St. Cloud State University

theRepository at St. Cloud State

Culminating Projects in Education
Administration and Leadership

Department of Educational Leadership and
Higher Education

8-2020

Co-teaching: Benefits and Challenges of Co-teaching in Middle School

Michael Weerts

Follow this and additional works at: https://repository.stcloudstate.edu/edad_etds

Part of the Educational Leadership Commons

Recommended Citation

Weerts, Michael, "Co-teaching: Benefits and Challenges of Co-teaching in Middle School" (2020).
Culminating Projects in Education Administration and Leadership. 72.
https://repository.stcloudstate.edu/edad_etds/72

Co-teaching: Benefits and Challenges of Co-teaching in Middle School

by

Michael Weerts

A Dissertation

Submitted to the Graduate Faculty of

St. Cloud State University

in Partial Fulfillment of the Requirements

for the Degree

Doctor of Education in

Educational Administration and Leadership

September, 2020

Dissertation Committee:
Kay Worner, Chairperson
Roger Worner
David Lund
James Johnson

Abstract

The increase in numbers of students with disabilities in American school districts has created the need to study options that have proven successful in meeting a variety of students' educational achievement needs in regular education classrooms. The use of co-teaching as a methodology to help meet this need is a worthy research topic.

A mixed methods study was conducted seeking information from special education and regular education middle school teachers in a select Minnesota school regarding co-teaching effectiveness, challenges, and benefits to students. The study participants were selected because they utilized co-teaching methodologies. The study may provide guidelines for teachers currently employing one of the six researched co-teaching models and for administrators contemplating the use of co-teaching models in the classroom in the future.

Statement of the Problem

Co-teaching methodology pairs a special education and general education teachers in the same classroom; this model was initially developed to provide instruction to students with disabilities in the regular classroom for a portion of their day rather than serving these students extensively in a resource room (Friend & Cook, 1995).

Between 2011-12 and 2017-18, students in public schools who received special education services increased from 6.4 million to 7 million (U.S. Department of Education, 2019). That increase in the number of students with disabilities created a need to study options that have proven successful in meeting a variety of students' educational achievement needs in regular education classrooms.

Study Purpose and Overview

The purpose of the mixed methods study was to examine the effectiveness and challenges of co-teaching, the benefits to students, and the most frequently employed co-teaching model from the Friend and Cook research, 2010, as reported by special education and general education teachers in select Minnesota middle schools who have implemented a co-teaching model in their classrooms. The study also examined the perceived differences in challenges identified by each co-teaching member.

Key Findings

Significant findings from the survey included:

- 62.5% of study participants perceived the Parallel Teaching model as very effective.
- 93.8 % of study participants either agreed or strongly agreed that co-teaching had increased the academic achievement of special education students.
- 93.8 % of study participants either agreed or strongly agreed that co-teaching allowed for increased opportunities to provide differentiated instruction.
- 87.6 % of study participants either agreed or strongly agreed that a lack of planning time between co-teaching partners was a challenge.
- The co-teaching model allowed teachers to differentiate instruction and reflect on what was beneficial to student achievement and to quality teaching.
- Implementation of a co-teaching model requires advanced planning, training of teachers and scheduled time to meet during the school day and week.

- Challenges occur when placing two teachers' personalities together. It is essential to ensure that the teachers will be able to work together and truly want to be part of the co-teaching team.

Acknowledgments

I would like to thank my committee chairperson, Dr. Kay Worner and my committee members, Dr. Roger Worner, Dr. James Johnson, and Dr. David Lund. Thank you for taking the time and giving me constant feedback to help me finish my research. This would not have been possible without all of your help.

I would also like to thank my classmates in Cohort 7 at St. Cloud State University. Their support and willingness to help me throughout my research is greatly appreciated. Thanks to all of my past and present colleagues for the encouragement while I went through the program. I appreciated everyone reaching out to others for me and making contacts for me during this research. Lastly, thanks to my family and friends for everything that you have done during this journey.

Dedication

This is for my family, friends, and everyone who has provided support for me along the way.

Table of Contents

9

Chapter   Page

G.   Email to Participants to Conduct Good Morning 139

H.   Survey Follow-up Email to Participants to Conduct Survey 140

List of Tables

11

Chapter I: Introduction

In 1975, Public Law 94-142, the Education for All Handicapped Children Act was enacted (Wilson & Blednick, 2011). "From that historic point on, every school district in the country was mandated to provide a free and appropriate education to all children with disabilities" (U.S. Department of Education, 2017).

Before 1975 and the Federal mandate, children with disabilities generally had fewer educational opportunities because teachers believed they were not able to educate them. "Millions of children were denied an education because educators felt they couldn't meet the needs of students with disabilities" (Wilson & Blednick, 2011, p. 6).

After 1975 when Public Law 94-142 was initiated in order to meet the needs of students with disabilities, students with disabilities were assigned to resource rooms for specific periods of time during the day rather than being assigned to mainstream classrooms with their non-disabled peers (Siegel, 1993). After receiving special educational assistance in those resource rooms, they were then mainstreamed into regular education classrooms with their peers for the remainder of the day (Siegel, 1993).

Special Education students' social and educational goals were written in their Individual Educational Plans (IEP). The IEP's specified the services and accommodations special education students needed to receive to succeed in their classrooms (Wilson & Blednick, 2011). These students were often taught in building spaces segregated from their classrooms; often they did not have access to the same classroom content and instruction as did non-special education students to achieve high academic levels (Wilson & Blednick, 2011, p. 7).

The number of students with disabilities as a percent of the total school population in the United States has increased over the years (Pugach & Winn, 2011). Between 1976-1977 and

2004-2005, the percentage of special and education students increased from 8.3% to 13.8%

(U.S. Department of Education, 2016). The challenges of meeting every student's needs required

teachers to differentiate instruction. By pairing a special education teacher with a general

education teacher, referred to as the co-teaching model, an opportunity was created to

meet all students' needs at a higher level (Pugach & Winn, 2011).

The co-teaching model became even more relevant when the No Child Left Behind Act

(NCLB) of 2001 was initiated. The Act required all students to have access to the general

curriculum throughout the course of the school day. It also caused teachers to be held to a higher

standard, one to which they would be accountable for all students' achievement outcomes

(Friend et al., 2010).

Background

Since passage of the No Child Left Behind Act (NCLB, 2001), the expectations that every

child succeed with the general education curriculum have increased intensely (Kohler-Evans,

2005). To meet the expectations of the Act in general and specifically for students with

disabilities, several new or adapted teaching strategies needed to be implemented including the

removal of students with disabilities from the mainstream classroom and placement

in an inclusive room setting. This strategy had not proven to be effective. "Time has taught us

that students pulled from general education classes and taught in a resource setting do not benefit

from the instruction of content area teachers" (Kohler-Evans, 2005, p. 260).

Another strategy developed to better meet the needs of students with disabilities was co-

teaching. Co-teaching is the partnering of a special education teacher with the general education

teacher, in one classroom, to meet students' needs. "Co-teaching is the most popular, inclusive,

educational model to meet the educational needs of students with disabilities previously enrolled in exclusive, segregated settings" (Magiera & Zigmond, 2005).

An advantage of co-teaching was that the pairing of two teachers brought more expertise into the classroom, allowing each teacher to convey their special qualities and knowledge. Each teacher can enhance his/her own instructional style. While the general education teacher may not have the knowledge or training to close the learning gap with every student, the special education teacher may possess different training and knowledge that can contribute to closing the achievement gap (Kohler-Evans, 2005, p. 260).

Six co-teaching models were identified by Marilyn Friend and Lynn Cook (1996) to meet the academic needs of all students in the classroom. The six models involved two teachers delivering instruction in one classroom. These models included:

- One Teach, One Observe

- One Teach, One Assist

- Station Teaching (teachers rotating among ability groups)

- Alternative Teaching (teaching a different curriculum to a group)

- Parallel Teaching (teaching two groups at the same time)

- Team Teaching (one instruction by two teachers)

The variety of models is intended to keep the co-teaching relationship fresh and effective. In offering different models, different teaching strategies and a range of instructional approaches are encouraged (Friend & Cook, 2010).

Regardless of which model is used, pairing general education and special education teachers permits two professionals to share their knowledge on preferred strategies for meeting every student's needs in the classroom (Kohler-Evans, 2005). This is beneficial since the general

education teacher often does not know how to properly instruct, or manage students with special needs (Kohler-Evans, 2005).

While co-teaching makes sense, it is not as easy as it might seem (Howard & Potts, 2009). It requires proper planning, communication, and collaboration. Teamwork is critical in order for co-teaching to be effective. The general education teacher must demonstrate expertise regarding general subject content, while the special education teacher must demonstrate knowledge regarding differentiation of content to teach students with learning disabilities (Howard & Potts, 2009). The challenge for educators is to identify the most appropriate co-teaching model to enhance the learning of all children while meeting each student's needs. It takes time and patience to execute the successful co-teaching model (Friend & Cook, 2010), and it was found that "Co-teachers should recognize that their relationship will evolve over time," (Friend & Cook, 2010, p. 124).

Significance of the Study

The increase in the number of students with disabilities in American school districts has created the need to study options that have proven successful in meeting a range of students' educational achievement needs in regular education classrooms.

A mixed methods study of special education and general education teachers, who employ co-teaching in a select Minnesota middle school, can contribute to the body of research on co-teaching effectiveness, challenges and benefits to students. The study may provide guidelines for those teachers currently employing one of the six identified co-teaching models and for those contemplating using co-teaching models in the classroom in the future.

Purpose of the Study

The purpose of the study was to examine the effectiveness and challenges of co-teaching, the benefits of co-teaching to students, and the co-teaching model most frequently reported as employed by special education and general education teachers in a select Minnesota middle school who have implemented a co-teaching model in their classrooms. The study also examined the perceived differences in challenges identified by co-teaching members.

Statement of the Problem

The Individuals with Disabilities Education Act (IDEA) is focused on serving students with disabilities in the Least Restrictive Environment (LRE) (U.S. Department of Education, 2017). The co-teaching methodology was initially developed to pair special education and general education teachers in the same regular classroom to provide instruction to students with disabilities for a portion of the day rather than having these students served extensively in a resource room. Co-teaching allowed students to be served in the regular classroom the entire day (Friend & Cook, 1995).

Between 2011-2012 and 2017-2018, students in public schools who received special education services increased from 6.4 million to 7 million (U.S. Department of Education, 2019). That increase in the number of students with disabilities created a need to study options that have proven successful in meeting a variety of students' educational achievement needs in regular education classrooms.

According to research conducted by Konrad, Keesey, Ressa, Alexeeff, Chan, and Peters (2014), the prominence of collaboration in the classroom is a high priority to ensure the needs of special education students are met. This required teachers to capitalize on opportunities for the

students with disabilities while not losing track of meeting all students' needs to achieve academic success (Konrad, Keesey, Ressa, Alexeeff, Chan, Peters, 2014).

The review of literature illustrated that the co-teaching model can be an effective teaching method for all students, depending upon proper planning and preparation of personnel (Friend & Cook, 2010)**.** No studies were located that explored the challenges, benefits, effectiveness and types of co-teaching models used by co-teaching teams of teachers in Minnesota middle schools.

Theoretical Framework

While other models have been created, Friend and Cook identified six co-teaching models for the delivery of effective classroom co-teaching practice. Their work provided the theoretical framework of the study and for an analysis of the collaborative teaching relationship between special education and general education teachers' in the classroom.

Friend and Cook's (1995) six-co-teaching models are as follows:

- **One Teach, One Observe**-General education and special education teachers are present in the classroom, but one teacher takes the lead while the other teacher observes those students who may need additional instruction. The co-teachers rotate roles in this model.

- **One Teach, One Assist-**One teacher directs instruction while the other teacher circulates about the room to provide assistance to those students on who demonstrates a need for assistance. Teachers rotate duties during this method.

- **Station Teaching**-Students in the class are divided into three to four ability groups. The teachers assign tasks to each group for independent learning when not grouped

with a teacher. On a rotated basis, each teacher will work with all students in a group
at their level and the basis of their individual needs.

- **Alternative Teaching-**One teacher instructs a large group of students while another
  teacher provides instruction on an alternative lesson to a smaller group of students.
  The lesson taught to each group is identical in content though it is taught at a different
  ability level to assure understanding by all students.
- **Parallel Teaching**-Co-teachers instruct the same lesson simultaneously, but the
  students are divided into two groups.
- **Team Teaching-**Co-teachers instruct and support all students at the same time. This
  model involves large group instruction that engages the class through constant
  interaction from both teachers.

Research Questions

1. How did co-teaching team members in a select Minnesota public middle school rate
   the effectiveness of each of the six co-teaching models?

2. What did co-teaching team members in a select Minnesota public
   middle school perceive as benefits to students of using co-teaching in the classroom?

3. What did co-teaching team members in a select Minnesota public
   middle school perceive as challenges in using co-teaching in the classroom?

4. Which of the six models of co-teaching did co-teaching team members of a select
   Minnesota public middle school report that they used most frequently?

5. What differences in perceived challenges of using co-teaching in the classroom were
   found between regular education teachers and special education teachers involved in
   co-teaching in a select Minnesota public middle school?

Definitions of Terms Used in the Study

Accommodations: In the purpose of the study, an aid provided to a student to facilitate learning. These are written into a student's IEP to help them with understanding with the material or to help them stay focused. Examples of accommodations include having the student stand; playing with a fidget to keep the students' hands occupied, or to have the teacher speak with a microphone to aid those students who have hearing disabilities (http://www.specialeducationguide.com/special-education-dictionary/).

Achievement Gap: Any significant and persistent disparity in academic performance or educational attainment between different groups of students, such as white students and minorities (https://www.edglossary.org/achievement-gap/).

Adaptations: Accommodations made to help the student feel welcomed in the classroom. For example, Autistic students may have an established routine or a certain way they need to do things. The teacher may set up their classroom to assist these students in adjusting to the classroom without altering the routine to which they have become acclimated to help themselves feel comfortable (http://www.specialeducationguide.com/special-education-dictionary/).

Collaborative Teaching (Co-teaching): Two teachers jointly working together and differentiating their teaching to fit every student's educational needs (http://www.specialeducationguide.com/special-education-dictionary/).

Co-planning: General education and special education teachers involved in co-teaching decide how they will implement instruction to meet the needs of all students (http://www.specialconnections.ku.edu/?q=collaboration/cooperative_teaching/teacher_tools/co_planning).

Inclusion: Providing special education students the opportunity to learn alongside their peers in the regular education classroom (http://www.specialeducationguide.com/pre-k-12/inclusion/).

Individualized Education Program (IEP): A legal document that defines special education services between the school district and the parents of a special education student (http://www.specialeducationguide.com/special-education-dictionary/).

Least Restrictive Environment (LRE): Providing education to students with disabilities in a classroom setting that is as close to the general education setting as possible as mandated by the Individuals with Disabilities Act (IDEA) (http://www.specialeducationguide.com/special-education-dictionary/).

Modifications: These may be up to the teacher discrepancy or written into their IEP. Alterations that are made by the teacher to reduce a special education student's workload or to give them few choices on certain tests. Examples of this are to cross off two answers on a multiple- choice test to give them a fifty-fifty chance of a correct answer or to provide three options on fill in the blank questions (http://www.specialeducationguide.com/special-education-dictionary/).

Delimitations

The researcher did not conduct research pertaining to the financial aspect of implementing the co-teacher model to focus on the effectiveness and challenges of placing two teachers in one classroom.

The study was limited to limited to Minnesota middle school teachers and to one Minnesota school district.

Organization of the Dissertation

The dissertation is organized into five chapters. Chapter I provides the introduction to the study, the background, significance of the study, purpose of the study, statement of the problem, theoretical framework, research questions, definitions of salient terms of the study, delimitations and organization.

Chapter II is the literature review and examines the models of co-teaching, the benefits and challenges of co-teaching models, the overall purpose of pairing a special education and general education teacher in the same classroom, and types of co-teaching models.

Chapter III consists of the methodology of the study. This includes an introduction, participants, human subject approval, instruments for data collection and analysis, research design, treatment of data, procedures and timeline, and a summary.

Chapter IV includes research findings, the results of the quantitative and qualitative research for each research question, and a summary.

Chapter V provides conclusions and discussion of the results, limitations of the study, and recommendations for professional practice and further research to be conducted.

Chapter II: **Review of Literature**

Introduction

The purpose of the mixed method study was to examine the effectiveness and challenges of co-teaching, the benefits to students, and the most used co-teaching model from the Friend and Cook research, 2010, as reported by select Minnesota public middle school teachers who implement co-teaching models in their classrooms. The study also examined the perceived differences in challenges as identified by each co-teaching member.

A review of literature on the topic of co-teaching resulted in the identification of four themes: benefits, challenges, and preferred models of co-teaching. The first theme addresses the advantages of having two teachers in the classroom serving students with disabilities and students who may need additional instructional differentiation in the classroom.

The second theme discusses the challenges of co-teaching. This theme discusses the difficulties of planning together as team, conflicting teaching philosophies, establishing routines, and sharing a room with equal responsibility.

The third theme examines the proper steps to create successful co-teaching teams. This includes how to divide the roles of each teacher, implementation procedures of the purpose of co-teaching and the importance of co-planning.

The fourth theme introduces the six co-teaching models commonly used in the classroom and an analysis of advantages and challenges of each model.

Benefits of Two Teachers in the Classroom (Co-teaching)

Marilyn Friend, author of "Co-Teach! A Handbook for Creating and Sustaining Classroom Partnerships in Inclusive Schools," researched the impact of collaboration between two teachers in the classroom. Friend emphasized the "power of two" teachers (Friend,

2005) who can take full advantage of having two professionals of different expertise in the classroom. In the course of time, if two teachers decide to work as a team and have the common goal to improve every student's academic success, the classroom culture will be a positive learning environment (Friend, 2005).

Harvey (2012) found that collaboration brings new ideas and insights into the classroom. Two professionals with different skills benefit all students regardless of academic abilities. "Collaboration is all about thinking and critical thinking because by combining for a stronger and more effective product are increased" (p. 5). The combination of two teachers' knowledge and expertise in one classroom enhances the learning experiences for students. It generates a new perspective to the classroom by having two professional teachers who are working together to help every student and enriches teaching strategies and student engagement (Harvey, 2012). On the same topic, Chanmugam and Gerlach (2013) stated that by pairing two teachers together, it offers additional value to instructional activities when two teachers brainstorm together during the school day.

Co-teaching is a valuable way to enhance teaching practices (Friend, 2008). When two professionals share their ideas and knowledge, teaching quality becomes more noticeable. The knowledge possessed by two teachers provides opportunities for both professionals to build on their professional expertise "Given the increasing popularity of co-teaching and implied legislative stimulus for it, educators should not only be aware of co-teaching but also enhance their knowledge regarding this practice" (Friend, 2008. p. 10). Allowing more professionals to work with students of all needs and to have shared responsibilities, will reduce the stress of both teachers (Friend, 2008).

Conducting peer observations or visiting other classrooms helps teacher colleagues bond and discuss what might work in the classroom (Friend, 2008). Feedback of what is beneficial to the students and what needs to be improved is helpful. "Co-teachers often benefit from visiting classrooms with model co-teaching practices already in place or participating in peer observations to exchange feedback on their classroom practices" (Friend, 2008). As a further example, according to Friend and Cook, (2010) by working together, the teachers gain perspectives of student behavior and learning capabilities (Friend & Cook, 2010). Teachers then understand which students need specialized services and which students need more advanced instruction for further education. Two teachers who are committed to co-teaching learn more about their students' learning, their behavior and which students need the extra motivation and specialized interventions to help them achieve academic and social success (Friend & Cook, 2010).

Graziano and Navarrette (2012) discussed how two minds can problem solve and reflect more effectively and efficiently when working together. Two teachers in a classroom allows for differentiated learning activities during a day in the classroom. Teachers can differentiate at a higher level, organize group activities, reflect with another professional daily and to monitor student understanding more effectively (Graziano & Navarrete, 2012). The ability to have impartial learning for the entire classroom is extremely valuable with the co-teaching model. There are more advantages of co-teaching than just the interaction of two teachers in the classroom (Graziano & Navarrete, 2012). It also allows two professionals to join ideas together to form one common lesson plan (Graziano & Navarrete, 2012). Additionally, by having two teachers planning and teaching collaboratively, even well-performing students improve their academics. "Many students without disabilities appeared to view "heling" students

with disabilities as a critical element of inclusion, and there was discussion of reciprocal

relationships and contributions of students with disabilities" (Shogren et al., 2015).

