Fall 2020

The Relationship Between Co-Teaching Partnerships and Student Achievement

Tikki N. Middleton

THE RELATIONSHIP BETWEEN CO-TEACHING PARTNERSHIPS AND STUDENT

ACHIEVEMENT

by

TIKKI NICHOLE MIDDLETON

(Under the Direction of Teri Denlea Melton)

ABSTRACT

Due to legislative mandates schools are required to educate SWDs in the least restrictive

environment alongside SWODs, which lead to the rise of co-teaching. However, enhancing the

quality of co-teaching partnerships to impact student achievement poses a challenge for many

school leaders due to the absence of quantitative data involving the impact of co-teaching on

student achievement. The purpose of this study was to identify correlations among the qualities

of co-teaching partnerships in grades six through eight as measured by *The Colorado Assessment

of Co-teaching* (CO-ACT), and student growth percentiles from Spring 2019 Georgia Milestones

Assessment (GMAS) data in middle school English Language Arts and Mathematics content

areas. This study explored whether a relationship existed between co-teaching partnerships and

student achievement by employing a quantitative research design utilizing a correlational

approach to measure the relationship the variables had with one another. This study was guided

by the following overarching research question: What is the relationship between co-teaching

partnerships and student achievement in middle school inclusive classrooms? Data were

collected from 10 middle schools and from student achievement as reported from GMAS. There

were 54 participants, creating a total of 27 dyads. Results of the analysis revealed that although

general agreeability existed, there were no statistically significant results that indicated having

the presence of behaviors within co-teaching partnerships correlate with SWD or SWOD student

achievement in either subject. Furthermore, the findings expressed a need to seek an

understanding of specific factors that may influence co-teaching partnerships and student

achievement.

INDEX WORDS: Co-teaching, Co-teaching partnerships, Co-teaching relationships, Colorado Assessment of Co-teaching, Inclusive education, Students with disabilities, Student achievement

THE RELATIONSHIP BETWEEN CO-TEACHING PARTNERSHIPS AND STUDENT
ACHIEVEMENT

DISSERTATION

by

TIKKI NICHOLE MIDDLETON

B.A., Florida International University, 2003

M.Ed., Southern Wesleyan University, 2007

Ed.S., Augusta State University, 2013

Ed.S., Georgia Regents University, 2015

A Dissertation Submitted to the Graduate Faculty of Georgia Southern

University in Partial Fulfillment of the Requirements for the Degree

DOCTOR OF EDUCATION

THE RELATIONSHIP BETWEEN CO-TEACHING PARTNERSHIPS AND STUDENT
ACHIEVEMENT

by

TIKKI NICHOLE MIDDLETON

Major Professor:	Teri Denlea Melton
Committee:	Antonio P. Gutierrez de Blume
	Kymberly Harris

Electronic Version Approved:

December 2020

DEDICATION

This dissertation is dedicated to my spiritual partner, my best friend, my husband: Cordaryl Middleton, affectionately called Cord, for supporting me by praying for me and praying with me through my most challenging moments during this process. I am sincerely grateful to have taken this journey with you, and I thank you for having enough strength to help me even when you were working to complete your own dissertation. All of the references you had to help me find because I did not write them down, all of the formatting I struggled to fix, for trouble shooting my technology issues, and so much more, I thank you. God sent me a husband that truly understands 1 Corinthians 13:4-8, thank you Cord for loving me, I sincerely love you. We did it Cord!

Also, this dissertation is dedicated to my three "sonshines," Ezzard Charles, Thomas Lamar, and Cortland Charles. Thank you for being good kids, out of all the things I try to avoid worrying about, you all made it easy to not worry about you. I pray that if you remember anything about Mommy and this process, is that with God anything is possible. Always remember Galatians 6:9, Let us not become weary in doing good, for at the proper time we will reap a harvest if we do not give up. Sonshines, don't ever give up on yourself, for if you can dream it, you can achieve it. Be great and walk boldly in God's favor; he will withhold no good thing from you. I love you all more than you may ever know!

Next, I dedicate this dissertation to my sister Trellani Michelle. You are like the daughter I never had. I am so proud of the woman you have become. I pray that all you have witnessed from me is something that you could put in your toolbox for life. You are an anomaly! Continue to set the standard. Decree and declare what you shall have in your life. Plan your work and work your plan, it only takes faith the size of a mustard seed to achieve it. I love you sister!

Lastly, I dedicate this dissertation to my Grandmother Christine. Thank you for being an awesome example of what the expression of love is, in action. I know you are smiling down on me! Heaven gained an angel!

ACKNOWLEDGMENTS

First, I acknowledge God who is Lord of my life. I am grateful that God answered my every petition during this process, sent the right help at the right time, and for sending needed encouragement on time.

I would like to acknowledge my mother, Frankie, who instilled the importance of education in me at a very early age, by making sure schoolwork came before anything else and that homework assignments were placed on top of the television for review nightly. It is without a doubt that through this simple act of consistency, I learned that education was vital!

I would like to acknowledge my mother-in-law Ruthie and sister-in-law Shante' for the unwavering support. Thank you giving Cortland special attention when time didn't permit me nor Cord to do so. Thank you for the meals you cooked and delivered without being asked. God knew Cord and I needed you. May you forever be blessed for having a giving heart. I am blessed to be a part of your family but more importantly a part of your hearts.

A sincere heartfelt thank you to my dissertation committee, Dr. Teri Denlea Melton (Chair), Dr. Antonio Gutierrez de Blume (Methodologist), and Dr. Kymberly Harris (Content Specialist) for your guidance and dedication throughout this dissertation journey. Dr. Melton, I thank you for challenging me beyond my comfort zone and sending encouragement along the way. Your belief in me to finish this degree, helped me find the strength to continue no matter the task set before me to complete. Dr. Gutierrez de Blume, thank you for helping me find my way in the world of quantitative analysis. Those six words, "Don't worry Tikki, I'll help you," will never be forgotten sir, as you did just what you said. Your diligence with helping me, empowered me and that was enough for me to move boldly on knowing your guidance was simply an email away. Dr. Harris, thank you for willingly giving your time. I am grateful for you reminding me to advocate for what I believe in. Your passion for what students should have on their educational journey is contagious! Again, I thank you all for endeavoring with me on this journey.

I would like to acknowledge my cousins, Reggie and Tom for always supporting me. It is one thing for some to say call me if you need me and another to actually answer the call. Thank you both for always answering the call and thank you for believing in me!

I would also like to acknowledge the Horn family (Ezzard Sr., Almener, Ezzria, and Aldon) for loving me, supporting me, and for being the first to show me the meaning of family. Being blood relatives could not make us any closer.

To my ex-husband Ezzard Jr. for being a supportive co-parent. Thank you for always being one call away. You have never wavered in your responsibilities as a father despite any differences or distance. You are appreciated!

To my Tutt Middle School Family, you all would never know how much faith and prayers it took to unexpectedly be appointed as a Principal while being a doctoral student, a mother, and a wife. After learning how great each of you are, I know that I could not have asked for a better school family. Thank you for all of your hard work, diligence, and support! Each of you play a very important role in our daily work, and I believe in the law of significance! You all will always have a special place in my heart, no Principal ever forgets their first Principalship. Thank you all for Leading, Succeeding and ROARing!

To my Richmond County School System family, I am thankful for every friendship and for every opportunity extended to me which equipped me to walk in God's purpose for my life. I will continue to inspire aspiring leaders and instill in every child I encounter the value of education.

Lastly, to my church family, Faith Outreach Church, thank you for your prayers and for standing in agreement with me and my family. To my pastors, Richard and Janice Peoples, I am grateful to see Jeremiah 3:15 in action; for I know that God has given me and my family pastors after his own heart who consistently by words and deeds give knowledge and understanding of how to be fully persuaded by the word of God.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1

INTRODUCTION

In 1975, Public Law 94-142 was passed guaranteeing a free and appropriate public education to each child with a disability (US ED, 2010). Public Law 94-142 had four purposes, yet one purpose would become the focal point for changing separate locations of students with disabilities (SWD). This focus would assure that all children with disabilities have access to free appropriate public education, which emphasizes special education and related services designed to meet their unique needs. The Education for All Handicapped Children Act adopted in 1975, renamed as the Individuals with Disabilities Education Act (IDEA, 1990) and again reauthorized as the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA, 2004), mandated schools to provide a free and appropriate public education to all students with disabilities in the least restrictive environment (LRE) to the maximum extent appropriate. As a result, states had to increase their efforts to ensure students with disabilities gained adequate exposure to standards-based curriculum as educational legislation amended existing laws.

With the focus of legislation aimed at accountability and the inclusion of all students, specifically the former No Child Left Behind Act (NCLB), comes initiatives such as the Regular Education Initiative [REI; Alexander & Alexander, 2011]. As a result of REI, the United States Department of Education (US ED) gave way to the inclusion movement and the drive to ensure equal access to grade-level standards. The revision to the NCLB resulted in the enactment of the Every Student Succeeds Act (ESSA) in 2015, which ensured a focus on the explicit goal of fully preparing all students for success in college and careers to advance the nationwide commitment to equal opportunities for all students.

