All Electronic Theses and Dissertations

2023

Collaborative teaching in the inclusive environment: A review of teaching models, benefits, barriers and preparation

Travis B. Rotegard
Bethel University

COLLABORATIVE TEACHING IN THE INCLUSIVE ENVIRONMENT: A REVIEW OF TEACHING

MODELS, BENEFITS, BARRIERS AND PREPARATION

A MASTER'S THESIS

SUBMITTED TO THE FACULTY

OF BETHEL UNIVERSITY

BY

TRAVIS B. ROTEGARD

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

MASTER OF ARTS IN EDUCATION

JULY 2023

BETHEL UNIVERSITY

COLLABORATIVE TEACHING IN THE INCLUSIVE ENVIRONMENT: A REVIEW OF TEACHING

MODELS, BENEFITS, BARRIERS AND PREPARATION

TRAVIS B. ROTEGARD

JULY 2023

APPROVED

Thesis Advisor: Nathan Elliott, M.A.

Program Director: Katie Bonawitz, Ed.D

Acknowledgments

I would like to personally thank Nathan Elliott for his positivity, patience, and feedback during this process. I have truly improved as a writer throughout this process, especially in the area of making my work more concise. I would also like to thank and acknowledge Dr. Katie Bonawitz, who throughout my time at Bethel University has been helpful and positive. I would also like to acknowledge Lisa Silmser for her feedback on my project as well as for being my second reader. I would also like to thank the Librarians at Bethel University for being of great assistance in getting access to many sources throughout the research process. Lastly, I would like to thank my friends and family who constantly checked in with me on how this journey was progressing. My appreciation for the people listed above is unlimited.

Abstract

This literature review explains the definition of collaborative teaching (co-teaching) in the inclusive environment. It explores the co-teaching models, and the opinions of those models through the lens of professionals and students. This review also covers the outlook professionals and students have on the benefits and difficulties of coteaching. Lastly, it reviews if and how professionals are being adequately prepared for co-teaching. This study found that co-teaching is not a one size fits all method for being effective co-teaching teams. Teachers must understand the co-teaching models and understand their students' needs to ensure they are servicing students in an effective manner. This review also found that some of the benefits mentioned throughout the

studies were also labeled as difficulties by others. The research found that it takes more than just two teachers in the room to operate an effective co-taught classroom. Collaboration, communication, and being open-minded are some of the skills needed to be effective. Lastly, this project reveals that pre-service and current professionals benefit from co-teaching training through college course work, student teaching, and professional development. Ultimately, this study indicates that when teachers work together with communication, collaboration, and understanding the different models leads to successful inclusive environments. When a co-taught classroom is successfully implemented and practiced, it leads to students with or without disabilities feeling a part of their school community leading them to an increase in their self-belongingness.

Table of Contents

CHAPTER I: INTRODUCTION

Context

This literature review analyzes the practice of collaborative team teaching (Co-teaching) in classrooms servicing students with and without disabilities. This topic fits into the evolution of education as co-teaching has seen an increase in its implementation since the Individuals with Disabilities Education Act (IDEA) was passed in 1994 (Hicks-Monroe, 2011). IDEA was passed for schools to instruct students with disabilities in a more inclusive environment with their sameage general education peers. This ensures that all students have an equal opportunity for the best free and appropriate public education being serviced in their least restrictive environment (L.R.E.). As inclusive settings have increased since the 1970's (Hicks-Monroe, 2011), this study reviews the practice of co-teaching as a service model. Perspectives and opinions from students, educators, families, administrators and university teacher preparation programs were considered to find out how the co-teaching models are used and what are the benefits and challenges of co-teaching.

Theoretical Framework

Throughout the research process, there were multiple subtopics that emerged from various case studies. The subtopics were the different delivery models of co-teaching, the perceived benefits and barriers of co-teaching from the views of professionals, students and families, and are teachers being adequately prepared for co-teaching? And if so, how are they being trained, and if not, what could they benefit from? While learning about the different delivery models there were six most commonly used models that are implemented. The models are one teach/one assist, one teach/one observe, station teaching, alternative teaching, parallel teaching, and team teaching (Keeley, 2015). Each model looks different, but all serve as multiple options for teams to choose based on their students' needs and their professional expertise.

This subtopic is important because it describes how to use the different models and can allow

for both special education and general education to apply their own expertise in the classroom.

The various models also help teachers as a guideline for how to service their students and does

not result in one of the teacher's taking on the role of a teaching assistant. The perceived

benefits and barriers of co-teaching were widely discussed in the research process. Interestingly,

a lot of the perceived benefits were also mentioned as barriers (Pratt, 2014). As research

continued, it was interesting to find out the components that made coteaching a positive

experience for some teams and difficult for others. The last subtopic that was examined in the

research process was finding out how teachers are being prepared for coteaching. It was

interesting to see if there is a correlation between the amount of training a professional receives

for co-teaching and if that affects their opinion on co-teaching. It was revealed in the research

that a lot of educators, especially general education teachers are not getting an adequate

amount or training or preparation for co-teaching in an inclusive environment. The research

also indicated that teachers who learned about co-teaching in college coursework or have taken

trainings and/or workshops on the co-teaching practice benefitted from the experience when

working in co-taught environments (Strieker et al., 2013).

<div align="center">Rationale and Research Focus</div>

Since IDEA was passed in 1994, schools have consciously tried to include students with

disabilities to attend classes and other school activities with their same-age general education

peers (Hicks-Monroe, 2011). The purpose of this research was to find out how professionals,

students, and families feel about the inclusive setting. Another part of the research was to find

out how co-teaching is being delivered in the inclusive classrooms and what kind of training or

preparation are professionals receiving on co-teaching. This topic is important because as

inclusive settings have increased (Keeley, 2015), I wanted to know how people felt about it and I

wanted to identify the perceived strengths and weaknesses. As a special education teacher, I am always trying to find out how to maximize the amount of opportunities where my students feel like they belong in their school community. I also wanted to find out what causes a co-teaching team to have a positive outlook on their practice and what causes a negative outlook. The research for this literature review was driven by three main research questions: 1) What are the opinions of students and professionals on the six most common co-teaching models? Is there one that stands out as the best model? Which models are the most used and most effective? 2) What are the opinions of professionals, students, and families on the positives and negatives of co-teaching in an inclusive environment? 3) Are professionals being adequately trained or prepared for co-teaching? If so, how? And if not, what do they need to feel more prepared for co-teaching? During the research process the online Bethel University Library was used using the search engines EBSCO, Proquest Education, Academic Search, and ERIC. During the search key, words like co-teaching, inclusion, professionals, opinions, models, preparation programs, negatives, positives, barriers, special education, general education and least restrictive environment (L.R.E.) were used. There were close to 50 scholarly articles and case studies researched for this project, as the research process continued, case studies that had concrete data and individuals involved were used for the literature review. This literature review examined 30 different case studies about the topic of co-teaching in an inclusive setting from various places in the United States of America and other places throughout the world.

Definition of Terms

Throughout the research process there were many terms that were used in the case studies and scholarly articles. Understanding the meaning of the common terms used in special

education and co-teaching helps build a better understanding of the topics being discussed.

First, the most common co-teaching models are one teach/one assist, one teach/one observe,

station teaching, alternative teaching, parallel teaching, and team teaching (Keeley, 2015). The

one teach/one assist model is described as one teacher having the primary instructional

responsibilities while the other teacher (typically the special education teacher) assist students

with work and tracks behavior and academic data. The one teach/one observe model is when

one teacher has the primary instructional role while the other teacher gathers specific

information based off of observations of the teacher and students. Station teaching is described

as a model where during lessons students will visit different stations where work is scaffolded to

their current levels; this model typically has three stations, one of which is a station for students

to complete independent work. The Alternative teaching model is when one teacher instructs

the bulk of the class as the other teacher modifies and differentiates the lesson to a smaller

group of students in the room that may require more independent instruction. Parallel teaching

is when both teacher's take on the primary role of instruction and break up what lesson they will

teach based on their content expertise. The team-teaching model is when a group of two or

more teachers work closely together to plan, coordinate, and evaluate all the unique learning

for the entire group of students (Hartnett et al., 2014). The next term to be aware of is inclusion;

this term is widely used in special education, and it simply means giving students with

disabilities a chance to be included in as many general education opportunities as possible based

on their needs (Keeley, 2015). Including special education students in their same-age general

education environment is one of the main goals of co-teaching. The next term that relates to

inclusion is a student's least restrictive environment (L.R.E.). The least restrictive environment,

like inclusion means that students with special needs should have access to their same-age

general education peers. Inclusion and L.R.E. promotes an improved school community and

sense of belongingness to a student's school environment (Keeley, 2015). The last two terms to

be aware of are a Free and Appropriate Public Education (FAPE) and Individualized Education

Plans (IEP). Since the IDEA Act was passed it was meant for public schools to offer public

education services for all students, including students with disabilities. The purpose of FAPE is

to ensure students from all sorts of ethnic and financial backgrounds have access to an

education just like students who come from more fortunate situations.

Students with disabilities who are being serviced with FAPE will also have an Individualized

Education Plan (IEP). An IEP is an annual education plan that gets updated at least once a year.

An IEP is written by the IEP team which can consist of a special education teacher, speech

pathologist, adaptive physical education teacher, occupational therapist, physical therapist, a

nurse, and other appropriate members who are a part of that student's service plan

(HicksMonroe, 2011). IEP's are written to provide a student's strengths and weaknesses,

medical information, academic goals, behavior goals, self-help goals, communication goals and

social and emotional goals. The IEP is important that it is written effectively and is current with

that student's performance. This will help ensure that if the student gets a new teacher or goes

to a new school, the professionals that will be working with that student will know the student's

capabilities as well as areas of need. The IEP is also critical because it will describe how often a

student will be serviced with their general education peers. For example, a federal level one

setting means a student will spend twenty percent of their day in a special education room and

at least 80 percent of their day with their general education peers. A federal level two student

will spend 60 percent of their day in general education, and federal level three student will

spend 60 percent of their day in a special education classroom, and federal level four students

will spend their entire day in a special education setting (Hicks-Monroe, 2011). The purpose of

the levels is to determine the appropriate amount of time when students will be included. IEP's

are legal documents, and the plans must be followed to help ensure students are getting a Free

and Appropriate Public Education (FAPE).

CHAPTER II: LITERATURE REVIEW Review of the Opinions from Educators and Students
on the Most Common Co-Teaching

Models

Keeley (2015) wanted to find out the opinions of the five most common

coteaching models from students in an inclusive classroom. Keeley (2015) indicated

that the five co-teaching models that were used in this study were one teach/one assist,

station teaching, alternative teaching, parallel teaching, and team teaching. This study

consisted of two teachers implementing these models in their inclusive classroom and

provided a Likert scale for students to complete to find out how each model was

effective in regard to teacher authority, student confidence, student learning, and

classroom management. The subjects of this study were 37 students aged 13-16 years

old in grades 8 and 9. Fifteen of the students were receiving special education services

for Attention Deficit Hyperactive Disorder, Autism Spectrum Disorder, and/or Specific

Learning Disability. The procedure implemented the five models for two days each for

ten school days (Keeley, 2015).

The first rubric that students filled out was in regard to teacher authority. A

score of 5 on this rubric would determine that students felt the teachers have an equal

amount of power in the classroom and a score of 1 would determine that the students

feel that one teacher has more power than the other (Keeley, 2015). Station and parallel

teaching both received an average score of 4.4 making these two models the most

effective in this category. Team teaching received an average score of 4.3. The one

teach/one assist model received a score of 3.9 and alternative teaching was rated as the least effective in terms of teacher authority with a score of 3.7 (Keeley, 2015).

The next category rated student's confidence with learning the lesson and the scores determined how confident they were in answering questions about the material (Keeley, 2015). The alternative teaching model rated as the most effective in terms of student confidence with an average score of 4.22. Station teaching and team teaching both had an average score of 4.13 making them the next most effective. Parallel team teaching was next with a score of 4.0 and one teach/one assist was determined to be the least effective with a score of 3.45 (Keeley, 2015).

The results from the student learning category rating what models helped students understand the lesson indicated that both Alternative teaching and parallel teaching were equal effectiveness with an average score of 4.3. Team teaching had an average score of 4.1. Station teaching was the next most effective with an average score of 4.0 and one teach/one assist had an effectiveness rating of 3.8. In the classroom management category, station teaching was rated the most effective with a score of 4.3. Parallel teaching was rated as the next most effective with a score of 4.2. Alternative and team teaching were rated as equally effective with an average score of 4.1 and one teach/one assist had an average rating of 3.6 (Keeley, 2015).