Collaboration can also decrease the burden of teachers thinking their job and workload is

more difficult than those of their peers (Friend & Cook, 2010). When professionals work

together, they tend to realize the importance of each other's position and have the knowledge that

everyone is working diligently to help the school and to benefit student achievement. Once they

see this, it builds team unity and togetherness (Friend & Cook, 2010). Similarly, Kohler-Evans

(2005) analyzed the significance of having two professionals conduct instruction in a

collaborative manner. The pairing of two teachers brings more expertise in the classroom. Each

teacher conveys a special quality and knowledge. Based on such variety, each teacher can

enhance his/her own instruction style. The general education teacher may not have the

knowledge or training to close the learning gap with every student; the special education

teacher possesses different training and knowledge that can contribute to closing the achievement

gap (Kohler-Evans, 2005).

According to research conducted by Konrad, Keesey, Ressa, Alexeeff, Chan, and Peters

(2014), the prominence of collaboration in the classroom is a high priority to assure needs of a

special education student is met. This required teachers to capitalize on opportunities for the

students with disabilities and to not lose track of meeting all students' needs to achieve academic

success (Konrad et al., 2014). On the same topic, Friend (2008) found teachers who have

worked with students with special needs can be overwhelmed with how to properly assist these

students. Special education teachers may have strategies to help a struggling student and can

assist the classroom teacher in working with special needs students (Friend, 2008). Skills and

knowledge of each teacher may not be extremely different but putting them together enhances

their knowledge and strengthens their weakness (Friend, 2008). "It is not so much that the educator's knowledge and skills are completely different; rather, the two sets of knowledge and skills form a sort of Venn diagram in which there are overlapping similarities and distinct differences" (Friend, 2008, p. 11).

Bresnahan, Conderman, and Pedersen (2009) said that when two teachers work together, it takes the burden off the solo teacher isolated in his/her classroom. With such wide range of learning among students, the job of a solo teacher may be rather strenuous. Keeping data and continuously monitoring student progress are both time consuming activities but essential for student learning providing immediate feedback (Bresnahan et al., 2009). When one teacher attempts to meet all students' needs at a high range of ability, it may evolve into a chaotic classroom (Bresnahan et al., 2009). As a further example, Kohler-Evans, (2005) identified that the purpose behind the co-teaching model was to enhance the quality of education for every student in the classroom. Teachers have a limited number of hours to provide instruction during the course of a year (Kohler-Evans, 2005). Transitions and removing students from the classroom can be time consuming and waste valuable instruction time. "Time has taught us that students pulled from general education classes and taught in a resource setting do not benefit from instruction of content area" (Kohler-Evans, 2005, p. 260).

Gloria Wilson and Joan Blednick, (2011), authors of "Teaching in Tandem, Effective Co-Teaching in the Inclusive Classroom," researched the importance of having proper planning and reflection time. For students to achieve success both socially and academically, the proper format must be in place and executed daily from co-planning to post-assessments (Wilson & Blednick, 2011). Similarly, Chanmugam and Gerlach (2013) found the same importance of daily reflection for every teacher after lessons or at the end of the day. When teaching alone, a teacher

does not have anyone to give or get feedback from on a regular basis. When teachers plan and reflect together, it allows teachers to build on their weaknesses and make their strengths stronger (Chanmugam & Gerlach, 2013). It also allows a collaborative style of teaching other than the private individual inclusion shared by a teacher who is solo (Chanmugam & Gerlach, 2013).

Friend and Cook (2010) discovered the benefits of co-teaching enhances a teacher's professional growth and provides an opportunity to coincide with another professional on a daily basis. The teachers can critique and learn from each other to improve student achievement. Reflection is an important part of teaching and when there is another set of eyes in the room, teachers can problem solve effectively and efficiently (Friend & Cook, 2010).

In various schools, the high diversity and wide range of learning complicates teaching to assure the entire classroom achieves academic success (Bresnahan et al., 2009). "Classrooms contain increased diversity. In some cases, classes contain a spread of five years in skill levels, yet teachers must ensure that all students meet state and local standards" (Bresnahan et al., 2009 p. 37). The implementation of the co-teacher model allows for differentiated groups of students to have time with each teacher (Bresnahan et al., 2009).

Friend (2008) found that with the differing academic levels of students, teaching in a classroom with a wide range of students' abilities created difficulty in assuring all students' needs are being met. "The requirement that nearly all students reach a high standard of academic achievement and that they are taught by highly qualified teachers has prompted focus on this service delivery option as a means for addressing legislative mandates" (Friend, 2008, p. 10). Teachers in such settings conducted small group instruction and had more one on one time with students who excel because they are not lost in a large classroom (Friend, 2008). Similarly, according to Gloria Wilson, "Co-Planning for Co-teaching" (2016), revealed how effective

co-teachers use strategies to help all students' achievement levels ranging from low to high (Wilson, 2016). Through delivering instruction and reflecting on outcomes, both teachers determine the effectiveness of each strategy and how it pertains to each student in the classroom (Wilson, 2016).

The culture in a co-teaching classroom can further the education quality for all students (Friend, 2008). Having two teachers enriching the classroom environment can be beneficial to an entire classroom. This model of co-teaching combines each teacher's skills and knowledge to create a learning environment both rigorous and flexible to accommodate every student's needs (Friend, 2008). Similarly, Badiali and Titus, (2010), discussed the positive learning culture when two effective teachers are collaborating in the classroom. When two teachers work together effectively, not only does it benefit students with disabilities, it helps promote collaboration in the entire classroom (Badiali & Titus, 2010). When co-teaching model existed in classrooms for a duration of time, teachers who worked side by side increased all student achievement (Badiali & Titus, 2010).

Walsh (2011) described the social importance of keeping students in their classrooms. The avoidance of removing special education students from the classroom for specialized instruction can have a positive impact socially (Walsh, 2011). The chance that students can be accepted by their classmates increased if their classmates do not see special attention from an outside resource. Accommodating students in a least restrictive setting allows students to have more responsibilities and they are provided more opportunities for quality differentiated instruction (Walsh, 2011). A further example is that co-teaching helps meet academic achievement of all students in the classroom (Cook & Friend, 2010). In a regular classroom, there are many students who are low achieving but may not qualify for special services. When

there are two teachers delivering instruction in the classroom, students of all abilities will also benefit from differentiated instruction and not just the students who have been identified with disabilities (Cook & Friend, 2010). "With two teachers delivering instruction and increasing the instructional options for students, all students can have more opportunities to participate actively in their learning and thus instructional intensity is increased" (Friend & Cook, 2010, p. 110).

Cook and Friend (2010) noted the advantages of successful co-teaching are substantial to everyone involved. When properly executed, the co-teaching model has the opportunity for teachers to write high intensity instructional plans; ability to build foundations and team leadership that would not be possible with a single teacher (Friend & Cook, 2010). Co-teaching also melds the unique perspectives and strengths of general and special educators to create various teaching approaches that could not occur if only one teacher were present (Friend & Cook, 2010). Additionally, research conducted by Qi Hang and Karen Rabren (2009) in "Examination of Co-teaching, Perspectives and efficacy Indicators" discovered that teachers believed that two teachers in one classroom helped students and gave students better self-perception of their academics. "Several studies have reported that co-teachers have positive perceptions of co-teaching. Specifically, co-teachers have felt that their student's experiences improved self-confidence, academic performance, social skills, and peer relationships" (Hang & Rabren, 2009, p. 259).

The increased contact and modified accommodations within the classroom setting allowed students to stay in the mainstream classes (Friend & Cook, 2010). This provides them the chance to enhance their social skills and to feel part of their classroom on a daily basis. This is essential when working with students with disabilities in order to make transitions less restrictive. By keeping them in the regular classroom, a greater opportunity is afforded for social interaction

and they feel less of an outcast then when constantly removed from the classroom by a specialist (Friend & Cook, 2010). Many students are not eligible for special education services but would benefit from special assistance in their education (Friend & Cook, 2010). "At the very least, the knowledge and skills that special education and general education teachers learn from one another can be applied to other students" (Friend & Cook, 2010, p. 435).

Interaction between teachers in the co-teaching setting is important for students to observe to understand how people can work together in a positive and professional manner (Treahy & Guranus, 2010). As team teaching starts to develop, the give and take interaction allows for constant engagement and different voices to keep students attention. "It slows the pace of challenging lessons and ensures that we provide clear, easy-to-understand steps for students who may need an extra boost" (Treahy & Guranus, 2010, p. 485). Similarly, according to Chanmugan and Gerlach (2013), when two teachers display a strong collaborative partnership, it models positive behavior on how to work together professionally. "Collaborative skills are critical for success in many professional environments, including effective work in school settings where educators, administrators, psychologist, counselors, social workers, nurses, and others partner to educate children and adolescents" (Chanmugan & Gerlach, 2013, p. 111). It also provides students an example of how to work together and to be part of a team to benefit everyone (Davis-Wiley & Cozart, 1998).

Challenges of the Co-teaching Team

Even though the benefits of co-teaching are well documented, Fluijt, Bakker and Struyf (2016) believed placing two teachers in a classroom is not that easy. It can be problematic for two teachers to agree on what path is needed to enable certain students to be successful in the classroom (Fluijt et al., 2016). According to the European Journal of Special Needs Education,

administrators have felt the need to facilitate the process. "The analysis points out that administrators feel challenged to facilitate the co-teaching process at different levels in and outside the school, and to develop normative and substantive knowledge about co-teaching" (Fluijt et al., 2016, p. 195).

Marleen Pugach and Judith Winn (2011) noted that to have successful co-teaching, there needed to be a full buy-in between both teachers in order for them to be effective. Teachers are accustomed to teaching alone, and in some cases, a general education teacher may not feel the need to have a special education teacher in the classroom (Pugach & Winn, 2011). The general education teacher in this case would rather call on the special education teacher only when needed (Pugach & Winn, 2011). Pairing two teachers with different skills may create a conflict of interest in teaching styles and goals. For co-teaching to succeed, each teacher must be willing to accept the challenge and have comparable personalities to be able to work with their colleague. "Volunteers for co-teaching were more satisfied than non-volunteers and that volunteers reported greater mutual respect for their co-teachers than those who did not volunteer" (Pugach & Winn, 2011, p. 37).

In "Getting to know your Partner," Jane Sileo (2011) states that when two teachers come together, they need to openly communicate to assure the co-teaching process is effective. This may include talking about their teaching philosophies, roles, and their goals for the classroom. As the two teacher's relationship grows and different situations arise, communication between teachers need to be clear and concise. The open interaction between the two teachers creates a shared a responsibility in the classroom (Sileo, 2011). "Co-teachers come together with dissimilar personal and professional values that they must identify, state, and combine in an effort to create positive academic and social climates for all students in their classroom settings"

(Sileo, 2011, p. 34). This is especially important if one teacher is a general education teacher and one is a special education teacher. The general education teacher is accustomed to working alone and so when another teacher comes into the classroom, he/she may feel intruded upon and friction may occur (Sims, 2008). The special education teacher may be viewed as a subordinate to classroom teacher in the eyes of students (Sims, 2008).

When conflicts among co-teachers occur, it can be detrimental to the classroom environment and can be difficult to find a resolution (Boyer & McMillen, 2012). "Conflict between co-teachers is one of the most perilous and difficult to overcome scenarios that schools face when enacting the system" (Boyer & McMillen, 2012, p. 15). On the same topic, teaching philosophies vary from teacher to teacher; individual teachers focus on different issues when in front of students. This can cause confusion and frustration among both teachers and students (Davis-Wiley & Cozart, 1998). The perception is not that either teacher is teaching the subject the wrong way, but that they have different perspectives and ways of teaching the subject manner. This becomes difficult and bothersome for teachers when they are not flexible and believe they have the best possible way of teaching the subject (Davis-Wiley & Cozart, 1998).

Ethical decisions can also become a problem between teaching styles. If one teacher is more aggressive or controlling than the other, it might not bode well with their counterpart (Davis-Wiley & Cozart, 1998). Confidentiality may also raise an issue. If co-teachers are uncomfortable around each other, they may not feel safe to share certain student information with each other. "A teacher may find her/himself working with someone who is not very enthusiastic about co-teaching. They may feel threatened, knowing their foibles will be witnessed by another professional" (Davis-Wiley & Cozart, 1998, p. 9). As a further example, creating a co-teaching team may cause some hesitation from administration because the

relationship between the two teachers must be the right fit to work well (Wilson & Blednick, 2011). "(It) require(s) high levels of teaching expertise, demand knowledge of both curriculum and remediation, and require time and effort for adequate planning" (Wilson & Blednick, 2011, p. 12). Co-teacher concerns may include that all students might not receive fair treatment throughout the day. The needs of special education students may be addressed before those of the general education students (Wilson & Blednick, 2011).

According to Kosko and Wilkins, it takes some time and training for teachers to prepare to educate students with special needs. Courses are offered in college but teaching strategies are not usually offered (Kosko & Wilkins, 2008). Quality professional development for teachers and administrators is vital so that teachers are prepared for classes of students with high learning disability needs. "Administrators and special education teachers ranked behavioral assessments and inclusion strategies in the top three areas needed for professional development" (Kosko & Wilkins, 2008, p. 4). Another challenge is the general educator's ability to educate students with learning disabilities may be limited due to the lack of resources and education to accommodate these students' needs (Kosko & Wilkins, 2008). "Since teacher efficacy has been shown to be reliable predictor of teacher actions, an analysis of teachers efficacy concerning inclusion may inform teacher training efforts that could potentially impact teachers' actions toward students with special needs in their classrooms" (Kosko & Wilkins, 2008, p. 2).

Friend, (2008) found that one concern teachers had during their experience in co-teaching, is the lack of planning time. Special education teachers and general education teachers may not have the same planning period; Individual Education Plans (IEPs) meetings for students with learning disabilities can be rather difficult for both teachers to attend (Friend, 2008). Additionally, adequate and consistent planning time is essential to a quality co-teaching team.

In many cases a realistic option is to consider planning as a two-component process. The first component involves sharing key decisions and discussing the most critical topics, a type of planning that occurs periodically, but at least once per month, for a class period, an hour, or whatever planning time can be made available. The companion to this planning is the second component which includes the on-the-fly conversations that occur on a daily or as needed basis. (Friend, 2008, p. 12)

Co-teaching is not always limited to having one special education teacher in the same room the entire day (Friend, Cook, Hurley-Chamberlain, Shamberger, 2010). It may occur for a certain period of time, or just one class to accommodate the needs for one student with a disability (Friend et al., 2010). Similarly, according to Sims, (2008) planning as a team needs to be conducted properly to assure both teachers know the instructional approach that will be taken during a lesson. Both teachers willing to work together by including each other in lesson planning is a necessity (Sims, 2008). Teachers who hold the same authority level in the classroom will get the most out of their students and can build a positive learning environment (Sims, 2008). A further example of this is in Uzuner and Grugur (2010) co-teaching study, "A Phenomenological Analysis of the Views on Co-teaching Applications in the Inclusion Classroom" the co-teaching meetings are as important to the process as is the actual teaching. The meetings need to be student focused and efficient to respect each professional's time during the process (Uzuner & Grugur, 2010). They found that at times, the special education teacher experienced frustration due to the process of always waiting for the general education teacher and never meeting the full 30 minutes of planning time that they were allotted (Uzuner & Grugur, 2010).

If meetings are changed or not held at all, the result can be confrontational among teachers of what their priorities are when it comes to co-teaching (Uzuner & Grugur, 2010). "Time to meet is a constant problem but making the time to accommodate a successful and meaningful meeting is essential to the co-teaching relationship" (Uzuner & Grugur, 2010, p. 8). Similarly, according to Friend and Cook (2010), the common obstacle of co-teaching is the clarification of the amount of "authority" each teacher might hold. Teachers do not want to feel like an assistant and should be treated as professionals with their co-teacher. "If one or several individuals are perceived by others as having significantly greater decision-making power or more valuable knowledge or information, collaboration cannot occur" (Friend & Cook, 2010, p. 10). As a result of the responsibilities not divided equally, the general education teacher may assume the majority of the responsibilities in the classroom (Wilson & Blednick, 2011). "Many co-teachers fall into routines where the general education teacher is responsible for most elements including curriculum, pacing, lessons, test preparation, and grading" (Wilson & Blednick, 2011, p. 59). In these cases, this leads to more of a support role for the special education teacher rather than both teachers sharing equal status (Wilson & Blednick, 2011).

In Davis-Wiley and Cozart (1998) research, "Are Two Instructors Better Than One? Planning, Teaching and Evaluating a Deux," noted that pairing the teachers is an important aspect to consider and both teachers need to be on board in order to run a successful classroom. Both teachers need to have equal ownership of the classroom and students need to view each teacher as equal to the other to have an effective classroom (Davis-Wiley & Cozart, 1998). Additionally, the obstacle to meet every student's needs becomes a challenge that requires a collaborative effort (Konrad et al., 2014). "General Educators and special education teachers must work together to ensure access to the standards while at the same time maintaining careful

attention to the driving force for the education of students with disabilities, the individualized education program (IEP)" (Konrad et al., 2014, p. 77).

Building a Co-teaching Team

Teachers should believe that the co-teaching experience is rewarding and beneficial to their teaching practices as well as to the academics of their students (Friend & Cook, 2010). "Typically, success in collaboration leads to increased commitment to future collaboration, and so beliefs and attitudes become increasingly positive" (Friend & Cook, 2010, p. 13). This is deemed important since there are so many time constraints and stressful conditions that may arise during the course of a school day; team members need to be respectful of each other's profession (Friend & Cook, 2010).

The co-teacher relationship is essential to be carefully considered and both teachers should be in the co-teaching model on a volunteer basis, be on the same page and have confidence in the teacher-teacher relationship (Pugach & Winn, 2011). The partnership among teachers cannot be forced and as non-volunteer co-teaching partners do not have the same mutual respect for their counterpart than those that volunteer. "Volunteers for co-teaching were more satisfied than non-volunteers and that volunteers reported greater mutual respect for their co-teacher than those who did not volunteer" (Pugach & Winn, 2011, p. 37).

Collaboration is formed around trust and being able to rely on the other teaching partner (Friend & Cook, 2010). "Only after a period of time in which trust and, subsequently, respect are established can school professionals feel relatively secure in fully exploring collaborative relationships" (Friend & Cook, 2010, p. 13). Each team member should be aware of what he/she is accountable for and what the team members' expectations are during the course of the day and school year (Friend & Cook, 2010). Similarly, according to Pugach and Winn (2011),

the relationship between the two teachers is instrumental to make a dynamic classroom. Roles need to be established and each teacher needs to assume equal value among the students in the classroom. Students should not see one teacher having more control than the other teacher. Collaboration of two teachers should be evident as an equal partnership to highlight the range of skills each teacher brings into the classroom to accomplish identical status of the teaching colleague (Pugach & Winn, 2011).

Forming a teaching culture takes time and communication. Teachers, who discuss what the best for students plan together on a regular basis, will experience more success in co-teaching (Friend, 2008). Discussions that take place on a regular basis to assure instruction is clear and precise among the co-teaching team are recommended. The teaching relationship should appear fluent and seamless to the affect that both teachers are working with all students while addressing individual needs (Friend, 2008). When conflicts occur in classrooms, the shared responsibility of problem solving needs to be communicated thoroughly to assure that everyone is on the same page (Friend & Cook, 2010). The teachers need to meet with each other to address the concerns of the student and to problem solve. "Whether conflict or resistance emerges as part of teams, consultation, co-teaching, or interactions with paraeducators, your knowledge of problem-solving strategies and communication skills are the tools that enable to you address such situations confidently" (Friend & Cook, 2010, p. 318). This can be the most critical part of the teamwork on a daily basis and should be professional to help students in redirection and success (Friend & Cook, 2010).

Susan and Frank Gately (2001) believed that to keep the collaborative partnership, co-teachers need to be able to receive constructive criticism from their fellow teachers. This allows them to stress certain ways to improve instruction, manage student behavior, and to

keep communication lines open for the teachers. Collaboration also allows teachers to focus on aspects of their strengths and weaknesses to help improve their instruction (Gately & Gately, 2001). Teamwork also developed a collaborative partnership between the two teachers, often noted by students, and provided the perception that the teachers have equal control and responsibility. On the same topic, in a study conducted by Chanmugam and Gerlach (2013), they found it is vital for teachers to be able to work together and be willing to put their differences aside to make the relationship work. Teamwork involves planning lessons together and to co-exist to form a working partnership in the classroom (Chanmugam & Gerlach, 2013).