Evolving legislation and the convergence of initiatives and legislation such as IDEA, NCLB, REI, and ESSA requires school systems and educators to determine how to provide equitable educational experiences with appropriate supplemental aids and services for SWD. Provisions in IDEA and goals of ESSA collectively work to improve educational practices and close achievement gaps for all student demographic groups. An infrastructure to support the development of collaborative teaching initiatives is common across states as the percentage of SWD are being educated in inclusive settings alongside students without disabilities (SWOD).

Infrastructures to support collaborative teaching initiatives and inclusive practices was further reinforced after parents argued that access to public schools where SWD were separated on a separate wing of the school was unfair treatment (Fleischer & Zames, 2011). Parent advocacy groups seized the opportunity to seek litigation that promoted federal laws mandating the premise of REI, as many wanted their children to be educated in classrooms among their peers within the same school community (Spaulding & Pratt, 2015). The response to parental desires led to inclusive practices to support SWD in the general education setting, leaving school districts responsible for creating implementation plans in line with legislation.

To be in compliance with federal statutes, such as ESSA (2015), and to gain reputable statuses of student achievement on accountability measures, school districts have been motivated to increase SWD placement in the inclusion setting. Inclusive settings require that general education and special education teachers work together using different forms of team teaching, which is referred to as *co-teaching*. As a result of ESSA, inclusion, and the implementation of co-teaching models to facilitate instruction in inclusive settings for SWD and SWOD have become an intuitive appeal. In such settings, teachers collaboratively plan instruction and use a

range of instructional strategies and supplementary aids so that SWD working alongside SWOD in general education settings are equally exposed to grade-level content.

Loertscher and Koechlin (2015) defined co-teaching as the art of two or more adults who plan, teach, and assess learning experiences together. As instructional roles and actions of co-teaching sometime differ depending on student needs, both teachers must work to deliver instruction, plan assessments, assign grades, manage classroom behavior, and communicate student's academic progress. The ability of co-teachers to collaboratively facilitate their roles and responsibilities determines their co-teaching perceived efficacy.

Co-teachers use various co-teaching models that include but are not limited to the one teach/one guide, station teaching, parallel teaching, alternative teaching, and/or synchronous teaming (Friend & Bursuck, 2018). In a co-taught setting, the roles of each teacher are often specific. Typically, the general education teacher is responsible for curriculum content and instructional planning, whereas the special education teacher is responsible for evaluating problems in classroom learning and social behavior to provide strategies and interventions for addressing identified problems (Scruggs & Mastropieri, 2017).

Currently there are limited mandates on educators in college teacher preparatory programs or requirements to learn how to function within collaborative settings; thus, being able to select an appropriate co-teaching model and knowing the role of each teacher becomes challenging for educators. In many co-teaching partnerships, both the general education teacher and special education teacher are left to determine how to collaborate and co-facilitate instruction to a group of students without either educator having adequate knowledge of co-teaching logistics. Although this implementation is rapidly growing in many school districts, many college education programs, as well as leader and teacher preparation programs, continue

to teach pedagogical concepts and instructional strategies appropriate for the single teacher classroom, with minimal emphasis on preparation for co-teaching in inclusion class settings.

Undoubtedly, the inclusion process has brought about concerns for school leaders, general education teachers, and special education teachers. Some of the concerns are related to challenges with meeting diverse student needs due to the lack of inadequate training and funding (Reed, 2019). As a result of stated concerns, teachers' perspectives of the effectiveness of co-teaching on student achievement remains inconsistent. Most research studies on co-teaching have focused either on teachers' perspectives and interactions (Ashton, 2016; Stefanidis & Strogilos, 2015) or on the organizational aspects such as models of co-teaching, and the roles and responsibilities of co-teachers within a co-taught classroom (Hackett et al., 2019). Thus, a gap in the literature exists about how teacher perceptions and practices within co-teaching settings impact student achievement.

Both early and recent studies continue to raise concerns with regard to the confusion that exists in the perspectives of co-teachers about their roles (Stefanidis & Strogilos, 2015). Instructional roles and actions of co-teaching sometimes differ depending on student needs. Nonetheless, both teachers collaborate to deliver instruction, plan assessment, assign grades, manage classroom behavior, and communicate student's academic progress to students and parents. The ability of co-teachers to collaboratively facilitate their roles and responsibilities further determines their co-teaching efficacy. Strogilos and Tragoulia (2013) stated although there are many roles, "shared planning time, training in co-teaching, and good levels of collaboration by all participants are regarded as highly important" (p. 81).

The increased prominence of co-teaching requires specific collaborative practices to be implemented to deliver instruction especially as the percentage of SWD being educated in

inclusive settings alongside SWOD increases. Unfortunately, many school leaders lack understanding of the importance for collaborative practices and co-teaching supports such as school schedules, common planning for co-planning, and limiting number of co-teaching partners (Campbell & Jeter-Iles, 2017). Leaders are also unfamiliar with how collaborative models should occur and often neglect the need to provide professional learning on successful co-teaching practices. The need for specific training of the teachers providing instruction in inclusive settings becomes more apparent when one considers the multitude of pedagogical strategies needed for effective inclusion (Cooc, 2019).

Despite available research, school leaders have no definitive or substantiated method to duplicate when seeking to successfully implement co-taught inclusive classrooms. Much of the research presents individual concepts or practices that benefit co-teaching situations, yet there is limited quantitative information on how either practice or combined practices affect student achievement. The majority of the literature that is quantitative focuses on one subgroup only, SWD, and within previous longitudinal studies, there is no information on student academic outcomes (Gerlach, 2017). Other studies provide more holistic information on how teachers could work collaboratively to impact student achievement. Ronfeldt et al. (2015) stated that existing literature provides evidence that there is a relationship between teacher collaboration and student achievement, yet it is not evident if the relationship is causal or dependent upon specific qualities of co-teaching.

<div align="center">**Statement of the Problem**</div>

Recommending how to enhance the quality of co-teaching partnerships to positively impact student achievement poses a challenge for many school leaders due to the absence of quantitative data involving the effect of co-teaching on student achievement. Using co-teaching

as an instructional delivery model to teach SWD within the general education setting is based on the belief that co-teaching instructional practices will allow greater access to grade level curriculum and will result in gains in academic achievement directly for SWD and indirectly for SWOD. The idealistic concept of co-teaching is that the general education teacher serves as the content expert able to provide exposure to grade-level content, and the special education teacher, who often lacks content knowledge, works to use a range of instructional strategies and supplementary aids to meet the instructional needs of SWD.

Although many states have increased inclusion practices out of compliance with legislations and due to motivation to make progress with state mandated accountability measures, limited research remains on how co-teaching practices impact student achievement. As a result of new school accountability systems and teacher evaluation systems, school leaders have a greater responsibility to gauge teacher proficiency in order to ensure the best academic outcomes of students. However, little research examines which co-teaching dynamics best serve SWD and SWOD in inclusive classrooms. This study examined the perception of co-teaching implementation in terms of personal and professional factors, as evidenced by co-teacher responses to the Colorado Assessment of Co-teaching (CO-ACT), and student achievement using student achievement growth rates measured by the Georgia Milestones Assessment (GMAS). The information captured from this study could contribute to the educational leadership research on the impact of co-teaching in an inclusive setting on student achievement. The information derived from this study could also contribute to decreasing the void in educational leadership research and literature regarding the relationship between co-teaching practices and student achievement.

For the purpose of this research, student growth percentiles were used to measure student achievement. Student growth percentiles were one method or source of achievement data that were utilized to measure the effectiveness of co-teaching factors present. Methods on how to obtain higher percentiles that lend itself to higher academic growth was of particular interest to many school leaders. Although inclusion classes and co-teaching is an existing practice, its impact on student achievement is limited. School leaders have limited available research on how to support co-teaching endeavors to ensure academic progress and student achievement within their school.

Purpose Statement

Research findings frequently display methods for implementing co-teaching in the inclusion classroom, yet there exists limited research on co-teaching effectiveness and its relationship with student achievement for SWD or SWOD. Therefore, the purpose of this study was to identify any correlations among the qualities of co-teaching partnerships in grades six through eight as measured by the CO-ACT, and student achievement as measured by growth percentiles from the GMAS data in middle school English Language Arts and Mathematics content areas.

The CO-ACT, by design, identifies the quality of co-teaching partnerships as exemplary and non-exemplary using a rating system of different factors in the three categories of personal prerequisites of each teacher, the professional relationship between the two teachers, and classroom dynamics. Teachers' rating of each statement on the CO-ACT is based on the extent to which they perceive each item to be present within their co-teaching situation. Student achievement data from GMAS was collected and analyzed for SWD and SWOD from several co-teaching partnerships.

Research Questions

This study was guided by the following overarching research question: What is the relationship between co-teaching partnerships and student achievement in middle school inclusive classrooms? In addition, the following two sub-questions served to add to this investigation:

1. What is the relationship between the level of agreement with the perceived presence of personal prerequisites, professional relationship, and classroom dynamics and student achievement in English Language Arts?

