and high school had co-teaching in the four core classes, math, English, science, and social studies. The administrators were interviewed one-on-one and the remainder of the groups were interviewed through subgroups. On average the interviews lasted 45 minutes for administration, 90 minutes for teachers, 30 minutes for parents, and 25 minutes for students. Interviews were held in the spring of the school year, so participants had completed a significant amount of a school year with co-teaching experience.

All recommendations were deemed equally important and therefore not placed in priority order. Recommendations were divided into two broad categories with general recommendations focusing on what could be done to improve the service delivery model for co-teaching, and training recommendations focusing on how to prepare teachers to implement co-teaching in both pre-service and in-service training. There were three categories under the general recommendation delivery of services--administrative issues, and communication, and four

categories under the training recommendation new personnel--indirectly involved personnel, parent training, and the university role.

Regarding the delivery of service, Gerber and Popp (2000) recommended schools set a minimum amount of time teachers are to spend in planning based on needs. If this minimum is not met, the authors suggested the co-teaching will not be successful. In the area of establishing limits, Gerber and Popp recommended limiting the inclusion of students to those who were “academically able” and determining the class was a good fit for the student rather than a ratio of special ed to general ed, or type of disability. The class should not a place for students with special education services who have no other place to go. Regarding maintaining multiple service delivery options, Gerber and Popp stressed the need for a variety of options for students to receive services such as self-contained classes, resource rooms, and other mainstream settings. Some students could also participate in a co-teaching setting as well as participate in a resource room for more intense services. To ensure program continuation, Gerber and Popp recommended students participating in a co-taught classroom continue with a co-taught class the following year.

The four recommendations for administrative issues were strategic scheduling, planning time, voluntary participation, and program evaluation. Gerber and Popp (2000) recommended schedules based on student needs with special education teachers scheduled in the classroom on a daily basis. The planning recommendations included prioritized planning with regular planning times to discuss pre-planning, team building sessions, and sessions for problem-solving. A final recommendation emphasized the voluntary participation of teachers. Teachers should not be forced into co-teaching as this diminishes the collaborative relationship.

Austin (2001) surveyed 139 teachers who taught in grades kindergarten through 12<sup>th</sup> grade in nine school districts in New Jersey to determine what they felt were important factors and effective strategies affecting collaborative teaching. Of the 139 teachers surveyed, 46 were special education teachers. In each of the nine districts, there was a minimum of six co-teaching pairs. The majority of the teachers taught at either the middle school or high school. The survey questions centered on four categories; co-teacher perceptions of current experience recommended collaborative practices, teacher preparation for collaborative teaching, and school-based supports facilitating collaborative teaching. The surveys were distributed to the teachers by the researcher with time to complete the survey on the same day and collected the following day. After the surveys were completed, teacher participants were selected at random to be a part of a more in-depth interview.

The teachers had similar ratings in three out of four of the categories. The first category, co-teacher perceptions of current experience, both the general education and special education teachers believed the general education teacher did more in the inclusive classroom. They also both agreed co-teaching was a worthwhile experience. The second category recommended collaborative practices; both groups of teachers agreeing that meeting daily to plan lessons is of great importance. However, the groups which were able to meet daily disagreed about how effective the practice was. Both groups also valued shared classroom management and instructional duties. Although, they did not practice the responsibilities. For the third category, teacher preparation for co-teaching, there was a significant difference in the percentage of teachers that felt the placement of a student teacher in a collaborative teaching setting to be useful. A large percentage of special education teachers 91.3% felt it was useful while only

70.5% of general education teachers felt it was useful. Another difference was the usefulness of special education courses for the general education teacher in preparation for inclusive teaching. Sixty-five percent of special education teachers felt it was important, while only 37.8% of general education teachers felt it was necessary. The final category, school-based supports that facilitate co-teaching, both groups of teachers mutually agreed about the importance of scheduled planning time.