The general education and special education teacher who are consistently working and being labeled as equal partners will start being viewed by parents and students as having equal power (Kohler-Evans, 2005). This includes having both names on report cards, open house meetings and parent-teacher conferences and co-ownership of materials, supplies, books and classroom arrangement (Kohler-Evans, 2005). "Both teachers are responsible for all the students in the classroom, therefor both teachers should be fully represented when it comes to all aspects of classroom identification," (Kohler-Evans, 2005, p. 262). As a further example, the roles during instructional time may include one teacher asking the other teacher to clarify the concept one more time or to give another example to help students identify the concept more clearly (Treahy & Guranus, 2010). By questioning, it allows for redirection and the special education teacher can ask the question that the other students might be afraid to ask.

Co-teaching styles and preparing for each class may be accomplished through Professional Development (Friend, 2008). This provides time for co-teachers to talk to other co-teachers and discuss what works and what does not. Meeting once a week with other co-teachers to discuss their accomplishments and challenges will help them trade ideas and expand their

ideas in the classroom (Friend, 2008). Additionally, Procedures are important to establish leadership and participation (Friend & Cook, 2010). Successful teams have strong leadership and function productively. Establishing roles and responsibilities will build a strong collaborative team (Friend & Cook, 2010). "Time and availability to carry out essential tasks may be the critical contribution that one person offers" (Friend & Cook, 2010, p. 11).

Quality teamwork starts with sharing the same goals and creating a shared planning process (Friend & Cook, 2010). By sharing duties and responsibilities individually before meeting as a team, it will evolve into more effective and efficient planning process. "The combination of shared planning and an appropriate division of the planning labor results in efficient and effective use of time, and it also can be applied to intervention assistance or response-to-intervention meetings, consultation, and other collaborative services" (Friend & Cook, 2010, p. 15). Collaboration in teaching styles may mean for teachers to change their styles and inclinations to teach a certain way to make teaching with another adult more effective for student achievement (Friend & Cook, 2010).

Team members who identify their roles will help strengthen the team to achieve their goals (Bursuck & Friend, 2011). Teams who address their individual strengths and weaknesses will cause for less distraction and conflicts during the school year (Bursuck & Friend, 2011). "As an effective member, you will recognize your strengths and use them to enhance the team; you also will be vigilant so your weaknesses do not interfere with the team's accomplishing its tasks" (Bursuck & Friend, 2011, p. 80). Similarly, according to Howard and Potts (2009), during meetings, it is important that both teachers discuss what strategies will be used for a variety of students. "If the co-teaching team initially plans instruction to include some of these strategies, more students will be successful" (Howard & Potts, 2009, p. 5).

Interventions and strategies should be discussed during co-teaching meetings in which minor details agreed upon before the issues become too great (Friend & Cook, 2010). Some of these are simple issues that may seem minor but need to be addressed to pursue a quality classroom to assure that there is parity among both teachers. These include shared participation in calling the parents, changing the student's assigned seat, grading assignments, or conferring with a student (Friend & Cook, 2010).

To allow meetings and planning periods to be efficient and to effectively use the time, roles such as facilitator, recorder, and timekeeper are to be identified and rotated on a weekly basis (Bursuck & Friend, 2011). Informal team roles such as compromiser, information seeker, and reality checker will be instituted if a certain situation may occur (Burcuck & Friend, 2011). "These roles are not usually assigned, but team members ensure that they are fulfilled as the need arises," (Bursuck & Friend, 2011, p. 81). Additionally, the roles of each of the teachers should be established when the co-teachers start to plan. This helps prevent the special education teacher feeling like an assistant to the general education teacher (Friend & Cook, 2010). Teaching teams that struggled exhibited less collaboration and their different teaching styles often led to conflict (Friend & Cook, 2010).

The planning periods and who needs to do what tasks should occur well before the school begins (Howard & Potts, 2009). This can begin with a checklist to assure that each person is on the same page and even the simplest task gets accounted for by a team member (Howard & Potts, 2009). On the same topic, team goals are to be clear and concise to assure complete understanding among all team members (Bursuck & Friend, 2011). Two types of goals that were addressed by Bursuck and Friend included task goals and maintenance goals. Task goals include to be on intervention teams, needs for specific students and the overall progress of the students'

academic success. Maintenance goals include beginning and ending meetings on time, finishing the agenda, improving communication, and listening to team members perspective of the effectiveness of both the task goals and maintenance goals (Bursuck & Friend, 2011).

The instructional planning and presentation are key components of co-teaching (Gately & Gately, 2001). Common instructional planning is vital and needs to occur on a daily basis at a certain time to keep a routine. In order to have cohesiveness, lesson planning developed together will avoid having one teacher not knowing what the lesson pertains (Gately & Gately, 2001). As the two teachers become competent in each other's ability, the more comfortable they will be to teach together. "This mutuality of planning continues to expand, until the two teachers reach the collaborating level. Now planning becomes ongoing and shared" (Gately & Gately, 2001, p. 44). It will open communication and shared ideas. "This occurs when the two teachers realize the need for an on-the-spot change in the lesson and agree to change course during the lesson to accommodate learners who may be struggling with a concept being presented" (Gately & Gately, 2001, p. 44).

The more planning is shared, the easier the instructional flow will be in presenting lessons. At first, the adjustment to work together will be an ongoing process. There may be a sense of separation of who is in charge and who may appear to be an assistant. "At the beginning level, the instructional presentation places one teacher in the role of the 'boss' who 'holds the chalk,' and the other teacher in the role of 'helper'" (Gately & Gately, 2001, p. 44). In this case, special educators will start to take over small groups and directing student activity. They may also present mini-lessons but the overview of the appearance is that the general education teacher is still in charge.

The culture of the classroom needs to be created and the students should be comfortable with having two teachers in the classroom. Both teachers need to interact with every student to prevent any isolation and to help provide the sense that both teachers are there to help every student (Hang & Rabren, 2009). To attain a positive learning culture in a classroom, it requires teachers to model a positive working relationship throughout the entire day (Pugach & Winn, 2011). Collaboration among teachers requires communication, planning and consistent reflection (Pugach & Winn, 2011). "Cultures were all described as cultures of sharing, collaboration, and inclusion and as schools in which special education was viewed as a support rather than as a crutch" (Pugach & Winn, 2011, p. 40).

In order to have a cohesive partnership in co-teaching, teachers have to be ready for a change in their approach in the classroom (Friend, 2008). This can be a difficult process and if not done properly, it can have negative effects in a classroom. Working with other teachers in a classroom can be intimidating and create fear that others may look down on them. "Classroom teachers may fear that special educators will judge their teaching. Special Educators may worry that others will question the value of their work, or even that their jobs might be eliminated" (Friend, 2008 p. 50). As a further example, a teacher's attitude can have an overwhelming effect on all students but may have a drastic negative influence on students with learning disabilities (Kosko & Wilkins, 2008). This is because students with disabilities already have the belief that they are destined to fail. Having a teacher with a negative influence only accelerates their belief even more (Kosko & Wilkins, 2008).

When two teachers began working together, communication may be a barrier (Gately & Gately, 2001). The two teachers are working to create a professional working relationship but are in unfamiliar territory. The general education teacher is not accustomed to having someone share

responsibilities and may experience a sense of intrusion or invasion (Gately & Gately, 2001). The special education teacher may believe that his or her importance is not valued and may be uncomfortable in the classroom setting. This may lead to conflict and appear that there is just another adult in the room (Gately & Gately, 2001).

In "Understanding Co-teaching Components," Gately and Gately (2001) stated that there were eight components that make co-teaching relationships work. The components consisted of the following: 1. Interpersonal Communication 2. Physical Arrangement 3. Familiarity with the Curriculum 4. Curriculum Goals and Modifications 5. Instructional Planning 6. Instructional Presentation 7. Classroom Management 8. Assessment (Gately & Gately, 2001). Similarly, Gately and Gately identified the three stages in which are developed in the co-teaching phase. The three stages consist of the Beginning stage, Compromising stage, and the Collaborating stage. The Beginning Stage is guarded and carefully communicated, and it slowly develops into the Compromising stage, where there is a give and take communication. The final stage is the collaborating stage which has open communication and interaction (Gately & Gately, 2001). Interpersonal communications was the key component to making the relationship effective. Communication may be limited in the beginning but as the relationship grew, communication improved. "Teachers also begin to give and take ideas, develop respect for a different communication style, increase their appreciation of the humor of some classroom situations, and increase their own use of humor in communication" (Gately & Gately, 2001, p. 40).

As the collaborative level developed, so did nonverbal signals used for communicating ideas. A positive relationship was then created between the general and special education teacher and served as a positive role model for others (Gately & Gately, 2001). The familiarity with the curriculum tends to be troublesome for special education teachers. They may feel less confidence

and the general education teacher may not have confidence in the curriculum knowledge of the special education teacher. "The general education teacher may have limited confidence in the special educators' ability to teach the curriculum and may be reluctant to 'give over the chalk' to the special education teacher" (Gately & Gately, 2001, p. 43). When the levels of competence and confidence grow, general education teachers are more willing to modify and share their planning and form a collaborative partnership (Gately & Gately, 2001).

Setting the curriculum goals and modifications takes teamwork and extra planning time to assure all students' goals are being met. Making the necessary modifications and developing modified tests will be the strengths of the special education teacher. "This differentiation marks the collaborative stage for both teachers. From this differentiation, modifications of content, activities, homework assignments, and tests become the norm for students who require them" (Gately & Gately, 2001m p. 44). As more collaborative learning and teaching grows, the students begin to accept the two teachers as a mutual relationship with equal control. To make this happen, equal balance should occur when instructing. "As the two teachers move into the compromising stage, there is more communication and mutual development of rules and routines for the classroom" (Gately & Gately, 2001, p. 45).

To keep the relationship of the co-teachers as one of equality, the special education teacher should focus on developing modified outlines, organizational strategies, and study skills (Gately & Gately, 2001). Behavior management should be collective for both teachers; they need to be present when presenting and reinforcing rules. To do this, modeling the behaviors and communicating among each other assures they are not stepping on individual roles. When the classroom management rules and expectations are established, individual behavior plans also need to be done on a collaborative effort. "At this stage it is common to observe individual

behavior plans, use of contracts, tangible rewards, and reinforcers, as well as community-building and relationship-building activities as a way to enhance classroom management" (Gately & Gately, 2001, p. 45). With this type of implementation, it will keep the teachers at a collaborative level knowing each other's roles and responsibilities.

Space is limited in classrooms and so having two teachers' workspaces in one room can lead a cluttered feel in the room (Wilson, 2016). To limit the amount of unnecessary space used, Gloria Wilson suggested that teachers discuss desk usage. Questions to ask included: How often are the materials in the drawers used? How much time is spent at the desk or how often are the files in the desk being accessed? (Wilson, 2016). After the materials and usage of the desk is discussed, teachers may often find alternative space for certain items and free up space in the classroom (Wilson, 2016). Arranging the classroom to fit each teacher's strengths allows time for both teachers to discuss the environment they want to create and allow an easy flow in the classroom (Wilson 2016). The optimal arrangement of the classroom allows easy transitions from group work to whole group lessons (Wilson, 2016).

The physical arrangement of a classroom may appear as divided in the beginning. The special education teacher has his/her own space and materials as does the regular education teacher. As the relationship moves forward and teachers are comfortable in working in each other's space, there is more of a supplemental flow of movement during construction as materials and space is evenly dispersed (Gately & Gately, 2001). Similarly, according to Wilson (2016) the students' desks should be organized to allow for easy transitions based on the students' needs. Teachers' having free range and access to every student in the classroom allows both teachers to feel comfortable while giving instruction (Wilson, 2016). "A chair may

be placed in the center, and co-teachers can easily and effortlessly access every student" (Wilson, 2016, p. 14).

Types of Co-teaching

Marilyn Friend and Lynne Cook identified six different types of co-teaching models. The models are used to enhance the instruction that normally cannot be done with a single teacher (Cook & Friend, 1995). These models offer a variety of strategies to enhance instruction of all student's abilities (Cook & Friend, 1995). The six different models for co-teaching included; One teach, One observe; One Teach, One assist; Parallel teaching; Alternative teaching; Station teaching; and Team teaching (Cook & Friend, 1995).

One teach, One observe

In this model, its main purpose is for data collection. It may include designing instruction, grouping students, responding to inappropriate behavior, and monitoring student progress (Friend & Cook, 2004). Examples of this may include documenting which students raise their hand during whole group instruction or which students are accurately completing sample problems on their white board (Friend, 2014). When teachers become comfortable, they may also gather data on each other's practice to further enhance their instruction (Friend, 2014). Teachers need to alternate roles in this type of model to prevent students from looking at one teacher as more superior to the other teacher (Friend & Cook, 2004).

One teach, One assist

In this model, both co-teachers are present, but one takes the lead while the other teacher circulates and assists. There is little collaboration during this instruction period and the teacher who assists seeks to clarify certain parts of instruction for those students who seem to be confused (Friend & Cook 1996). This model requires little co-planning (Friend & Cook, 2010).

In order for both teachers to establish equal power and control among the students, this

model requires to be implemented in a way that it does not appear that one teacher is an aide to

the other teacher (Friend & Cook 1996). This model can lead to having teachers have split

roles; students view one teacher as having more power than the other (Friend & Cook 1996).

 If this model is used, teachers meet more regularly to reflect and discuss. "They need to

reflect, redirect, and try a co-teaching model that lowers the ratio of students to teachers and

enables co-teachers to better assess learning, adjust instruction, and give more students

opportunities to respond" (Wilson, 2016, p. 5). The advantages of this type of model are that

students can receive individual attention and will receive reminders to stay on task without being

prompted by the lead teacher. Certain students can be attended to and little planning is needed

for this co-teaching model (Wilson & Blednick, 2011). This type is best used when teachers lack

time to plan and when there is whole group instruction. At times, the special education teacher

may not be as familiar with the content but will have insight to get through to lower ability

students by revising what the general educator is delivering (Wilson & Blednick, 2011).

 The disadvantages of this model are that one teacher may dominate the classroom and the

other teacher may feel inferior or like an assistant rather than having equal power (Friend &

Cook, 1996). The power struggle and teachers believing they are not being utilized correctly

could become a struggle in the classroom and when working with students. Students need to see

both teachers as having of equal power and control and students will start to expect immediate

assistance (Friend & Cook, 1996). Too much movement in the classroom may also cause

distractions in the classroom and having individual conversations during a lesson may cause

disturbances to students and the other instructor (Friend & Cook, 2010). "When professionals are

walking around they can be a visual distraction, and when they whisper to individual students they may be an auditory distraction," (Friend & Cook, 2010, pp. 120-121).

Station teaching

This model of teaching divides the class into three to four different groups. These groups can be divided by ability and assigned tasks for independent learning when they are not with a teacher (Friend & Cook, 2010). These groups rotate and each teacher works with all students at their level on the basis of students' needs (Friend & Cook, 2010). This should not be confused with ability learning groups, as all students will have a rotation with each teacher (Friend & Cook, 2010). "Further, because in this approach each teacher instructs all of the students, albeit in different groups, the equal status of both the students and the teachers can be maximized, and so parity is clearly established" (Friend & Cook, 2010, p. 117).

This model of teaching reduces the teacher to student ratio and increases student engagement as well as placing students in ability groups to learn with their peers who are at the same level of learning (Friend & Cook, 1996). The disadvantages of this model are that it requires more planning and the level of the noise in the classroom may increase. Management is essential for this model since students will need to be able to work independently and collaboratively when not in their station with a teacher (Friend & Cook, 1996).

Alternative teaching

This form of a co-teaching model is where one teacher instructs a large group while another teacher instructs an alternative lesson to a smaller group. This is still the same lesson but is taught at a different ability level to assure understanding from all students (Friend & Cook, 2010). It is often used when there is a wide differentiation level among the students in the

classroom (Friend & Cook, 2010). This is referred to as the "back-table" model (Wilson, 2016) to help assist those students who are struggling well below grade level.

The benefit of this model is to provide a high level of instruction to a certain group that meets all of their needs. The alternative lesson is meant for students who may not grasp the concept but are given the chance to have differentiated instruction in a smaller group. This model also gives students the chance to have individualized attention (Friend & Cook, 2010).

One of the challenges of this model is that it can be overused (Wilson & Blednick, 2011). This can cause a division in the classroom and make students feel less important to not be part of the large group instruction. Taking students to another part of the classroom may cause students to have a negative opinion on those being taken out or removed from the whole group (Friend & Cook, 2010). Rotating students from these groups is important as all students see it as an opportunity to be part of a small group rather than being segregated from the rest of the class. Rotating teachers in these smaller groups will also help reduce the division among the students (Wilson & Blednick, 2011). "It's overuse creates a virtual 'other' class-or a class within a class-and leads to stigmatization of the students grouped in this way" (Wilson 2016, p. 6).

Parallel teaching

In this model, co-teachers instruct the same lesson, but the class is divided into two groups (Friend & Cook, 2010). This format allows lower student-teacher ratio while separating certain students to control behavior (Friend & Cook, 2010). When introduced to this model, teachers tend to disagree on its effectiveness and may protest using this type of teaching (Wilson, 2016). The common arguments are that it is too distracting, controlling the noise level is difficult, and it may not be affective to students with low attention span (Wilson, 2016).

This model needs extensive planning and both teachers need to be competent in the content. Teachers also need to modify their volume when giving instruction and be aware of their surroundings the lesson must be evenly paced to have the lesson finished at the same time (Friend & Cook, 1996). "This type of parallel teaching is often appropriate for drill-and-practice activities, test reviews, topics needing a high level of student discussion, or projects needing close teacher supervision," (Friend & Cook, 2010, p. 118).

This model is most effective when both teachers are confident in the content. Precise planning and the fact that both teachers need to have extensive knowledge of the content is essential to this model. Timing is important to help transition flow and for both teachers to rotate and not have down time among the groups. Teachers also need to know what they can and cannot do in their classrooms (Friend & Cook, 2010).

Team teaching

In this model, co-teachers instruct and support all students at the same time. This model uses a large group instruction approach that engages the class through constant interaction from both teachers. This is a high intensity teaching style that results in a give and take conversation among the two teachers (Friend & Cook, 2010). "Co-teachers who team frequently report that it results in a synergy that enhances student participation and invigorates the professionals, sometimes even prompting teachers to try innovative techniques and activities that they would not have tried teaching alone" (Friend & Cook, 2010, p. 120).

This model is conducive to high levels of teaching and is very engaging while promoting classroom interaction and discussion. This also builds the collaboration of the two teachers and teachers share power demonstrating to the students how to work together and to complement each other's energy. This type of teaching takes time, experience, and a compatible relationship

with the other co-teacher (Friend & Cook, 2010). Some of the disadvantages are the extensive

planning minutes it involves and both teachers' roles need to be clearly defined to have equal

responsibility (Friend & Cook, 2010). "When teaming is implemented, co-teachers should check

frequently to ensure that both are satisfied with their use of it" (Friend & Cook, 2010, p. 120).

Summary

The review of the literature illustrated that co-teaching can be extremely beneficial

for students if planned properly or can be detrimental if not implemented properly. Planning time

must be set aside, and it needs to be productive for both the general education and special

education teacher for both teachers to believe that it is worth their time.

Research indicated that teachers who participated in the co-teaching model agree

to be there on a volunteer basis and are an integral part of the team. The partnership requires

quality training and guidance to make sure the roles and duties are made clear on what each co-

teacher is supposed to do throughout the course of the day. The special education teacher offers

specialized strategies that may benefit more than just students with learning disabilities.

Time was the greatest issue in assuring an effective partnership. The schedule throughout

the day can be complicated and finding a regular meeting time and day is important and can be

difficult. If the meetings are missed or are not properly planned, the preparation of the upcoming

lesson will not be as impactful nor be a complete thought out plan brought together by two

professional teachers.

The two teachers need to have leadership qualities and to be able to take charge of any

situation that occurs in the classroom. When doing this, communication is important to assure

that both partners are in sync with each other. This would include sharing daily progress of each

student and daily reflects on what is and what is not working. It is important to plan as a team

and to have a set agenda on what needs to be discussed during the planning and meeting periods throughout the week.