2. What is the relationship between the level of agreement with the perceived presence of personal prerequisites, professional relationship, and classroom dynamics and student achievement in Mathematics?

Significance of the Study

Due to the mandates of accountability measures, the need to show an increase on GMAS and meet improvement targets of subgroups, the prevalence of inclusion is vastly expanding and being mandated in many school districts requiring teachers to engage in co-teaching. The implementation of inclusion has resulted in the usage of various practices and strategies through a variety of co-teaching partnerships. Although the ideal of two teachers in one class is believed to render positive student achievement, there exists a lack of studies that link co-teaching practices in inclusive settings to positive student achievement. Teachers and leaders struggle with identifying the most effective type of co-teaching or effective factors with classroom dynamics while co-teaching. School leaders find it further challenging to respond to requests for support often due to the lack of familiarity with identifying exemplary and non-exemplary co-teaching partnerships. Training regarding inclusion and co-teaching are not thoroughly addressed

in leader preparation programs; therefore, school leaders are often not aware of how to provide support on a fundamental level. Frequent, constructive feedback from school leaders was one method used to help teachers improve their pedagogical practices. Unfortunately, thorough and specific feedback is often omitted from evaluations of teachers participating as co-teachers due to the evaluator's (i.e., school leader) lack of knowledge and lack of understanding on how to develop instructional next steps. In short, school leaders may be uncertain if teachers are co-teaching in a manner that optimizes positive student academic outcomes.

Additionally, the authorization of ESSA (2015) holds schools accountable for helping students achieve academic success as measured by state created assessments. Current legislation does not exclude SWD from being tested on general education curriculum during required statewide standardized testing. As a result of the latter, promoting rigorous accountability and gains toward college and career readiness requires equitable access to general education curriculum for SWD and SWOD. In middle school, unlike elementary school, all students are faced with requirements to participate in content specific high-stakes assessments which is often linked to promotion requirements. According to Georgia Department of Education ([GaDOE], 2015) students' performance on the reading portion of the English Language Arts test and the Mathematics portion will be used to determine promotion to the high school for 8th graders in addition to local promotion requirements. Students' performance on the reading portion of the Georgia's state testing must report as on grade level reading and students' must achieve the developing learner achievement to be considered eligible for promotion (Woods, 2015). Understanding how to support SWD being provided instruction among SWOD in inclusive class settings cannot be ignored as school leaders are seeking to avoid failing school statuses due to low performance on statewide assessments for all students.

Collectively, the aforementioned challenges impact school leaders' ability to determine which school-based services may be used to support co-teaching in their buildings. Teachers then tend to become restricted in attempting to vary the instructional delivery because of their lack of knowledge of different co-teaching partnerships. Therefore, teachers face the challenge of determining with whom to consult when assistance is needed, and school leaders also become further challenged with overlooked components such as attitudinal barriers that could develop because of adversity with this instructional collaboration of co-teaching.

The CO-ACT was selected because of the researcher's interest in the presence of known factors for successful co-teaching. Using the CO-ACT instrument that was developed based on exemplary practices from existing co-teaching partnerships could help school leaders with a basic level of understanding in each category of the instrument. For example, determining which teachers are compatible to co-teach could help school leaders by using the personal prerequisites or professional relationship factors of the instrument. If the findings of this study support that the presence of the factors identified in the CO-ACT instrument aid in positive student achievement for SWD as well as SWOD in co-taught settings, it becomes a beneficial resource to school leaders which then directly impact teachers' instructional practices. This added resource has the potentiality to help impact school leaders' decisions on school functions such as school budget expenditures, teacher evaluations, professional learning, and teacher allocations. Decisions for facilitating professional learning could also be impacted, as administrators will be provided with valuable information specifically geared to previously identified factors that are evident in exemplary co-teaching partnerships and how student achievement may be impacted.

Procedures

This study attempted to address the gap in existing research regarding co-teaching partnerships and student achievement. In an effort to determine if there was a relationship between co-teaching partnerships and student achievement, the researcher employed a correlational design to measure the relationship that the two variables had with one another through the administration of the CO-ACT instrument (i.e., quality of partnerships) and student achievement results as measured by the GMAS in English Language Arts and Mathematics. The researcher utilized one school district due to easy accessibility of school personnel and student data and selected one English Language Arts class and one Mathematics class from grades six through eight from a total of nine of the middle schools located within the district.

The participants included middle school general education and special education teachers participating in co-teaching settings; the researcher began with a goal to obtain at least 120 teachers (60 co-teaching partnerships). Through an online survey, each participant was asked to respond to the scale measuring the presence of behaviors within the co-teaching partnership, by rating how much they agreed or disagreed with provided statements. Although the CO-ACT has two scales, one measuring the importance, and one measuring presence, for the purposes of this study the scale measuring presence was used alone to capture behaviors and practices occurring within the co-teaching partnership. Student achievement data were taken from the administration of the GMAS, a statewide assessment, from the most recent available released scores. The data were obtained from the student data learning system which houses each school's GMAS performance data. The researcher used the combined summarized growth of the class from the Georgia Student Growth Model (GSGM) data.

The research questions were answered by conducting a zero-order correlation analysis. Pearson's *r* correlation between the total co-teaching partnership ratings were collected as dyad scores and the median student growth percentiles (mSGPs) of English Language Arts and Mathematics data were calculated. Correlation methods were used to explore whether a relationship existed between co-teaching partnerships and student achievement. Partnership ratings were determined by calculating the average of the "presence" partnership scores of the co-teacher pairs. The variables consisted of SGPs collected from student achievement and the following CO-ACT factors: Factor I (Personal Prerequisites), Factor II (Professional Relationship), and Factor III (Classroom Dynamics).

Definition of Key Terms

The following terms and definitions are provided to ensure clarity and consistency of understanding throughout the research and all other definitions were cited appropriately.

Classroom Dynamics (CO-ACT Factor III): Classroom dynamics are the beliefs and action perceived by co-teachers as adding benefit to the co-taught classroom such as how teaching and learning occurs, knowledge of curriculum and range of individualized strategies used. For the purposes of this study, classroom dynamics was defined as a score on the Factor III section of the CO-ACT.

The Colorado Assessment of Co-teaching (CO-ACT): CO-ACT is a questionnaire designed to assist co-teachers with understanding critical components of co-teaching. For purposes of this study, three factors from the CO-ACT will be used as measures.

Co-teaching: Co-teaching occurs when two teachers deliver instruction to students (with identified disabilities and without identified disabilities) in a single classroom simultaneously (Murawski, 2017).

Georgia Milestones Assessment (GMAS): GMAS is a comprehensive assessment administered to

    students in grades three to high school. The intent of the assessment to evaluate students'

    understanding and knowledge of specific content taught (GaDOE, 2015).

Georgia Student Growth Model (GSGM): GSGM provides student growth percentiles to describe

    the amount of growth a student has demonstrated and growth targets, relative to other

    students across Georgia with the same achievement history (GaDOE, 2017).

Inclusive Education: Inclusive education is the concept of providing access to educational

    services for SWD in schools in the regular education classroom with support from special

    education teachers to expose them to grade-level curriculum (Gilmour, 2019).

Individualized Education Program (IEP): An IEP is a written statement of specially designed

    instruction that describes the student's present level of academic performance; annual

    goals and short-term objectives; specific educational and related services (Agoratus,

    2017).

Perception: Perception is intuitive understanding and insight ("Merriam-Webster," n.d.).

Personal Prerequisites (CO-ACT Factor I): Personal prerequisites are skills and characteristics

    that each teacher brings to a co-teaching situation. For the purposes of this study,

    personal prerequisites were defined as a score on the Factor I section of the CO-ACT.

Professional Relationship (CO-ACT Factor II): The professional relationship describes the

collaborative interaction of co-teachers to work toward a shared goals, decisions, and

accountability. For the purposes of this study, professional prerequisites were defined as a

score on the Factor II section of the CO-ACT.

Student Growth Percentiles (SGPs): SGPs describe the amount of growth a student has

demonstrated relative to academically similar students across the state on the GMAS

(GaDOE, 2017).

Students With Disabilities (SWD): SWD are children with specified impairments and needs

special education and related services for impairments (Alexander & Alexander, 2011).

Student Without Disabilities (SWOD): For the purposes of this study, SWOD was the

abbreviation used to describe children with no specified impairments and needs no

special education or related services for impairments.

Chapter Summary

Legislation, such as REI and ESSA, has led to an increased need for educational practices

such as co-teaching in all settings in school districts nationwide to address the educational needs

of SWD in a LRE. Both general and special education teachers may, at some point in their

professional career, be required to participate as a co-teacher in an inclusion setting to facilitate

instruction. This study sought to identify any correlations that may exist among the qualities of

co-teach partnerships in grades six through eight as measured by the CO-ACT, and determined

whether there was a relationship between the quality of the partnership and student academic

outcomes as measured by student assessment data. This study may offer insight into the process

of co-teaching on the secondary level within one school district.