The results from the interviews showed both groups had a positive experience with co-teaching. Both groups of teachers felt the use of cooperative learning and small groups were the most effective instructional strategies. Also, the teachers agreed that co-teaching had positive effects on their professional development. Special education teachers reported they were able to gain content knowledge, while the general education teachers reported they were able to improve their skills in classroom management and curriculum adaptation. The majority of the co-teaching pairs were pleased with their current co-teaching assignment; however, they felt they need more support from the school and more planning time. Other benefits that were noted in the interviews were benefits to all students in promoting tolerance for differences, and peer modeling for students with disabilities. However, there were also some concerns from the teachers for academic performance to be disrupted by students with disabilities. The special education teachers felt responsible for the modifications of lessons and the general education teachers felt they were more responsible for the general lesson planning.

Austin (2001) concluded successful co-teaching needs co-planning time and administrative support. Another component, making use of both the teachers to teach the class and using the proper co-teaching methods. In addition, co-teaching has many benefits for

everyone involved. The teachers have an opportunity to learn and increase their skill set from each other. Also, the students are able to benefit from gaining tolerance for differences and having positive peer modeling.

There were several limitations noted by the researcher in this study. There was a small sample size and they were all from a school which was considered middle class. In addition, the participants could have had a predisposition about co-teaching which could have caused them to answer the survey questions and interview questions with potential biases.

Magiera and Zigmond (2005) compared the outcomes of placing students with disabilities in a co-taught classroom versus giving them instruction in the general education setting with only the general education teacher. The participants in this study were from three different school districts from four western New York middle schools in grades five through eight. Of the schools participating, there was one from a rural area, one from the suburbs, and two from a small urban area the class sizes ranged from 18-27 students with the number of students with disabilities ranging from 5-15 per class. There were eight co-teaching pairs of teachers that volunteered for the study, four of the pairs were teaching together for the first time, and the other four had been together for less than 2 years. Some of the teachers co-taught together for multiple classes; in all there were 11 co-teaching classrooms to be observed. Before the school year began, there was a professional development on co-teaching offered to the teachers; however, only half of the teachers were able to participate in the professional development. Eighteen of 35 students returned permission to participate in the study. Of the 18 students with disabilities participating in this study, 15 were classified as having a learning disability (LD) and the other three were classified as other health impairments (OHI). The

students were placed in classes under routine conditions and the teachers were not given any additional training or planning time. The researchers conducted four observations in each of the two conditions of co-taught classrooms and solo taught classrooms. In some of these cases, the co-taught and solo taught classes were the same classroom and the special education teacher was either present or not present. The observations took place while active instruction was happening in typical lessons that consisted of reading, writing, solving problems, or any combination of the three.

There were 13 different areas in which the observers were monitoring during the observations. They were as follows; students working alone, students working in small groups, students working as part of a whole class, student 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 direction, and student participation. During each 45-minute observation, the observer collected time-sample data on observable behavior at the end of a 10-second interval. Within each observation, up to six students were observed with each student being observed once every 3 minutes. At the end of the 10-second interval, the researcher noted the following five areas on the individual being observed: 1) co-teaching or solo-taught, 2) group size, 3) on/off task student behavior, 4) interaction with the general education teacher, special education teacher, other adults, or student, and 5) nature of interaction.

There was a statistically significant difference in two of the 13 variables that were measured. One of the significant differences was in the area of teacher interaction with the target student. The target students received individual instructional interaction in the co-taught

classroom 2.2% of the time and in the solo-taught classroom, it was only 1% of the time. In one of the co-taught classrooms, there were not any observations of individual instructional interactions with the target student. In the solo-taught classroom, six out of 11 of the classes the target student did not receive any individual instructional interaction. The other statistically significant difference was the general education teachers interactions with the target student. In the co-taught setting, the general education teacher interacted with the targeted students 45% of the time. In the solo-taught classrooms, the general education teacher interacted with the target student 62% of the time. The special education teachers seemed to make up for this lack of interaction. In the co-taught classroom, the combination of teacher interaction was 67% and there was no significant difference between total teacher interaction and the interaction during the solo-taught classroom. The remainder of the variables had no significant differences. There were some variables in which the results varied greatly from class to class this is indicated by a large standard deviation. One variable in which there was a large standard deviation was the use of small groups in the co-taught classroom. Other variables which had a standard deviation greater than 10 in the co-taught classroom were; working alone, whole class instruction, and content instruction to the group.