Chapter III: Methodology

Introduction

Chapter III provides the methodology for the study. The mixed method research questions focus on the teachers' perceptions of co-teaching effectiveness, benefits to students, challenges between teaching partners and how the six co-teaching models are utilized in the classroom. The mixed method research approach is a combination of qualitative and quantitative data to provide further understanding of the research problem (Creswell, 2015). "A core assumption of this approach is that when an investigator combines statistical trends (quantitative data) with stories and personal experiences (qualitative data), this collective strength provides a better understanding of the research problem than either form of data alone" (Creswell, 2015, p. 2).

The participants in the study were general education and special education teachers in a select Minnesota public middle school who use the co-teaching model in regular classrooms. The data were gathered from a survey instrument distributed to participants and from interviews with participants who volunteered for the interview portion of the study.

Research Questions

The following five research questions were developed to guide the study:

1. How did co-teaching team members in a select Minnesota public middle school rate the effectiveness of each of the six co-teaching models?

2. What did co-teaching team members in a select Minnesota public middle school perceive as benefits to students of using co-teaching in the classroom?

3. What did co-teaching team members in a select Minnesota public middle school perceive as challenges in using co-teaching in the classroom?

4. Which of the six models of co-teaching did co-teaching team members of a select Minnesota public middle school report that they used most frequently?

5. What differences in perceived challenges of using co-teaching in the classroom were found between regular education teachers and special education teachers involved in co-teaching in a select Minnesota public middle school?

Research Design

The researcher used a mixed methods research design to provide quantitative and qualitative data for an extensive form of research (Creswell, 2015). The quantitative research was conducted using a survey which allowed for statistical analysis of the common trends and differences of the participants' responses to survey questions (Creswell, 2015). The survey was conducted through a web-based survey using SurveyMonkey (see Appendix A).

The qualitative research component of the study was conducted through an interview of four volunteer participants representing general education and special education teachers who co-teach at a select public middle school in Minnesota. The qualitative research study component was designed to obtain a deeper understanding of the responses to the research questions not identified in the quantitative research (Creswell, 2015). The qualitative data were collected through one on one phone interviews of four volunteer participants representing one general education and three special education teachers.

The quantitative data were collected through an online electronic survey conducted over a four-week time period and were analyzed and reported using frequency distributions and percentages.

Participants

The study participants were general education and special education teachers in middle

schools who co-teach a select Minnesota school district. The study focuses on Minnesota middle

school teachers who use the co-teaching model because that organizational level allows for the

largest potential number of teacher participants compared to the number of Minnesota

elementary teachers who use the co-teaching model. To select the participants, the researcher

contacted a private consultant who has administered co-teaching training to Minnesota middle

school teachers and a university professor who instructs co-teaching courses. The researcher

selected school districts that implemented co-teaching in middle schools.

After identifying the school districts and finding their contact information through the

district's website, the researcher emailed the districts special education administrators (see

Appendix B) to verify how many co-teaching teams are in the school district and specifically ask

them to identify which schools within their district employ co-teaching teams consisting of a

general education and special education teacher. Note: only one large Minnesota school district

(10,000 or more students) agreed to participate in the study.

The link to distribute the survey to the co-teaching team members was used by providing

an email link. Prospective participants were not asked any identifiable information. Proper

controls to assure confidentiality were taken and all data were destroyed at the conclusion of the

research. In order to participate, an electronic consent form (see Appendix C) was included at the

beginning of survey explaining that their participation is voluntary, no harm resulted from their

participation, individual responses are confidential, and they could withdraw at any time during

the survey or interview (if they chose to volunteer for an interview). Once they began the survey,

they understood they have consented voluntarily to participate in the survey. If participants chose

to volunteer for the interview portion, a consent form (Appendix D) was issued before conducting the interview.

The survey utilized a SurveyMonkey link (see Appendix A) as the means to distribute the survey to middle school general education and special education teachers who implement the co-teaching model in their classrooms.

The study focused on Minnesota middle school teachers who used the co-teaching model because that organizational level allows for the largest potential number of teacher participants compared to the number of Minnesota elementary teachers who use the co-teaching model.

Instrumentation

Based on the Research Questions 1, 2, 3, and 4 of the study, a survey was distributed using a web-based SurveyMonkey to gather information from select Minnesota middle school district's general and special education teachers who implement co-teaching in their classroom. The intent of the survey was to gather data on the effectiveness of co-teaching models, the benefits and challenges of co-teaching, and the overall teachers' perceptions of the co-teaching models.

The survey gathered basic demographic data to identify if the participant was a general education or a special education teacher, number of years co-teaching, and number of years of teaching experience in general. Demographic data were reported in Chapter IV, Table 1. For research question 5, the data were separated by special education and general education teachers' responses. Research questions 1-4 combined all participants' data. Years of experience and number of years co-teaching were not deemed significant for statistical analysis. The survey questions were created based on seeking responses to Research Questions, 1, 2, 3, and 4. For Research Questions 1 and 4, the participants were asked their perceptions on the six co-teaching

models that were identified by Friend and Cook. There were six survey questions for each of the

Research Questions 2 and 3 and an additional three demographic data questions for a total of 25

survey questions. Based on Research Question 5, the researcher created four open-ended

interview questions pertaining to the challenges of co-teaching in the middle school classroom

(see Appendix E).

The survey questions were designed by the researcher and based on review of the

literature regarding co-teaching models implemented in classrooms as identified by Marilyn

Friend and Lynne Cook (1996), as well as the research on the challenges of co-teaching in the

classroom, and benefits of having two teachers in one classroom.

The survey questions for Research Questions 2 and 3 were generated using a 4-point

Likert scale with the following possible responses: 1 = Strongly Disagree, 2 = Disagree, 3 =

Agree and 4 = Strongly Agree. The participants were provided the opportunity to list any

additional responses at the end of each Research Question section for Research Questions 2 and

3. The survey questions for Research Question 1 were generated using a three point Likert scale

with the following possible responses: 1 = Not Effective, 2 = Somewhat Effective, 3 = Very

Effective. In Research Question 4, the participants were asked to rank the six co-teaching models

from 1 = the model least used to 6 = the model that is used the most.

The survey was edited by the researcher's academic advisor. The researcher reviewed the

modifications and made changes to the survey questions based on advisor's suggestions. Once

the survey was finalized and the preliminary exam was scheduled and completed, application for

approval of the study was made to the St. Cloud State Institutional Review Board (IRB). The

St. Cloud State Institutional Review Board approved the conduct of the study on October 4,

2019.

The survey window was open for 4 weeks. A reminder was sent to the participants on February 4, 2020 (see Appendix H). The data from the survey was downloaded for access by the St. Cloud Statistical Center. Survey data was analyzed and reported using frequency distributions and percentages.

At the conclusion of the survey, participants were asked if they would be willing to participate in a phone interview and if so, they provided contact information. Once the participant volunteers were identified, those participants were separated into two groups, special education teachers and general education teachers based on their demographic data. Interview data was recorded and coded thematically for analysis.

Data Analysis and Treatment of Data

The researcher used the St. Cloud State University Statistical Research and Consulting Center to assist with data analysis employing frequency distributions and percentages. The researcher also used the analysis capabilities from Survey Monkey to analyze the data. Tables provided in Chapter IV display the results of the survey responses.

Quantitative survey questions were generated for Research Questions 2 and 3 using a Likert scale with the following possible responses: 1 = Strongly Disagree, 2 = Disagree, 3 = Agree and 4 = Strongly Agree for Research Questions 2 and 3. For Research Question 1, a Likert scale with the following possible responses: 1 = Not Effective, 2 = Somewhat Effective, 3 = Very Effective. For Research Question 4, the participants were asked to rank the six co-teaching models from 1 = the model least used to 5 = the model that is used the most. Once the data was gathered, data tables were established to specify frequency and mean values of each response.

Results for Research Question 5 provided qualitive data regarding the challenges perceived by general education teachers and special education teachers through a narrative

design. Creswell explains the narrative design is employed to learn more about the individual experiences through audio or text (Creswell, 2015).

Human Subject Approval–Institutional Review Board (IRB)

The researcher submitted a request for the implementation of the study through the Institutional Review Board (IRB) of St. Cloud State University for approval (see Appendix F). The researcher was granted permission on October 4, 2019. The participants understood they were volunteering for the study, their identity was protected, and their responses remained confidential. The participants were aware that they would be under no obligation and were able to withdraw from the study at any time.

The researcher conducted the survey through an electronic database and the data were compiled as a group response. The risk of participating in the survey was low and the data was destroyed at the conclusion of the study. Permission for the study was granted through the International Review Board (IRB), for research on the co-teaching between general education and special education teachers. To assure confidentiality, all data was stored in a password protected electronic database. The researcher was unable to access any responses from a specific participant.

Procedures and Timeline

- The preliminary examination was held on September 16, 2019.
- The researcher was given approval from the International Review Board (IRB) approval on October 4, 2019.
- On October 7, 2019, the researcher contacted a private consultant who had previously provided co-teaching training to special education and general education teachers in

Minnesota school districts to specifically select Minnesota middle schools whose teachers had participated in the training.

- From October 10-January 10, 2019, the researcher contacted Special Education Administration to identify the number of co-teams are in their middle schools.

- Due to lack of responses, unwillingness to participate or schools no longer implementing the co-teaching model the researcher focused the study on one school district.

- On January 16, 2020, a total of 20 participants were identified to participate in the co-teaching survey.

- The survey (see Appendix A) and an email (see Appendix G) describing the study and instructions of how to participate was sent on a link found on SurveyMonkey to the 20 participants (12 general education and 8 special education teachers) detailing how to access the survey through SurveyMonkey on January 20, 2020 and was concluded on February 15, 2020.

- A follow up email to remind participants that the survey window closed on February 15, 2020 was sent on February 4, 2020 (see Appendix H).

- At the conclusion of the survey, participants were asked if they would be willing to participate in an interview. Five participants indicated a willingness to be interviewed.

- From April 6-May 14, 2020, the researcher conducted interviews through a one on one phone call with three special education and one general education middle school teacher.

- The researcher contacted the St. Cloud State's Statistical Center to assist in the analysis of the qualitative data on April 22, 2020.

- The final defense was conducted on August 17, 2020.

Summary

Chapter III included explanation of the study purpose, research questions, research design, participants, data collections and timeline, instrumentation, and data analysis. Chapter IV provides the results of the study and Chapter V discusses conclusions, limitations of the study, and recommendations for further study and research.

Chapter IV: Results

In Chapter IV qualitative and quantitative data are reported with regard to the benefits, challenges, effectiveness, and usages of the six co-teaching models cited in the research of Cook and Friend (1995). The chapter is organized in the following sections: background information, research design, research questions, interviews and participants, survey results by research questions, interview results, and summary.

Background Information

The purpose of the mixed methods study was to examine the effectiveness and challenges of co-teaching, the benefits to students, and the most frequently employed co-teaching model from the Friend and Cook research (2010), as reported by special education and general education teachers in a select Minnesota middle school that have implemented a co-teaching model in their classrooms. The study also examined the perceived differences in challenges identified by each co-teaching member.

A 25-question survey developed to correlate with the five research questions was sent to 16 identified participants; interview results involving four volunteer participants were included to gather deeper understanding of data related to co-teaching in a select Minnesota school district.

The survey gathered basic demographic data that from participants on whether they were general education or special education teachers, number of years involved in co-teaching, and their total number of years of teaching experience.

For Research Questions 1 and 4, participants were asked their perceptions on the six co-teaching models identified by Cook and Friend (1995). There were six survey questions for each of Research Questions 2 and 3 and an additional three demographic questions for a total of 25

survey questions. Based on Research Question 5, the researcher created four open-ended

interview questions pertaining to the challenges of co-teaching in the middle school classroom.

Research Design

The researcher used a mixed methods research design to provide both quantitative and

qualitative data for an extensive form of research (Creswell, 2015). The quantitative research

was conducted using a survey which allowed for statistical analysis of the common trends

and differences of the participants' responses to survey questions (Creswell, 2015). The survey

was conducted through a web-based survey using SurveyMonkey (Appendix A). Data were

reported using frequency and percentages of participant responses for each survey question.

The qualitative research component of the study involved interviewing six volunteer

teachers, representing general education and special education, who co-taught at a select public

middle school in Minnesota. The qualitative research study component was designed to obtain a

deeper understanding of participant responses to the research questions not identified in the

quantitative research (Creswell, 2015). The qualitative data were collected through one on one

phone interviews of the four volunteer participants. The volunteers included one general

education and three special education teachers. The qualitative data were analyzed by examining

the recorded responses from the interviews of the four respondents.

Research Questions

The following five research questions were developed to guide the study:

1. How did co-teaching team members in a select Minnesota public middle school rate

   the effectiveness of each of the six co-teaching models?

2. What did co-teaching team members in a select Minnesota public middle school

   perceive as benefits to students of using co-teaching in the classroom?

3. What did co-teaching team members in a select Minnesota public middle school perceive as challenges in using co-teaching in the classroom?

4. Which of the six models of co-teaching did co-teaching team members of a select Minnesota public middle school report that they used most frequently?

5. What differences in perceived challenges of using co-teaching in the classroom were found between regular education teachers and special education teachers involved in co-teaching in a select Minnesota public middle school?

Survey Results: Participant Demographics

The researcher collaborated with a Minnesota public school district to survey participants who have co-taught in the middle school. The co-teaching teams consisted of a special education teacher and a general education teacher. There was a total of 16 participants in the survey including 10 general education teachers and six special education teachers. Eight of the 16 participants taught for three years or fewer, two taught for 4-9 years and six had taught for 10 or more years. Seven of the participants co-taught for 5 or more years, five for 3-4 years and four co-taught for 1-2 years.

Of the 16 survey participants, four agreed to volunteer in the interview component of the study. One general education teacher and three special education teachers were interviewed. The interviewees were identified by Participant 1, 2, 3, or 4. The interviewees answered four questions regarding the benefits and challenges of co-teaching in the middle school.

Table 1 of the study reports demographic information regarding the study participants which included primary teaching role, years of teaching, and number of years of co-teaching.

Table 1

Demographics of the Participants

	Demographics		
	Response	**Frequency**	**Percent**
Primary teaching roles	General Education	10	62.5%
	Special Education	6	37.5%
	Total	16	100.0%
Years of teaching	**Response**	**Frequency**	**Percent**
	3 years or fewer	2	12.5%
	4-9 years	6	37.5%
	10 or more years	8	50.0%
Years of co-teaching	**Response**	**Frequency**	**Percent**
	1-2 years	4	25.0%
	3-4 years	5	31.3%
	5 or more years	7	43.8%

Of the participants who completed the survey, 62.5% (N = 10) were general education teachers and 37.5% (N = 6) were special education teachers. A total of 50.0% (N = 8) of the participants reported they have taught 10 or more years, 37.5% (N = 6) taught 4-9 years, and 12.5% (N = 2) have taught three years or fewer. Similarly, among the participants who completed the survey, 43.8% (N = 7) reported they have co-taught 5 or more years, 31.3% (N = 5) co-taught 3-4 years, and 25.0% (N = 4) have co-taught for 1-2 years.

Survey Results: Research Question One

The first research question asked, "How did co-teaching team members in a select Minnesota public middle school rate the effectiveness of each of the six co-teaching models?"

In addressing the first research question, the researcher analyzed responses to question nine on the survey. Participants were asked to rate their perceptions of the effectiveness of each

of six co-teaching models used in the classroom using a Likert scale in which 1 = Not effective,

2 = Somewhat effective, 3 = Very Effective or if the model has not been used, option 4 for Not

Applicable. The frequency data for this question are found in Tables 2 through 7. Each of the

Tables 2 through 7 describe the co-teaching model for the table, lists the possible responses,

identifies the number of participants (N) selecting each response, and the percentage of the

participants who selected the response.

The second table focused on the effectiveness of the One teach, One observe co-teaching

model. The data for this model are found in Table 2.

Table 2

Effectiveness of One Teach, One Observe

General education and special education teachers are present in the classroom, but one teacher
takes the lead while the other teacher observes those students who may need additional
instruction. The co-teachers rotate in this model.

Effectiveness of One Teach, One Observe		
Response	Frequency	Percent
Very Effective	1	6.3%
Somewhat Effective	11	68.8%
Not Effective	4	25.0%
Not Applicable	0	0.0%
Total	16	100.0%

The data reveal that 68.8% (N = 11) of participants of perceived the one teach, one

observe model was somewhat effective, 25.0% (N = 4) reported that it was not effective and

6.3% (N = 1) said it was very effective.

Table 3 data report on the effectiveness of the One teach, One assist co-teaching model.

The data for this co-teaching model are found in Table 3.

Table 3

Effectiveness of One Teach, One Assist

One teacher directs instruction while the other teacher circulates about the room to provide assistance to those students on who demonstrates a need for assistance. Teachers rotate duties during this method.

Effectiveness of One Teach, One Assist		
Response	Frequency	Percent
Very Effective	7	43.8%
Somewhat Effective	7	43.8%
Not Effective	2	12.5%
Not Applicable	0	0.0%
Total	16	100.0%

The data reveal that 43.8% (N = 7) of participants reported that the One teach, One assist model was very effective, 43.8% (N = 7) said it was somewhat effective while 12.5% (N = 2) said it was not effective.

Table 4 data reports on the effectiveness of the Parallel teaching model. The data for this co-teaching model are found below.

Table 4

Effectiveness of Parallel Teaching

Co-teachers instruct the same lesson simultaneously, but the students are divided into two groups.

Effectiveness of Parallel Teaching		
Response	Frequency	Percent
Very Effective	10	62.5%
Somewhat Effective	4	25.0%
Not Applicable	2	12.5%
Not Effective	0	0.0%
Total	16	100.0%

The data reveal that 62.5% (N = 10) of participants perceived the Parallel Teaching model was very effective, 25.0% (N = 4) reported it was somewhat effective and 12.5% (N = 2) reported that it was not effective.

Table 5 data report on the effectiveness of the Station teaching model. Data for this co-teaching model are found below.

Table 5

Effectiveness of Station Teaching

The class is divided into three to four ability groups. The teachers assign tasks to each group for independent learning when not grouped with a teacher. On a rotated basis, each teacher will work with all students in a group at their level and the basis of their individual needs.

Effectiveness of Station teaching		
Response	Frequency	Percent
Very Effective	4	25.0%
Somewhat Effective	10	62.5%
Not Applicable	2	12.5%
Not Effective	0	0.0%
Total	16	100.0%

The data reveal that 62.5% (N = 10) of participants identified the station teaching model as somewhat effective, 25.0% (N = 4) said it was very effective. A significant majority of participants, 87.5% (N = 14) reported that the station model was either very effective or somewhat effective.

Table 6 data reports on the effectiveness of the Alternative teaching model. The data for this co-teaching model are found below.

Table 6

Effectiveness of Alternative Teaching

One teacher instructs a large group of students while another teacher provides instruction on an alternative lesson to a smaller group of students. The lesson taught to each group is identical in content though it is taught at a different ability level to assure understanding by all students.

Effectiveness of Alternative Teaching		
Response	Frequency	Percent
Very Effective	6	37.5%
Somewhat Effective	5	31.3%
Not Applicable	5	31.3%
Not Effective	0	0.0%
Total	16	100.0%

The data reveal the 37.5% (N = 6) of participants reported the alternative teaching model was very effective, 31.3% (N = 5) said it was somewhat effective and 31.3% (N = 5) related it was not applicable.

Table 7 data report on the effectiveness of the Team-teaching model. Data for this co-teaching model are reported below.

Table 7

Effectiveness of Team Teaching

Co-teachers instruct and support all students at the same time. This model involves large group instruction that engages the class through constant interaction from both teachers.

Effectiveness of Team teaching		
Response	Frequency	Percent
Very Effective	11	68.8%
Somewhat Effective	2	12.5%
Not Applicable	2	12.5%
Not Effective	1	6.3%
Total	16	100.0%

The data reveal the 81.3% (N = 13) of participants perceived the Team-teaching model as very effective or somewhat effective while 12.5% (N = 2) stated it was not applicable, and 6.3% (N = 1) reported it was not effective.

Survey Results: Research Question Two

The second research questions asked, "What did co-teaching team members in a select Minnesota public middle school perceive as benefits to students of using co-teaching in the classroom?"

In addressing the second research question, the researcher analyzed responses to question five on the survey. A total of 16 participants completed the survey, of which ten were general education teachers and six were special education teachers who reported they had implemented the co-teaching model. Participants were asked to rate their perceptions of each of five researched benefits of implementing co-teaching in a mainstream classroom using a Likert scale with responses ranging from 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree, NA = Not Applicable.