The quantitative research methodology was used for the collection of numerical data from participants to determine the relationship between the perceived presence of co-teaching factors and student achievement. District level special education leaders designing professional learning opportunities for school leaders such as administrators and teachers, veteran or new to the special education profession, may find value in this research. Building-level leaders such as principals, assistant principals, administrative interns, and curriculum instructional coaches may also find value in this research as it would provide leaders with an insight on how to address needs and provide support while implementing inclusive settings. The sharing of this knowledge could lead to teacher education programs designing courses specific to co-teaching practices and effective teaming strategies and models to better equip educators on all levels to successfully implement inclusive classrooms.

CHAPTER 2

REVIEW OF LITERATURE

The implementation of the least restrictive environment, which regulates original and reauthorization of laws designated for educating and integrating children with special needs into different learning environments, is summarized in PL 94-142, originally referred to as the Education of All Handicapped Children Act of 1975 (IDEA, 2012). This bill was reauthorized as IDEA in 1990 and reauthorized again in 1997 and 2004. The passage of IDEA Amendments of 1997, No Child Left Behind Act (NCLB) of 2001, and subsequent amendments to IDEA leading to IDEIA of 2004, bought on educational reforms. The IDEA of 2004 created an awareness within the United States (US) for the need for educational reform and in the provision of the opportunities given to students with special needs under IDEA (Macfarlane, 2012). The reauthorization of IDEA continues to address the needs and demands of educational shifts and is legally set for the students identified through special education 1975 (IDEA, 2012).

With the evolutions and reauthorizations of legislations, specifically the NCLB, aimed at accountability and the inclusion of all students, come initiatives such as the "regular education initiative" (Alexander & Alexander, 2011, pp. 589-593). As a result of the regular education initiative, the USED gave way to the inclusion movement and the drive to ensure equal access to grade level standards (USED, 2010). The revision to the NCLB resulted in the enactment of the ESSA in 2015, ensuring a focus on the clear goal of fully preparing all students for success in college and careers to advance the nationwide commitment to equal opportunities for all students (ESSA, 2015). As a result, states had to increase their efforts to ensure SWD gained adequate exposure to standard-based curriculum as educational legislation amended existing laws. An infrastructure to support exposure to curriculum led to the collaborative teaching initiatives

across states as the percentage of SWD began being educated in inclusive settings alongside SWOD increased. As a result of inclusion vastly expanding and being implemented in many school districts, some leaders and teachers engaging in co-teaching are faced with determining how to implement inclusion as well as understanding roles and responsibilities during its implementation.

Organization of Literature Review

Most research studies on co-teaching have focused either on teachers' perspectives and interactions (Ashton, 2016; Stefanidis & Strogilos, 2015), the organizational aspects such as models of co-teaching, or the roles and responsibilities of co-teachers within a co-taught classroom (Hackett et al., 2019). The intent of this literature review was to identify different facets of co-teaching. The review of literature was organized by co-teaching (i.e., roles/responsibilities), co-teaching logistics (i.e., programs and practices), and evaluation/ supervision of co-teaching. In an effort to obtain quality scholarly articles, the researcher utilized Georgia Southern library resources. Based on the resources provided, the following databases were identified and deemed more useful in identifying relevant literature for this study: Galileo, ERIC, EBSCOhost, ProQuest, JSTOR, and Wiley Online Library. With these identified databases, the following search terms were utilized to identify literature that is aligned to this study: co-teaching, pedagogy, secondary, inclusion; secondary school students; special education, co-teaching and middle school; administrator practices; inclusive education; student teaching, co-teaching, student achievement, pedagogy, instruction, and collaboration.

Co-teaching

Reauthorizations of legislations such as IDEA of 2004 (USED, n.d.) mandated schools to provide a free and appropriate public education to all students with disabilities in the least

restrictive environment to the maximum extent appropriate. IDEA's presumption of inclusion declared each state must establish procedures to assure that, to the maximum extent appropriate, SWD are educated with SWOD, and special classes, separate schooling, or other removals of SWD from the regular educational environment occur only when the nature of severity of the disability of a child is such that education in regular education with the use of supplementary aids and services cannot be achieved satisfactorily (Turnbull et al., 2013). The governing rights of such legislations for SWD, coupled with parental desires for access to public schools brought on the development of inclusive practices under the concept universally referred to as inclusion. Although the term *inclusion* is most commonly used when referring to the integration of SWD in the general education setting receiving instructional support from co-teachers, inclusion is characterized in a number of different ways. In the literature, inclusion has been defined as (a) students with disabilities attending their home school of residence, as opposed to a special school; (b) students with disabilities spending part of their day in general education classes with typical peers; (c) students with mild-to-moderate disabilities spending their full day with typical peers; or (d) all students, regardless of the severity of their disability, spending their full day with typical peers (Boyle et al., 2012; Copeland & Cosbey, 2008; Florian & Black-Hawkins, 2011).

Collaborative practices expanded due to SWD spending part of their day or their full day in general education classes with SWOD. The collaborative instructional formats where SWD and SWOD are educated in the same classroom setting, in an inclusion setting, with teachers as co-instructors would become referred to as *co-teaching*. Co-teaching is the partnering of a general education teacher and a special education teacher for the purpose of delivering instruction that meets the learning needs of all students in the classroom (Friend, 2019; Stein, 2016; Trites, 2017). Other definitions of co-teaching share the same premise, describing co-

teaching as "two people sharing responsibility for teaching all students assigned to a classroom" (Villa et al., 2013, p. 4) and as the art of two or more adults who plan, teach, and assess learning experiences together (Loertscher & Koechlin, 2015). It is "meant to provide specialized services to students with disabilities in regular classrooms, while ensuring they also get access to the same academic material as their peers" (Samuels, 2015). Murawski and Berhardt (2015) elaborated:

> Co-teaching requires more than just learning to "play nicely" together. It requires a paradigm shift- from teaching in silos to teaching in tandem, from owning the front of the room to sharing space, from sending students with special needs out of the classroom to thoughtfully differentiating for diverse learners. Before working on collaboration and communication skills, educators, need to embrace the mindset that inclusion is an issue of both equity and social justice. Then, teachers and administrators will be more prepared for and committed to co-teaching. (p. 31)

DeMartino and Specht (2018) explained how the regulations under the reauthorization of IDEA as mandated by the U.S. DOE gave no explication of co-teaching, leaving it to each state and local officials' discretion to fashion instructional models as they deem necessary for SWD to participate in regular education classrooms. Various kinds of creative co-teaching models have evolved out of necessity (Brown et al., 2013). Most frequently, there are six co-teaching models used in co-taught inclusive classrooms and are as follows: One Teach/One Observe, One Teach/One Assist, Station Teaching, Parallel Teaching, Alternative Teaching, and Team Teaching (Keely, 2015). Friend and Cook (2013) claimed that using approaches such as one of the co-teaching models is necessary to maximize the learning of all students within a co-taught classroom. The six co-teaching models have distinct features but can benefit students equally

when facilitated in appropriate ways (Friend & Cook, 2016). Cassel (2019) expressed that despite the model used, it is critically important that both teachers actively engage and work together throughout the instructional cycle, which includes planning, teaching, assessing, and reflection.

Although general and special education teachers working collaboratively with overlapping roles, co-teaching models by design allow co-teachers to assume different roles within the classroom to structure and co-facilitate lessons. With 64% of all students with identified disabilities spending 80% or more of their time in the general education setting (National Center for Educational Statistics, 2020), "the antiquated mindset of placing a student with a disability in a separate classroom, without consideration for their unique abilities, is a thing of the past" (Kramer & Murawski, 2017, p. 153). Considering provided statistics, the service delivery option for SWD is co-teaching, where instruction is co-facilitated within the same general education setting as SWOD.

Roles and Responsibilities of Co-teaching

In general, accepted components of co-teaching involve (a) parity existing between two teachers, (b) equal distribution of responsibilities, (c) co-planning to determine how to meet the needs of students, and (d) delivery of instruction in a manner that neither teacher is perceived as the primary or subordinate teacher (Davis et al., 2012). Murawski and Lochner (2010) also supported that co-planning, co-instructing, and co-assessing are necessary skills needed by co-teachers in order to implement research-based co-teaching models. Division of teacher roles and proper assignment of responsibilities between co-teachers is imperative for students to conceptualize content and benefit from having two teachers; yet, it ultimately becomes dependent upon the pedagogies that co-teachers plan and implement regardless of the co-

teaching model utilized (Brawand & King, 2017). Proper assignment of roles and responsibilities is important due to SWD and SWOD being faced with participation in content-specific high-stakes assessments which are often linked to promotion requirements.

Co-teachers have flexibility with varying design and delivery across multiple content areas at the secondary level. Effective middle school co-teachers are expected to blend their respective areas of expertise when teaching SWD and SWOD (Ashton, 2016). In addition to co-facilitating instruction, as an effort to have students make academic progress, co-teachers also share the role of monitoring progress both formally and informally on instructional goals, especially for SWD as dictated by their IEPs (Ruble & McGrew, 2013).