After all the data was compiled for each category, Keeley (2015) compiled the models' ratings for each category and placed them on an overall average. The results from this work indicated that students felt that the most preferable teaching models were in the order of parallel teaching, Team teaching, station teaching, one teach/one

assist, and Alternative teaching. The results from this study suggest that students prefer to be taught in smaller groups and receive instruction from a collaborative team (Keeley, 2015). Evidence of the effectiveness for implementing the five co-teaching models was that the lowest rated model overall received a Likert score of 3.5 out of a possible 5 and three of the models had an overall Likert scale score of over 4. These results show that students have a positive opinion on these particular co-teaching models. This study is a good source to refer to when determining how to implement collaborative team teaching in the inclusive environment. This study suggests that co-teaching models should be chosen to compliment the student's preferences to increase the effectiveness on teacher authority, student confidence, student learning, and classroom management (Keeley, 2015).

Aliakbari and Bayzar (2012) wanted to find out if the parallel co-teaching model has positive effects on English as a Foreign Language Learners more so than being taught by a single instructor. The subjects of this study were 32 Junior High School students in Llam, Iran aged 13-14 years old as well as two male English teachers specialized in teaching English as a Foreign Language and English translation. The instruments used to gather data was a pretest and posttest examining a general knowledge proficiency test of the students in the classes. Results from the pretest was used to place students in either a control group who were taught by one teacher, and an experimental group who would be co-taught by both teachers. The posttest was implemented to gather data on the experience and compare the results. The teachers taught their classes individually for the first two months, then combined the class to

coteach the class using the parallel teaching model (Aliakbari & Bayzar, 2012).   Pretest

results indicated that there was no significant difference between the groups in

language proficiency prior to the study. The results from the posttest also indicated that

there was no significant difference in language proficiency amongst the single-taught

and co-taught classes (Aliakbari & Bayzar, 2012). Some of the problems that emerged

from the study were that students felt having two teachers was distracting and they

were not familiar with co-teaching so they sometimes felt shy and out of place. The

teachers supported these findings indicating that they themselves were not used to the

co-teaching model which impacted its effectiveness and the authority of both teachers.

There were some positive aspects of the parallel teaching model in this study, such as

the participants indicated they enjoyed the class and it was a friendly environment but

it just did not produce better results for students and teachers (Aliakbari & Bayzar,

2012).

Aliakbari and Bayzar (2012) concluded that there were no significant benefits to

implementing parallel teaching in a classroom for English as a Foreign Language

Learners. There are limitations to this study as it was a small sample size, and not much

experience with co-teaching for teachers and students. However, it does discuss one

teaching model specifically and provides data on whether this model was effective in a

specific case (Aliakbari & Bayzar, 2012).

This study by Keeley et al. (2017) purpose was comparing teacher and student

perceptions of the five most used models after they were implemented in an inclusive

classroom over a six-week period. Like Keeley (2015), the five models used were one

teach/one assist, station teaching, alternative teaching, parallel teaching, and team teaching. The subjects of this study were five co-teaching teams consisting of one special education and one general education teacher and 122 students, 40 of whom are special education students and 82 general education students (Keeley et al., 2017).

Data was collected using student and teacher rubrics that used a Likert scale to rate their opinions of each model in the areas of classroom management, teaching model, teacher confidence, learning, behavior, student confidence and teacher authority (Keeley et al., 2017). The rubrics provided statements about specific parts of each model and asked participants to rank the statements 1-5 with one being lowest score and five being the highest. Participants filled out the data rubrics after each model was implemented for at least two days. The researchers assisted in planning the implementation of the co-teaching models, the types of instruction they would use, and the model they would use. The co-teaching teams decided amongst themselves of their individual roles and responsibilities across the five co-teaching models (Keeley et al., 2017).

The results of the study indicated that station teaching was the most recognized model by the students. Keeley et al., (2017) indicated that this is most likely due to the fact that station teaching is more obvious to detect as the students attend stations during instruction. Parallel teaching was the highest model in the area of student confidence followed by one teach/one assist and station teaching. Further results show that the station teaching model was rated low in the areas of student behavior, student confidence and teacher authority. The results indicate that the teams preferred team

teaching, alternative teaching and parallel teaching. The study suggests that the teacher

to student ratio is reduced when using alternative, parallel and team-teaching allowing

teachers to better suit the needs of their students. The biggest contrast between the

students and teachers was that students rated one teach/one assist as the second

highest rated model and teachers rated it as their lowest. The authors suggest that this

is because co-teaching teams are generally trying to find different models to use so they

are also teaching and offering their own expertise (Keeley, et al., 2017).

Keeley et al. (2017) concluded that because students rated models in certain

categories different from teachers it shows that each model can be implemented and

be effective when teaching. The researchers of this study state that this is encouraging

because the students are indicating that they see positive effects in all five models and

teachers can then choose to implement these models appropriate to the lesson (Keeley

et al., 2017).

Hartnett, McCoy, Weed and Nickens (2014) completed a qualitative study with a

purpose of revealing the results and opinions of teacher candidates and cooperating

teachers who participated in a multi-semester pilot of implementing co-teaching models

in inclusive classrooms. The subjects of this study were 94 teacher candidates, 20

cooperating teachers, 12 university mentors, and administrators from 21 participating

school districts. To acquire data, this study had participants fill out an online weekly

reflective journal as well as an end of the experience survey. The journal and survey

questions focused on which co-teaching models were used the most? What models

were the participants most comfortable using? What were the benefits for students in

inclusive classrooms? What were the benefits for cooperating teachers and teacher candidates? This study also used feedback to determine some of the drawbacks of the co-teaching model during this pilot. Results from this study's data instruments were analyzed after week one, week five, week eight, and week ten of the pilot (Hartnett et al., 2014).

The results from journal entries indicated that seven different models of coteaching were used during the pilot. The model that was used the most was team teaching, and participants indicated this model was also the most comfortable for the participants to implement (Hartnett et al., 2014). The second most used model was one teach/one assist; this model was mostly used in the opening weeks as it allowed time for the teacher candidate to get comfortable with the cooperating teachers style and their students. One teach/one observe was the third most used strategy and was noted to look similar to the one teach/one assist model. Parallel teaching was indicated to have been the next model that was implemented in this experience. Station teaching, Alternate/Differ, and Supplemental teaching were indicated to be used less in comparison to the other models (Hartnett et al., 2014).

At the end of the semester, the participants completed a survey asking their opinions on the benefits of co-teaching for students, teacher candidates, and cooperating teachers. All participants in the survey indicated that the quality of instruction improved with the co-teaching model compared to the traditional student teaching setting (Hartnett et al., 2014). The benefits the participants saw in relation to the students were more individual attention, teachers could build off one another,

teachers were more engaged, the students could be taught from different perspectives, and they benefited from having two teachers helping with instruction. The data from this survey also highlighted the benefits for teacher candidates. The results showed that the candidates improved in the areas of classroom management, and confidence in instructing material, benefitted from learning about the different models of co-teaching, improved their collaboration skills, and more opportunities to reflect on their teaching. Further data indicated that the cooperating teachers saw a benefit in having more help for students with special needs, not having to give up the entirety of their classroom to a candidate, and an enhanced relationship with their candidate. Some of the drawbacks of the co-teaching model were it took a lot of time to plan (67%), some had an uncomfortable relationship with the co-teacher (42%), confusing for students (11%), and not enough space (11%) (Hartnett et al., 2014).

Akerson and Montgomery (2017) studied a university's co-teaching field experience with pre-service teacher candidates. The purpose of this study was to develop a model to gather feedback from co-teaching teams to reflect on their teaching and set goals. The data revealed how the teachers felt about each co-teaching model. The main guided question of this study was, "How can we prepare teacher candidates for implementing co-teaching?" These participants were 70 pre-teaching candidates participating in a co-teaching field experience with 12 mentor teachers (Akerson & Montgomery, 2017).

At the beginning of the process, teacher candidates attended a co-teaching workshop along with their mentor teachers to learn how to implement six different coteaching practices before incorporating them into their classrooms. Like the study by Turan and Bayar, (2017), the six co-teaching models for this study were as follows: Station Teaching, Parallel Teaching, Alternative Teaching, Team Teaching, One Teach/One Assist, and One Teach/One Observe (Akerson & Montgomery, 2017).

Data was collected throughout the process by students completing a four-point Likert Scale for each teaching model (Akerson & Montgomery, 2017). The students rated each co-teaching model as very valuable, moderately valuable, slightly valuable, and not valuable. Reviewing the ratings of each co-teaching model, the results show that the one teach/one assist model was rated as the most effective. This is evident because this model was rated as very valuable by 77.3% of the teacher candidates, while

13.6 % rated it as moderately valuable, and just 9.1% indicated it was slightly valuable. The second most effective model was team teaching, in which 68.2% felt it was very valuable, 27.3% felt it was moderately valuable, and 4.5% determined it was slightly valuable. Station teaching was next, and like team teaching 68.2% of the candidates rated it as very valuable and 22.7% rated it moderately valuable, with just 9.1% rating it slightly valuable. Alternative teaching was rated as very valuable by 63.6% of the teacher candidates and 36.4% of candidates rated it as moderately valuable and had no ratings for slightly or not valuable. One teacher/one observer was rated by 54.5% very valuable, 27.3% felt it was moderately valuable, followed by 13.6% found it slightly

valuable. Parallel teaching was the lowest rated model, as just 27.3% of students rated it as very valuable, 68.2% rated it as moderately valuable, and 4.5% rated it as slightly valuable. Some additional data from the Likert scale indicated that teacher candidates felt co-teaching allows for more one-on-one time with students and co-teaching benefits students because it makes the most of learning time (Akerson & Montgomery, 2017).

The other data collected in this study was having teacher candidates reflect on the benefits they felt from their co-teaching experience (Akerson & Montgomery, 2017). The results indicate that teacher candidates felt they had increased their collaboration skills, improved their classroom management, received more exposure to experienced teachers, gained confidence through the co-planning process, developed a deeper understanding of the curriculum through co-planning, had more time to ask clarifying questions, had more exposure to teaching, and learned to facilitate and/or direct the efforts of other adults in the classroom (Akerson & Montgomery, 2017).

The limitation to this study was that although it includes a lot of analysis on the co-teaching experience for candidate teachers, it does not do much to cover how the mentor teachers felt about their teaching candidate's effectiveness. The strengths of this study were that it covers a wide range of teacher candidates (70) and their opinions on which co-teaching models were the most effective. It also highlighted the benefits of co-teaching in inclusive classrooms as well as the student's experience when implementing the different models. This study was effective in describing the different models of co-teaching and how they are implemented (Akerson & Montgomery, 2017).

Review of the Opinions on the Benefits and Difficulties with Co-Teaching

Harter and Jacobi (2018) administered a qualitative and quantitative study comparing the opinions of students who were in a co-taught communication college course and students who were in a traditional communication course. Harter and Jacobi (2018) wanted to find out what students believe are the benefits and challenges of coteaching versus the traditional model and how students felt they learned in the two classrooms. The participants were 17 students in the co-taught course and 19 students in the traditional course. To collect data, Harter and Jacobi (2018) had participants answer open-ended questions and subscale surveys about the opinions of their instructor(s), learning effectiveness, and cognitive learning (Harter & Jacobi, 2018).

The results indicated that the participants thought the benefits of the co-taught class were another instructor perspective, varied teaching styles, better communication skills and a unique approach different from traditional instruction (Harter & Jacobi, 2018). When describing these benefits, the participants indicated that having multiple perspectives from the instructors ensured that they were getting the questions answered correctly and thoroughly. A variety of teaching styles was seen as a benefit because students felt it gave them more opportunity to learn by having a teaching style that works for them. Some students in the traditional class (84%) indicated that variety teaching styles are not that important, but other students indicated that they could see why having a variety would be beneficial. The co-taught class offered more opportunities for communication, as the class would often break up into two groups with an instructor for discussion and activities. Being in a smaller group increased the

opportunity for students in the co-taught class to be able to participate in discussions and have their questions answered more than the traditional course. Having a unique approach to teaching was mentioned as beneficial because students indicated it was more interesting and kept them engaged rather than the traditional course (Harter & Jacobi, 2018).