The frequency data for research question 2 are reported in Table 8 through 12. Tables 8 through 12 identify the responses, list the number of participants and the percentage of the participants who selected each response.

Table 8 asked participants their level of agreement or disagreement with whether or not the co-teaching model had increased the academic achievement of general education students. Frequency data are found in Table 8.

Table 8

General Education Students' Benefits

The co-teaching model has increased the academic achievement of general education students.		
Response	Frequency	Percent
Strongly Agree	3	18.8%
Agree	8	50.0%
Disagree	5	31.3%
Strongly Disagree	0	0.0%
Not Applicable	0	0.0%
Total	16	100.0%

The data reveal that a total 68.8% (N = 11) of the participants either agreed or strongly agreed that co-teaching had increased academic achievement of general education students. A total of 31.3% (N = 5) disagreed that the co-teaching model had increased the academic achievement of general education students

Table 9 details data on whether or not the co-teaching model had increased the academic achievement of special education students. Frequency data are reported in Table 9.

Table 9

Special Education Students' Benefits

The co-teaching model has increased the academic achievement of special education students.		
Response	Frequency	Percent
Strongly Agree	6	37.5%
Agree	9	56.3%
Disagree	1	6.3%
Strongly Disagreed	0	0.0%
Not Applicable	0	0.0%
Total	16	100.0%

The data reveal a total of 93.8% (N = 15) of the participants either agreed or strongly agreed that co-teaching had increased academic achievement of special education students while 6.3% (N = 1) disagreed.

Table 10 data report on whether the co-teaching model has simplified the process of establishing a classroom management protocol. The data results are reported below.

Table 10

Classroom Management Protocol

The co-teaching model has simplified the process of establishing a classroom management protocol.		
Response	Frequency	Percent
Strongly Agree	6	37.5%
Agree	3	18.8%
Disagree	6	37.5%
Strongly Disagree	1	6.3%
Not Applicable	0	0.0%
Total	16	100.0%

The data reveal that 56.3% (N = 9) of the participants either agreed or strongly agreed that co-teaching had simplified the process of establishing a classroom management protocol. A total of 43.8% (N = 7) either disagreed or strongly disagreed that co-teaching had simplified the process of establishing a classroom management protocol.

Table 11 data illustrate whether the co-teaching model allows for increased opportunities to provide differentiated instruction. The data results are found below.

Table 11

Increased Differentiated Instruction

The co-teaching model allows for increased opportunities to provide differentiated instruction.		
Response	Frequency	Percent
Strongly Agree	7	43.8%
Agree	8	50.0%
Disagree	1	6.3%
Strongly Disagreed	0	0.0%
Not Applicable	0	0.0%
Total	16	100.0%

The data reveal that 93.8% (N = 15) of the participants either agreed or strongly agreed that co-teaching allows for increased opportunities to provide differentiated instruction. One participant (N = 1) or 6.3 % disagreed that co-teaching allows for increased opportunities to provide differentiated instruction.

Table 12 data reports on whether or not the co-teaching model had led to an overall decrease in negative student behaviors in the classroom. The data results are detailed below.

Table 12

Student Behavior

The co-teaching model has led to an overall decrease in negative student behaviors in the classroom.		
Response	Frequency	Percent
Strongly Agree	4	25.0%
Agree	6	37.5%
Disagree	3	18.8%
Strongly Disagree	2	12.5%
Not Applicable	1	6.3%
Total	16	100.0%

The data reveal that 62.5% (N = 10) of the participants either agreed or strongly agreed that the co-teaching model had led to an overall decrease in negative student behaviors in the classroom. Five participants (N = 5) or 31.3% either disagreed or strongly disagreed that the co-teaching model had led to an overall decrease in negative student behaviors in the classroom, while 6.3% (N = 1) said it was not applicable.

Survey Results: Research Question Three

The third research question asked, "What did co-teaching team members in a select Minnesota public middle school perceive as challenges in using co-teaching in the classroom?"

In addressing the third research question, the researcher analyzed responses to question seven on the survey. Participants were asked to rate their perceptions of the challenges of co-teaching using a Likert scale with the following possible responses: 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree, NA = Not Applicable. The survey question included five different responses in which the participants answered each question separately using a Likert scale. The survey questions focused on the challenges that co-teachers may face when implementing the co-teaching model in the mainstream classroom. The frequency data for this question are found in Tables 13-17. Tables 13-17 lists the number of participants (N) and the percentage of the participants responses.

Table 13 data reveal participants' perceived agreement that they were challenged by the lack of training or professional development for co-teaching partners.

Table 13

Lack of Training

Lack of training or professional development for co-teaching partners.		
Response	Frequency	Percent
Strongly Agree	5	31.3%
Agree	6	37.5%
Disagree	5	31.3%
Strongly Disagree	0	0.0%
Not Applicable	0	0.0%
Total	16	100.0%

A total of 68.8% (N = 11) of the participants either agree or strongly agree that a lack of training or professional development for co-teaching partners was a challenge, while 31.3% (N = 5) disagreed that a lack of training or professional development for co-teaching partners was a challenge.

Table 14 data report whether co-teaching team members were challenged by personality or philosophical clashes with co-teaching partners. The data results are reported below.

Table 14

Personality Conflicts

Personality or philosophical clashes between co-teaching partners.		
Response	Frequency	Percent
Strongly Agree	5	31.3%
Agree	6	37.5%
Disagree	3	18.8%
Strongly Disagree	2	12.5%
Not Applicable	0	0.0%
Total	16	100.0%

The data reveal a total of 68.8% (N = 11) of the participants either agreed or strongly agreed that personality or philosophical clashes between co-teaching partners was a challenge. A total of 31.3% (N = 5) either disagreed or strongly disagreed that personality or philosophical clashes between co-teaching partners was a challenge.

Table 15 data reports on whether co-teachers were challenged with scheduling issues between co-teaching partners. The data results are detailed below.

Table 15

Scheduling Issues

Scheduling issues between co-teaching partners.		
Response	Frequency	Percent
Strongly Agree	6	37.5%
Agree	6	37.5%
Disagree	3	18.8%
Strongly Disagree	1	6.3%
Not Applicable	0	0.0%
Total	16	100.0%

The data reveal a total of 75.0% (N = 12) of the participants either agreed or strongly agreed that scheduling issues between co-teaching partners was a challenge, while 25.0% (N = 4) either disagreed or strongly disagreed that scheduling issues between co-teaching partners was a challenge.

Table 16 illustrates data on whether co-teachers were challenged by a lack of planning time between co-teaching partners. The data results are reported below.

Table 16

Lack of Planning

Lack of planning time between co-teaching partners were a challenge

Response	Frequency	Percent
Strongly Agree	9	56.3%
Agree	5	31.3%
Disagree	1	6.3%
Strongly Disagree	1	6.3%
Not Applicable	0	0.0%
Total	16	100.0%

The data reveal a total of 87.6% (N = 14) of the participants either agreed or strongly

agreed that a lack of planning time between co-teaching partners was a challenge. Two

participants (N = 2) or 12.5% either disagreed or strongly disagreed that lack of planning time

between co-teaching partners was a challenge.

Table 17 data reports on the clarity of roles and following of roles by each co-teacher.

The data results are detailed below.

Table 17

Roles of Co-teaching Partners

Roles of each co-teacher were not well-established or followed between the co-teaching partners.

Response	Frequency	Percent
Strongly Agree	1	6.3%
Agree	6	37.5%
Disagree	8	50.0%
Strongly Disagree	0	0.0%
Not Applicable	1	6.3%
Total	16	100.0%

Table data report that 50.0% (N = 8) of the participants disagree that roles of each co-teacher were not well-established or followed between the co-teaching partners. A total of 43.8% (N = 7) either agreed or strongly agreed that roles of each co-teacher were not well-established or followed between the co-teaching partners.

Survey Results: Research Question Four

The fourth survey question asked, "Which of the six models of co-teaching did a select Minnesota public middle school co-teaching team member report that they used most frequently?"

In addressing the fourth research question, the researcher analyzed responses to question ten on the survey. Participants were asked to rank their usage of the following six co-teaching models that were identified by Friend and Cook: One teach, One observe; One teach, one assist; Parallel teaching; Station teaching; Alternative teaching; Team teaching. Participants were asked to rank the models from 1 = The model least used to 6 = The model that is used the most. If a co-teaching model had not been used co-teaching had not been used, NA was listed to donate that it was Not Applicable.

The frequency data for this question are found in Table 18-23. Tables 18-23 lists the number of participants (N) and the percentage of the participants responses. Table 18 focused on the usage of the co-teaching model, One teach, One observe. The data results are found below.

Table 18

One Teach, One Observe Usage

One teach, One observe		
Response	Frequency	Percent
1	1	6.3%
2	6	37.5%
3	2	12.5%
4	2	12.5%
5	2	12.5%
6	2	12.5%
N/A	1	6.3%
Total	16	100.0%

The data reveal a total of 43.8% (N = 7) ranked the usage of the One teach, One observe

either a 1 or a 2 indicating that it was used the least. A total of 25.0% (N = 4) ranked the usage of

the One teach, One observe either a 3 or a 4. A total of 25.0% (N = 4) ranked the usage of the

One teach, One observe either a 5 or 6 or applied it the most.

Table 19 reports data on the usage of the co-teaching model One teach, One assist. The

data results are reported below.

Table 19

One Teach, One Assist Usage

One teach, One assist		
Response	Frequency	Percent
1	1	6.3%
2	7	43.8%
3	1	6.3%
4	2	12.5%
5	0	0.0%
6	4	25.0%
N/A	1	6.3%
Total	16	100.0%

Table data reveal a total of 50.1% (N = 8) ranked the usage of the One teach, One assist either a 1 or a 2 indicating that it was used the least. A total of 25.0% (N = 4) ranked it a 6 or used it the most, and 18.8% (N = 3) ranked the usage of the One teach, One assist either a 3 or a 4.

Table 20 details data on the usage of the co-teaching model parallel teaching. The data results are found below.

Table 20

Parallel Teaching Usage

Parallel teaching		
Response	Frequency	Percent
1	1	6.3%
2	3	18.8%
3	2	12.5%
4	3	18.8%
5	4	25.0%
6	3	18.8%
N/A	0	0.0%
Total	16	100.0%

Table data reveal a total of 43.8% (N = 7) ranked the usage of the parallel teaching model either a 5 or a 6 which indicted that co-teachers applied it the most. A total of 31.3% (N = 5) ranked the usage of the parallel teaching model either a 3 or a 4, and 25.1% (N = 4) ranked the usage of the parallel teaching model either a 1 or a 2 or used it the least.

Table 21 data reports on the usage of the co-teaching model station teaching. The data results are found below.

Table 21

Station Teaching Usage

Station teaching		
Response	Frequency	Percent
1	1	6.3%
2	3	18.8%
3	5	31.3%
4	3	18.8%
5	2	12.5%
6	1	6.3%
N/A	1	6.3%
Total	16	100.0%

Table data reported that 50.1% (N = 8) ranked the usage of the station teaching either a 3 or a 4 which indicates medium usage. A total of 25.1% (N = 4) ranked the usage of the station teaching either a 1 or a 2, while 18.8% (N = 3) ranked the usage of the station teaching either a 5 or a 6.

Table 22 data reports the usage of the co-teaching model alternative teaching. The data results are located below.

Table 22

Alternative Teaching Usage

Alternative teaching		
Response	Frequency	Percent
1	3	18.8%
2	1	6.3%
3	4	25.0%
4	1	6.3%
5	5	31.3%
6	1	6.3%
N/A	1	6.3%
Total	16	100.0%

The data reveal a total of 37.9% (N = 6) ranked the usage of the alternative teaching either a 5 or a 6, which indicates the model was applied the most, while 31.3% (N = 5) ranked the usage of the alternative teaching either a 3 or a 4, and 25.1% (N = 4) ranked the usage of the alternative teaching either a 1 or a 2 or applied the model the least.

Table 23 data details the usage of the co-teaching model team teaching. The data results are furnished below.

Table 23

Team Teaching Usage

	Team teaching	
Response	Frequency	Percent
1	1	6.3%
2	3	18.8%
3	1	6.3%
4	3	18.8%
5	3	18.8%
6	4	25.0%
N/A	1	6.3%
Total	16	100.0%

The data reveal a total of 43.8% (N = 7) ranked the usage of the team teaching either a 5 or a 6, indicating it was used the most, while 25.1% (N = 4) ranked the usage of the team teaching either a 3 or a 4, and 25.1% (N = 4) ranked the usage of the team teaching either a 1 or a 2.

Interview Results: Research Question Five

Research question five asked, "What differences in perceived challenges of using co-teaching in the classroom were found between regular education teachers and special education teachers involved in co-teaching in a select Minnesota public middle school?"

In addressing this question, the researcher examined data from the four interview questions asked of each volunteer participant. The interviews were conducted with four middle school co-teachers who implement a co-teaching model. Participants were asked at the end of the survey if they were willing to participate in a phone interview. Of the 16 respondents, four participants agreed to participate in the survey. Among the participants interviewed, Participant 1 was a general education teacher while Participants 2, 3 and 4 were special education teachers.

The researcher emailed each respondent asking to identify a day and time in which they would be willing to complete a phone interview. After three email reminders were sent to those respondents who had earlier agreed to be interviewed, four participants were interviewed. The researcher utilized "Call Recorder" to record the interviews. The interviews ranged in duration from 5 to 15 minutes per interview.

In addressing the fifth research question, the researcher analyzed responses to the following four interview questions: 1) What do you see as the benefits of the co-teaching model? 2) Would you recommend the co-teaching model to other Districts? Why or why not? 3) What do you see as the challenges of the co-teaching model? 4) What cautions would you suggest to other districts wanting to use the co-teaching model?

The first interview question asked, "What do you see as the benefits of the co-teaching model?"

Among the participants interviewed, all agreed that having a second person involved to differentiate, plan and reflect were all beneficial to student achievement and quality teaching. Participant 1, a general education teacher, stated that, "It divides the work in half, makes a lot easier during independent work time to address all the needs of the class."

Participant 1 also stated an advantage of learning from another professional was in being able to apply it to other classes. "It has more dialogue about what I intend to teach to whereas in my regular classes to where I'm not co-teaching." Participant 1 explained that having reflections on what does and does not work with another professional enhances future teaching lessons to similar students. "It pushes the dialogue about how could I do this differently; we can push to do better activities, or suggestions for better differentiations."

Participant 1 explained that having access to two teachers allowed more students to seek more help when needed. "They have access to a teacher if they have questions and generally get better materials that have been differentiated or just constructed better with two perspectives."

Participant 2, a special education teacher, said the greatest benefit of co-teaching is learning content a general education teacher. Not only was this beneficial in the co-teaching setting but also in small group pullout classes. They stated, "I can learn the language in the main classroom." Participant two emphasized that knowing the common vocabulary for a certain content area was also beneficial to other students taught outside the co-teaching classroom.

Participant 2 stressed that organizing small group stations as a co-teaching team allows the other co-teacher to focus on different tasks. "My role is more to modify the content or bringing that vocabulary or simplify and break apart assignments, chunk things more like creating the stations when the mainstream teachers may not have the flexibility to do so."

Participant 3, a special education teacher, stated that when done correctly, more content is covered because you can divide and conquer different topics or ability group students in their areas of need. "This is easier to try new things or new projects."

Participate 3 said student achievement is evident in the co-taught classes. "We usually see a lot more growth in the co-taught section because there is another adult there to help them as they need it or notice if something is going on or meet them where they are at a little easier."

Participant 4, a special education teacher, added that the special education and general education teacher learn teaching skills and strategies from each other. "We make more than just our co-taught class better; we make all of our classes better." Participant four added that taking back content learned from the mainstream classes and bringing that information to the pullout classes has enhanced the small group pullout classes. "Likewise, my cooperating teacher learns

accommodations, modifications, and adaptions that they see me doing inside their classrooms and applies them to all their other classes of students as well."

During the interviews, participant four acknowledged the improvement that occurred not only with special education students but also with those students who do not qualify for special education. Participant four said, "Another benefit is to all those other students who are in the class that also struggle but are not in special education, they also benefit from the co-taught classes."

Participant 4 stated that a benefit for the students was that it allowed the least restrictive environment. At the middle school level, students are motivated by the social aspect. "When we take kids with enough skill that we can help scaffold the buy in, in the main stream setting, we find that the kids are motivated to stay in the curriculum and to participate and to get more out of that curriculum."

The second interview question was, "Would you recommend the co-teaching model to other Districts? Why or why not?"

Participant 1 said that if a district implements the co-teaching model, they need to implement it properly. Participate one also added, "If they give time for the co-teachers to meet, then I feel like it is a productive model that allows for greater than just having another person in the room." Participant 1 further related that the benefits also include better teaching, more organized and focused lesson plans. "It makes it a lot easier to address the needs of a special education heavy class or ELL (English Language Learners) heavy class just because that second person in the room that is confident in the material as well as the content teacher allows the students more access to that information and makes it a lot easier to keep them all on track."

Participant 2 highly recommended it to provide deeper enrichment for all students. "It provides a deeper enrichment level for the kids when you have two teachers helping in the classroom." In addition, it also eases the workload among the cooperating teachers if they are using the model effectively. "It's just good perspective when working together. I do all of the grading in both of my co-taught classes because I want the data on my students. I want to see their progress on what they are and are not learning so I can hit it later in my skills classes and reinforce it with them, and I think that has been a blessing to both of those teachers just to have one less class to grade."

Participate 3 added that if done right and the district has the resources, it is a great tool to use when the personalities match up.

"The years when the pairs are done intentionally to where the personalities go well together and you have prep time together, then co-teaching works really well. The process needs structure with planning periods and the master schedule is laid out well, it will work. What doesn't work is placing two teachers in the same room and label(ing) them co-teachers; that can be really unsuccessful."

Participant 4 would recommend it to any district stating that it increases not only student achievement, but it enhances teacher practices as well. "The increase in (student) achievement, and it increases teacher achievement, too, or like teacher skills. It puts all our teachers in a situation to where they have to learn from each other to be productive."

The third interview question asked was, "What do you see as the challenges of the co-teaching model?"

All four interviewees agreed that challenges to co-teaching occur when placing two teachers' personalities together to making certain the teachers will be able to work together and

are the right fit. Participant 1 said, "Challenges of the co-teaching model are definitely making sure that you have a connection with your co-teacher. So, if you have a person and you two aren't really clicking, then it can be confrontational." Having the right co-teacher will also help bring added attention to detail in the classroom as well.

> "My first teacher didn't put much of an effort into the co-teacher dynamic…the second one definitely puts more effort into it…I have benefited greatly in my daily prep concept as far as just having that person to talk about the lesson and she has also motivated me to be organized with my lesson plans and direct with my intentions."

Participant 2 addressed the challenges of co-teaching with a teacher in their first year in the profession.

> "Twice in the last three years I have been asked to be a co-teacher with a brand new teacher, and I think that is a very bad idea. Because the brand- new teacher does not know the content yet and doesn't even know what the next lesson is going to be. I just think that until the content teacher has a grasp of their curriculum then it's a little too hard to share the responsibility of developing and changing or making it more of a modified curriculum or modifying some part of it anyways."

Participant 2 addressed time as a concern to make a successful co-teaching team. "Time for collaboration probably would be my number one. It's really hard to teach two content areas. I do have common prep with both of them, but I have a million other obligations to do during my prep as well, so that has been number one."

Participant 3 said teachers need to be able to collaborate together and be able to problem solve without confrontation when things become difficult.

"For the teachers, having a set resource piece of making sure it is a pair that will work

well together. It can be really challenging if their personalities…clash or if they have

very different teaching styles and if the teachers aren't getting along, then the kids pick

up on that very easily. If you are doing it for real, it is more work because you can't just

plan your own thing and go with it. You have to check in with somebody else and get

their feedback."

Participant 3 said the students also may struggle if they are not used to having two

teachers in the room. Participant three stated, "Once in a while you have a kid that struggles with

the managing the two teacher personalities in one room, but that wasn't very often. If the

teachers aren't working well together or if they are conflicting…then the kids get confused."

Participant 4 talked about relationships as a challenge in co-teaching.

"I think it is really hard to create really good relationships between co-teachers. And from

the co-teacher point of view, the relationship is very important. A lot of the specialty

teachers, like ELL or special education teachers, don't always feel as comfortable

teaching curriculum that the class teacher may be teaching. They may not be comfortable

with the math, might not be comfortable with the language arts."