Establishing a routine with responsibilities and roles is an efficient manner within co-teaching to promote organization of who does what, when, with what materials, and with which students (Braward & King, 2017). Co-planning and co-instruction are two vital roles necessary with organizing roles of co-teaching and establishing routines and responsibilities. Brendle et al. (2017) explained that co-planning requires teachers to create plans together and to determine appropriate accommodations and modifications, which is necessary to monitor progress for SWD and SWOD. Co-planning assures that both co-teachers understand their roles and responsibilities prior to co-instructing. Co-instructing involves both teachers and occurs after co-planning so that a clear understanding of the instructional goal and selection of an appropriate co-teaching model has been established (Brendle et al., 2017). Providing a supportive and engaging learning environment for both SWD and SWOD is possible with the implementation of co-planning (Ploessl et al., 2010).

Vannest and Hagan-Burke (2010) investigated the use of teachers' time and found that the organization of instructional routines, which largely contributes to organization in co-

teaching, represented the smallest amounts of teacher time. In fact, time spent collaborating was

8.6%, while time spent planning was 5.4%. DeMartino and Specht (2018) highlighted key roles

for both the general education teacher and special education teacher. General education teachers'

roles were noted as being responsible for maintaining curriculum pacing and providing rigorous

instruction and assessments aligned to curriculum. Special education teachers' key roles and

responsibilities were noted as being responsible for adapting assignments/materials, and

assessments, providing learning strategies, and maintenance of accurate records of

interventions/supports, or behavior plans for SWD. DeMartino and Specht provided additional

roles and responsibilities such as tutoring, grading, and collaboration between teachers as shared

roles of co-teachers.

When there is a lack of clearly defined roles, this leads to role assignment confusion as

teachers venture into collaborative settings. The misunderstanding and overuse of some co-

teaching models creates unequal balances of teacher control and highly restricts teacher

autonomy. The result of role confusion and imbalance of powers has adverse effects on teacher

efficacy, often leading to low teacher efficacy (Viel-Ruma et al., 2010). Teacher efficacy

describes the teacher's personal reflective belief about how he or she can affect the education

and behavior of students (Woolfson & Brady, 2009). Feelings of low self-efficacy could lead to

negative feelings, ultimately resulting in attitudinal barriers. Because of varying attitudes toward

inclusion, which impacts relationships between co-teachers, co-instructing in varied and complex

arrangements across different schools could also result in role assignment confusion.

Co-teachers are paired together so that SWD and SWOD benefit from the general

education teacher's content expertise and the special educator's pedagogical expertise to

maximize academic outcomes. Maintaining evidence-based practices is another role of co-

teachers, as it is vital for co-teachers to understand how to continually engage in new methods for the learning process with students on the secondary level. Keeping abreast of evidence-based practices and engaging in professional learning development is a separate ongoing role of co-teachers. Pancsofar and Petroff (2013) found co-teachers with more professional development opportunities throughout and across years reported greater confidence in their ability to co-teach. Ensuring that appropriate professional development opportunities are available to co-teachers is one of the ways in which the school leader can support co-teaching.

In addition, the leader's role includes ensuring that co-teachers are supported throughout the implementation of co-teaching. This support may involve ensuring that adequate funds are allocated appropriately (i.e., fiscal responsibility), professional learning facilitators are assigned to support strategic plans, and that teachers have scheduled time and balanced workloads of co-teachers according to their skillsets. For example, if a special education teacher co-teaches with several general education teachers, certain factors related to effectiveness and efficiency may be compromised, such as the time allotted for planning (Tremblay, 2013). Teachers express difficulties with securing time due to workloads and additional work-related responsibilities. Heck and Bacharach (2015/2016) argued that co-teachers must have shared time as the act of paired teaching must have an intentional structure that provides adequate time for both co-creation and authentic co-reflection. Consequently, students and teachers begin the middle school year pressured by these "high stakes" set for both the regular and special education students (Dieker & Rodriguez, 2013; King-Sears et al., 2014). As a result of the latter, school leaders must monitor practices for continuous school improvement including the process of collaborative efforts such as co-teaching to establish efficient programs and sustainable practices.

Co-teaching Logistics

Although co-teaching has been implemented across different levels of education, little research exists regarding its effectiveness; yet, co-teaching exists as a standard practice in many districts throughout the United States (Hanover, 2012). Co-teaching can take many different forms and often varies between classrooms and between co-teachers. Co-teaching literature from experts reveals that the mixed research findings may reflect inconsistent definitions of practices, inconsistent implementation, lack of training, and school culture dilemmas such as limited planning time (King-Sears & Jenkins, 2020). Despite the varying definitions of practices and the varied forms of instructional models used in the co-teaching classroom, it is essential for both teachers to agree on the theoretical foundations that will guide their work together (Grant, 2014). Teachers are uncertain about how to implement specific strategies and time consumed working on defining logistics of co-teaching deducts from the focus of academic success. Further concern arises when students need more intensive instruction than what typically occurs in co-taught settings (Wexler et al., 2018).

A study based on meta-analysis research of inclusion and co-teaching collaborative models of teaching in classrooms presented six syntheses, with four investigating inclusion and two investigating co-teaching (Solis et al., 2012). The empirical findings were representative of 146 studies. The purpose of this meta-analysis was to provide a summary of research conducted to determine the efficacy and use of inclusion and co-teaching as a means to inform school psychologists' recommendations during the special education referral and identification process. The study also intended to provide a summary or synthesis of findings related to inclusion and co-teaching to inform educational decision-makers. Results indicated that the most common model implemented for inclusion was the general education teacher provides most of the

instructional responsibilities, and the special education teacher serves as a support to students and makes suggestions to the teacher. Common themes were identified across the six syntheses, including student outcomes, teacher support issues, and attitudes, beliefs, and perceptions of collaborative models. Recommendations from this meta-analysis revealed "school psychologists may want to consider how to focus their role and the role of the special education teacher on facilitating these curriculum changes, determining their implementation in classrooms, and monitoring their influence on students' academic and social outcomes" (Solis et al., 2012, p. 507).

School leaders reported that there was no single best approach in acquiring professional development in utilizing IEPs to educate students with disabilities or additional needs; yet, continuous professional learning was identified as key to the effective implementation of IEPs (Timothy & Agbenyega, 2018). A study examined co-teaching in practice and the need for professionals planning and delivering instruction using six approaches necessary to meet the instructional needs of diverse learners (Friend et al., 2010). The discussion of the challenges faced in its design, implementation, and evaluation is detailed in its relation to the practice of co-teaching. The authors noted three topics commonly addressed as co-teaching programs and practices: (a) teachers' roles and relationships, perceptions of co-teaching and its impact and effectiveness; (b) program logistics, scheduling common planning for co-teachers; and (c) the impact of co-teaching on student learning, student behavior, student attendance, and student discipline. The authors recommended that professionals help to facilitate the development, implementation, and evaluation of co-teaching programs using the topics commonly addressed. Shaffer and Thomas-Brown (2015) also examined the impact of embedded professional development with co-teachers. Among their findings across that year, the general educator

became more amenable to accommodations for SWD, and both co-teachers focused more on pedagogies leading toward success for all students (not just SWD).

Gurgur and Uzuner's (2010) research design was action research with the aim of systematically implementing co-teaching. The participants were a general education teacher and a special education teacher co-teaching pair. The purpose of the study was to analyze the opinions of both the special and general education teachers regarding the applications utilized while working in inclusion classes. Data were collected from interviews conducted with classroom teachers, and planning meetings were arranged to prepare for the lessons and daily reflective journals. The researchers analyzed all interviews prior to determining themes and sub-themes. The researchers concluded that both the general education and special education teacher must receive training on issues such as inclusion, support services, and cooperative skills. The researchers concluded that individuals' perceptions, ways of construing systems, opinions, intentions, and attitudes influenced the successful application of a program.

Pratt (2014) observed that inclusive education presents challenges largely due to a lack of professional preparation, lack of administrative support, and lack of supportive structures (i.e., scheduling). The researchers sought to extend the literature by addressing how effective co-teachers found solutions for common co-teaching challenges. Qualitative data were collected from focus groups, questionnaires, observations, and individual interviews. The study used the results of teachers from four co-teaching teams, totaling 10 participants who were involved in inclusive education. The researchers collected data from the four teams of co-teachers who provided instruction in inclusion classes for students with special needs on the secondary level (i.e., middle and high school). The questionnaire included statements that addressed interpersonal behaviors received from others, perceptions of interpersonal relations, and desired

interactions for each of the three interpersonal dimensions (Inclusion, Control, and Openness). Data were reported in tables and the responses were transcribed and coded to identify emerging themes. The researcher concluded that teachers needed professional development, administrative support, common co-planning times, and similar teaching philosophies. The results further concluded that the planning times assist teachers with mapping out intended learning outcomes and that regular training should support teachers with understanding how to blend their different expertise in content knowledge and interpersonal dimensions (e.g., teacher roles).