There were several limitations including: small sample size, lack of teacher training, lack of common planning, the same classroom for both settings, and no student outcomes. The small sample size consists of only eight pairs of co-teachers and 18 students. The participants were all from western New York middle schools. If the teachers had any professional development related to co-teaching, it was limited and many of the teachers involved in the co-teaching did not have any training in the area of co-teaching. The co-teaching pairs also did not have

scheduled co-planning time and, therefore, some of them did not have weekly co-planning time. The classrooms used for co-teaching and solo-teaching were the same classrooms. This created potential threats to the validity of the study.

Simmons and Magiera (2007) were invited by a school district to conduct a study to determine if effective co-teaching was being used at three high schools in a suburban district. The researchers focused on two questions:

1. What does co-teaching in action look like at the secondary level in this school district?
2. How are teachers co-planning and making instruction decisions at the secondary level?

Simmons and Magiera (2007) conducted observations of the classrooms and follow-up interviews of the general education and special education teachers. There was a variety of different content areas and grades involved in the study. The grades ranged from ninth to twelfth and the classes were from English, math, science, and social studies. The interviews were conducted with each teacher individually and lasted between 20 and 30 minutes.

The three high schools were labeled as High School A, High School B, and High School C. High School A was described as the “traditional” high school, High School B was representative of a “large suburban” high school, and High School C was characterized as an “open classroom” high school. The smallest school was High School A and used department chairs as their general education teacher in the co-teaching pair. High School B was the largest school in the study and had various interpretations of co-teaching. High School C, the open

classroom high school, was constructed with no permanent walls and had the least consistent interpretation of co-teaching.

The results of the interviews varied from school to school; there were some successful strategies that resulted from each co-teaching model. The three high schools were given a rating based on a rating scale of emerging, progressing, or developed. An emerging skill indicated the co-teaching methods were rarely occurring and given a rating of 0 to 1. A progressing skill indicated the co-teaching methods were occasionally occurring and given a rating of 2 to 3. A developing skill indicated the co-teaching methods were consistently observed and embedded within the instruction. High School A was given a rating of 4.3 developing, which indicated quality co-teaching methods were observed frequently. The teachers at High School A focused on planning together and both teachers were responsible for teaching and grading. The teachers worked together to map out the curriculum together which included some work together in the summertime. The teachers shared instructional roles and gave each other feedback on the lessons. High School A teachers also were more likely to share teaching roles and both teachers help all students in the classroom. Lastly, at High School A, teachers focused on placing students in groups for learning and presented their teaching in a variety of formats. High School B was given a rating of 2.0 progressing, which indicated co-teaching methods were observed occasionally. The general education teacher was primarily the lead teacher and the role of special education teacher was to review the material. They described their teachers as the general education teacher being the content specialist and the special education teacher the learning specialist. High School B believed in the use of mixed ability grouping for student learning. High School C was given a rating of 1.7 emerging, which indicated co-teaching

methods were rarely observed in the classroom. Although High School C was given a low rating, they still were using some good strategies; both were viewed as instructors in the class and attended content department meetings. Both special education and general education teachers felt it was important for teachers to be mindful of the different learning styles among students and lessons needed to be adapted to meet the needs of the students. High School C felt it necessary to implement instructional support classes to review content in a separate setting. Some of the downfalls from High School C were the general education teacher was solely responsible for planning and teaching the lessons. Special education teachers were primarily responsible for providing one-to-one instruction to students. Also, they did not implement different co-teaching methods.

Hang and Rabren (2009) conducted a study to determine the efficacy of co-teaching and the teachers' and students' with disabilities perspectives of this teaching approach. Seven schools from the southeastern U.S. were involved in the study; including four elementary schools, one middle school, one junior high, and one high school. A total of 103 persons participated including 31 general education teachers, 14 special education teachers, and 58 students with disabilities. Of the 58 students with disabilities participating in this study, 50 of the students completed the survey and submitted it. The teachers in the study were in their first year of implementing co-teaching in the areas of English/language arts, math, science, and social studies.