Although the participants mentioned a lot of benefits to the co-taught course, they also mentioned some of the problems with the course design in comparison to traditional style teaching (Harter & Jacobi, 2018). Some students indicated that they were confused by the course structure, and having two teachers made it feel like they were in an extra course. Some students saw a problem with the use of time in the cotaught course, suggesting that it felt like two lectures in one class. Another problem that participants mentioned was co-teaching, dismissing traditional teaching approaches. This was considered a negative by some, as some students felt that they just wanted the same structure they got their whole school career rather than learning through a new model of teaching. The results from the subscales indicated that participants in the cotaught class had a more positive opinion of their instructors and affective learning, but there were no significant differences in cognitive learning (Harter & Jacobi, 2018).

Harter and Jacobi (2018) conclude that there are many benefits to students being taught in a co-taught course. However, this does not mean that every classroom should implement co-teaching, especially at the collegiate level. Students should be offered options as some found it beneficial, while others found it confusing. Since there

was no significant difference in cognitive learning outcomes, students should be able to make that decision for themselves (Harter & Jacobi, 2018).

Pratt (2014) administered a qualitative study using six secondary co-teaching teams in a school district in Eastern Iowa. Like Harter and Jacobi (2018), the purpose of the study was to find some of the benefits and barriers teachers face with co-teaching. To collect data Pratt (2014) used group interviews, interpersonal questionnaires on behavior, observations, and individual interviews with the participating teams over the 2011-2012 school year. Co-teaching teams that only use the one teach-one assist model were not included unless they switched roles often. Pratt (2014) provides five strategies for effective co-teaching partnerships based on the results.

Pratt (2014) highlighted the potential barriers that can hinder implementing effective co-teaching. The challenges that surfaced in the data were teachers had different styles in the area of teaching, behavior management, and grading. Other challenges found in this study were lack of communication, taking things too seriously, selfishness, and being able to admit when you are not an expert in certain content areas (Pratt, 2014).

This study took the results of the challenges, then observed and questioned the participants on how they overcome these challenges (Pratt, 2014). This study used the participants to help come up with five effective strategies when implementing coteaching in inclusive classrooms. The first strategy was that teachers need to be openlyminded as one participant stated, "It's like any other relationship, you're going to have to be willing to change, you can't be so sure that your style is right" (Pratt, 2014,

p.5). The second strategy was to be willing to use open communication. A willingness to have open communication, even if it is uncomfortable, allows for teachers to discuss what is going well and what things need to be changed in their classroom. Using humor is another strategy, finding humor about each other's styles helps put the class at ease. One team mentioned that they joked with students about different handwriting styles. It is important for students to see the differences in their teachers, especially when the teachers show that they can make it work. The fourth strategy is that teachers need to be selfless. Teachers need to not take things too personally, so if one teacher does not like a lesson they should let each other know. This is key because there are times when a teacher might notice that a student's engagement level was low, and the other teacher was unaware. The last strategy mentioned was to ask for help. This strategy revolves around finding each teacher's expertise to help distribute the amount of times you are going to take control of a lesson based on each other's expertise with that content (Pratt, 2014).

Pratt (2014) provided effective strategies to refer to when trying to overcome some of the challenges of co-teaching. When preparing to implement co-teaching, understanding some of the challenges you will face going into it is the first step to overcoming them. The limitations to this study were that it was a small sample size but it provided the opinions of co-teaching teams on the challenges and benefits to effective collaboration (Pratt, 2014).

Chitiyo (2017) administered a quantitative study similar to Pratt (2014) with the purpose of finding out the opinions on the barriers general and special education

teachers face when co-teaching. The subjects in this study were 77 teachers in a school district in North Eastern, United States. The subjects consisted of 67 (87%) general education teachers and 10 (13%) special education teachers. All the subjects in this study worked in co-taught inclusive classrooms. This study consisted of (35) elementary, (17) middle school, and (23) high school teachers (Chitiyo, 2017).

Chitiyo (2017) provided a questionnaire to the participants to reveal how they learned about co-teaching. The results determined that 44% of the participants indicated that they learned about co-teaching through college courses. 17% of the subjects learned about co-teaching through district training programs, 22% indicated they learned about co-teaching through a presentation at a conference, and 3% of the subjects indicated they learned about co-teaching from a published source. The remaining 14% learned about co-teaching from sources other than the ones listed above. The data revealed that 78% of the subjects indicated that they have co-taught before, and 22% indicated that they have not (Chitiyo, 2017).

The final part of the study asked the participants about the barriers that can hinder the use of collaborative team teaching. Chitiyo's (2017) results indicated that 76% of the participants did not feel that co-teaching requires a lot of extra resources, different from teaching in a non-inclusive classroom. When asked about co-teaching feasibility 73% of the subjects indicated that they agreed or were neutral that coteaching is feasible. In the category of necessary skills to be a successful co-teaching team, 62% indicated that they feel they are lacking in this area. This is a concerning statistic because "when teachers lack the skills needed for the use of co-teaching, they

may not adopt it or abandon it" (Chitiyo, 2017, p.9). Data about school policies showed that 82% of the participants do not see certain policies in their school as a barrier to coteaching. This suggests that policies in schools support co-teaching. The study revealed that teachers feel co-teaching is effective in meeting student's needs, teachers see advantages and find that their colleagues are supportive of co-teaching (Chitiyo, 2017).

Chitiyo (2017) used the results from this study to argue that there is a need for teachers to be trained in the use of collaborative team teaching. He argues that prospective teachers should get collaborative team-teaching training prior to getting their first job in a classroom. "Teacher education programs need to offer mandatory courses to prospective teachers focused on co-teaching" (Chitiyo, 2017, p.9). By doing so, it will help teachers have knowledge for the use of collaborative team teaching in their first year. This study also determined that student teachers should be placed in an inclusive co-teaching setting so they can gain knowledge and skills of collaboration. This supports earlier results that only 44% of the teachers learned about co-teaching in university coursework. This study also indicated that teachers that are already teaching should be provided with adequate training and professional development opportunities provided by their district and administrators. This study suggests that this will improve the overall performance, competency, and effectiveness of co-teaching in an inclusive classroom (Chitiyo, 2017).

Morgan (2016) administered a study with the main purpose of finding the key concepts for implementing effective collaborative team teaching in inclusive classrooms.

The main question was: what is necessary for a special education teacher to do to become a collaborative team-teaching specialist? (Morgan, 2016). For this qualitative study, the author interviewed and surveyed 16 teachers working in a co-taught inclusive classroom as well as 19 second grade students that were being taught in these classrooms. This study also gathered data through observation and thorough documentation from participants. Morgan (2016) described the means to being an effective co-teaching team as well as the difficulties that arise amongst teams.

The results showed there were common opinions about what causes a coteaching team in an inclusive classroom to be effective (Morgan, 2016). Three main components that make a collaborative team effective are teams meeting regularly with clear agendas to help make proper use of time, teachers sharing the responsibility to meet the student's needs, and team's having goals and objectives pre-determined throughout the school year. Morgan (2016) suggested that when co-teaching teams effectively work together, it improves the quality of integrated services, instruction models, and students' engagement and sense of belonging in the classroom.

According to the study results, integrated services improved with effective coteaching teams by staff discussing students' progress and planning for what is next (Morgan, 2016). By doing so, teachers can highlight how students can apply the lessons learned in the inclusive classroom and apply those skills throughout the school and in their community. Co-teaching teams that consistently apply integrated service models help special education and general education students, which is more attainable with teacher collaboration. Further analysis of this study indicated that the quality of

instruction is improved through collaborative team-teaching models. The data suggest that instruction is improved in the co-taught classroom by increasing the number of experts in the classroom resulting in a higher level of learning for all students because it increases the chances of finding different pathways for learning (Morgan, 2016).

At the conclusion of this study, the teachers and students were asked to give their opinions regarding the collaborative team-teaching model (Morgan, 2016). When asked if the students enjoyed having two teachers in the classroom, all 19 of the students in the survey answered "yes." The majority of students (18) enjoyed the variety of learning activities coming from two different teachers. Fifteen of the 19 students said they want to have two teachers in their future classes. The students' survey results indicated that effective co-teaching builds community and increases the chances of all students being successful in the inclusive classroom. The teachers' survey results indicated that some co-teaching teams had some difficulties in the beginning, but once the collaborative teams got on the same page with instructional models and how to implement them, the teams saw the benefits of collaboration. According to Morgan (2016), in order to be effective in the co-teaching model, collaborative teams need to be flexible and accountable and delegate responsibilities in the areas where one teacher is the expert. By doing so, co-teaching teams can be effective in the inclusive setting reaching all types of learners (Morgan, 2016).

This qualitative and quantitative study by Bacharach and Heck (2012) wanted to find out the opinions of co-teaching from student teachers, cooperating teachers and students of the classroom at the completion of a student co-teaching experience. The

participants of the study were 249 teachers with 195 of the teachers in a focus group to gain additional data. Other participants included 1,686 students, 540 of the students were in a focus group. Data was collected using surveys, interviews, and observations for all participants over a four-year period (Bacharach & Heck, 2012).

According to the survey, teacher candidates indicated that there were many benefits to co-teaching. When being asked questions about classroom management, collaboration, understanding of curriculum, and increased confidence; at least 88% of the participants indicated they saw an improvement (Bacharach & Heck, 2012). The teacher candidates in the focus group were asked further questions about the positives and negatives of co-teaching. The results show that a majority of candidates had a positive experience because they were viewed as real teachers instead of the "helper", were active in lessons from the very start, and had a strong bond with their cooperating teacher. The cooperating teachers also indicated that there were a lot of benefits to having a co-teacher. Like the study from Hartnett et al. (2014), teacher candidates revealed some of the benefits was having more help for high-needs students, professional growth through co-planning, the ability to host candidate and not give up their classroom, and a better relationship with a co-teacher than a student teacher (Bacharach & Heck, 2012).

Students of the classrooms were also surveyed and interviewed on how they felt about attending a co-taught class (Bacharach & Heck, 2012). The results revealed that students saw a benefit in having more help with questions, learning from different teaching styles, more creative lessons, more individual attention, and teachers building

off of each other. When surveyed about the drawbacks of being in a co-taught classroom, 47% of the students indicated they did not see any drawbacks to coteaching. The study shows that the students felt the drawbacks of co-teaching were confusion with two explanations, whom to go for help, teachers contradicting information, teachers interrupt each other, candidates being too dependent on cooperating teachers and less material covered. However, most of these drawbacks were only indicated in responses of about 10% of students, with the most being 18% for confusion with two explanations (Bacharach & Heck, 2012).

This study concluded that there were very positive opinions about co-teaching from the teacher candidates, cooperating teachers and students in the classrooms (Bacharach & Heck, 2012). All participants indicated that they saw a lot more benefits than drawbacks to co-teaching. Bacharach and Heck's (2012) study highlight the benefits and drawbacks and advocates that more college programs should add a coteaching field experience because it benefits teacher candidates.

This study by Johnson, King-Sears, and Miller (2022) wanted to find out teacher's opinions on their self-efficacy, active involvement in instruction and personal compatibility when co-teaching. The questions that they wanted to answer involved figuring out if there was a significant difference in opinions of general education and special education teachers. The subjects of this study were 127 high school co-teachers (56 teams) from two school districts in the mid-Atlantic United States. The participants taught English, History, Mathematics, and/or Science classes and 46% of them were in their first year of co-teaching (Johnson et al., 2022).

The instruments used to collect data were a teacher self-efficacy scale, a coteacher relationship scale and perceptions of co-teacher's responsibilities subscale. The teacher self-efficacy scale gained the opinions of teachers on instruction, classroom management, and student engagement. The co-teacher relationship scale gathered their beliefs and approaches to teaching and personal and professional characteristics (Johnson et al., 2022).

The results from the study revealed that all teachers reported involvement in coteaching tasks when asked about their active involvement in instruction. There is a discrepancy when comparing data from general and special educators, as general educators reported being "very involved" with instruction (Johnson et al., 2022). In the area of personal compatibility, the results were similar amongst co-teaching teams on their beliefs and approaches to teaching as well as personal and professional characteristics. On self-efficacy, the co-teachers reported being capable of affecting students on a variety of teaching tasks but the general education teachers reported higher levels than special education teachers (Johnson et al., 2022).