Special education teachers may also become uncomfortable in the classroom as they are not as

comfortable with the content or the curriculum, Participate four offered. "So that can be a

challenge. There also are a lot of ways to overcome it, but that's what some of my colleagues

have struggled with in the past and, sometimes, I have too."

Participant 4 added to this sentiment saying that when students arrive for class, having

two teachers in the same classroom can be a difficult adjustment. Participate four talked about

those different challenges for students.

"The challenges for the students are that you have to understand that the class may run differently, and sometimes different is not a great thing inside a middle school and my model. Sometimes your class may be doing a different assignment than the other classes and different needs to be defined and sometimes kids get hung up on that and sometimes they feel like they are still picked out separately in the classroom especially if they are asked to be part of a small group from time to time with the special education teacher. So, it is tricky and getting that balance right of who you are supporting and when you are supporting it, it can be tricky."

The fourth interview question questioned, "What cautions would you suggest to other districts wanting to use the co-teaching model?"

Participant 1 stressed the importance of proper planning time among the co-teachers. "I would say to make sure you give them an hour a week or encourage them to meet an hour a week." The time required will vary depending on the relationships among the teaching partners.

"Some teacher pairings are pretty on par with each other, so there isn't much need for a dialogue to discuss the plans for the day or plans for the week or the possibility for making adjustments to a lesson plan, and some teachers would be very far apart in their opinions and they may need more time. I would say encouraging the co-teacher pairs to meet at least once a week for about an hour. I think that is the biggest hint or secret of making a co-teaching dynamic successful. It also encourages the building of that relationships between the two co-teachers."

Participant 2 said co-teaching shouldn't be limited to certain subjects. "Personally, I do not think there should just be co-teaching in just math and language arts, but there should be co-teaching in science and social studies too."

Participate 3 stated, "If you going to do it, make sure you do it right."

Participant 4 said that co-teaching needs to be done by choice. Teachers should not be forced to participate.

"Well, I would say that it should be by choice if at all possible. To do it that way…to encourage teachers and groups to pair themselves up. It seems to be a real problem when teachers are assigned to each other for a particular purpose. Those things don't go as well, just because from the get go, it becomes an assigned thing."

Participant 4 explained that it takes time and support to make a quality teaching team.

"So, you are really trying to take advantage of teachers getting there, and the other thing is you need, especially early on with the teaching pair…to support them with strategies that help them learn how to co-teach and how to co-plan. Co-plan and co-teaching go hand in hand, so you have to commit to giving your teachers time to co-plan together, and it should be by choice and need to be supported through the whole process."

Participant 4 also added,

"It takes patience to become a quality team, and it is something that the teaching pair needs to be committed to for multiple years. Even at helping them become better at co-teaching, and they have to be patient too. It may take a co-teaching pair 2-3 years to be good at it. But most teachers, most specialists, and mainstream teachers will want to be paired with one other teacher for multiple years. So, they can learn how each other works where they see their role in the curriculum."

Summary

In this chapter, survey data gathered from ten general education teachers and six special education teachers who implement the co-teaching model at Minnesota middle schools were reported. Significant findings from the survey included:

- Table data revealed that 62.5% of participants perceived the Parallel Teaching model was very effective

- Table data revealed a total of 93.8% of the participants either agreed or strongly agreed that co-teaching had increased the academic achievement of special education students.

- Table data revealed that 93.8% of the participants either agreed or strongly agreed that co-teaching allowed for increased opportunities to provide differentiated instruction.

- Table data revealed that 87.6% of the participants either agreed or strongly agreed that a lack of planning time between co-teaching partners was a challenge.

- Table data revealed 43.8% ranked the usage of team teaching were either a 5 or a 6.

In the interview, four questions were asked of four volunteer participants. There were three special education teachers and one general education teacher interviewed. Significant findings on which the special education and general education teachers agreed were as follows:

- Having a second person involved to differentiate, plan and reflect were beneficial to student achievement and quality teaching.

- If a school district implements a co-teaching model, it needs to be implemented it properly.

- Challenges occur when placing two teachers' personalities together. It is essential to ensure that the teachers will be able to work together and are the right fit.

Chapter V details conclusions, discussion, limitations, and recommendations for further study and professional practice.

Chapter V: Conclusions, Discussion, Limitations, and Recommendations

Introduction

The purpose of the mixed methods study was to examine the effectiveness and challenges of co-teaching, the benefits to students, and the most frequently employed co-teaching model from the Cook and Friend (1995) as reported by special education and general education teachers in select Minnesota middle schools who have implemented a co-teaching model in their classrooms. In examining the literature on the benefits and challenges of implementing the co-teaching model, the data were analyzed and reported using frequency distributions and percentages. The study also examined the perceived differences in challenges identified by special education and general education teachers who were interviewed.

Chapter V provides results and conclusions of the study, discussions of the most significant findings, study limitations, recommendations for future practice, recommendations for future research and a summery.

Research Questions

The following five research questions were developed to guide the study:

1. How did co-teaching team members in a select Minnesota public middle school rate the effectiveness of each of the six co-teaching models?

2. What did co-teaching team members in a select Minnesota public middle school perceive as benefits to students of using co-teaching in the classroom?

3. What did co-teaching team members in a select Minnesota public middle school perceive as challenges in using co-teaching in the classroom?

4. Which of the six models of co-teaching did co-teaching team members of a select Minnesota public middle school report that they used most frequently?

5. What differences in perceived challenges of using co-teaching in the classroom were found between regular education teachers and special education teachers involved in co-teaching in a select Minnesota public middle school?

Research Design

The researcher used a mixed methods research design to provide quantitative and qualitative data for an extensive form of research (Creswell, 2015). The quantitative research was conducted using a survey which allowed for statistical analysis of the common trends and differences of the participants' responses to survey questions (Creswell, 2015). The survey was conducted through a web-based survey using SurveyMonkey (Appendix A).

The qualitative research component of the study was conducted through an interview of four volunteer participants representing general education and special education teachers who co-teach at a select public middle school in Minnesota. The qualitative research study component was designed to obtain a deeper understanding of the responses to the research questions not identified in the quantitative research (Creswell, 2015). The qualitative data were collected through one on one phone interviews of four volunteer participants representing one general education and three special education teachers.

The quantitative data were collected through an online electronic survey conducted over four weeks and were analyzed and reported using frequency distributions and percentages.

Conclusions

Research Question 1

How did co-teaching team members in a select Minnesota middle school rate the effectiveness of each of the six co-teaching models?

Effectiveness of the six co-teaching models

From the study's electronically distributed survey (Appendix A), 10 general education

teachers and six special education teachers completed the survey.

One teach, One observe

In rating the effectiveness of the co-teaching model One teach, One observe, 68.8% of

the study respondents reported the model to be somewhat effective. The findings support the

research from Friend and Cook, (2004) who stated that teachers need to alternate roles in this

type of model to prevent students from looking at one teacher as more superior to the other

teacher (Friend & Cook, 2004). Friend (2014) added that when teachers become comfortable

with this model, they may use each other's teaching practices to further enhance their own

instruction.

One teach, One assist

In rating the effectiveness of the co-teaching model One teach, One assist, 87.6% of the

respondents reported the model to be either somewhat effective or very effective. The findings

support the research from Wilson and Blednick (2011). The advantages of this type of model are

that students can receive individual attention and will receive reminders to stay on task without

being prompted by the lead teacher. Certain students can be attended to and little planning is

needed for this co-teaching model (Wilson & Blednick, 2011). This type is best used when

teachers lack time to plan and when there is whole group instruction.

Parallel teaching

In rating the effectiveness of the co-teaching model Parallel teaching, 87.5 % of the

respondents reported the model to be either somewhat effective or very effective. The study

findings do not support the research from Wilson (2016). This is the only co-teaching model that study respondents rated differently than that of research.

For example, Wilson (2016) found that when introduced to this model, teachers tended to disagree on its effectiveness and may protest using this type of teaching. The common arguments were that it is too distracting, controlling the noise level is difficult, and it may not be effective for students with low attention span.

Even Friend and Cook (1996) stated this model consumes time. This model needs extensive planning and both teachers need to be competent in the content. They added that teachers also need to modify their volume when giving instruction and be aware of their surroundings the lesson must be evenly paced to have the lesson finished at the same time (Friend & Cook, 1996).

Station teaching

In rating the effectiveness of the co-teaching model Station teaching, 87.5% of the respondents reported the model to be either somewhat effective or very effective. The findings support the research of Friend and Cook (1996). This model of teaching reduces the teacher to student ratio and increases student engagement as well as placing students in ability groups to learn with their peers who are at the same level of learning (Friend & Cook, 1996).

These groups rotate and each teacher works with all students considering students' needs (Friend & Cook, 2010). This method should not be confused with ability learning groups, as all students have a rotation with each teacher (Friend & Cook, 2010).

Alternative teaching

In rating the effectiveness of the co-teaching model Alternative teaching, 68.8% of the respondents reported the model to be either somewhat effective or very effective. The findings

support the research of Friend and Cook (2010). This model is often used when there is wide

differentiation among the students' needs in the classroom (Friend & Cook, 2010).

The benefit of this model is to provide a high level of instruction to a certain group that

also addresses other student needs. The alternative lesson is meant for students who may not

grasp the concept but are given the chance to have differentiated instruction in a smaller group.

This model also gives students the chance to have individualized attention (Friend & Cook,

2010).

Team teaching

In rating the effectiveness of the co-teaching model, Team teaching, 81.3% of the

respondents reported the model to be either somewhat effective or very effective. The findings

support the research of Friend and Cook (2010). This model utilizes large group instruction that

engages the class through constant interaction from both teachers. This is a high intensity

teaching style that results in a give and take conversation among the two teachers (Friend &

Cook, 2010).

This model is conducive to high levels of teaching and is very engaging while promoting

classroom interaction and discussion. This also builds the collaboration of the two teachers and

teachers share power demonstrating to the students how to work together and to complement each

other's energy.

This type of teaching takes time, experience, and a compatible relationship with the other

co-teacher (Friend & Cook, 2010). Some of the disadvantages are the extensive planning

minutes it involves and both teachers' roles need to be clearly defined to have equal

responsibility (Friend & Cook, 2010).

Research Question 2

What did co-teaching team members in a select Minnesota middle school perceive as benefits to students of using co-teaching in the classroom?

In addressing the second research question, the researcher analyzed responses to question five on the survey. A total of 16 participants completed the survey, of which there were ten general education teachers and six special education teachers who reported they implemented the co-teaching model.

Increased academic achievement of general education students

In rating the benefit, co-teaching has increased academic achievement of general education students, 68.8% of the participants either agreed or strongly agreed with the statement. These findings support the research of Badiali and Titus (2010) and Friend and Cook (2010). Co-teaching helps meet academic achievement of all students in the classroom (Friend & Cook, 2010). In a regular classroom, there are many students who are low achieving but may not qualify for special services. When two teachers work together effectively, not only does it benefit students with disabilities, it helps promote collaboration in the entire classroom (Badiali & Titus, 2010). When co-teaching model existed in classrooms for a duration of time, teachers who worked side by side increased all student achievement (Badiali & Titus, 2010).

Increased academic achievement of special education students

In rating the benefit, co-teaching has increased academic achievement of special education students, 93.8% of the participants either agreed or strongly agreed with the statement. These findings support the research from Walsh (2011) and Friend and Cook (2010). The chances that special education students can be accepted by their classmates increased if their classmates do not observe them receiving special attention from an outside resource.

Accommodating students in a least restrictive setting allows students to have more responsibilities and they are provided more opportunities for quality differentiated instruction (Walsh, 2011).

The increased contact and modified accommodations within the classroom setting allowed students to stay in the mainstream classes (Friend & Cook, 2010). This provides them the chance to enhance their social skills and to feel part of their classroom each day. This is essential when working with students with disabilities in order to make transitions less restrictive (Friend & Cook, 2010).

Simplified the process of establishing a classroom management protocol

In rating benefit that co-teaching has simplified the process of establishing a classroom management protocol, 56.3% of the participants either agreed or strongly agreed. These findings also support the research by Friend and Cook (2010). The common obstacle of co-teaching is the clarification of the amount of "authority" each teacher might hold. Teachers do not want to feel like an assistant and should be treated as professionals with their co-teacher. Wilson and Blednick (2011) also address these concerns. As a result of the responsibilities not divided equally, the general education teacher may assume the majority of the responsibilities in the classroom. In these cases, this leads to more of a support role for the special education teacher rather than both teachers sharing equal status (Wilson & Blednick, 2011).

Davis-Wiley and Cozart, (1998) also stated that both teachers need to have equal ownership of the classroom and students need to view each teacher as equal to the other to have an effective classroom. With just a little over half of the respondents who agreed that co-teaching simplified the process of establishing a classroom management protocol, the researcher does not consider this rating as a strong support of the statement.

Increased opportunities to provide differentiated instruction

In rating the benefit that co-teaching allows for increased opportunities to provide

differentiated instruction, 93.8% of the participants either agreed or strongly agreed. These

findings strongly support research from Bresnahan et al. (2009) and Wilson (2016). The

implementation of the co-teacher model allows for differentiated groups of students to be with

each teacher (Bresnahan et al., 2009). Wilson revealed how effective co-teachers use

strategies to help all students' achievement levels ranging from low to high (Wilson,

2016). Through delivering instruction and reflecting on students' achievements on outcomes,

both teachers determine the effectiveness of each strategy and how it pertains to each individual

student in the classroom (Wilson, 2016).

Led to an overall decrease in negative student behaviors in the classroom

In rating the benefit that the co-teaching model has led to an overall decrease in negative

student behaviors in the classroom, 62.5% of the participants either agreed or strongly agreed

with the statement. These findings support literature from Treahy and Guranus (2010) and

Chanmugan and Gerlach (2013). As team teaching starts to develop, the give and take interaction

allows for constant engagement and different voices to keep students attention (Treahy &

Guranus, 2010). When two teachers display a strong collaborative partnership, it models positive

behavior on how to work together professionally (Chanmugan & Gerlach, 2013).

Research by Gately and Gately (2001) supports these findings who state that behavior

management should be collective for both teachers; they need to be present when presenting and

reinforcing rules. To do this, modeling the behaviors and communicating among each other

assures they are not stepping on individual roles. Additionally, Gately and Gately stated that

when the classroom management rules and expectations are established, individual behavior

plans also need to be done on a collaborative effort.

Friend and Cook (2010) also support these findings in which by working together, the

teachers gain perspectives of student behavior and learning capabilities. Teachers then

understand which students need specialized services and which students need more advanced

instruction for further education. Two teachers who are committed to co-teaching learn more

about their students' learning, their behavior and which students need the extra motivation and

specialized interventions to help them achieve academic and social success (Friend & Cook,

2010).

Research Question 3

What did co-teaching team members in a select Minnesota middle school perceive as

challenges in using co-teaching in the classroom?

In addressing the third research question, the researcher analyzed responses to question

seven on the survey. A total of 16 participants completed the survey, of which there were ten

general education teachers and six special education teachers who reported they implemented the

co-teaching model.

Lack of training or professional development for co-teaching partners was a challenge

In rating the challenge, lack of training or professional development for co-teaching

partners, 68.8% of the participants either agreed or strongly agreed. These findings aligned with

research of Kosko and Wilkins (2008). It takes some time and training for teachers to prepare to

educate students with special needs. Courses are offered in college but teaching strategies are not

usually offered (Kosko & Wilkins, 2008). Quality professional development for teachers and

administrators is vital for teachers to be prepared for classes of students with high learning

disability needs (Kosko & Wilkins, 2008). "Administrators and special education teachers ranked behavioral assessments and inclusion strategies in the top three areas needed for professional development" (Kosko & Wilkins, 2008, p. 4).

Research conducted by Friend (2008) also supports the importance of training and professional development. Co-teaching styles and preparing for each class may be accomplished through Professional Development. This provides time for co-teachers to talk to other co-teachers and discuss what works and what does not. Meeting once a week with other co-teachers to discuss their accomplishments and challenges will help them trade ideas and expand their ideas in the classroom (Friend, 2008). Additionally, Procedures are important to establish leadership and participation (Friend & Cook, 2010). Successful teams have strong leadership and function productively. Establishing roles and responsibilities will build a strong collaborative team (Friend & Cook, 2010).

Personality or philosophical clashes between co-teaching partners was a challenge

In rating the statement that personality or philosophical clashes between co-teaching partners was a challenge, 68.8% of the participants either agreed or strongly agreed. These finding support research from Davis-Wiley and Cozart, (1998) and Pugach and Winn (2011). Teaching philosophies vary from teacher to teacher; individual teachers focus on different issues when in front of students (Davis-Wiley & Cozart, 1998). This can cause confusion and frustration among both teachers and students (Davis-Wiley & Cozart, 1998). The perception is not that either teacher is teaching the subject the wrong way, but that they have different perspectives and ways of teaching the subject manner. This becomes difficult and bothersome for

teachers when they are not flexible and believe they have the best possible way of teaching the subject (Davis-Wiley & Cozart, 1998).

Pairing two teachers with different skills may create a conflict of interest in teaching styles and goals (Pugach & Winn, 2011). For the co-teaching to succeed, each teacher must be willing to accept the challenge and have comparable personalities to be able to work with their colleague (Pugach & Winn, 2011).

Scheduling issues between co-teaching partners was a challenge

In rating the statement that scheduling issues between co-teaching partners was a challenge, 75.0% of the participants either agreed or strongly agreed. These finding support the research from Uzuner and Grugur (2010). They found that "If meetings are changed or not held at all, the result can be confrontational among teachers of what their priorities are when it comes to co-teaching" (Uzuner and Grugur, 2010). "Time to meet is a constant problem but making the time to accommodate a successful and meaningful meeting is essential to the co-teaching relationship" (Uzuner & Grugur, 2010, p. 8).

Lack of planning time between co-teaching partners was a challenge

In rating the statement that lack of planning time between co-teaching partners was a challenge, 87.6% of the participants either agreed or strongly agreed. These finding**s strongly** support the research from Friend (2008) and Sims (2008). Friend, (2008) found that one concern teachers had during their experience in co-teaching, is the lack of planning time. Special education teachers and general education teachers may not have the same planning period; Individual Education Plans (IEPs) meetings for students with learning disabilities can be rather

difficult for both teachers to attend (Friend, 2008). Adequate and consistent planning time is essential to a quality co-teaching team (Friend, 2008).

Sims (2008) stated that planning as a team needs to be conducted properly to assure both teachers know the instructional approach that will be taken during a lesson. Both teachers willing to work together by including each other in lesson planning is a necessity. Teachers who hold the same authority level in the classroom will get the most out of their students and can build a positive learning environment (Sims, 2008).

Roles of each co-teacher were not well-established or followed

In rating that the roles of each co-teacher were not well-established or followed between the co-teaching partners was a challenge, 50.0% of the participants disagreed indicating that the roles of the co-teacher partnership were established. This finding supports research from Friend (2010) and Wilson and Blednick, (2011) but not considered as strong a response as the other challenges cited by the respondents. The roles of each of the teachers should be established when the co-teachers start to plan. This helps prevent the special education teacher feeling like an assistant to the general education teacher (Friend & Cook, 2010). Teaching teams that struggled exhibited less collaboration and their different teaching styles often led to conflict (Friend & Cook, 2010).

As a result of the responsibilities not divided equally, the general education teacher may assume most of the responsibilities in the classroom (Wilson & Blednick, 2011). In these cases, this leads to more of a support role for the special education teacher rather than both teachers sharing equal status (Wilson & Blednick, 2011).

Research Question 4

Which of the six models of co-teaching did co-teaching team members of a select

Minnesota middle school report that they used most frequently?

In addressing the fourth research question, the researcher analyzed responses to question

ten on the survey. Participants were asked to rank their usage of the following six co-teaching

models identified by Friend and Cook: One teach, One observe; One teach, one assist; Parallel

teaching; Station teaching; Alternative teaching; Team teaching. Participants were asked to rank

them from 1 = The model least used to 6 = The model that is used the most. If a co-teaching

model had not been used, then the participants were to select N/A for Not Applicable.

One teach, One observe

In ranking the usage of the One teach, One observe co-teaching model 43.8% of the

participants ranked it either a 1 or a 2 indicating low usage of this model. The main purpose of

this model is data collection and may include designing instruction, grouping students,

responding to inappropriate behavior, and monitoring student progress (Friend & Cook, 2004).