Hang and Rabren (2009) used observations, surveys, and record analysis to gather their results. The observations were used to ensure that co-teaching was done with fidelity. The surveys were used to gather perspectives of students with disabilities and the teachers on co-

teaching. The researchers also used student data such as SAT scores, discipline records, and attendance records to determine the effectiveness of co-teaching.

Teachers and students rated their perceptions of co-teaching the questions on a 5-point Likert scale ranging from strongly disagree to strongly agree. The teachers were given 31 questions in four different categories such as components of co-teaching, teachers' roles and responsibilities, teachers' expectations, and planning schedules. The students were given 19 questions covering the categories of differences between resource classroom and co-taught classroom, students' expectations, challenges, and advantages/disadvantages. The teachers were given directions to administer the surveys to the students with disabilities, so they could complete them anonymously. Of the 58 students with disabilities participating in this study, 50 students completed the survey and submitted it.

The survey revealed many positive outcomes for all three groups (general education teachers, special education teachers, and students with disabilities). Some of the opinions were consistent across groups while others applied to specific groups. One of the topics all groups agreed on was that students with disabilities showed growth in multiple areas including increased self-confidence, increased learning, increased feelings of having sufficient support, and increased positive behaviors while in the co-taught setting. While all groups agreed students with disabilities had sufficient support, the special education teachers identified with this statement significantly more strongly than did the other groups. The authors suggested this difference could be explained by the special education teacher's primary responsibility to support the students with disabilities.

Results concerning the teachers' views about co-teaching showed 100% agreement in valuing a common weekly planning schedule during school hours. The teachers felt they needed time to connect with their partner to discuss content, evaluations, behavior management, and other classroom issues. Teachers reported having time to connect with one another was an essential part of co-teaching, citing the need for time to discuss teaching expectations, methods, and instructional strategies.

While there were many positives reported by all three groups, there was only one negative perspective. Both the general education and special education teachers felt as though they were more responsible than the other teacher for the behavior management of the classroom. This was the only negative outcome of the survey from the teachers.

The data from school records of the students with disabilities comparing their co-teaching year to their previous school years showed some discrepancies. For example, all three groups surveyed stated they felt the behaviors were improved from the previous year; however, the school discipline records showed there were more discipline referrals for students with disabilities in the year they were involved in co-teaching. One explanation for this discrepancy offered by the authors could be the students had an additional adult watching them and available to notice when they were not behaving appropriately. Another contrast between school records and participants' perceptions involved attendance. The records showed students' attendance actually decreased from the previous year while the perceptions reported in the survey suggested improved attendance during the co-teaching year. The authors had no explanation for this discrepancy.

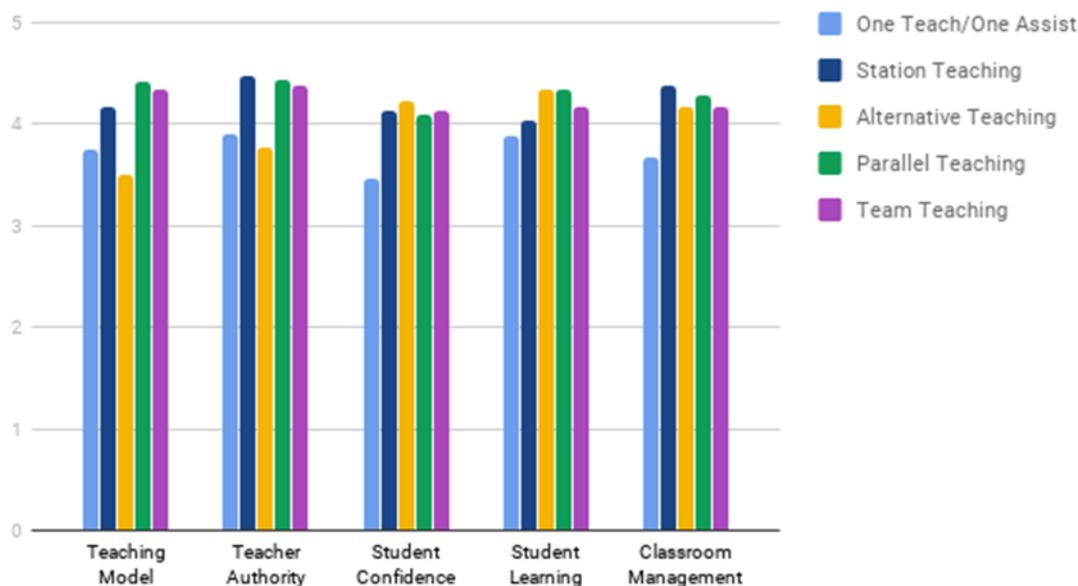
The students with disabilities test scores from the previous year were compared to the current co-teaching year. The results showed a significant improvement in both reading and math scores. The rate of improvement as compared to the general school population and no significant difference in the amount of gain was observed between groups. The authors concluded the students were making growth at the same rate as their peers.