Johnson et al. (2022) determined that the results from their study were encouraging for the co-teaching model. There was no significant difference in selfefficacy and personal compatibility between the team which suggests that special education teachers see themselves as capable as their teammates with instruction, classroom management and student engagement. This is a sign that the special education teacher's role is increasing other than just servicing students as a paraprofessional. The study identified a gap between active involvement in instruction,

but the special education teacher still rated it high on their scale. This study indicated

that the higher level of active involvement in instruction for general education teachers

is consistent with other studies, but the gap is closing (Johnson et al., 2022).

This study by Morelock et. al. (2017) had a purpose of finding out teacher's

perceptions of the advantages and disadvantages of co-teaching and the student

experience. The subjects of this study were seven educators who co-taught college

classes within the last two years in the Mid-Atlantic United States. The participants

were tenured professors or graduate student professors in the fields of education,

engineering, and biological science (Morelock et al., 2017).

Data was collected using 45-minute semi-structured interviews with each

participant covering their experiences with co-teaching. After reviewing the data, three

main themes were developed: power and authority, dynamics of co-teaching

relationships, and co-teacher perceptions of the advantages and disadvantages of

coteaching and student experiences. Data revealed that in the category of power and

authority, teachers typically taught classes by themselves in the past and are experts in

their content because they own the course. They saw this as a benefit because when

they elected to try co-teaching they could choose a team member that would be

compatible to eliminate differences in opinion issues. Data indicated that in the area of

the dynamics of co-teaching, teachers stated that alternative teaching was the most

efficient in having educators teach different class sessions. However, when teachers

took the time to teach simultaneously, it resulted in better experiences for students and

teachers. Another dynamic was having good communication habits amongst the teams

discussing their philosophies and area of expertise. All the teachers in this study revealed that mentoring and co-learning were also beneficial to help the instructors grow as they shared ideas, perspectives and approaches that teaching a class by themselves might not offer. Teachers thought the students benefited from co-teaching because participants produced more in-depth exploration of classroom content. Another advantage for the teachers was that they felt they could produce a better course by offering different ideas and perspectives from other professionals. The disadvantages that were mentioned in this study were taking a lot of time to plan, strained relationships and a division of teachers workload (Morelock et al., 2017).

This study concluded that the participants made a case that co-teaching should be implemented in college courses (Morelock et al., 2017). This model was a benefit for students and for the professional development of educators. This includes mentoring new teachers and the ability to learn from new perspectives for experienced educators. The authors recommend that university administrators should consider implementing co-teaching because it results in better collaboration among instructors (Morelock et al.,2017).

Gokbulut et al.'s (2020) purpose for their qualitative study was to find out the opinions of students and families before and after co-teaching was implemented in a 2nd-grade reading classroom. The subjects of the study were 19 students with three of them being serviced in special education, a general education teacher and a special education teacher using the one teach-one assist model over a 14-week period (Gokbulut et al., 2020).

For research, this study used a control chart for students and families to fill out to gather data on their perception of co-taught instruction (Gokbulut et al., 2020). The control chart asked questions to identify if the students were willing to attend class, interested in materials used, the opinions of how they felt to be in the class and assess their own class achievement. The families were surveyed to find out the impact on their child's reading skills, the impact on their child's attitude towards the class, if the reading class increased efficiency, and their overall opinions on the quality of the practices used (Gokbulut et al., 2020).

The results from the study after the 14-week period indicated that 98% of the time, special education students and 100% of the time, general education students were willing to participate in the class (Gokbulut et al., 2020). When asked about the materials used for the course 96% of the time, special education students and 99.5% of the general education students indicated that the study handouts used by both teachers helped them understand the topic better. Overall class enjoyment was rated at 100% by all the students and 98% Thought they were successful in each day's class. The students also indicated that they saw a benefit with having two teachers revealing that they felt more comfortable and understood the lessons more easily. All the students in this study indicated that they would like both teachers to lecture in all their classes this way (Gokbulut et al., 2020).

The parents indicated in the pre-study that they had concerns about two teachers lecturing in the classroom. The parents also revealed that their expectations were that the approach being implemented would increase the student's success in

reading (Gokbulut et al., 2020). After the 14-week period, the parents had a opinion about co-teaching. The results determined that parents felt the practices of the classroom improved reading comprehension, homework assignments and study handouts were attractive and effective, and that co-teaching should be implemented in other classes (Gokbulut et al., 2020).

The results from Gokbulut et al. (2020) were encouraging as it describes a positive experience with co-teaching being implemented in an inclusive classroom. The opinions from the students revealed that they enjoyed being in the class together, and felt more successful with co-instruction. The families revealed their concerns about the course but afterward revealed it was a positive experience and more co-teaching should be implemented in more classes (Gokbulut et al., 2020).

Sears and Strogilos (2018) wanted to determine the opinions of two co-teachers and their students who attended a 6th-grade co-taught math class consisting of students with and without disabilities. Both teachers have taught for 13 years, and each had eight years of experience with co-teaching. The classroom had 27 students total but only ten of them participated in the study. Three students had disabilities, and the other seven did not. They collected data using a survey where students and teachers answered questions about the co-teaching models, the available support from the coteaching teams, instructional methods, efficacy, and school belongingness (Sears & Strogilos, 2018).

The results revealed that one-teach/one-observe was the most used model. All of the students and the teachers indicated that this model was used. The students also

revealed that station teaching and alternative teaching were used, but the teachers only indicated that alternative team teaching was used about 1/3 of the time (Sears & Strogilos, 2018). The next portion of the study's results indicated that the seven students without a disability agreed that the general education teacher is responsible for grading, planning most of the instruction, and taking the lead. The three students with a disability indicated that both teachers grade their work, lead instruction, plan the instruction and organize materials for the lesson. This part of the data suggests that the students with disabilities benefit from having a special education teacher in the classroom, and it indicates the special education teacher is assisting with differentiation and accommodations (Sears & Strogilos, 2018).

The data regarding teacher availability to the students indicated that the general education teacher was the lead teacher but also described the special education teacher to make sure content was understood by all the students (Sears & Strogilos, 2018). All the students without a disability in this study indicated that they enjoyed having more than one teacher, and the students with disabilities indicated they would rather learn in a classroom with two teachers (Sears & Strogilos, 2018). The results indicate that some students learn best from the general education teacher, but both teachers play a role in learning by explaining things to them when they do something wrong. Students also revealed they felt they learned better in a classroom with co-teachers (Sears & Strogilos,

2018).

Similar to Gobkulut et al. (2020), the results on the co-teachers relationship revealed that the general education and special education teacher both agreed that they had a positive co-teaching relationship (Sears & Strogilos, 2018). When asked various questions about the co-teaching relationship the general education teacher rated the relationship with an average score of 3.92 out of 4, and the special education teacher rated their relationship at 3.31. The ratings of the scale describe a score of higher than 3 as agreeing or strongly agreeing with each statement regarding their relationship. This data suggests that along with students who agreed they saw a benefit with having two teachers in the classroom, the co-teaching team did as well. The higher score from the general education teacher indicates that this teacher (like the student's) felt that she was the leader and benefitted from having a special education teacher in the classroom to implement differentiated instruction and accommodations (Sears & Strogilos, 2018).

The results of this study indicated that the positive co-teaching relationship translated into students having an increased sense of belonging and self-efficacy (Sears & Strogilos, 2018). Students reported that being part of an inclusive classroom with two supportive co-teachers maximize the learning experience for students. The limitations of this study are that it was a small sample size and the students with disabilities in the class mainly had a learning disability or language impairments, so the results may not reflect the feelings and opinions of students with different disabilities (Sears & Strogilos, 2018).

Turan and Bayar (2017) administered a qualitative study with the main purpose of revealing the effectiveness of co-teaching in a primary school (Turan & Bayar, 2017). This study aimed to find out the opinions of teachers participating in co-teaching during the 2016-2017 school year in Mus Province, Turkey (Turan & Bayar, 2017). The subjects of this study were six co-teaching teams consisting of a total of 12 teachers, five of whom were female and seven of them male. When determining the effectiveness of the co-teaching teams, this study wanted to get the answers to three main questions. What are the opinions of primary school teachers on the co-teaching model? What are the opinions of teachers on the implementation of the co-teaching model in crowded classrooms? What are the advantages and disadvantages of the co-teaching model according to the opinions of teachers? (Turan & Bayar, 2017). Turan and Bayar (2017) described six different co-teaching models being used for this study, one teach/one observe, one teach/one walks around, parallel teaching, teaching with terminals, alternate teaching, and teaching as a team.

Throughout the study, co-teaching teams were observed and interviewed about their views of the effectiveness and challenges of co-teaching (Turan & Bayar, 2017). The results showed that the co-teaching teams felt that the co-teaching model increased the efficiency of lessons, improved classroom management, students with disabilities learned lessons more completely, there was more time to reach students, decreased workload, increased the equal opportunity for diverse learners, and more practical solutions were created for challenges encountered during the process. The data results showed that out of the 12 teachers participating in the co-teaching model,

10 of the teachers answered "yes" when asked if a co-teacher was needed in an inclusive classroom. Showing that the majority in this study felt co-teaching in inclusive classrooms was effective and necessary. The data results from this study aiming to gather the opinions of the challenges that the co-teaching teams encountered showed that crowded classrooms are the biggest problem, and although it improved with coteaching there was still not enough time to reach all learners effectively (Turan & Bayar,

2017).

This study concluded that there are a lot of benefits to co-teaching (Turan & Bayar, 2017). The strengths of this study were that it detailed the different models of co-teaching by breaking it down into six different models and describing how each of those models are used. Another strength of this study was that it gathered the opinions of teachers participating in the co-teaching model as well as highlighted the areas where teachers felt the model was most effective for their students. The study showed that teachers had a positive opinion of co-teaching in inclusive classrooms and also showed effectiveness in improving some of the challenges that co-teaching teams face in inclusive classrooms (Turan & Bayar, 2017).

Metzger (2015) wanted to find out the opinions of students who attended one of two co-taught Biology courses at the University of Minnesota, Rochester. The subjects of this study were 165 students in total, 131 of them attending a lower-level Biology class and 34 of them attending an upper-level Biology class. To collect data, Metzger (2015) used a quantitative approach using a Likert scale rating their opinions on how

having two instructors impacted their learning experience. This study also used a qualitative approach to their opinions of how having two instructors at the same time contributed to their learning experience (Metzger, 2015).

Data results indicated varied responses to the implementation of co-teaching. Some of the positive responses that emerged were that over 60% of the students in both classes revealed that co-teaching helped with having their questions answered and having additional assistance with group activities (Metzger, 2015). However, there were a lot of difficulties with the co-taught model in student responses. The difficulties included management of the learning space, messaging, content delivery, and confusion over who the lead teacher was. Student responses indicated that some students found that having multiple instructors in the classroom was distracting, and sometimes the instructors contradicted themselves with mixed messages. Although students stated that having two instructors sometimes helped with class discussions, they determined it was difficult to email questions to the professors because they didn't know which one they should answer (Metzger, 2015).

Overall, Metzger (2015) concluded that in order for co-teaching to be effective in college courses, instructors need to have a high level of communication amongst each other and organizational skills. Another need for effective co-teaching is for professors to have clear communication with students on whom to ask questions about the course. Metzger (2015) states that if students do not know who to ask questions to, students might result to a "ask mom, if mom says no ask dad approach" (Metzger, 2016, p.6). Lastly, this study reveals that teachers should pay attention to student feedback

throughout each course to help revise instruction, implementation and assessments (Metzger, 2015).

Reviewing Co-Teaching Preparation Through Training, Student Teaching, and Field Experiences

Strieker et al. (2013) wanted to know what the impacts of a co-teaching field experience would have on middle school pre-service teachers in regard to their knowledge and overall attitudes toward teaching students with and without disabilities. The participants of this study were 120 pre-service teachers teaching social studies, language arts, math, and science. The participants were enrolled in two 45-hour content methods and classroom management courses along with a field experience requiring them completed 135 hours. This study used a qualitative approach to track data using KWC charts, think-pair-share activities, written reflections and classroom observations. Data results were compared to develop and identify themes in the participants' understanding of effective co-teaching (Strieker et al., 2013).