One teach, One assist

In the model One teach, One assist, 50.1% of the participants ranked it either a 1 or a 2

indicating that this model had low usage among the co-teaching teams. This model requires little

co-planning (Friend & Cook, 2010). In order for both teachers to establish equal power and

control among the students, this model requires to be implemented in a way that it does not

appear that one teacher is an aide to the other teacher (Friend & Cook 1996). This model can lead

to split roles for the teachers; students view one teacher as having more power than the other

(Friend & Cook, 1996). Students need to see both teachers as having of equal power and control and students will start to expect immediate assistance (Friend & Cook, 1996).

Parallel teaching

In ranking the usage of the Parallel co-teaching model 43.8% of the participants ranked it either a 5 or a 6 indicating that this model had high usage among the co-teaching teams. This format allows lower student-teacher ratio while separating certain students to control behavior (Friend & Cook, 2010).

This model is most effective when both teachers are confident in the content. Precise planning and the fact that both teachers need to have extensive knowledge of the content is essential to this model. Timing is important to help transition flow and for both teachers to rotate and not have down time among the groups. Teachers also need to know what they can and cannot do in their classrooms (Friend & Cook, 2010).

Station teaching

In ranking the usage of the Station teaching co-teaching model, 50.1% of the participants ranked it either a 3 or a 4 indicating that the model had medium usage among the co-teaching teams. In Station teaching, groups of students rotate among the teachers and each teacher works with all students at their level based on students' needs (Friend & Cook 2010). The disadvantages of this model are that it requires more planning and the level of the noise in the classroom may increase. Management is essential for this model since students will need to be able to work independently and collaboratively when not in their station with a teacher (Friend & Cook, 1996).

Alternative teaching

In ranking the usage of the Alternative co-teaching model, 37.9% of the participants ranked it either a 5 or a 6 meaning that it had a high usage of the model. A total of 31.3% ranked the usage of the alternative teaching either a 3 or a 4 meaning that it had a medium usage. A total of 25.1% ranked the usage of the alternative teaching either a 1 or a 2 meaning it had a low usage of the model. The overall ranking of the usage of this model was close to be evenly divided among the co-teaching teams therefore not considered a strong rating of usage among the respondents.

This form of co-teaching is often used when there is a wide differentiation level among the students in the classroom (Friend & Cook, 2010). This is referred to as the "back-table" model (Wilson, 2016) to help assist those students who are struggling well below grade level.

One of the challenges of this model is that it can be overused (Wilson & Blednick, 2011). This can cause a division in the classroom and make students feel less important to not be part of the large group instruction. Taking students to another part of the classroom may cause students to have a negative opinion on those being taken out or removed from the whole group (Friend & Cook, 2010). Rotating students from these groups is important as all students see it as an opportunity to be part of a small group rather than being segregated from the rest of the class. Rotating teachers in these smaller groups will also help reduce the division among the students (Wilson & Blednick, 2011).

Team teaching

In ranking the usage of the team-teaching model, 43.8% of the participants ranked it either a 5 or a 6 indicating it had a high usage of the model. A total of 25.1% ranked the usage of

the team teaching either a 3 or a 4 meaning it had a medium usage of the model. A total of 25.1%

ranked the usage of the team teaching either a 1 or a 2 indicating it had a low usage of the model.

The researcher did not consider the responses regarding this model as strong in indicating usage

among the respondents.

In this model, co-teachers instruct and support all students at the same time. This model is

a large group instruction that engages the class through constant interaction from both teachers

(Friend & Cook, 2010).

This type of teaching takes time, experience, and a compatible relationship with the other

co-teacher (Friend & Cook, 2010). Other disadvantages include extensive planning minutes

required and that both teachers' roles need to be clearly defined to have equal responsibility

(Friend & Cook, 2010).

Research Question 5

What differences in perceived challenges of using co-teaching in the classroom were

found between regular education teachers and special education teachers involved in co-teaching

in a select Minnesota public middle school?

In addressing this question, the researcher examined data from four interview questions

derived from research question 5. The interviews were conducted with four middle school co-

teachers who implemented the co-teaching model. Participants were asked at the end of the

survey if they were willing to participate in a phone interview. Of the 16 respondents, five

participants agreed to participate in the survey, but the researcher was not able to reach one of

those volunteers. Among the participants interviewed, Participant 1was a general education

teacher while Participants 2, 3, and 4 were special education teachers.

In addressing the fifth research question, the researcher analyzed responses to the following four interview questions: 1) What do you see as the benefits of the co-teaching model? 2) Would you recommend the co-teaching model to other Districts? Why or why not? 3) What do you see as the challenges of the co-teaching model? 4) What cautions would you suggest to other districts wanting to use the co-teaching model?

What do you see as the benefits of the co-teaching model?

General education teacher

Participant 1 stated that, "It divides the work in half, makes a lot easier during independent work time to address all the needs of the class." Participant 1 further said the advantage of learning from another professional applying it to other classes.

This response aligned with research conducted by Harvey who found that collaboration brings new ideas and insights into the classroom. Two professionals with different skills benefit all students regardless of academic abilities (Harvey, 2012).

The combination of two teachers' knowledge and expertise in one classroom enhances the learning experiences for students (Harvey, 2012). It generates a new perspective to the classroom by having two professional teachers who are working together to help every student and enriches teaching strategies and student engagement (Harvey, 2012).

Participant 1 explained that having reflections on what does and does not work with another professional enhances future teaching lessons to similar students. This coincides with research conducted by Chanmugam and Gerlach, (2013). By pairing two teachers together, it offers additional value to instructional activities when two teachers brainstorm together during the school day (Chanmugam & Gerlach, 2013).

Participant 1explained that having access to two teachers allowed more students to secure help when they needed it. "They have access to a teacher if they have questions and generally get better materials that have been differentiated or just constructed better with two perspectives."

These findings support research conducted by Friend and Cook (2010) who found that by working together, teachers gain perspectives of student behavior and learning capabilities. Teachers then understand which students need specialized services and which students need more advanced instruction for further education. Two teachers who are committed to co-teaching learn more about their students' learning, their behaviors and which students need the extra motivation and specialized interventions to help them achieve academic and social success (Friend & Cook, 2010).

Special education teachers

Participant 2 said the greatest benefit of co-teaching has been learning content from the general education teacher. Not only was this beneficial in the co-teaching setting but also in small group pullout classes. Participant 2 emphasized that knowing the common vocabulary for a certain content area was also beneficial to other students taught outside the co-teaching classroom.

These findings support research conducted by Kohler-Evans (2005) who analyzed the significance of having two professionals conduct instruction in a collaborative manner. They found the pairing of two teachers brought more expertise to the classroom. Each teacher conveys a special quality and knowledge. Based on such variety, each teacher can enhance his/her own instruction style. The general education teacher may not have the knowledge or training to

close the learning gap with every student; the Special Education teacher may possess different training and knowledge that can contribute to closing the achievement gap (Kohler-Evans, 2005).

Participant 2 stressed that organizing small group stations as a co-teaching team allows the other co-teacher to focus on different tasks. These finding support research of Bresnahan et al. (2009). They found that when two teachers work together, it takes the burden off the solo teacher isolated in his/her classroom. With such wide range of learning among students, the job of a solo teacher may be rather strenuous. Keeping data and continuously monitoring student progress are both time consuming activities but essential for student learning providing immediate feedback (Bresnahan et al., 2009).

Participant 3 stated that when done correctly, a teacher can get more content covered because co-teachers can divide and conquer different topics or ability group students on area of need. Participate 3 also said student achievement growth is evident in the co-taught classes. "We usually see a lot more growth in the co-taught section because there is another adult there to help them as they need it or notice if something is going on or meet them where they are at a little easier."

These finding support research conducted by from Kohler-Evans, (2005). They identified that the purpose behind the co-teaching model was to enhance the quality of education for every student in the classroom. Teachers have a limited time to provide instruction during a school year (Kohler-Evans, 2005). Transitions and removing students from the classroom can be time consuming and waste valuable instruction time (Kohler-Evans, 2005).

Participant 4 added that the special education and general education teachers learn teaching skills and strategies from each other. Participant 4 added that taking back content

learned from the mainstream classes and bringing that information to the pullout classes has enhanced the small group pullout classes.

These findings support the data reported by Chanmugam and Gerlach (2013). They found the importance of daily reflection for every teacher after delivering lessons or at the end of the day. When teachers plan and reflect together, it allows them to build on their weaknesses and strengthen their strengths (Chanmugam & Gerlach, 2013). It also allows a collaborative style of teaching other than the private individual inclusion shared by a teacher who is solo (Chanmugam & Gerlach, 2013).

Participant 4 acknowledged the improvement not only of special education students but also those students who do not qualify for special education. These findings are aligned to research conducted by Bresnahan et al. (2009). In various schools, the high diversity and wide range of learning complicates teaching to assure the entire classroom achieves academic success (Bresnahan et al., 2009). The implementation of the co-teacher model allows for differentiated groups of students to be exposed to instruction by each teacher (Bresnahan et al., 2009).

Participant 4 stated that a co-teaching benefit for the students was that it allowed the least restrictive environment. At the middle school level, students are motivated by the social aspect. These findings are aligned to the findings of Walsh, (2011) who described the social importance of keeping students in their classrooms. Avoiding the removal of special education students from their classrooms for specialized instruction can have a positive impact socially (Walsh, 2011). The chance that students can be accepted by their classmates increased if their classmates did not see special attention from an outside resource. Accommodating students in a least restrictive

setting allows students to have more responsibilities and they are provided more opportunities for quality differentiated instruction (Walsh, 2011).

Would you recommend the co-teaching model to other districts? why or why not?

General education teacher

Participant 1 said that if a district implements the co-teaching model, it needs to be implemented properly. This includes giving co-teachers time to meet. Participant 1 added the benefits include better teaching, more organized, focused lesson plans and it is easier to address the needs of a special education students.

These findings are aligned with the research of Friend (2008). Forming a teaching culture takes time and communication. Teachers, who discuss on regular basis what is the best plan for students will experience more success in co-teaching (Friend, 2008). Discussions that take place on a regular basis to assure instruction is clear and precise among the co-teaching team members are recommended. The teaching relationship should appear fluent and seamless to the affect that both teachers are working with all students while addressing individual needs (Friend, 2008).

Special education teachers

Participant 2 highly recommended the co-teaching model to other school districts in order to provide deeper enrichment for all students. In addition, participant 2 stated the model eased the workload among the cooperating teachers if they were using the model effectively.

These findings support the research revealed by Gately and Gately (2001). They believed that to keep the collaborative partnership, co-teachers needed to be willing to receive constructive criticism from their fellow teachers. This allows them to stress certain ways to

improve instruction, manage student behavior, and to keep communication lines open for the teachers.

Participant 3 added that if implemented correctly and the district had the resources, co-teaching is a great tool to use when the personalities match up.

"The years when the pairs are done intentionally to where the personalities go well together and you have prep time together, then co-teaching works really well. The process needs structured with planning periods and the master schedule is laid out well, it will work. What doesn't work is placing two teachers in the same room and label them co-teachers, that can be really unsuccessful."

The findings these support research conducted by Kohler-Evans, (2005). The general education and special education teachers who are consistently working and being labeled as equal partners will start being viewed by parents and students as having equal power (Kohler-Evans, 2005). This includes having both names on report cards, open house meetings and parent-teacher conferences and co-ownership of materials, supplies, books, and classroom arrangement (Kohler-Evans, 2005).

Participant 4 would recommend co-teaching in any district that stated it would increase not only student achievement but enhance teacher practices as well. These findings were supported by the findings of Graziano and Navarrette (2012) who discussed how two minds can problem solve and reflect more effectively and efficiently when working together. Two teachers in a classroom allow differentiated learning activities during a day in the classroom (Graziano & Navarrete, 2012). They stated that teachers can differentiate at a higher level, organize group activities, and reflect with another professional daily to monitor student understanding more

effectively (Graziano & Navarrete, 2012). The ability to have impartial learning for the entire classroom is extremely valuable with the co-teaching model (Graziano & Navarrete, 2012).

What do you see as the challenges of the co-teaching model?

General education teacher

Participant 1 said a main challenge of co-teaching was to assure having a connection with the co-teacher, otherwise it could be confrontational. Participant 1 added that having the right co-teacher will add attention to detail in the classroom as well as to enhance the daily lesson.

These findings were supported by the research conducted by Sileo (2011). In "Getting to know your Partner," Sileo stated that when two teachers come together, they need to openly communicate to assure the co-teaching process is effective. This may include talking about their teaching philosophies, roles, and their goals for the classroom (Sileo, 2011).

As the two teachers' relationship grows and different situations arise, communication between them need to be clear and concise. The open interaction between the two creates a shared a responsibility in the classroom (Sileo, 2011).

Special education teachers

Participant 2 addressed the challenges of co-teaching with a first-year teacher emphasizing that teachers in their first years of teaching need to learn the content and be comfortable with the curriculum before teaming with another individual.

These findings are supported by the work of Pugach and Winn, (2011) who asserted that the co-teacher relationship must be carefully considered, and both teachers should be participants in the co-teaching model on a volunteer basis, be on the same page and have confidence in the teacher-teacher relationship (Pugach & Winn, 2011). The partnership among teachers cannot be

forced as non-volunteer co-teaching partners do not have the same mutual respect for their counterpart as those who volunteer (Pugach & Winn, 2011).

Participant 3 offered that co-teachers need to be able to collaborate and be able to problem solve without confrontation when issues become difficult. Participant 3 added that the challenges occur when their personalities clash or if they have very different teaching styles, which is something students quickly observe. "If the teachers aren't working well together or if they are conflicting and then the kids get confused."

These findings support the research of Friend and Cook, (2010) who noted that when conflicts occur in classrooms, the shared responsibility of problem solving needs to be communicated thoroughly to insure that everyone is on the same page (Friend & Cook, 2010). This can be the most critical part of the teamwork on a daily basis and should be professional to help students in redirection and success (Friend & Cook, 2010).

Participant 4 cited co-teacher relationships as a challenge in co-teaching as special education teachers may not feel as comfortable with certain curriculum. These findings were supported by studies by Chanmugam and Gerlach (2013), and Gately and Gately (2001).

Chanmugam and Gerlach (2013) found it is vital for teachers to be able to work together and be willing to put their differences aside to make their relationship work. Teamwork involves planning lessons together and co-existing form a working partnership in the classroom.

Collaboration also allows co-teachers to focus on aspects of their strengths and weaknesses to help improve instruction (Gately & Gately, 2001). Teamwork results in a collaborative partnership between the two teachers, often noted by students, and provides a perception that the co-teachers have equal control and responsibility (Gately & Gately, 2001).

What cautions would you suggest to other districts wanting to use the co-teaching model?

General education teacher

Participant 1 stressed the importance of proper planning time among the co-teachers which depends on the relationship between the teaching partners. Participant 1 added that meeting regularly helps builds a co-teaching partnership.

These findings were supported by the research conducted by Gately and Gately (2001) who found the instructional planning and presentation were key components of co-teaching. Common instructional planning is vital and needs to occur daily at a certain time to establish a routine. To achieve cohesiveness, developing lesson plans lesson together will avoid having one teacher not knowing what a lesson contains (Gately & Gately, 2001). As the two teachers become competent in each other's abilities, the more comfortable they will be to teach together (Gately & Gately, 2001).

Special education teachers

Participant 2 said co-teaching should not be limited to certain subjects. Friend et al. (2010) research reinforced this statement, noting that special education teachers do not always have to be limited to one area. Co-teaching is not always limited to having one special education teacher in the co-taught classroom the entire day as the teacher may be in the classroom for only one class or as needed to accommodate the needs for one student with a disability (Friend et al., 2010).

Participant 4 stated that co-teaching needs to be by choice and teachers should not be forced into co-teaching. These findings were found by from Wilson and Blednick (2011) and Pugach and Winn, (2011) who offered that creating a co-teaching team may cause some

hesitation from administration because the relationship between the two teachers must be the right fit to work well (Wilson & Blednick, 2011).

The co-teacher relationship must be thoroughly planned, and both teachers should be in the co-teaching model on a volunteer basis, be on the same page and have confidence in the teacher-teacher relationship (Pugach & Winn, 2011). The partnership between two teachers cannot be forced; co-teaching partners who have been assigned to co-teach do not necessarily have the same mutual respect for their counterpart than those who volunteer to co-teach.

Participant 4 explained that it requires time and support to make a quality teaching team. This includes creating strategies on how to co-teach and how to co-plan. These findings support the findings of Friend and Cook, (2010) and Howard and Potts (2009) who stated that the roles of each of the co-teachers should be established in the beginning of the planning process. Doing so helps prevent the special education teacher from feeling like an assistant to the general education teacher (Friend & Cook, 2010). Teaching teams that struggled exhibited less collaboration, and their different teaching styles often led to conflict (Friend & Cook, 2010).

Decisions regarding planning periods and the responsibilities of each co-teacher should occur well before school begins (Howard & Potts, 2009). This can be accomplished with a checklist to assure that each co-teacher is on the same page and even the simplest task gets accounted for by a team member (Howard & Potts, 2009).

Participant 4 also added that it takes time and patience to become a quality co-teaching team, and it is something that the teaching pair needs to be committed to for multiple years. These findings support the findings of Friend and Cook (2010). Teachers should believe that

the co-teaching experience is rewarding and beneficial to their teaching practices as well as to the academic needs of their students research (Friend & Cook, 2010). This is deemed important since there are so many time constraints and stressful conditions that may arise during a school day; team members need to be respectful of each other's profession (Friend & Cook, 2010).

Discussion of the Study Results

The study results found that the participating co-teachers agreed that the co-teaching models identified by Cook and Friend (1995) were effective. They reported that One teach, One assist, Parallel teaching, Station teaching, and Team teaching were the most effective co-teaching models. Additionally, research indicated that the co-teaching model serves a purpose; it allows for student engagement and the ability for teachers to gather data during instruction.

The study findings also revealed that the co-teaching model benefited special education students since their teachers were able to provide quality differentiation among all students. This allowed co-teachers to provide proper modifications and accommodations for students of all abilities. It also benefited students who do not receive special education services.

The lack of planning time available to co-teaching teams was one of the primary challenges identified by study participants. Over 87% of the participants either agreed or strongly agreed that this was a challenge. Among the participants interviewed, it was stated that it is difficult to have quality co-teaching without quality co-planning.

Scheduling conflicts also were a challenge reported by study participants. Proper planning time allows reflections and time for modifications; the co-teachers' schedules need to be aligned to make the required instructional and curricular modifications possible.

The study results further indicated that the two co-teaching models, Team teaching and Parallel teaching were most frequently used by study participants. The One teach, One observe and the One teach, One assist co-teaching models were reported least frequently employed from among the co-teaching models.

One of the perceived challenges among the general education teachers and special education teachers included developing a positive co-teacher relationship. The co-teaching team should consist of teachers who volunteer to participate in co-teaching rather than teachers who are assigned to such a process.

Co-planning and scheduling were also challenges mentioned by study interviewees. Co-planning was identified as needing to be a regularly scheduled time in the day/week to foster a productive co-teaching partnership.

Study results indicated that the co-teaching model was an effective instructional tool if conducted and planned properly. The co-teaching partnership takes time and effort by both teachers to make the relationship productive. When co-teaching is working effectively, it benefits all students in the class, both academically and socially.

Limitations

Limitations of the study were as follows:

- Eighteen school districts were contacted to participate in the study. School districts either declined, were no longer participating in co-teaching or did not respond. This resulted in a smaller sample size among co-teaching participants.

- Consent to conduct the study of middle school co-teachers was obtained only from one large Minnesota school district.

- A survey reminder was distributed to the agreeing study participants during the school district's transition to distance learning due to school closures during Covid-19. The survey was sent out to possible teacher participants on four different occasions with no additional responses.

Recommendations for Further Research

The following are recommendations for future research:

- Future research may be conducted to analyze the effectiveness of school districts that implement a co-teaching model with English Language Learners (ELL).

- Future research may be conducted to analyze the expenses of implementing a co-teaching model in school districts compared to a one teacher model in a classroom.

- Future research may be conducted to analyze the effectiveness of co-teaching partnerships among co-teachers who volunteered to participate in co-teaching compared to those who were assigned to participate in co-teaching.

- Future research may be conducted to focus on only one of the six co-teaching models.

- Future research may be conducted to examine perceptions of co-teaching teams in elementary schools.

Recommendations for Practice

The following are recommendations for practice applicable to administrators who implement a co-teaching model.