Despite the popularity and potential benefits of co-teaching, challenges with effective implementation are due to common obstacles and wide variation in implementation (Solis et al., 2012). One common concern is the need for pre-service training and professional learning/development. It has been recognized that both general and special education teachers participating in co-teaching need additional clarification and training in the repertoire of skills and professional development necessary for effective co-teaching (Will, 2018). Much of the apprehension of participating in collaborative settings is teacher unfamiliarity. Because of inconsistent practices of implementation, many teachers resort to utilizing a few co-teaching models, although several models are available for co-teachers to implement as they co-instruct inclusive classes. Strogilos et al. (2016) described how the one teach/one assist model is the most widely used co-teaching model. The role of the assisting teacher or observing teacher is described as the support role (King-Sears et al., 2018). Research results showed that many special education teachers often fall into the role of assistant or paraprofessional (King-Sears et al., 2014) and learner or apprentice (Friend et al., 2014). The latter co-teaching situation can create a lack of professional parity for teachers, which calls for explicit delineation of the roles to reduce the loss of parity and to support all students in the most consistent ways possible.

Pancsofar and Petroff (2013) surveyed 129 co-teachers who worked with more than two different co-teachers; 61% of the co-teaching pairs had co-taught for more than one year together. The survey results revealed that the co-teachers most frequently implemented the one lead/one support model. Individualized support to SWD, enhancing instruction, or modifying materials or assessments was the role of the supporting teacher. The researchers concluded from their findings the following: (a) co-teachers who co-taught for more than one year with their co-teaching partner co-planned and co-instructed more frequently; (b) co-teachers who spent more time together on a daily basis more frequently provided small group instruction; and, (c) teachers with more pre-service training in co-teaching were more likely to instruct different groups at the same time and share responsibility.

Sinclair et al. (2018) reported that lack of planning time shaped teachers' roles in the classroom. The general education teacher often took the lead role because he or she had planned much of the lesson. Planning time is restricted because co-teachers are often assigned to several co-teaching partnerships with general education colleagues.

Campbell and Jeter-Iles (2017) conducted a study that examined educators' perceptions of co-teaching effectiveness and the supports and approaches needed for its implementation. The study involved 33 general education teachers, and 33 special education teachers. The participants co-taught at one of four secondary schools within a West Central School District. The researchers compiled information from the participating educators that provided basic tenets of valuable practices while co-teaching. Campbell and Jeter-Iles (2017) measured teacher's perceptions by using a single survey instrument called the Perceptions of Co-teaching Survey (PCTS). The instrument was predominantly quantitative and consisted of two major sections. The first section gathered demographic information and the other section was related to teachers'

perceptions of effective collaborative practices: a) co-teaching and current experiences, b) collaborative best practices, c) preparation for teaching collaboratively, and d) necessary school-based supports, which were responded to by ratings on a Likert scale. The Likert scale required participants to rate each response by assigning a number one through five, indicating a range from strongly agree to strongly disagree. After the administration of the PCTS, teachers' data were collected and analyzed using descriptive statistics for each of the Likert scale items. It was concluded that school leaders counteract teacher engagement with co-teaching when they verbally support the need for collaboration but do not provide the planning time or resources. Participants indicated that common planning time provided by the administrator and instructional supplies (i.e., common materials) are believed to be critical practices when co-teaching.

Researchers refer to teacher parity as professional equality, yet equality of workload and respect for roles in co-teaching situations are based on the expertise of teachers (Friend et al., 2014). In some cases, the joint roles lead to under and overutilization of both teachers' skills, which impacts professional parity, and may lead to a loss of respect (Pratt et al., 2016). In each co-teaching situation, the special education teacher can assume the role as the primary teacher; however, this causes concern because of requirements for teachers to obtain certification in their specialty area as stipulated in NCLB. These stipulations further strain the delivery of shared roles within co-teaching situations due to special education teachers being unable to provide instruction due to unfamiliarity with the content, leading to attitudinal barriers that are noted for adversely impacting professional parity in co-teaching partnerships. Behavioral management is also a noted barrier with the implementation of inclusive classrooms. DeMartino and Specht (2018) explained that secondary special education teachers are faced with being the sole

disciplinarians for SWD that display reluctance and apathetic interest in learning, which deducts

from their expertise in providing special education instruction.

Teacher perceptions may influence the perceived benefits of co-teaching for co-teachers,

which could adversely impact the consistency of practices used in the overall co-teaching

program as well. Evidence reveals that effective co-planning, parity, and relationships underlie

perceived co-teachers benefits, which consequently leads to students' benefits (Strogilos &

Avramidis, 2016). Stefanidis et al. (2019) conducted a study to determine whether co-planning,

parity, and relationship quality lead to more perceived benefits of co-teaching by co-teachers.

The researchers collected data using a web-based self-administered survey targeting special

education teachers across four states within the United States, through random selection. Seventy

of the responses were used after eliminating incomplete or otherwise not eligible responses. Data

collection utilized a Co-Teacher Questionnaire (CTQ), where the dependent variable measured

co-teacher's perceptions toward benefits of co-teaching and the independent variable measured

co-teacher's perceptions toward co-planning effectiveness, parity, and quality of the relationship

with peer co-teachers. The researchers discovered that higher levels of co-planning positively

affect perceived benefits of co-teaching, and also that higher levels of parity were not found to

positively affect perceived benefits of co-teaching. Researchers recommended that future

research could be conducted using additional instrumentation. It was also recommended that

further research could be conducted to examine the impact of co-teaching on students' learning

and affective outcomes to measure the perspectives of co-teachers and using student-level data to

determine outcomes.

Engaging in collaborative practices without proper preparation could cause leaders and

teachers to become reluctant with collaborative practices, which could have a negative impact on

the implementation of co-teaching and student achievement. Research further supports that teachers frequently express barriers because of concerns regarding logistics of inclusive practices, belief that working with students with disabilities becomes time intrusive, lack of knowledge regarding the specialized teaching strategies for students with disabilities, and that general education staff are not equipped with adequate skills needed to work with students with special needs (Mitchell, 2019; Gee, & Gonsier-Gerdin, 2018). Difficulty may surface at the school level as collaborative efforts and inclusive practices are implemented. It then becomes vital to build systems, set specific goals for collaboration, monitor collaborative practices through direct observation, and implement integrity checklists to overcome barriers and monitor progress with data on student outcomes (Van Garderen et al., 2012).

Evaluation and Supervision of Co-teaching

Recent accountability measures such as NCLB and IDEA set the tone for assessment-based accountability, creating greater levels of accountability for student outcomes. In response to federal legislation and policy changes, the co-teaching process ensures that SWD have "access to the same curriculum as other students while receiving specialized instruction in which they are entitled" (Friend et al., 2010, p.9). These educational initiatives require co-teachers to not only monitor the use of accommodations but to strategically select evidenced-based instructional practices to support SWD's success on standardized assessments. Mackey et al. (2018) supported the principle that "good teaching results in improved outcomes for students" (p. 466). Murawski (2017) summarized some key roles and responsibilities for leaders as follows: observe co-teaching in action to determine the types of job-embedded professional learning, survey stakeholders to obtain specific feedback for completion of needs assessments, and determine the level of performance (i.e., current level of implementation). Fitzell (2018) explained that it is

essential for administrators to comprehend the importance of coaching staff and to commit to fostering a culture that supports co-teacher enhancement. It is not a recommended practice for school leaders to simply duplicate a co-teaching inclusion model from a different school due to varying school cultures and availability of resources (i.e., personnel) but to assess and evaluate co-teaching situations and provide feedback. Aviles and Grayson (2017) explained that assessment serves as a critical tool, intending to guide teachers as they plan. As a result of the latter, inclusive practices and best approaches must be determined for efficient implementation methods and proper support of student learning.

Administrators can help close the gaps in teacher knowledge and experiences related to co-teaching regardless of the lack of professional preparation or inconsistencies that still exist in co-teaching (Friend et al., 2010). The implementation of consistent evaluative practices and active supervision of co-teaching allows administrators to assess student learning outcomes for SWD and SWOD. Many studies were conducted and expressed how teachers were better prepared to participate in co-teaching situations, whereas others felt-ill prepared due to lack of experience, which is another reason why it is essential to assess and evaluate co-teaching programs and practices.

Chitiyo and Brinda (2018) explained that when teachers are not adequately prepared in using co-teaching, a number of problems may arise, one being diminished chances of achieving desired outcomes. Chitiyo and Brinda's study sought to examine if teachers were prepared to use co-teaching. Researchers used a convenience sample of 77 general education and special education teachers with experience in co-teaching. Data were collected using a questionnaire divided into three sections: demographics, preparation for co-teaching (i.e., university course work, conference, school-wide training, etc.), and usage of co-teaching. Section two of the

instrument posed questions to participants that gauged the level of preparedness for co-teaching. Within this section, teachers were given a series of statements and were asked to respond using a five-point Likert scale to indicate their level of agreement. Using descriptive and non-parametric inferential data were analyzed and discovered that only 44% of teachers interviewed believed that they had learned anything about co-teaching in their teacher preparation programs. The researchers concluded that while some pre-service teachers had some understanding of the foundations of co-teaching, they did not feel confident to engage in it effectively. The researchers recommended that colleges and universities require students to co-teach in an inclusive setting as part of their fieldwork and that faculty model different co-teaching strategies by teaming up to teach college courses.