Overall, this study found definite benefits for co-teaching. The student achievement scores showed the students with disabilities were able to make the same growth as their peers when participating in a co-taught classroom. The results from the survey showed the teachers and the students who participated in the study saw positive results from the co-taught setting for students with disabilities.

There were several limitations of this study that need to be considered when looking at the results. One of the limitations was the lack of a control group. The only participants the researchers considered were the students with disabilities participating in a co-taught setting. Another consideration for limitations was that the test results were from group-administered standardized tests which only assessed English/language arts and math. The students were participating in co-taught classes in English/language arts, math, science, and social studies. Finally, the teachers had only been using co-teaching as a teaching method for 1 year. There was no long-term measure to determine how co-teaching impacts students in the long term.

Keeley (2015) conducted a study to gather the perceptions of teachers and students regarding the five most commonly used co-teaching models: One Teach/One Assist, Station Teaching, Alternative Teaching, Parallel Teaching, and Team Teaching. The study took place at a large junior high in the southern United States. The school currently uses co-teaching as an

instructional model for services for students with special education needs. The participants in the study were part of an English Language Arts co-taught classroom which consisted of two teachers: one special education teacher, one general education teacher, and 24 students including those with special needs and general education students. The disabilities included specific learning disabilities, Autism Spectrum Disorder, and Attention Deficit Disorder. The study lasted for 10 days in which the teachers taught one of the five co-teaching models for 2 days in a row. After the second day the teachers and students each completed a separate rubric on their perceptions of the method which was just completed. The students and teachers rated their perceptions on the co-teaching model in the following areas: classroom management, teaching model (a measurement of the balance of teacher instruction), teacher confidence, learning, student confidence, and teacher authority. Figure 1 shows the students' perceptions for each category for each of the co-teaching models. In addition to the above, teachers rated their perceptions of the co-teaching model regarding student behavior and ease of implementation. The items were rated on a 1 through 5 Likert scale with 5 being the optimum choice.



*Figure 1.* Mean Ratings for all Student Responses as they Relate to the Specific Category and Co-teaching Model. Adapted from “Measurements of student and teacher perceptions of co-teaching models. Keeley (2015). *The Journal of Special Education Apprenticeship*, 4(1), 1-15.

Keeley (2015) concluded the teaching models in which students felt the most balance in teacher responsibility of Classroom Management was Station Teaching and Parallel Teaching. The model that received the lowest for Classroom Management was One Teach/One Assist. The students rated Parallel Teaching and Team teaching the highest for balancing the amount of instruction provided by each teacher (Teaching Model). One Teach/One Assist and Alternative Teaching received the lowest rating for Teaching Model. Student Learning was rated the highest with Station Teaching, Parallel Teaching, and Team Teaching. Additionally, students felt they learned the least with One Teach/One Assist. The Student Confidence ratings for One Teach/One Assist were significantly lower than all other teaching models. Finally, the students

rated the balance of power (Teacher Authority) between the teachers was significantly uneven between Alternative Teaching and Station, Parallel, and Team Teaching. Overall, Parallel Teaching, Team Teaching, and Station Teaching were given higher ratings and were more desired whereas One Teach/One Assist was consistently rated lower in all the categories.

The limitations noted by the researcher were the small sample size, the data collection method, and the short time of the study. The sample was from only one class of students, therefore making it difficult to generalize. The researcher's use of a Likert scale to measure the students' perceptions limited the study to the perceptions of a small group of students. The authors also suggested "the content of the instruction did not match the co-teaching model as well as it could have" (Keeley, 2015). Finally, the time frame in which data were collected was over a short period of time.