- Administration are encouraged to consider having a structured planning period for co-teaching team members. To build cohesive co-teaching partnership, planning periods needs to be structured with an agenda of the needs to be examined during the

planning period. Roles need to be established to allow the planning meeting to be effective and efficient. Roles need to alternate to assure there is an equal partnership among the team members.

- Administration are encouraged to consider having co-teachers explore (or alternate) a variety of co-teaching models during the week. Co-teachers should alternate roles regularly to demonstrate to students that there is equal "power" among the co-teachers.

- Administration are encouraged to consider providing co-teachers brief periods for reflection during the week. This time could be added in the structured planning periods to consist of reflections about processes and procedures that were effective and measures that could be undertaken to improve student achievement. Co-teachers should be encouraged to communicate daily to enhance instruction and differentiation among the students.

- Administration are encouraged to request that co-teachers volunteer for assignment to serve in a co-teaching model. To assure a strong co-teaching team, co-teachers who volunteer and have a positive and productive working relationship with their partner will be more likely to develop into a dynamic team. Merely assigning teachers to serve as a co-teacher participant may cause tension and conflict that will reflect poorly in the teacher and student classroom performance.

- Administration are encouraged to consider aligning the schedules of co-teaching team members. Teachers will need time to meet and prepare. By aligning their schedules, co-teachers will have time for productive planning and reflection.

Summary

To have an effective and efficient co-teaching partnership, personalities and commitment to the team is essential. Each of the co-teachers should have time to plan to assure team members alignment to the same goals and for the students. Adequate planning time, along with support from the administration, will help create a dynamic co-teaching team. Each co-teaching model that was identified by Cook and Friend (1995) can be used in a variety of ways to avoid teacher complacency and to apply a variety of teaching styles to enhance student achievement for all students.

If the co-teaching model is conducted properly, it is likely to benefit all students in the classroom and not just the special education students. If the model is not conducted properly is can have negative effects. The co-teaching model is not only beneficial for students academically but also socially. This is due to special education students remaining in the classroom and allowing them to feel accepted.

When considering implementing the co-teaching model, teachers' personalities and training should be considered; co-teachers should be volunteers and given proper training, adequate professional development and planning time to form a well-established co-partnership.

The study results provide recommendations for future practice that may benefit existing co-teaching teams or teams in school districts that are considering implementing the co-teaching model involving a special education teacher and general education teacher in the same classroom.

References

Badiali, B., & Titus, N. (2010). Co-teaching: Enhancing student learning through mentor-intern

    partnerships. *School-University Partnerships, 4*(2), 74-80.

Boyer, K., & McMillen, C. (2012). Finding opportunity in co-teacher personality conflicts.

    Journal of the American Academy of Special Education Professionals, (Winter).

    http://Www.aasep.org, 30 Nov. 2012, eric.ed.gov/?id=EJ1135668

Bresnahan, V., Conderman, G., & Pedersen, T. (2009). *Purposeful co-teaching: Real cases and

    effective strategies.* Thousand Oaks, CA: Corwin Press. doi:10.4135/9781452219189

Bursuck, W. D., & Friend, M. (2011) *Including Students with special needs: A practical guide

    for classroom teachers, student value edition*. Allyn & Bacon. Inc.

Chanmugam, A., & Gerlach, B. (2013). A co-teaching model for developing future educators'

    teaching effectiveness. *International Journal of Teaching and Learning in Higher

    Education*, *25*(1), 110-117.

Cook, L., & Friend, M. (1995). Co-teaching: Guidelines for creating effective practices. *Focus

    on Exceptional Children*, *28*(3).

Cook, L., & Friend, M. (2010). The state of the art of collaboration on behalf of students with

    disabilities. *Journal of Educational and Psychological Consultation, 20*(1), 1-8.

    www.tandfonline.com/doi/abs/10.1080/10474410903535398

Creswell, J. W. (2015) *A concise introduction to mixed methods research*. Sage.

Davis-Wiley, P., & Cozart, A. (1998). *Are two instructors better than one? Planning, teaching

    and evaluating a deux*. Paper presented at the Annual Meeting of the Mid-South

    Educational Research Association, New Orleans, LA, November 3-6, 1998.

Fluijt, D., Bakker, C., & Struyf, E. (2016). Team-reflection: The missing link in co-teaching teams. *European Journal of Special Needs Education*, *31*(2), 187–201. doi:10.1080/08856257.2015.1125690

Friend, M. (2005). *Special education: Contemporary perspectives for school professionals*. Boston, MA: Pearson.

Friend, M. (2008). Co-teaching: A simple solution that isn't simple after all. *Journal of Curriculum and Instruction, 2*(2). www.joci.ecu.edu/index.php/JoCI/ article/viewArticle/17

Friend, M. (2014). *Co-teaching: Strategies to improve student outcomes*. Port Chester, NY: National Professional Resources.

Friend, M., & Cook, L. (2004). *Six approaches to co-teaching*. State Education Resource Center. https://ctserc.org/component/k2/item/50-six-approaches-to-co-teaching

Friend, M., & Cook, L. (1996). *Interactions: Collaboration skills for school professionals* (2nd ed.). White Plains, NY: Longman.

Friend, M., & Cook, L. (2010). *Interactions: Collaboration Skills for School Professionals*. Pearson.

Friend, M., Cook, L., Hurley-Chamberlain, D., & Shamberger, C. (2010). Co-teaching: An illustration of the complexity of collaboration in special education. *Journal of Educational and Psychological Consultation*, *20*(1), 9–27. doi:10.1080/10474410903535380

Gately, S., & Gately, F. J. (2001). Understanding coteaching components. *Teaching Exceptional Children*, *33*(4), 40–47. doi:10.1177/004005990103300406

Graziano, K., & Navarrete, L. (2012). Co-teaching in a teacher education classroom: Collaboration, compromise, and creativity. *Issues in Teacher Education, 21,* 109. www.scirp.org/reference/ReferencesPapers.aspx?ReferenceID=1185577

Hang, Q., & Rabren, K. (2009). *An examination of co-teaching: perspectives and efficacy indicators*. Sage.

Harvey, C. A. (2012). Collaboration-it's not just a library thing. *American Library Association*, *40*(4), 4–5.

Howard, L., & Potts, E. (2009). Using co-planning time: Strategies for a successful co-teaching marriage. *Teaching Exceptional Children Plus*, *5*(4), 2-12.

Kohler-Evans, P. A. (2005). Co-teaching: How to make this marriage work in front of the kids. *Education*, *127*(2), 260-264.

Konrad, M., Keesey, S., Ressa, A., Alexeef, M., Chan, P., & Peters, M. (2014). *Setting clear learning targets to guide instruction for all students*. Sage.

Kosko, K. W., & Wilkins, J. L. (2008). General educators' in-service training and their self-perceived ability to adapt instruction for students with IEPs. *Professional Educator*, *33*(2).

Magiera, K., & Zigmond, N. (2005). Co-teaching in middle school classrooms under routine conditions: Does the instructional experience differ for students with disabilities in co-taught and solo-taught classes? *Learning Disabilities Research and Practice*, *20*(2), 79–85. doi:10.1111/j.1540-5826.2005.00123.x

No Child Left Behind (NCLB). (2001). *Encyclopedia of evaluation encyclopedia of evaluation*. doi:10.4135/9781412950596.n375

Pugach, M. C., & Winn, J. U. A. (2011). Research on co-teaching and teaming: An untapped resource for induction. *Journal of Special Education Leadership*, *24*(1), 36-46.

Shogren, K. A., Gross, J. M., Forber-Pratt, A. J., Francis, G. L., Satter, A. L., Blue-Banning, M., & Hill, C. (2015). The perspectives of students with and without disabilities on inclusive schools. Thousand Oaks, CA: Sage.

Siegel, J. (1993). *Special education issues, trends, and future predictions*. ERIC no. ED 405657.

Sileo, J. M. (2011). Co-teaching: Getting to know your partner. *Teaching Exceptional Children*, *43*(5), 32–38. doi:10.1177/004005991104300503

Sims, E. (2008). Sharing command of the co-teaching ship: How to play nicely with others. *The English Journal*, *97*(5), 658-63.

Treahy, D., & Gurganus, S. (2010). *Models for special needs students. Teaching Children Mathematics.* National Council of Teachers of Mathematics.

U.S. Department of Education. (2016). National Center for Education Statistics. https://nces.ed.gov/ https://nces.ed.gov/

U.S. Department of Education. (2017). https://nces.ed.gov/fastfacts/ display.asp?id=64

U.S. Department of Education. (2019). https://nces.ed.gov/fastfacts/display.asp?id=64

Uzuner, Y., & Gurgur, H. (2010). A phenomenological analysis of the views on co-teaching applications in the inclusion classroom. *Educational Sciences: Theory & Practice, 10*(1), 311-331.

Walsh, J. (2011). Co-teaching as a school system strategy for continuous improvement. *Preventing School Failure*, *56*(1), 29-36.

Wilson, G. L. (2016). *Co-planning for co-teaching: Time-saving routines that work in inclusive classrooms*. Alexandria, VA: Association for Supervision and Curriculum Development [ASCD].

Wilson, G. L., & Blednick, J. (2011). *Teaching in tandem: Effective co-teaching in the inclusive classroom*. Alexandria, VA: Association for Supervision and Curriculum Development [ASCD].

Appendix A: Co-teaching Survey

Demographic Questions:

1. **Please select the most appropriate response to your teaching responsibilities**

   a. General education teacher
   b. Special education teacher

2. **How many years have you been teaching?**
   a. 3 years or fewer
   b. 4-9 years
   c. 10 or more years

3. **How many years have you co-taught?**
   a. 1-2 years
   b. 3-4 years
   c. 5 or more years

Please rate the effectiveness of each co-teaching model used in the classroom using a Likert scale in which 1=Not effective, 2=Somewhat effective, 3=Very effective or if the model has not been used select option 4 for Not Applicable.

1. One teach, One Observe
   1 = Not effective   2 = Somewhat effective   3 = Very effective   4 = Not Applicable

2. One Teach, One Assist
   1 = Not effective   2 = Somewhat effective   3 = Very effective   4 = Not Applicable

3. Parallel teaching (Each teacher leads half the classroom on the same topic)
   1 = Not effective   2 = Somewhat effective   3 = Very effective   4 = Not Applicable

4. Station teaching (Each teacher teaches a group while a third group is working independently. The students rotate groups to enable each teacher to interact with every student.)
   1 = Not effective   2 = Somewhat effective   3 = Very effective   4 = Not Applicable

5. Alternative teaching (Either teacher works in a small group while the other teacher instructs large group.)
   1 = Not effective   2 = Somewhat effective   3 = Very effective   4 = Not Applicable

6. Team teaching (Two teachers teaching the same topic to the whole group while taking turns during instruction.)
   1 = Not effective   2 = Somewhat effective   3 = Very effective   4 = Not Applicable

From your perceptions as a co-teacher please rate the following statements on a Likert scale from 1=strongly disagree to 4=strongly agree.

1. The co-teaching model has increased the academic achievement of general education students.
   1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree 5 = Not Applicable

2. The co-teaching model has increased the academic achievement of special education students.
   1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree 5 = Not Applicable

3. The co-teaching model has simplified the process of establishing a classroom management protocol.
   1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree

4. The co-teaching model allows for increased opportunities to provide differentiated instruction.
   1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree

5. The co-teaching model has led to an overall decrease in negative student behaviors in the classroom.
   1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree

6. Please list any additional benefits

Please rate the following perceived challenges in co-teaching using a Likert scale from 1= strongly Disagree to 4=strongly Agree to indicate level of agreement with the challenge statement.

1. Lack of training or professional development for co-teaching partners.
   1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree

2. Personality or philosophical clashes between co-teaching partners.
   1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree

3. Scheduling issues between co-teaching partners.
   1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree

4. Lack of planning time between co-teaching partners.
   1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree

5. Roles of each co-teacher were not well-established or followed between the co-teaching partners.
   1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree

6. Please list any additional challenges.

Please rank the following six co-teaching models from 1= the model least used to 6=the model that is used the most. If a co-teaching has not been used, put N/A for Not Applicable.

Co-teaching Model Rank

One teach, One Observe _____
One Teach, One Assist _____
Parallel teaching_____
Station teaching_____
Alternative teaching_____
Team teaching_____

Appendix B: Letter to Special Education Administration

Dear Special Education Administration,

As part of the requirements for my Doctoral Degree at St. Cloud State University I am conducting a research project on the benefits, challenges, and implementation of the co-teaching models in Minnesota public middle schools.

The purpose of this email is to identify the number of co-teaching teams that implement a co-teaching team of a special education and general education teacher in your middle schools.

If you would please reply to this email with the number of co-teaching teams in your district, it would be greatly appreciated.

Thank you for considering this request.

Sincerely,

Michael Weerts

Appendix C: Consent to Participate–Survey on Co-teaching with General Education and Special Education on a Co-teaching Team

You are invited to participate in a research study about the implementation of middle school co-teaching using co-teaching teams consisting of a general education and a special education teacher. This study will take place in January 20- February 15, 2020.

This purpose of this research is to examine implementation of co-teaching in Minnesota Public Middle Schools. This study will reveal co-teaching benefits, challenges, and how six co-teaching models are utilized in the classroom.

If you agree to be part of the research study, you will be asked to answer 25 survey questions related to the implementation of co-teaching in your school. The survey is expected to take from 10-15 minutes.

Data collected as part of the survey will remain strictly confidential. Participant names will not be disclosed. There will be no personal or professional risks to interviews participants. Direct quotes will only be used with permission. During the survey you may refuse to answer any questions. After completion of the survey, participants will be asked to volunteer for a 10-minute phone interview. Participation in this study is completely voluntary. Your decision to participate or not will not affect your current or future relations with St. Cloud State University, or the researcher. If you decide to participate, you are free to withdraw at any time without penalty.

If you have questions about this research study, you may contact the primary investigator, Michael Weerts at mdweerts@stcloudstate.edu and/or the faculty advisor, Dr. K. Worner at ktworner@stcloudstate.edu. Results of the study can be requested from the primary investigator.

Your consent below indicates that you are at least 18 years of age, you have read the information provided above, and you have consented to participate.

I have read and agree with the above statements:

◉ Yes, I would like to proceed with the survey.

◉ No, I would not like to proceed with the survey.

**Appendix D: Consent to Participate–Interview with General Education and
Special Education Teachers Who are Part of a Co-teaching Team**

You are invited to participate in a research study about the implementation of co-teaching with a general education and a special education teacher in the classroom in your school district.

This purpose of this research is to examine implementation of co-teaching in Minnesota Public Middle Schools. This study will reveal information about teachers' perceptions of co-teaching benefits, challenges, and six co-teaching models are utilized in their classroom. If you agree to be part of the interview portion of the research study, you will be asked to answer two interview questions related to your knowledge of the implementation of co-teaching in your school. Phone interviews are expected to take 10 minutes.

Data collected as part of the individual interviews will remain strictly confidential. Participant names will not be disclosed. There will be no personal or professional risks to interviews participants. Direct quotes will only be used with permission. During the interview you may refuse to answer any questions. After completion of the interview, participants will receive a recorded copy and at this point, may expand responses or note omissions. Participation in this study is completely voluntary. Your decision to participation or not will not affect your current or future relations with St. Cloud State University, or the researcher. If you decide to participate, you are free to withdraw at any time without penalty.

If you have questions about this research study, you may contact the primary investigator, Michael Weerts at mdweerts@stcloudstate.edu and/or the faculty advisor, Dr. K. Worner at ktworner@stcloudstate.edu. Results of the study can be requested from the primary investigator. Your consent below indicates that you are at least 18 years of age, you have read the information provided above, and you have consented to participate.

I have read and agree with the above statements:

- ⦿ Yes, I would like to proceed with the interview without direct quotes being used.

- ⦿ Yes, I would like to proceed with the interview and permission to use direct quotes may be used. Transcripts will be sent and participants will have the opportunity to review the transcript before being published.

- ⦿ No, I would not like to proceed with the interview.

Appendix E: Interview Questions

Interview Questions:

1. What do you see as the benefits of the co-teaching model?

2. Would you recommend the co-teaching model to other Districts? Why or why not?

3. What do you see as the challenges of the co-teaching model?

4. What cautions would you suggest to other districts wanting to use the co-teaching model?

Appendix F- IRB Approval

Institutional Review Board (IRB)

720 4th Avenue South AS 210, St. Cloud, MN 56301-4498

Name: Michael Weerts

Email: mdweerts@go.stcloudstate.edu

IRB PROTOCOL DETERMINATION: Exempt Review

Project Title: Co-Teaching: Benefits and Challenges of Co-teaching in the Middle School

Advisor Kay Worner

The Institutional Review Board has reviewed your protocol to conduct research involving human subjects. Your project has been: **APPROVED**

Please note the following important information concerning IRB projects:

- The principal investigator assumes the responsibilities for the protection of participants in this project. Any adverse events must be reported to the IRB as soon as possible (ex. research related injuries, harmful outcomes, significant withdrawal of subject population, etc.).

- For expedited or full board review, the principal investigator must submit a Continuing Review/Final Report form in advance of the expiration date indicated on this letter to report conclusion of the research or request an extension.

-Exempt review only requires the submission of a Continuing Review/Final Report form in advance of the expiration date indicated in this letter if an extension of time is needed.

- Approved consent forms display the official IRB stamp which documents approval and expiration dates. If a renewal is requested and approved, new consent forms will be officially stamped and reflect the new approval and expiration dates.

- The principal investigator must seek approval for any changes to the study (ex. research design, consent process, survey/interview instruments, funding source, etc.). The IRB reserves the right to review the research at any time.

If we can be of further assistance, feel free to contact the IRB at 320-308-4932 or email ResearchNow@stcloudstate.edu and please reference the SCSU IRB number when corresponding.

IRB Chair:

Dr. Benjamin Witts
Associate Professor- Applied Behavior Analysis
Department of Community Psychology,Counseling, and Family Therapy

IRB Institutional Official:

Dr. Latha Ramakrishnan
Interim Associate Provost for Research
Dean of Graduate Studies

OFFICE USE ONLY

SCSU IRB# 1921 - 2471	**Type:** Exempt Review	**Today's Date:** 10/4/2019
1st Year Approval Date: 10/3/2019	**2nd Year Approval Date:**	**3rd Year Approval Date:**
1st Year Expiration Date:	**2nd Year Expiration Date:**	**3rd Year Expiration Date:**

Appendix G: Email to Participants to Conduct Good Morning

My name is Michael Weerts and I am a doctorate student at St. Cloud State University. XXXXX gave me your contact information to invite you to participate in the study about the implementation of middle school co-teaching using co-teaching teams consisting of a general education and a special education teacher.

The purpose of the study is to examine implementation of co-teaching in Minnesota Public Middle Schools. The study will reveal co-teaching benefits, challenges, and how six co-teaching models are utilized in the classroom.

Data collected as part of the survey will remain strictly confidential. Participant names will not be disclosed. There will be no personal or professional risks to interviews participants. Direct quotes will only be used with permission. During the survey you may refuse to answer any questions. After completion of the survey, participants will be asked to volunteer for a 10- minute phone interview. Participation in this study is completely voluntary. Your decision to participate or not will not affect your current or future relations with St. Cloud State University, or the researcher. If you decide to participate, you are free to withdraw at any time without penalty.

If you agree to participate in the study, the 25 question survey should take 10-15 minutes to complete. Please click on the following link to participate in the survey. https://www.surveymonkey.com/r/PZBWTJJ

If you have questions about the study, you may contact the primary investigator, Michael Weerts at mdweerts@stcloudstate.edu and/or the faculty advisor, Dr. Kay Worner at ktworner@stcloudstate.edu. Results of the study can be requested from the primary investigator.

Thanks again for your time,

Michael Weerts

Appendix H: Survey Follow-up Email to Participants to Conduct Survey

Good afternoon,

Thank you to everyone who have taken the time to participate in the survey. If you haven't already done so, I'd like to invite you again to take the 25 question survey, it should take 10-15 minutes to complete. The survey window will be closing on February 15, 2020. Please click on the following link to participate in the survey. https://www.surveymonkey.com/r/PZBWTJJ

This will be the final notice and I thank everyone who have already taken the time to participate in the survey. If you have questions about the study, you may contact the primary investigator, Michael Weerts at mdweerts@stcloudstate.edu and/or the faculty advisor, Dr. Kay Worner at ktworner@stcloudstate.edu. Results of the study can be requested from the primary investigator.

Thanks again for your time,

Michael Weerts