Although it is noted that evaluations are beneficial, evaluating general education and special education teachers using the same evaluation methods may be problematic as this method fails to account for the roles and responsibilities special education teachers contribute to the cognitive development of SWD (Holdheide et al., 2010). Benedict et al. (2013) explained that assessment is a key element of teachers' learning processes, and periodic checkpoints support teachers in professional reflection and development of their instructional practices. Benedict et al. (2013) further explained that it is important for teachers to use the feedback received from evaluations to inform professional learning goals and prepare for instruction. Despite knowing the importance of evaluations and assessment of teaching practices for teachers, relatively little research has been conducted involving special education teachers' evaluation methods (Holdheide et al., 2010). There has been no standard set for assessing general education teachers any differently than special education teachers. A standard to create tools to assess co-teaching is not mandated, although the requirement for inclusion exists. The study revealed themes related

to professional preparation and training and also needs such as supporting, supervising, and evaluating co-teachers (Kamens et al., 2013).

Gurgur and Uzuner (2010) observed that inclusion classes failed to provide adequate special education support services and determined that both the general education and special education teacher must receive training on issues such as inclusion, support services, and cooperative skills. Assistance with the division of tasks and thorough feedback often goes undone by school leaders who are uncertain of how structured, inclusive settings are created, and because of the school administrator having minimal knowledge of inclusive settings, the support needed for teachers is not available. Gurgur and Uzuner further asserted that teachers new to co-teaching often used the one teach/one assist model due to a lack of adequate planning that made co-teachers feel ill-equipped to try other models. Mielke and Rush (2016) concurred with assistance for division of tasks because teachers may not yet have known how to mitigate differences in their training, their backgrounds, their skills, and their challenges.

Kamens et al. (2013) conducted a study to investigate and describe school administrators' practices related to the supervision and evaluation of co-teachers in inclusive classroom settings. Data from 65 participants who held positions as administrators (i.e., principals, assistant principals, and supervisors) were collected and analyzed using coding and triangulation, which uncovered recurring themes and patterns. The survey instrument consisted of 26 open-ended questions. According to the study participants, the primary criteria for determining effective co-teaching are related to student achievement and progress. The results of the study revealed that administrators had varied definitions of what supporting, supervising, and evaluating co-teachers should be. The study also revealed that the co-teaching observations practices varied but were guided by the district's policy. The researcher concluded that evaluations of co-teachers did not

substantially differ from practices used with other teachers, and although observations were conducted for co-teaching teams, the inconsistency in observation practices led to inconsistency in the study findings with respect to the evaluation of co-teachers. Lastly, the researcher noted that study participants' primary criteria for determining effective co-teaching are related to student achievement and progress. Administrators could offer feedback, however, substantiating if co-teaching was working or if feedback was precise enough depended upon how student achievement reported. Because educational leaders have never had personal experience with co-teaching, understanding co-teaching principles is vital and it is recommended to evaluate both teachers at once and not in separate observations or true co-teaching in action may not be observed (Murawski & Bernhardt, 2015).

Lack of evaluative feedback from administrators paired with unfamiliarity of how to engage in co-teaching opens the possibility of barriers for co-teachers and co-teaching implementation. Although many states are using co-teaching as their instructional delivery model for inclusion classes, the available instruments that could be used to evaluate and assess co-teachers to provide recommendations for implementation and to improve teacher preparedness for inclusive settings are limited. Reilly (2015/2016) stressed the use of "reflective feedback" as a tool to promote partnership in co-teaching situations, which is imperative for professional parity (p. 37). As a result of there being no mandates for states to create evaluation tools for co-teachers within any federal regulation, teachers receive feedback from multiple forms on their pedagogical practices, which they in turn use for improvement. Feedback for improvement is important because many states have included student academic performance as a requirement within teacher evaluations. Due to the latter, teachers should engage in practices that will render positive relationships between co-teaching practices and student achievement. Sinclair et al.

(2019) found that "teachers' viewed their school's leadership decisions as adversely affecting their ability to co-teach effectively" (p. 303). Young et al. (2019) stated that administrators should create an environment that increases teachers' knowledge and confidence in the practice of co-teaching. It is equally important to actively supervise and provide teachers with supportive feedback to minimize challenges such as ineffective division of labor as some general education teachers have difficulty "sharing instructional time, releasing control, and seeing value of their co-teacher" (Beninghof & Leensvaart, 2016, p. 72). This research further supports the need to have some form of instrumentation that communicates a standard of practices and expectations for teachers to use as a guide while engaging in co-teaching and the need for a separate co-teaching instrument to assess co-teaching situations.

Implementing measures to evaluate progress with college and career readiness assessments and evaluations has been a significant change for many teachers and administrators because of the component of academic growth of students. The National Council on Teacher Quality (NCTQ) (2015) provides the following statistical data regarding teacher and principal evaluations: (a) 17 states include growth as the preponderant criterion in teacher evaluations; an additional 18 states include growth measures as a significant criterion in teacher evaluations; and (b) 19 states require student achievement/growth to be the preponderant criteria in principal evaluations; 14 states require student growth to be significant in principal ratings. For example, in 2016, Georgia implemented a common evaluation system where teacher evaluations included three components, one being student growth which accounted for 30% of the overall evaluation (GADOE, 2020). For leaders in Georgia, the second component under the Leader Keys Effectiveness system used to evaluate principals includes student growth and counts for 40% of

the overall evaluation. The student growth component is comprised from student growth

percentiles, which are calculated annually based on state assessment data (GADOE, 2020).

Although there are no guidelines given to state departments of education on how to

evaluate or assess co-teaching programs and practices, many states have created instruments

such as observation tools to help inform programs and practices. The instruments are intended to

aid in assessing the fidelity of implementation. The West Virginia Department of Education

(2019) designed the Co-teaching Guidance Manual (GCTM) to assist regular education teachers,

special education teachers, and administrators in guidance with planning and implementing co-

teaching. It provides administrators with suggestions on how to assess co-teaching. The GCTM's

administrative and observation/feedback form uses a four-point rating scale with one (1) being

the lowest and four (4) being the highest rate on different factors. The factors noted on the

GCTM requires the observer to rate the following occurrences: student engagement, the physical

environment of the room, teacher engagement with the co-teaching model identified, and

consideration of IEP accommodations. The GCTM also includes a list of observable behaviors

that are recommended for implementation, where the observer could identify by recording

analysis of behaviors seen or heard as "saw it done well," "saw an attempt," or "didn't see it."

This section of the GCTM was adapted from Murawski's (2007) co-teaching solutions system.

In Maryland, the State Department of Education (2011) created a document titled *Co-*

teaching Reflection Tool. The document was developed and produced by the Maryland State

Department of Education's Division of Special Education/Early Intervention Services and was

designed to assist co-teaching teams and co-teachers by reflecting upon their co-teaching

implementation. The reflection is geared to enhance or refine existing practices. The document is

separated into two parts. The first part of the document has five co-teaching categories: planning

for instruction and assessment, instructional environment, physical environment, discipline, and school environment. The second part of the document has instructional delivery types, and the co-teaching model used to facilitate instruction. On parts one and two, co-teachers are given ratings in the following three categories: initiating, developing, and sustaining.

New Jersey's Department of Education (NJ DOE) provided administrators with a co-teaching classroom observation tool designed to support co-teachers. The instrument has three main components: Teacher role, Differentiation, and Culture/Climate. Each component provides several declarative statements such as, "Both teachers are actively engaged," "Accommodations are evident within the instruction and activities/work presented," or "rituals and routines are evident" (NJ DOE, 2015, p. 65). The observing administrator can notate whether specific behaviors were observed or not observed and identify the teaching model observed using a pictorial representation provided on the form of co-teaching models.

A Texas Education Agency (n.d.) used representatives across the state to develop a document titled *Co-teaching: A how to guide: Guidelines for co-teaching in Texas*. The guide provides a sample walkthrough form with short phrases representative of co-teaching elements. The walkthrough collects information such as classroom climate, student engagement, co-teaching approach, and classroom management. The form falls into the recommendation to check the quality of implementation.

Colorado Assessment of Co-teaching

The Colorado Assessment of Co-teaching (CO-ACT) is an instrument that was originally designed to assist co-teachers in understanding the critical components of co-teaching. The CO-ACT was funded by a grant through the U.S. Department of Education Office of Special Education and Rehabilitative Services (OSERS). Based on sets of critical components, the

instrument has been found to differentiate exemplary teams (i.e., co-teaching partnerships) from

other co-teaching teams (Adams et al., 1993). The CO-ACT contains five factors: Factor I:

Personal Prerequisites, Factor II: Professional Relationships, Factor III: Classroom Dynamics,

and Factors IV and V are not classified by a group of specific components as they are pragmatic,

temporal conditions. Each factor contains a set of declarative statements, with practices related to

the theme of the factor designed and field-tested as part of a collaborative project between the

CO-ACT researchers and the Colorado Department of Education (Adams, 1993).