The results from the field experience improved the pre-service teacher's awareness of the common challenges of implementing co-teaching (Strieker et al., 2013). Some of the challenges that were discovered were finding time to co-plan, being on the same page with co-instruction, and identifying each teacher's role. The study indicated that co-planning was critical to having effective and engaging lessons however, finding time to co-plan was a big obstacle. The Pre-service teacher's in this study that were successful with co-planning had to do so before or after school. Effective co-planning leads to effective instruction, and participants that were successful

in this were able to implement parallel, station, and team teaching and not just the traditional one teach/one-assist model. The results also indicated that the roles and responsibilities of co-teachers must be equal in order to both have ownership of the class and students viewing them as authority figures. The participants discussed how the field experience improved their understanding and appreciation for the contributions special educators offer to co-taught classrooms (Strieker et al., 2013).

The study concluded that co-teaching field experiences for pre-service teachers are beneficial in understanding the positives and negatives of co-teaching. The study indicates that it wasn't until after the experience that the pre-service teachers had an understanding and appreciation for co-teaching because it is not easy to implement. This study states that "it is important for teacher educators to acknowledge, identify, and intentionally address the concerns of pre-service teachers as an integral part of the instructional program" (Strieker et al., p. 16, 2013).

Guise et al. (2017) examined teacher education field experience to find out how co-teaching occurred, some of their successes and some of the difficulties with coteaching. The participants in this study were eight co-teaching teams consisting of a student teacher and a mentor teacher, and university supervisors. The study collected data from weekly reflections, bi-monthly supervisor observations and teacher interviews (Guise et al., 2017).

The results of the study were broken into four continuums based on each team's experience: traditional student teaching, student teaching and co-teaching, lessons learned, and scaffold and growth (Guise et al., 2017). Three out of the eight groups'

experiences resembled a traditional student teaching experience. This is evident by the researchers determining that the cooperating teacher slowly gave the student teacher more responsibility and the models used were mostly one teach/one assist and one teach/one observe. The student teachers in these groups indicated that they were teaching already completed lessons from the cooperating teacher and were not involved in the co-planning process. One of the group's experiences was a split between traditional student teaching and co-teaching. This team slowly gave the student teacher more responsibility as the year progressed and then implemented more co-teaching practices throughout the experience. The third continuum involved two of the groups implementing co-teaching with their cooperating teacher; they were given alreadymade lessons by the cooperating teacher but then had time together to revise them and differentiate. These teams also revealed that they rarely were given lessons by the cooperating teacher to teach without discussion, different from the previous teams. The final continuum included two of the co-teaching teams that experienced a high level of collaboration. These groups revealed that they never were given a lesson to teach without discussion. The elements that these teams had in common were that the cooperating teachers mentored teachers in a co-teaching experience before resulting in a deeper understanding of the models and effectiveness (Guise et al. 2017).

Guise et al. (2017) agree with Strieker et al. (2013) that more teacher preparatory programs should implement a co-teaching field experience. Co-teaching teams need a clear understanding of co-teaching and throughout the experience, identify what teams are doing well and what teams need more support. Early

intervention can help ensure that effective co-teaching is being implemented and students, pre-service teachers, and cooperating teachers benefit from the experience (Guise et al., 2017).

This Qualitative study by Oh, Murawski, and Nussli (2017) examined a short-term co-teaching experience of pre-service general education teachers and special education teachers teaching English language instruction to students in South Korea. The central aim of this study was to identify the characteristics of an effective co-teaching team and an ineffective co-teaching team. The subjects of this study included eight teachers - four were preservice teachers, and the other four included graduate student teachers. The students in this study were 30 students ranging from 2nd to 11th grade with low levels of English-speaking skills (Oh et al., 2017).

Participants completed a pre-trip worksheet sharing their views, hopes, attitudes, responsibilities, and expectations that was developed by Murawski (2004) for their co-teaching experience (Oh et al., 2017). Participants also completed another presurvey about their teaching style, philosophies, personal preferences, level of comfort being paired up with someone who had different ideas, and hypothetical questions about how they would react to situations in the classroom. The results from the presurveys indicated that all participants have heard about co-teaching but have received little to no training. When asked about their views before the trip, participants indicated that more attention and individualized assistance for students would be an advantage. One of the challenges that was consistent in the pre-survey results was in the area of disagreements and miscommunication (Oh et al., 2017).

Throughout the study, participants were asked to complete weekly journals to record their thoughts at the end of each day, documenting their experience with coteaching, their experience teaching English to English language learners, and their cultural experiences (Oh et al., 2017). Throughout the study, the researchers also conducted one-on-one interviews with the participants about their experiences. The results from the journals and interviews determined that two co-teaching teams had an overall positive experience with co-teaching and two teams had a challenging coteaching experience. Themes from the teams that had a positive experience were shared ideas, agreeing on many decisions, cohesive lessons, open communication, frequent check-ins, and openness to criticism (Oh et al., 2017). Themes from the challenging experience included work not divided evenly, miscommunication, difference in styles, preferring to plan alone, and a wide difference in experience (Oh et al., 2017).

In conclusion, Oh et al. (2017) determined that the characteristics of a successful co-teaching partnership are open-communication, willingness to accept feedback, willingness to learn from others points of view or styles, mutual respect, frequent checkins, and compatibility of personal characteristics. The potential challenges that can arise in a co-teaching partnership are mismatched personalities, incompatible teaching goals, lack of co-planning, conflicts with lesson planning, work not divided evenly, and a lack of trust and respect (Oh et al., 2017).

Faraclas (2018) administered a study to compare and contrast the effects of coteaching on teachers who participated in training and teachers who did not participate in training. The participants were divided into a treatment group and a

control group. The treatment group participated in 30 two-hour training sessions for co-teaching covering co-planning, co-classroom management, co-instruction, co-behavior management, and co-assessment. The subjects of the study were 24 special education teachers and 24 general education teachers co-teaching in two urban and two suburban school districts in the northeast region of the United States. The subjects were taught in three different high schools and four different middle schools (Faraclas, 2018).   Data was collected through a demographic survey prior to the study to gain knowledge of the teacher's education, prior experience with training, and co-teaching (Faraclas, 2018). The results from this demographic survey revealed that 33 teachers (13 special and 20 general education) did not take any classes on co-teaching in college. Furthermore, 23 special education teachers had attended less than 20 hours of professional development on co-teaching, with three of those teachers receiving no training at all. All 24 general education teachers had less than 20 hours of co-teaching training, with 15 of them receiving none at all (Faraclas, 2018).

The study collected data through 36 observations for both groups using a performance assessment of co-teaching (PACT) instrument that determines which teams used the best practices in their inclusive classrooms. Baseline data was collected through a series of pre-test observations to look at the effects training had on the treatment group in comparison to the control group (Faraclas, 2018).

The results of the data indicated that the treatment group made a lot more improvement throughout the study than the control group. The treatment group showed improvement from pretest to posttest scores in the areas of methods used,

coplanning, classroom management, and delivery of instruction. In comparison, the control group showed only a very slight improvement in these areas as evidenced by their overall pretest and posttest scores. More specifically, the control group actually showed a decrease in their overall score in methods used with nine out of the 12 teams revealing they relied heavily on the one teach/one support model (least-preferred) in the pretest and the posttest number increased to 11 out of 12 (Faraclas, 2018).

Faraclas (2018) concluded that teachers who participated in co-teaching training benefited much more so than teachers who did not. This study concluded that teachers are unprepared when asked to co-teach and can benefit from professional development training or courses taken in college. Faraclas (2018) suggested that these opportunities should be provided by school administrators and universities.

Pettit (2017) conducted a study similar to Faraclas (2018) to determine whether the expectations of a co-teaching field experience can be adjusted to increase the chances that candidates will get exposure to co-teaching early and collaborate with their cooperating teacher to increase student learning. The subjects of this study were 13 teacher candidates spending three hours per week in their field experience classroom. Nine of the candidates were placed in elementary classrooms, and four were placed in secondary math and science classrooms (Pettit, 2017).

Data was collected through weekly discussions over 15 weeks to determine the candidates experience in the co-taught classroom and through post teaching video reflections where the students were observed via video and completed a reflection assignment on the experience (Pettit, 2017). Responses from the data instruments

were coded, and four themes were generated. The four themes centered around learning goals, teaching goals, equal roles, and opportunities for differentiation.

The first theme was "co-teachers worked together to meet common learning goals" (Pettit, 2017, p.5). Candidates felt like they would touch base with cooperating teachers during the lessons, and it improves student focus and aiding with struggling students that they did not previously plan for. Candidates also noted that they got experience using good communication skills between their teams to clarify what accommodations and scaffolding are needed for students. Responses also indicated there was a benefit to having two teachers in the classroom to help explain things differently. One candidate stated, "I think it benefits the teachers because if they have one way of doing the activity, the other teacher might have another way to explain it" (Pettit, 2017, p.5).

The next theme was teams working together to meet common teaching goals (Pettit, 2017). The study indicated that cooperating teachers often have concerns about having a teacher candidate teach the whole class for fear they will not meet core standards or have trouble managing behavior. Having a candidate start by assisting in the classroom is beneficial and improves the candidate's confidence because there is another professional to back them up if they forget an aspect of the lesson (Pettit, 2017).

In regard to teacher roles, Pettit (2017) indicated that in past semesters early candidates had concerns that they were treated as just an extra body in their field experience classrooms and were not properly utilized. The results from this co-teaching

experience indicated that candidates felt that they had a role in the classroom. One

candidate stated "I now have the ability to teach with another teacher and hold equal

roles in the classroom" (Pettit, 2017, p.6).

The results from the fourth theme (opportunities for differentiation) indicated

that students felt their differentiation skills improved throughout the experience. Pettit

(2017) indicated that knowing how to plan and implement differentiated instruction is

critical in inclusive settings. This skill is also harder to know and understand when

teachers first start teaching. The candidates in this study indicated that they learned

how to differentiate instruction for different learners because they were supported by

another teacher in the classroom, and it freed up some time for candidates to explore

how to better differentiate. "Candidates were afforded additional opportunities to

differentiate instruction, and with co-teaching support, the confidence to practice such

differentiations on the spot" (Pettit, 2017, p.6).

Pettit (2017) concluded that having a co-teaching field experience for teacher

candidates was beneficial so they can acquire skills and knowledge for when they

become licensed teachers. The results support the narrative that preparing for

coteaching through preparatory programs is necessary. This is beneficial to general and

special education candidate students because co-teaching is becoming a more used

practice (Pettit, 2017).

Strogilos et al. (2016) wanted to find out what co-teaching teams feel is an

adequate amount of time to plan and evaluate their instruction, what models of

coteaching the teams prefer, and how teachers justify their beliefs in the area of

planning and instruction. The subjects of this study were 400 co-teachers in Greece who

completed a survey questionnaire reporting their co-teaching practices as well as

semistructured interviews with 10 participants. This study was quantitative when

surveying 400 participants and qualitative with the participants being interviewed

(Strogilos et al.,

2016).

The results from the study revealed that general education teachers feel they do

not need as much time to co-plan as special education teachers (Strogilos et al., 2016).

However, both teachers, on average feel they do not have an adequate amount of time

to co-plan and evaluate their teaching practices (Strogilos et al., 2016). Other data

indicated that the co-teaching teams generally preferred the one teach/one assist

model more so than teaching all the students together and changing teaching locations.

General educators indicated that one teacher/one assist was the preferred model due

to lack of time and expertise. One general education teacher indicated via interview

that while teaching 20 students with some having unique challenges and needs, she

feels it is the special education teachers' job to teach those students due to lack of time

and expertise (Strogilos et al., 2016).

This study concluded that teachers' opinions and lack of skills can be associated

with a lack of training and preparation for co-teachers. The study also indicated that a

lack of planning time results in teachers referring to the one teach/one assist model the

most because it is easiest to implement. Finally, this study concluded that "in order to

promote the social and academic progress of students with disabilities through

appropriate co-teaching activities, an inclusive culture needs to be constructed through professional development and not by means of legislation" (Strogilos et al., 2016, p.15).

Simons et al. (2020) studied a field experience implementing parallel and sequential models of co-teaching for student teachers. The study was trying to find out what opinions student teachers develop during the field experience on the models used, collaboration, advantages, and disadvantages. The subjects of this study were 14 student teachers with no prior field experience in co-teaching. This study collected data using self-report logs and a team-teaching experience questionnaire (Simons et al., 2020).