### Summary

This section presented the findings of six studies which discussed the best practices and strategies for implementing co-teaching. Table 9 provides a summary of these findings.

Table 9

#### Summary of Best Practices and Strategies for Implementing Co-teaching

AUTHOR/DATE	PARTICIPANTS	METHOD/ PROCEDURE	RESULTS
Gerber & Popp (2000)	Fourteen administrators, 53 general education teachers, 70 special education teachers, 32 parents of general education students, and 37 parents of students with special education needs from four elementary, middle, and high schools	Individual interviews were conducted with administrators of the schools. All other participants were interviews in focus groups.	Researchers placed recommendations into two groups: general and training. General recommendations focused on how to improve the system of co-teaching. Training recommendations focused on how to prepare teachers to co-teach.

Table 9 (continued)

AUTHOR/DATE	PARTICIPANTS	METHOD/ PROCEDURE	RESULTS
Austin (2001)	Kindergarten through 12th-grade teachers in nine districts from New Jersey 93 general education teachers and 46 special education teachers	Teachers were given surveys from the researcher. Some of the teachers were randomly selected to participate in an in-depth one on one interview.	Results from surveys reported successful co-teaching needs: co-planning time, administrative support, both teachers need to share the teaching responsibility and use proper co-teaching methods.
Magiera & Zigmund (2005)	Eighteen special education students and teachers from western New York middle school	Designed to determine if instructional experiences were different in co-taught settings and solo-taught settings for students with disabilities. Classrooms were observed four times in each setting for one 45-minute class period within a time frame of 3 weeks.	The significant difference found in one-to-one instructional interactions co-taught classes 2.2% of the time and less than 1% of the time in solo-taught classrooms. A significant difference in the interactions with general education teacher toward the target students. 62% of the opportunities in solo-taught classrooms and 45% of the opportunities in co-taught classrooms. There was no significant difference in the following: students working alone, the grouping of students, on-task behavior, students interacting with each other, whole class instruction, directions provided to the whole class, directions provided to individual students, or student participation.
Simmons & Magiera (2007)	Three high schools in a suburban district. One labeled traditional, one labeled large suburban, and the last one open classroom	The researchers conducted observations of the co-teaching classrooms and followed up with individual interviews of the teachers.	High School A was implementing more successful strategies than the other two schools.

Table 9 (continued)

AUTHOR/DATE	PARTICIPANTS	METHOD/ PROCEDURE	RESULTS
Hang & Rabren (2009)	Thirty-one general education teachers and 14 special education teachers from first grade to tenth grade. Also, 58 students with disabilities.	Data included observations, surveys, and record analysis. Observations were used to ensure co-teaching practices were being implemented. Students' SAT scores, discipline records, and attendance records were analyzed.	Statistically significant differences in the reading and math NCEs of the students with disabilities when compared to the previous year. No significant difference in student achievement between participants and all students of the same grade. A statically significant difference in discipline referrals.
Keeley (2015)	Thirty-seven students from a large urban school in a southeastern state receiving services in a co-taught classroom.	Students and teachers were given a rubric after different co-teaching models were used to determine if there are perceived differences in methods for either students or teachers.	There was a statistical difference in teaching authority, student confidence, student learning, and classroom management.

### Summary

This chapter presented a review of the 11 studies that examined benefits for all involved in co-teaching and what are the best practices and strategies for implementing co-teaching.

Conclusions and recommendations are discussed in Chapter 3.

### **Chapter 3: Conclusions and Recommendations**

The purpose of this literature review was to examine the benefits to all students in a co-teaching setting and to determine the necessary components of a successful co-taught classroom. In Chapter 1, I provided background information on the topic of co-teaching, and in Chapter 2 I presented a review of 11 recent and relevant research articles. In this chapter, I will discuss these findings as well as recommendations for future research and the implications for current practice.