Initially, 11 out of 14 student teachers had positive feelings towards teamteaching. The participants indicated that they were happy with having a peer teacher to help teach for the first time and make it less stressful. Two student teachers revealed mixed feelings about team-teaching, and one of them revealed negative thoughts towards teaching as a team. At the conclusion 10 out of the initial 11 positive participants were still positive. These 10 indicated that the process was enjoyable and provided well-thought-out lessons. Four students had mixed feelings after the experience, however, they all had positive opinions on peer support, different teaching perspectives and an increase in possibilities for learning activities (Simons et al., 2020).

The study used a Likert-type scale ranking each model in terms of collaboration, with a score of 1 being "no collaboration" and a score of 4 being "intense collaboration." At the beginning of the study, students ranked their desired amount of collaboration and at the end of the experience, the actual amount of collaboration.

Sequential teaching received a score of 3.64 in both categories. Parallel teaching had a

desired score of 3.10 but came up short of that desire with a score of 2.5 (Simons et al.,

2020).   Data from the logs indicate that peer support, professional growth,

decreased workload, dialogue, personal growth, and better management were the

advantages of co-teaching. The advantages were equal in most areas, but personal

growth was mentioned more for sequential team teaching and better management was

mentioned more for parallel teaching. Some of the disadvantages that the participants

experienced were less individual teaching, increased workload, and complex feedback

problems. Although disadvantages were reported, advantages were much more

reported in the study (Simons et al., 2020).

This study revealed that student teachers who take part in a co-teaching field

experience have a positive outlook on co-teaching after the experience. Student

teachers revealed a positive or neutral opinion after the experience with two different

co-teaching models. The student teachers also indicated that they saw a benefit with

having an experienced teacher to help with planning and instruction which decreased

their workload. A co-teaching field experience is beneficial for student teachers to get a

better sense of how to teach effectively in inclusive classrooms (Simons et al., 2020).

Brendle et al. (2017) studied the implementation of co-teaching models in

inclusive classrooms to gain insight into the participants' experience, knowledge, and

opinions of co-teaching. The authors then used the information obtained to make

recommendations for future educators to prepare for collaboration. The guided

questions for this study revolved around the process of implementing co-taught models

and collaboration, roles of the teachers, and the impact of administration support. The subjects of this study were two different elementary classrooms consisting of one special education teacher and one general education teacher. Data was collected with the use of a rating scale, interviews, and classroom observations. The Likert scale was used to gather information on the team's implementation of co-teaching models, coplanning, and communication. The interview gathered information on their experience with planning, instruction, assessment, and administrative support. Classroom observations documented the teacher's instructional roles and identified the models of co-teaching utilized during their instruction (Brendle et al., 2017).

The themes of the first research question were models utilized, the teacher's collaboration, and collaborative planning (Brendle et al., 2017). The teams reported that they had a lack of knowledge of the different co-teaching models, and this affected implementing them appropriately (Brendle et al., 2017). Both teams stated that they saw a benefit in collaborating to make accommodations for their students. It was determined through observation that the fifth-grade team implemented the parallel team-teaching model, and the fourth-grade team used the one teach/one assist model. The teams indicated they saw a benefit of having two teachers because the general education teacher is a content specialist, and the special education teacher is a specialist in differentiation. The teams indicated that this helps the students complete work effectively, learn more effectively, and allows the teams to make the necessary changes when administering tests for students associated with their Individualized Education Plans (IEP) (Brendle et al., 2017).

The themes of the second question were that the teams experienced a positive collaborative relationship and learned a lot from each other in collaborative planning and collaborative instruction. During the observations, Brendle et al. (2017) indicated that the co-teaching team's willingness to share the classroom and the responsibility of instructing the class was vital to having a positive relationship. Both teams indicated that learning from each other's expertise in content and differentiation was the most beneficial aspect of the experience (Brendle et al., 2017).

The themes from the last question were administrators implementing coteaching training and providing scheduled time for team collaboration (Brendle et al., 2017). According to the study, administrative support is necessary to the success of coteaching. Both of the co-teaching teams indicated that the administrator provided planning time for the teams to collaborate but only one full day every nine weeks. The teams revealed that they would benefit from having corresponding schedules to provide more time for planning. The teams also indicated that they received no training or guidance during the process about the co-teaching models. This is evident in the rating scale and interviews, indicating that the teachers in this study only had general knowledge of co-teaching (Brendle et al., 2017).

Despite the limitations (small sample size) of this study, it provided some evidence to the need for teachers to be trained in collaborative team teaching and an increase in administrative input. The teachers lacked knowledge of the co-teaching models, which impacted the overall effectiveness of their lessons. However, despite those shortcomings the teams revealed a benefit in implementing co-teaching with

collaboration, differentiation, and learning from each other's expertise (Brendle et al.,

2017).

Ricci et al. (2019) administered a quantitative and qualitative study to find out

the opinions of residency teachers and their mentors on their experiences with

collaborative team teaching. The author's purpose for collecting this data was because

they indicate that co-teaching in residency programs is not a common practice (Ricci et

al., 2019). The subjects were 37 residency teachers and 35 mentors with 25 residents in

a single subject preparation program and 12 residents in a special education

preparation program. The mentors consisted of 24 single-subject mentors and 11

special education mentors. When collecting data, the resident teachers and mentors

completed a survey on collaborative team-teaching, a Likert-type scale on co-teaching,

reflections on openended questions related to the experience, and a self-assessment on

their collaboration

skill (Ricci et al., 2019).

The co-teaching survey consisted of a four question Likert scale providing

general statements with an answer of 1 being strongly agree and 5 being strongly agree

(Ricci et al., 2019). The statements asked participants to reflect on if they benefited

from co-teaching if their partner benefitted, and if students with or without special

needs benefitted from the co-teaching experience. The average score for the residents

in all four statements was 1.81, and the average score amongst the mentors was 1.63.

This indicates that they agreed with all four statements that the participants, their

mentors, and students with or without disabilities benefitted from co-teaching (Ricci et

al., 2019).

The responses to the open-ended questionnaire of this study developed

categorical themes among the responses (Ricci et al., 2019). The first theme was that

the common barrier that the team's felt they had to overcome was finding adequate

planning time. The next theme indicated that the mentor and resident teacher thought

that having two different perspectives for classroom instruction was a benefit. The

mentor teacher indicated their different perspective was based on experience, and the

resident teacher's perspective was based on current coursework and newer ideas. The

next theme revealed both the mentor and resident teacher indicated that having open

communication with the co-teaching teams was beneficial. The participants also saw a

benefit in sharing authority of the classroom. Although some reported being

undermined by their mentor, the majority of the responses were positive. Lastly, the

coteaching teams found that the benefits for students were obvious with this model by

having two teachers helping struggling students and differentiating instruction. Results

for collaboration indicated that both the mentor and resident teacher felt they

established effective collaboration, which positively impacted the experience (Ricci et

al., 2019).

When reviewing the opinions of professionals on co-teaching, the results from

this study are encouraging. The teams indicated that they both saw a benefit for

themselves, their co-teaching partner, and students with or without disabilities (Ricci et

al., 2019). The teams also saw benefits in collaboration, perspectives, sharing ideas, communication, feedback, and sharing authority (Ricci et al., 2019).

Hurd & Weilbacher (2018) used a qualitative approach in their study to find out the benefits and drawbacks of co-teaching for teacher candidates, cooperating teachers, students, and university members. The subjects of this study were nine classroom teachers and eight teacher candidates co-teaching middle school classrooms involving students with and without disabilities. This study collected data using three individual interviews for each participant, three focus group interviews, field notes, classroom observations, and personal opinions over one academic year (Hurd & Weilbacher, 2018). The data results determined that cooperating teachers and candidates saw a benefit to having another teacher being there to help students and assist with instruction (Hurd & Weilbacher, 2018). Station teaching was the most used model according to the cooperating teachers, and it benefitted the class because it allowed for more opportunities for explicit instruction. How co-teaching benefitted the students was by having two different educators that the students could seek out for help, and the teachers could find which students learn best when certain strategies are in place. The teacher candidates reported that they saw a benefit with the co-teaching model because they could learn content from an experienced teacher and pushed themselves to get on the same page in content knowledge (Hurd & Weilbacher, 2018).

Although the benefits seen in this study outweigh the drawbacks, there were some common themes that emerged in the results about some of these difficulties

(Hurd & Weilbacher, 2018). The cooperating teachers indicated that some of the drawbacks were a lack of time to plan, unestablished rapport with students, and communication difficulties. The teacher candidates agreed with some of these themes as they revealed that they did not have an opportunity to co-plan with the cooperating teacher. The candidates indicated that not being involved in this process caused a lack of ownership of the lessons which resulted in teacher candidates often just following the teacher and not implementing their own ideas (Hurd & Weilbacher, 2018).

Overall, Hurd & Weilbacher (2018) determined that having time to co-plan is the biggest drawback of co-teaching. Co-teaching teams have difficulty with this because they have to find a balance between co-planning and test preparations, project-based curriculum, standard grading, and community involvement. The benefits of co-teaching in this study were giving teacher candidates early exposure to co-teaching, going beyond observational norms, and focusing on co-teaching with experienced teachers, students, school curriculum, and increased collaboration (Hurd & Weilbacher, 2018).

Bowlin et al. (2015) studied a university's co-teaching preparation program for pre-service teachers working to obtain a general education and/or special education license. The main purpose of this study was to find out if general and special education pre-service teachers' knowledge and opinions of co-teaching practices, disability characteristics, special education laws, and self-efficacy toward teaching in an inclusive classroom differed after completing an introductory special education class and observing co-taught classrooms (Bowlin et al., 2015).

The subjects for this study consisted of 158 participants and had an age range of 19-53 years old, with the average age being 23 years old. Out of these participants, 13 (8%) were in their third year of their undergraduate program, 125 (80%) were in the fourth year of their undergraduate program, and 20(12%) were grade level teachers working towards their master's degree. The teaching licenses that were being obtained out of these subjects were seven (4%) early childhood licenses, 67 (42%) elementary licenses, 59 (37%) secondary licenses, 13 (8%) special education licenses, and seven (4%) working towards a middle-grade license (Bowlin et al., 2015).

Participants completed both a pre and post-course online survey consisting of four components (Bowlin et al., 2015). The four components were an attitudes questionnaire, a pre-service inclusion survey, a teacher's sense of efficacy survey, and 30 multiple choice questions about inclusion and special education students. The surveys and questionnaires included an eight-item Likert – type scale designed to measure attitudes about fairness and meeting the needs of students with disabilities. The Likert scales were five-point scales to find out the participants' feelings about collaboration and co-teaching, with the answers consisting of negative, somewhat negative, neutral, somewhat positive, and positive (Bowlin et al., 2015).

Data results from this study indicated that pre-service teachers had different outcomes. This is evident by the study showing there were differences in the scores on the pre and post surveys (Bowlin et al., 2015). According to the thirty-question survey, pre-service teachers benefitted from the course in the area of gaining knowledge on legal issues, disability characteristics, and instructional strategies. Data from the survey

regarding teachers attitudes toward educating students with disabilities showed that teachers attitudes improved by the end of the course. Further data showed that the attitudes of the participants toward collaboration and co-teaching also improved by the end of the course. In the category of pre-service teachers' sense of self-efficacy, the data revealed that the participants felt they have improved. The results showed that pre-service teachers benefit from learning about co- teaching as "Findings support that participating in a stand-alone, introductory level special education course positively influences the knowledge, attitudes, and perceived abilities (self-efficacy) of pre-service teachers" (Bowlin et al., 2015, p. 18)

The purpose of this qualitative study by Duran et al. (2020) was to compare the perceptions of co-teaching from two different groups of students in their third year of their educational degree program. The participants in this study were 82 students in total, all the students received training through coursework on co-teaching, but 28 (group two) of the students received training and applied the practice in schools with a fellow student teacher as a part of their training in primary schools. Data was collected from a co-teaching questionnaire involving open-ended questions and Likert scales to find out a student's previous experience with co-teaching, opinions on co-teaching, and the benefits and difficulties with co-teaching. At the conclusion of the study, students filled out final written reports about collaboration, co-taught lessons, and their development with co-teaching (Duran et al., 2018).

The results from the study indicated that students who applied the practice had more positive opinions on collaborating with other teachers than the group that only

received course work training (Duran et al., 2018). The results indicate that this is

because the group not only learned through coursework but applied what they learned

in an actual school setting. Further results indicate that group two had a better sense of

how to design engaging lessons by knowing what worked for them in the field and what

did not. Also, students in group two felt like they improved professionally by applying

the practice, something the other group missed out on, so the opportunity to grow in

this aspect was not possible (Duran et al., 2018)

Duran et al. (2018) determined that offering pre-service teacher's opportunities

to apply co-teaching improves student's willingness and attitudes toward co-teaching.

The experience helped student teachers learn teamwork skills, from other perspectives,

planning better lessons, and improving professionally. The author of this study said, "To

foster co-teaching in schools, student teachers should have opportunities of using

coteaching in their training programs" (Duran et al., 2018, p.13). By doing so, this gives

student teachers opportunities to value the model of co-teaching rather than just

learning about it through course work (Duran et al., 2018).

Pancsofar and Petroff (2016) studied how frequently co-teachers implement

different models of co-teaching and what the factors associated with using different

models of co-teaching on teacher's attitudes. This study hypothesized that teacher

attitudes and the use of more collaborative models would be associated with

professional development and training. The subjects of this study were 129 teachers (81

co-teaching teams) of five different school districts in a Mid-Atlantic region of the

United States teaching grades pre-k through 12th grade (Pancsofar & Petroff, 2016).

The instruments used for collecting data were a co-teaching experience and attitudes survey (Pancsofar & Petroff, 2016). The teachers completed the survey sharing how often they use a variety of co-teaching models, how much professional development or training they have in co-teaching, and their overall attitudes towards co-teaching. The results showed that co-teaching teams that have been in their partnership for more than a year reported using multiple different models of coteaching rather than primarily one teach/one assist. The results also indicated that teams that have had training and experience reported an overall better attitude about co-teaching. The results indicate that teacher attitudes were related to how the many models were used. The researchers indicated that teachers with negative opinions were likely to report mainly using the one teach/one assist model. Further data indicates that teachers with more pre-service training reported more frequently sharing responsibility for planning instruction, teaching, assessments, and co-instructing and less use of the one teach/one assist model (Pancsofar & Petroff, 2016).

Pancsofar and Petroff (2016) suggest that co-teaching teams need an adequate amount of training to be more effective teams. In this study, teachers who reported receiving pre-service or in-service training were more likely to report more collaborative approaches within their team. This study also concluded that the use of the least collaborative models was associated with a lack of training and development, causing negative attitudes about the practice (Pancsofar & Petroff, 2016).

Semon et al. (2018) studied the opinions of teachers on the different co-teaching models, the benefits and difficulties of co-teaching, and their perceptions of sustainability after completing a 16-week professional development course providing coaching and modeling. The participants of this qualitative study were 16 special education teachers from a large rural district in West Central Florida consisting of two elementary schools (7 teachers), one middle (3 teachers), and one high school (6 teachers). The coaching team consisted of two faculty members from a university close to the district. The study provided ongoing training to each special education teacher about the different models of co-teaching (one teach/one assist, parallel, team teaching, etc.) and collected data through pre and post-surveys using Likert scales, open-ended questions, and observations (Semon et al., 2018).

The results from the data indicated that the one teach/one assist model was the most frequently used model amongst the teachers (Semon et al., 2018). Throughout the study, the elementary and high school teachers' results indicated that they had an increase in implementing parallel, alternative and multiple different co-teaching approaches, while the middle school teachers had just a slight increase. When asked if they will use different models after the study, the elementary teachers indicated that they would use multiple approaches because they saw it as beneficial for students and sustainable because of their team's willingness to collaborate. The high school teachers indicated that they would implement more models after this experience. One high school teacher stated, "I can see how much better it is with team teaching having two teachers in the room working together" (Semon et al., 2018, p.11). Middle school

teachers had a different outcome and indicated they would use station teaching occasionally.

When comparing the pre and post-survey this study suggests that the special education teachers benefitted from the coaching experience (Semon et al., 2018). Elementary and high school teachers indicated before the study that they were slightly knowledgeable about co-teaching and at the conclusion, 99% indicated they were very knowledgeable. All three middle school teachers indicated they were moderately knowledgeable at first, and two of them indicated they were very knowledgeable at the conclusion. The majority of the participants recommended coaching and modeling, citing it helped them develop the tools needed for using different styles of co-teaching (Semon et al., 2018).

Semon et al. (2018) indicate that they understand why one teach/one assist is the most frequently used model because of time constraints and managing behavior. However, this study indicated that coaching and modeling during a school year is the best way for teachers to get help with exploring the other models. The reason is it includes another professional to support teachers in navigating through some of the barriers of co-teaching (Semon et al., 2018).

CHAPTER III: DISCUSSION AND CONCLUSION

Summary of Literature

Keeley (2015) and Turan and Bayar (2017) determined the most common co-teaching models used are one teach/one assist, which is when the general education teacher typically provides instruction of content while the special education or support teacher assists students (typically special education students) as needed. Another co-teaching model is parallel-teaching, which is when students are divided into groups based on their ability after mini-lessons. Stationteaching is when students transition to different stations throughout the lesson. Alternativeteaching is described as a model where educators review the material after checking for understanding before moving on further with the topic content. Team-teaching is described as both teachers being comfortable with the content and the students and the teachers work well as a team (Keeley, 2015; Turan & Bayar, 2017).

Keeley (2015) and Keeley et al. (2017) indicated that by using the different co-teaching models' students and educators found an improvement in the areas of teacher authority, student confidence, student learning, and classroom management. According to the Likert scale scores of these two studies, all models received a score of 3.5 or better on a five-point scale indicating that the students and educators found all these models beneficial in these areas (Keeley, 2015; Keeley et al., 2017). The results in the study by Hartnett et al. (2014) agreed with Keeley (2015) and Keeley et al. (2017) that using the most common models of co-teaching improved classroom management. Hartnett et al. (2014) also had similar results to the study by Akerson and Montgomery (2017), that using the different models of co-teaching showed an increase in more individual time with students. Hartnett et al. (2014) also found in their study that there was an improvement in the areas of improving quality of instruction. Teachers could build off each other's teaching style, students got to learn from different perspectives, and students felt they benefited from having two instructors. Aliakbari and Bayzar (2012) indicated

that students and teachers felt like the classroom structure and environment was positive while using the parallel teaching model.

Although there were many positives highlighted by these studies in the use of the coteaching models, there were some problems that occurred as well. Hartnett et al. (2014) found that implementing these models takes a considerable amount of time to plan. The result of this was that the one teach/one assist model was mostly used because it took the least amount of time to organize (Hartnett et al., 2014). This study also found that, at times the classroom environment could become uncomfortable if the instructors were not on the same page with each other and the students. Aliakbari and Bayar (2012) also found a similar problem as Hartnett et al. (2014), in both studies, the educators and students found that at times having multiple instructors was confusing for the students.

Overall, these studies revealed positive opinions on the effectiveness of using the different models of co-teaching from teachers and students (Akerson & Montgomery, 2017; Aliakbari & Bayar, 2012; Hartnett et al., 2014; Keeley, 2015; Keeley et al., 2017). The results suggest that because there were so many positives about all the different models, co-teaching teams would probably be able to find a model or various models that would work well in their classroom (Keeley, 2015). Since the opinions on the different co-teaching models are more positive than negative, using the different co-teaching models can be considered for inclusive classrooms.

The research showed a lot of similarities in the benefits and difficulties of co-teaching among students and staff. Some of the benefits that certain case studies identified were considered difficulties among other studies. Some students and teachers saw a benefit in having two teachers in the classroom (Bacharach & Heck, 2012; Gokbulut et al., 2020; Harter & Jacobi,

2018; Johnson et al., 2022; Metzger, 2015; Morelock et al., 2017; Morgan, 2016; Sears & Stroglios, 2018; Turan & Bayar, 2017. The benefits included having two teaching perspectives, two experts improved the quality of instruction, increased efficiency of lessons, and an increase in the chance for students to get their questions answered (Bacharach & Heck, 2012; Gokbulut et al., 2020; Harter & Jacobi, 2018; Johnson et al., 2022; Metzger, 2015; Morelock et al., 2017, Morgan, 2016; Turan & Bayar, 2017; Sears & Stroglios, 2018). When teaching students with special needs, teachers and students cited benefits of having two teachers to help with struggling students, work was better scaffolded, accommodations were better met, and the students had a better sense of belonging in their general education classroom (Bacharach & Heck, 2012; Gokbulut et al., 2020; Sears & Stroglios, 2018; Turan & Bayar, 2017).

While some studies mentioned that learning from two different perspectives was a positive experience (Bacharach & Heck, 2012; Gokbulut et al., 2020; Sears & Stroglios, 2018; Turan & Bayar, 2017), others felt that having two different perspectives posed a challenge for students (Metzger, 2015; Pratt, 2014). Pratt (2014) and Metzger (2015) also noted that participants in their studies found that co-teaching posed an issue for teams that didn't work well together and having different classroom management philosophies made expectations unclear. Harter and Jacobi (2018) and Bacharach and Heck (2012) also determined that some subjects of their research thought that having two teachers was confusing for students. Other difficulties that were found in the studies were a divide of each teacher's workload, noting that both the general education and special education teacher felt at times their work was not divided evenly (Johnson et al., 2022; Morelock et al., 2017). Chitiyo (2017) indicated that some teachers felt like they did not have the necessary skills to be effective educators for students in both general and special education.

Many studies revealed benefits for pre-service and current teachers participating in training, field experiences, and co-teaching during student teaching. Bowlin et al. (2015); Faraclas (2018); Guise et al. (2017); Hurd and Weilbacher (2018); Oh et al. (2017); Strieker et al. (2013) indicated that teachers benefitted from their co-teaching experiences or trainings in the areas of developing a better awareness for the common challenges of co-teaching, developing an increased level of respect for general education and special education teachers expertise and contributions, and increased communication and collaboration skills (Bowlin et al.,2015; Faraclas, 2018; Guise et al., 2017; Hurd & Weilbacher, 2018; Oh et al., 2017; Strieker et al., 2013).

Pre-service and current teachers who received training and participated in co-teaching experiences made an adequate amount of progress and had a better opinion on co-teaching than those who did not complete a field experience or training (Brendle et al., 2017; Duran et al., 2020; Faraclas, 2018; Pancsofar & Petroff, 2016; Petit, 2017; Ricci et al., 2019; Semon & Jones, 2018; Simons et al., 2017). Evidence suggested that these experiences helped teachers acquire skills and knowledge on co-teaching before becoming licensed educators. The experiences helped the participants learn about peer support, differentiation of instruction, professional growth, better communication skills, and better classroom management (Brendle et al., 2017; Duran et al., 2020; Faraclas, 2018; Pancsofar & Petroff, 2016; Petit, 2017; Ricci et al., 2019; Semon & Jones, 2018; Simons et al., 2017). Stroglios, Stefandis and Tragoulia (2016) agreed with this suggestion by concluding that teachers and candidates need to be trained and prepared for co-teaching through preparation programs, field experiences, and professional development.

Limitations of Research

While researching to answer my guided questions of this study, there were some limitations that were considered. First, case studies with participants, guided questions and data collection procedures were selected instead of scholarly articles based on an author's opinion. The purpose of this limitation was to ensure that the findings of the research were backed up by data in the studies used. Another limitation that was considered was selecting case studies that are relevant to modern times. The research process for this project started in the year 2021, so case studies that took place before the year 2011 were not considered. This limitation was to ensure that the research was based on modern and current practices.

There were some additional limitations that were discovered in the research. What I was expecting to learn was how co-teaching impacted special education student's academic performance. Throughout the research process, there were minimal sources that provided data on how co-teaching impacted students' academic performance. Additionally, there was no data collected on how co-teaching affected student performance on state standardized tests. Another limitation of this study was there were not a lot of data comparing and contrasting student performance with and without being in a co-taught classroom. Instead, what was discovered in the research was the different delivery models that were used, how professionals, prospects and students felt about co-teaching, and what are the opinions on the need for teachers to be trained or prepared for co-teaching. Therefore, additional research should be considered to find out the impacts co-teaching has on student performance.

Implications for Future Research

Due to the limitations of this study, suggestions for future research are to try and find out if the most common models of co-teaching impact students with or without disabilities academic performance. If there is an impact, what models are the most successful? Are the

discoveries of the impact of these models universal, or is there a wide range of data? Furthermore, does a student's disability category have an effect on their academic success? In my research, there was a lot of information on student's and educator's opinions of the models, but their direct impact on academic performance was lacking. The literature revealed some information on student's feeling an increase of belongingness in co-taught classrooms and further research could be aimed towards finding out if this contributed to student's academic success.