#### **Conclusions**

Eight of the 11 studies I reviewed in Chapter 2 noted benefits for students and or teachers in co-taught classrooms (Austin, 2001; Gerber & Popp, 2000; Hang & Rabren, 2009; Keeley, 2015; Miller & Oh, 2013; Murawski, 2006; Simmons & Magiera, 2007; Wilson & Michaels, 2006). All of the studies conducted had all or some participants in a secondary school.

Self-confidence was one of the benefits reported by three of the studies (Hang & Rabren, 2009; Miller & Oh, 2013; Wilson & Michaels, 2006). Wilson and Michaels had students report they felt they made growth in their personal confidence. Miller and Oh also noted from student surveys they felt they gained confidence.

Co-teaching benefited the students with special needs but it also benefited the general students. Positive changes in student perspectives were reported by two of the studies (Austin, 2001; Miller & Oh, 2013). Austin concluded both students with special education services and general education students benefited from each other. General education students developed a tolerance for differences in students while students with special needs had more access to positive role models than in the resource room. Miller and Oh felt exposure to differences made students more accepting of each other. After being in co-taught setting students in the Miller and

Oh study reported they could be friends with someone in special education because “it is their right to be included.”

The studies sampled showed co-teaching was not just a benefit for students, it also benefited the teachers. Four of the studies reported the teachers also benefited from working with one another (Austin, 2001; Miller & Oh, 2013; Wilson & Michaels, 2006). All aforementioned studies asserted in some way how teachers were able to grow professionally through the co-teaching process. Special education teachers gained knowledge in the content area they were collaborating in; while general education teachers expanded their ability to make accommodations and adapt the curriculum.

Of the six studies focusing on strategies for successful co-teaching experience, four cited the importance of scheduled common planning time (Austin, 2001; Gerber & Popp, 2000; Hang & Rabren, 2009; Simmons & Magiera, 2007). Common planning time was considered not only necessary for curriculum planning but also for discussing classroom management issues such as interfering behaviors. Hang and Rabren reported teachers also felt they needed time to discuss which teaching methods to use, types of instructional strategies, teaching expectations, evaluations, and other classroom issues. Gerber and Popp concluded planning time should include time for pre-planning, team building, program evaluating, and problem-solving. In addition, collaboration should have a set minimum amount of time to ensure all the needs of the co-teaching model are being met. Simmons and Magiera reported teachers should also work together during the summer to develop curriculum.

Many of the studies made assertions about utilizing both teachers to their fullest (Austin, 2001; Gerber & Popp, 2000; Keeley, 2015; Simmons & Magiera, 2007; Wilson & Michaels,

2006). Four of the five studies recommended using multiple teaching methods to deliver the instruction to the students (Gerber & Popp, 2000; Keeley, 2015; Simmons & Magiera, 2007; Wilson & Michaels, 2006). Austin concluded the most effective results happen when students are in small groups each being led by one of the teachers and when cooperative learning is happening. Keeley reported teachers and students gave higher ratings when Parallel Teaching, Team Teaching, or Station Teaching were being used. Simmons and Magiera concluded both teachers are responsible for teaching and grading; as well as sharing the teaching roles and helping all the students.

Another area in which there were common results among studies was the lack of effectiveness when the improper implementation of co-teaching occurred (Magiera & Zigmond, 2005; Murawski, 2006; Simmons & Magiera, 2007). Magiera and Zigmond noted negative outcomes when students with disabilities were placed in a co-teaching setting but the interaction from the general education teacher was limited, with the special education teacher making up the difference. In these situations, the students did not make gains and did not show the benefits seen in the other studies. Murawski noted students with special needs participating in a co-taught setting were better able to maintain their grades; however, they did not note any other benefits when the co-taught setting did not implement a variety of teaching methods. Bouer (2013) did not differentiate between co-teaching and general inclusion; her results were negative in psychological benefits, behavioral benefits, academic benefits, and overall benefits.

## **Recommendations for Future Research**

Methodology limitations were present in all 11 studies I reviewed, therefore, all results must be interpreted with caution. Continued research is necessary to determine the benefits for all students and the best ways to implement co-teaching for greatest results.

All 11 studies were conducted in a limited demographic area (within one school, one District, or one state) which affects the generalizability of the results to other schools, districts, or states in the country.