Further research would be beneficial to attempt to determine if an educator's job performance has any correlation with their opinions of the benefits and difficulties with coteaching. For example, do teachers who receive positive feedback related to job performance by administrators have a better opinion of co-teaching than teachers that did not receive similar feedback? When examining their opinions, do teachers that reveal more positives than negatives about co-teaching (Decrease in workload and positives regarding collaboration, etc.) have certain strategies in place that help develop their opinion? This question would be interesting because, in the research done for this project, there were some common themes developed regarding co-teaching. Interestingly, some of the positives that were found in the research were also considered negatives by other professionals. An example of this would be on teacher workload; a lot of groups revealed that co-teaching decreased their responsibility, while others revealed that co-teaching increased the amount of work they had to do. There are similar contradictions in the data regarding collaboration, communication, and expertise with content.

Lastly, the data indicated that more teacher preparation programs and school districts are trying to prepare pre-service teachers for co-teaching through college coursework, field experiences, student teaching and professional development. Further research should attempt

to determine if a particular preparation model is more impactful than others. If so, is this universal, or is each case/experience different? Also, is there a certain impact from applying the practice through field experience and/or student teaching that professionals indicate was more important than learning about it through college courses? With a lot of the data about the teacher's and students' opinions being varied, it is worth determining if one preparation/training model has a more positive impact than others.

Professional Application

As I move forward with my career in special education, I reflect on how my research has and will impact myself going forward. The research has impacted myself by realizing that coteaching is not guaranteed to be an effective service model. Initially, I believed that co-teaching would be beneficial to my students and also myself professionally. The data in my research indicates that a lot of the opinions on the aspects that make co-teaching difficult were also aspects that educators and students saw as a benefit. In order to be an effective team, coteachers need to collaborate effectively by engaging in open-minded conversation, respect other's perspectives, identify teacher roles and expertise, be familiar with the different models of co-teaching, identify which models work best for your team and students, and being aware of special education due process and laws. Throughout my research, I found that educators and students who had negative opinions about co-teaching indicated that their team's failed at various components that make up an effective team. As I move forward professionally, if I decide to work in a co-taught setting, I now know what many different educators have described as the positives and negatives of co-teaching. While in this position, I know the importance of communicating effectively, accepting other's expertise, explaining how I can be an asset to the classroom with my own expertise, making time to co-plan, and defining our roles.

When working in a co-teaching environment, it is important to understand the most common models of co-teaching. As discussed in the literature review, the most common models are one teach/one assist, parallel teaching, station teaching, alternate teaching and team teaching. It is important for teams to understand these models because it is key to finding the right models that best suit the students and teachers of the classroom. It is also important to avoid only using the one teach/one assists model. Using multiple models increases the chances of utilizing both educators' expertise. This is critical because one of the negative opinions that were described about co-teaching in the literature review was that sometimes one of the educators feels they are being utilized as a paraprofessional or teaching assistant and does not have an ownership role of the classroom. This is primarily when one teach/one assists is the primary model chosen. It is critical that both educators establish their roles and try to be available for all students, not just a specific list of student's in the classroom. One of the benefits that students described of co-teaching in the literature review was having an extra point of view to help students understand classroom material. This opportunity would be limited if both educators only offered themselves to specific students. Co-teaching effectively is vital in students feeling a sense of belongingness and building a community that supports everyone.

Lastly, data from the literature review suggests that teacher preparation programs would benefit from having pre-service educators take college courses regarding the co-teaching practice. Aside from taking these courses, completing a field experience where they can apply the practice would be beneficial to prospective special education and general education teachers. The literature review revealed that some teachers did not have adequate training in co-teaching while pursuing their degrees. Data also suggests that students who did learn about co-teaching in their programs were better prepared and had a more positive opinion of

coteaching. Additionally, educators who completed a co-teaching field experience had a better experience with co-teaching than those who did not, and they felt they had the ability to coteach effectively. Current educators who did not receive co-teaching training through university coursework could benefit from the training provided by their districts and/or administrators. My research indicated that a lot of current teachers have had minimal pre-service experience with co-teaching, especially educators whose focus is on students without disabilities. The more exposure that current educators can obtain from co-teaching could improve their performance and their outlook. Moving forward, I feel that educators who will work in co-taught classrooms need ongoing training and applied practice to benefit the students in their classroom. When coteaching is executed effectively it improves school and district-wide inclusion of students with and without disabilities.

Conclusion

At the conclusion of my research, there were a few things that resonated. In order to orchestrate a successful co-taught classroom, the teams need to understand the most used models of co-teaching and identify what models would be best for their specific classrooms. Understanding the different models and how to implement them will ensure that both teachers are utilizing their expertise and have ownership of the classroom. This is essential to avoid the one teach/one assists model. Another aspect of co-teaching that resonated was the essentials to being an effective co-teaching team in terms of collaboration and communication. Teams need to set aside adequate time to co-plan their instruction to ensure they are being as effective as possible. This is vital to ensuring that both teachers are making the most of their planning time and one teacher in particular not feeling like they are doing the bulk of the work. This was one of the negatives that was mentioned while reading through the studies of the research. Lastly,

current and pre-service educators need adequate training and professional development to

better prepare for co-teaching. Ideally, exposure to co-teaching in preparation programs would

be the most beneficial, but for those who are already in the field, training and professional

development would contribute to more effective co-teaching. Co-teaching has become more

common when servicing special education students in the general education classrooms and is

beneficial to the students' sense of belongingness at their school and in their communities.

References

Akerson, A., & Montgomery, M.S. (2017). Peer-to-peer co-teaching: Idea to

   implementation. *SRATE Journal,26(2),* 1-8*.*

Aliakbari, M., & Bayzar, A. (2012). Exploring the impact of parallel teaching on general

   language proficiency of EFL learners. *Journal of Pan-Pacific Association of*

   Applied Linguistics, 16(1), 55-71.

Bacharach, N., & Heck, T. W. (2012). Voices from the field: Multiple perspectives on a

   co-teaching in student teaching model. *Educational Renaissance, 1* (1), 49-62.

Bowlin, T.M., Bell, S. M., Coleman, M.B., & Cihak, D.F. (2015). Co-teaching and

   collaboration: Preservice teachers' knowledge, attitudes and perceived sense of

   efficacy in teaching students with disabilities. *Journal of the American Academy*

   of Special Education Professionals, 37-57.

Brendle, J., Lock, R., & Piazza, K. (2017). A study of co-teaching identifying effective

implementation strategies. *International Journal of Special Education, 32*(3),

538-550.

Chitiyo, J. (2017). Challenges to the use of co-teaching by teachers. *International*

*Journal of Whole Schooling, 13 (*3), 55-66.

Duran, D., Flores, M., Ribas, T., & Ribosa, J. (2021). Student teachers' perceptions and

evidence of peer learning through co-teaching: Improving attitudes and

willingness towards co-teaching. *European Journal of Psychology of Education –*

EJPE (Springer Science & Business Media B.V.), 36(2), 495-510. https://doi-org.ezproxy.bethel.edu/10.1007/s10212-020-00479-0

Faraclas, K.L. (2018). A Professional Development of Reading Skills. *International Journal*

of Education and Practice, 8(1), 1-17.

Gokbulut, O.D., Akcamete, G., & Guneyli, A. (2020). Impact of co-teaching approach in

inclusive education settings on the development of reading skills. *International*

Journal of Education and Practice, 8(1), 1-17.

Guise, M., Habib, M., Thiessen, K., & Robbins, A. (2017). Continuum of co-teaching

implementation: Moving from traditional student teaching to co-teaching.

Teaching & Teacher Education, 66, 370-382.

https://doi-org.ezproxy.bethel.edu/10.1016/j.tate.2017.05.002

Harter, A., & Jacobi, L. (2018). Experimenting with our education or enhancing it? Co-

teaching from the perspective of students. *I.e.: Inquiry in Education, 10(*2).

Hartnett, M. J., McCoy, A., Weed, R., & Nickens, N. (2014). A work in progress:

Unraveling the lessons learned in a co-teaching pilot. *Educational Renaissance,*

3(1), 33-54.

Hicks-Monroe, S. L. (2011). A review of research on the educational benefits of the

inclusive model of education for special education students. *Journal of the*

American Academy of Special Education Professionals, 61-69.

Hurd, E., & Weilbacher, G. (2018). Developing and using a co-teaching model within a

middle level education program. *Current Issues in Middle Level Education, 23*(1).

Johnson, T.M., King-Sears, M.E., & Miller, A.D. (2022). High school co-teaching partners'
self-efficacy, personal compatibility, and active involvement in instruction.

Learning Disability Quarterly, 45(2), 96-107.

Keeley, R. G. (2015). Measurements of student and teacher perceptions of co-teaching

models. *Journal of Special Education Apprenticeship, 4*(1).

Keeley, R. G., Brown, M. R., & Knapp, D. (2017). Evaluation of the student experience in

the co-taught classroom. *International Journal of Special Education, 32*(3), 520-

537.

King-Sears, M. E., & Strogilos, V. (2020). An exploratory study of self-efficacy, school

belongingness, and co-teaching perspectives from middle school students and

teachers in a mathematics co-taught classroom. *International Journal of*

Inclusive Education, 24(2), 162-180.

Metzger, K.J. (2015). Collaborative teaching practices in undergraduate active learning

classrooms: A report of faculty team teaching models and student reflections from two biology courses. *Bioscience: Journal of College Biology Teaching, 41*(1), 3-9.

Morelock, J.R., Lester, M. M., Klopfer, M.D., Jardon, A. M., Mullins, R.D., Nicholas, E.L., & Alfaydi, A. S. (2017). Power, perceptions, and relationships: A model of co-teaching in higher education. *College Teaching, 65*(4), 182-191.

Morgan, J.L. (2016). Reshaping the role of a special educator into a collaborative learning specialist. *International Journal of Whole Schooling, 12*(1), 40-60.

Oh, K., Murawski, W., & Nussli, N. (2017). An international immersion into co-teaching: A wake-up call for teacher candidates in general and special education. *Journal of Special Education Apprenticeship, 6*(1).

Pancsofar, N., & Petroff, J.G. (2016). Teachers' experiences with co-teaching as a model for inclusive education. *International Journal of Inclusive Education, 20*(10), 1043-1053.

Pettit, S. L. (2017). Preparing teaching candidates for co-teaching. *Delta Kappa Gamma Bulletin, 83*(3), 15-23.

Pratt, S. (2014). Achieving symbiosis: Working through challenges found in co-teaching to achieve effective co-teaching relationships. *Teaching & Teacher Education, 41,* 1-12. https://doi-org.ezproxy.bethel.edu/10.1016/j.tate.2014.02.006

Ricci, L.A., Persiani, K., & Williams, A.D. (2019). From "training wheels for teaching" to

"cooking in your mother -in-law's kitchen": Highlights and challenges of co-

teaching among math, science, and special education teacher candidates and

mentors in an urban teacher residency program. *International Journal of*

Whole Schooling, 15(2), 24-52.

Semon, S., Lane, D., Jones, P., & Smith, S.M. (2020). Job-embedded professional

development: Implementing co-teaching practices in general education

classrooms. *International Journal of Inclusive Education,* 1-16*.*

https://doi-org.ezproxy.bethel.edu/10.1080/13603116.2020.1821448.

Simons, M., Baeten, M., & Vanhees, C. (2020). Team teaching during field experiences

in teacher education: Investigating student teachers' experiences with parallel

and sequential teaching. *Journal of Teacher Education, 71*(1), 24-40.

Strieker, T., Gillis, B., & Zong, G. (2013). Improving pre-service middle school teachers'

confidence, competence, and commitment to co-teaching in inclusive

classrooms. *Teacher Education Quarterly, 40*(4), 159-180.

Strogilos, V., Stefanidis, A., & Tragoulia, E. (2016). Co-teachers' attitudes towards

planning and instructional activities for students with disabilities. *European*

Journal of Special Needs Education, 31(3), 344-359.

Turan, M., & Bayar, B. (2017). Examining teachers view on primary teaching practices

based on the co-teaching model. *Journal of Education and Training Studies,*

5(11), 82-97.