The sample size was another significant limitation for all studies. The smallest, least generalizable, sample size was at a high school and consisted of 14 ninth-graders (Packard et al., 2011). The largest sample size was 144 participants including administrators, general education teachers, and special education teachers in Bouer's (2013) dissertation in southern California. Some of the studies should be replicated with larger sample sizes to determine generalizability to different geographical areas.

The studies were all done within a school year or less to provide true fidelity; the study should track students over many semesters. The long-term effects on the students Individual Education Program (IEP) should be tracked for true growth and benefit.

Most of the studies also lacked a control group to compare the co-teaching group to. The studies which did include a control group the co-teaching models were not used with fidelity. Therefore, it was not a good representation of the true benefits of co-teaching.

Another important methodological limitation was the measurement of perceptions rather than concrete outcomes. Many of the studies used a quantitative approach to measure perceptions by using Likert scales. This is limiting due to no actual concrete evidence of grades,

actual pre- and post-measures of self-confidence, related academic gains, and behavior referrals. Behavior referrals were used in Hang and Rabern (2009); however, the referrals did not match the perceptions.

### **Implications for Practice**

As a special education teacher at a secondary school, I have many roles. I teach a reading intervention class to sixth- and seventh-graders, I teach a reading and math skills class to students receiving special education services, I teach a resource class which consists of all the students on my caseload, and I co-teach English and math--which was a new role this year. Based on what I have learned, I am really pushing for scheduled planning time with all co-teaching pairs. Currently, team teachers are scheduled for bi-weekly collaboration time. I have requested for the special education teachers to be a part of the collaboration time with the team teachers for English and math. I have taught with the same English teacher for the past 4 years and it gets easier each year as we are getting accustomed to each other and I become more familiar with the curriculum. On the other hand, the math class I was in this year was much more challenging since it was my first year in her classroom.

I have also suggested to our administration, including the special education coordinator, to provide the co-teaching teams with additional training and professional development. When we first started co-teaching, we were provided with training, but it was at the beginning of the summer. This was not an ideal situation because we were not given the chance to apply our training right away. Since then we have adjusted to the curriculum and have also added teachers to co-teaching. Too often all of our teams fall into the One Teach/One Assist model where the special education teacher is the one assisting. This is not ideal because the students are not

getting the small group instruction which is one of the benefits of the co-teaching model. I think we need further training on how to implement different models in the classroom. I have discussed with my teaching partner, and she agrees, we need to start looking at how to better serve all the students. I have also encouraged other teaching pairs in the building to look at the co-taught class completely different than the rest of their classes. The structure of the class should not be the same; if it is, we are not doing justice to co-teaching and we are not doing justice to our students.

Another area in which we have failed the students as a department was by putting too many students with special needs in one classroom, just because they received special education services. When we plan our schedules for next year, we will consider the diversity of students' needs and offer more consideration as to whether or not co-taught classroom meets those needs. As mentioned in Gerber and Popp (2000), some students may need to remain in a resource setting and some students may need both a resource setting and a co-taught setting. It is important when scheduling the students to look at what their needs are.

I was pleased to learn about the benefits for all involved. I myself have definitely grown as a professional from working so closely with my coworkers. I have been able to take strategies I have learned from being in the English class and apply them to my reading intervention classes. I also feel I have a greater connection with my students and I am more available to them when they are needing assistance in my room.

Hang and Rabren (2009) mentioned how behaviors appeared to be improved but in reality, there were more behavior referrals. One of the reasons given was four eyes see more than two. This is true but I wonder how often it becomes more of a tolerance issue or the student

and teacher not seeing eye to eye. I have seen it in my own building with students I have cased managed in the past. I have had students have twice as many referrals from one teacher over another. There are many factors that could lead to more behavior referrals however, I feel these are probably two of the major ones.

### **Summary**

Co-teaching has become an increasingly more common method of serving students in special education; it provides service and support to them in the least restrictive environment. The overall findings in these studies suggest there are benefits of co-teaching; however, not necessarily always academically. In order to have a successful co-teaching setting, it is necessary to have planned collaboration time and effectively implement the various co-teaching models with Parallel Teaching, Team Teaching, and Station Teaching being used the majority of the time and One Tech/One Assist being used the least.

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