The concept of co-teaching emerged from the philosophy that two teachers with different

perspectives and professional backgrounds can bring a plethora of pedagogical strategies to the

classroom (Friend & Cook, 2016). This philosophy falls in perspective with the examples of

statements found within Factor I. Personal prerequisites share the importance of components

such as effective communication. Statements from within personal prerequisites read "Co-

teachers have effective communication skills;" "Co-teachers are willing to share their knowledge

and skills with each other" (Adams et al., 1993, p. 2). Although two separate statements, they are

both practices that are predicated on one another. Friend and Cook (2016) explained that

interpersonal collaboration is defined as two or more co-equal individuals who share a common

goal, responsibilities, resources, and decision making. The blending of these two experts' skills

enables access to the general education curricula (Campbell & Jeter-Illes, 2017). Thus, the

collaborative responsibilities and interpersonal collaboration develops the co-teaching

professional relationships.

Two teachers being willing to share their collective expertise is the basis for a sustainable

co-teaching relationship. The general education teacher serves as the content master, yet the

special education teacher works to individualize or differentiate the process to ensure that SWD

primarily and SWOD are able to access the curriculum. For example, the statement "co-teachers regularly set time aside for joint planning" (Adams et al., 1993, p. 2), indicates the presence of the opportunity for the content mastery to meet differentiation and the sharing of knowledge. Without the ability to co-plan, teachers are less likely to collaborate to determine which accommodations, modifications, and levels of differentiation are needed for higher levels of success for students (Murawski & Lochner, 2011). Murawski (2017) shared that professional responsibilities within co-teaching partnerships have three strands: communication, collaboration, and problem-solving, and are required continuously between educators as key to co-teaching partnerships. Murawski further explained that through processes of collaboration, collective inquiry, and dialogue, members work side by side to clarify what each student must learn, monitor their progress, and provide the necessary supports or enrichment based on student needs (Murawski, 2017). DuFour et al. (2010) recognized that collaborative teams with shared visions, missions, and values could accomplish more together for student achievement than they could alone. In addition to two teachers coming together to engage in a co-teaching, the dynamics of classroom environments are also critical components of co-teaching partnerships.

Classroom dynamics in a co-taught inclusive classroom involves more than the interactions between students and teachers. "Variety of co-teaching structures/formats, presentations, and methods to assess students' progress" (Adams et al., 1993, p. 2), are noted as important to elements listed within Factor III (Classroom Dynamics). Additional teacher responsibilities that support ideal classroom dynamics include designing lessons that instruct a diverse class using best practices, incorporating differentiated techniques and various co-instructional approaches, and assessing students using multiple means of expression (Murawski, 2017). Co-teachers' ability to address the diverse learning needs of SWD and SWOD to make

achievement gains begins with their planned co-facilitation of instruction and how the professional prerequisites connect and form the professional relationship. Being responsive to the diverse learning needs and varied achievement levels helps to sustain ideal practices, the professional relationship, and build upon the personal prerequisites of co-teachers.

Outcomes for SWD

Considerations of ESSA including provisions such as high academic standards, accountability measures, and statewide assessments were all designed to collectively advance equity for students to be prepared for success in college and career goals (U.S. Department of Education, n.d.). Financial support through means such as the *Investing in Innovation* grants is also a key component of the efforts to uphold accountability measures deemed necessary to improve the quality of educational experiences for students (U.S. Department of Education, n.d.). ESSA builds on key areas of progress (e.g., graduation rates, dropout rates, achievement gaps) and adds additional financial supports to improve student achievement. The latter expectation surmises positive outcomes for all students. Flexibility allowed by ESSA for states to develop their own plans aligned with ESSA goals implores the concern regarding the efficacy of educational opportunities such as co-teaching and/or challenges with implementation of state plans (i.e., co-teaching logistics, evaluation, and supervision of co-teachers) for student outcomes of high-need students (i.e., SWD).

The prevalence of inclusive practices has become favorable and widely accepted as one of the LRE for SWD. Gilmour (2018) shared that inclusion did not become a widespread practice due to a robust evidence base supporting its effectiveness as a result of federal laws establishing special rights for SWD and their parents. Although the inclusive environment is widely accepted and utilized, there exists limited quantitative evidence to support that co-teaching positively

impacts student outcomes for SWD. Existing established research specific to outcomes of SWD does not support the premise of ESSA that proposes preparation to advance equity and fully prepare *all* students for success in college and careers. The provisions extended through IDEA, IDEIA, NCLB, and ESSA struggle to demonstrate favorable outcomes for SWD when compared to SWOD exposed to the same educational experiences.

The National Center for Statistics (2020) reported that students from the ages of three through 21 years old receiving services under IDEA was 7.1 million or 14 % of all public-school students. Approximately 414,000 students from ages 14 through 21 served under IDEA exited school in 2017–18, over 73 % graduated with a regular high school diploma, 16 % dropped out, and 10 % received an alternative certificate (NCES, 2020). The percentage of students enrolled in postsecondary institutions was 19.4% compared to 80.6% of that of SWOD (NCES, 2019). The completion rate for SWD obtaining a bachelor's degree was 16.4%, fewer than SWOD which was 34.6% (U.S. Bureau of Labor Statistics, 2020). It is understood that education provides opportunities for employability for individuals who have completed higher levels of education. However, employability opportunities were 26.1% for SWD with a bachelor's degree, were fewer when compared to SWOD who held the same credentials at 75.9% (U.S. Bureau of Labor Statistics, 2020). In 2016, the median earnings of people with disabilities ages 16 and over in the U.S. were $22,047, which was about two-thirds of the median earnings of people without disabilities, $32,479, that represents an earning disparity of over $10,00 in median earnings (Kraus et al., 2017). This has been a continuous trend since 2008, resulting in 20.9% SWD living in poverty versus 13.1% for SWOD (Kraus et al., 2017).

The aforementioned statistics share the outcomes for students who complete school; however, SWD often miss instructional days of schools for different reasons. One main reason is

problematic behaviors that lead to suspensions resulting in an adverse impact on reaching learning objectives due to decreased instructional hours. This ultimately impacts post-secondary educational attainment goals resulting in decreased graduation rates. U.S. Government Accountability Office (2018) reported that SWD have been disproportionately suspended. Morgan et al. (2018) shared that the disproportionate rates of suspensions for SWD may occur due to lack of training in effective management in classroom behaviors for SWD. It becomes imperative for educational leaders to support co-teachers within their classroom dynamics to support the diverse groups of students and eliminate risk factors that may be present facilitating instruction for SWD in the same setting as SWOD. Reducing risk factors is important because students who are more frequently suspended are especially likely to experience academic difficulties in school due to increased absenteeism, and involvement with the criminal justice system due to less adult supervision and more opportunities to interact with criminally active individuals (Anderson & Ritter, 2017). Overall, if challenges with the implementation of co-teaching are not improved or properly supported, the outcomes for high-need students such as SWD will continue to fail to attain ideal benefits of inclusive settings. The reported statistics fail to show alignment to the promising changes for SWD under ESSA and/or with practices such as inclusion, which supports the notion of collaborative practices having positive outcomes for SWD. Considering the latter, educational leaders and teachers should support practices despite the popularity of the practice, but to make attempts to ensure that educational environments, such as inclusion, help SWD who are already not progressing on a commensurate level as SWOD beneficial. Advocating for best practices, may decrease the reported gaps in post-secondary opportunities and employability for SWD and reach the aims of ESSA to ensure success for all in college and careers.

Chapter Summary

School districts, school leaders, and classroom teachers are tasked with developing innovative practices to aid student achievement due to the focus of legislation aimed at accountability and the inclusion of all students. The placement of SWD into the general education settings among SWOD requires that teachers work collaboratively as co-teachers and co-instructors to facilitate instruction in the inclusion setting. The directive of ESSA to fully prepare all students for success on the collegiate level supports the nationwide commitment for equal and accessible opportunities for all students. Because school districts and school leaders desire to be in compliance with federal statutes, efforts to support and assess collaborative processes have become an essential focus for inclusion classes and co-teachers. Understanding common co-teaching logistics to include teachers' roles and responsibilities, noted concerns and challenges of co-teaching, evaluation/supervision of co-teaching programs, and student academic outcomes drove the focus of this literature review.

The literature review revealed factors regarding supports and challenges that impact the implementation of inclusion classes, such as lack of professional preparation for co-teachers, lack of administrative support, and lack of supportive structures. Supportive structures such as common planning times to co-plan and to determine how to co-assess instructional practices are often available to co-teachers. The literature also revealed that there is no single practice, co-teaching model, professional learning strategy, or evaluation/supervision method identified that has a correlation linked to the implementation of co-teaching and inclusion classes that has impacted student academic outcomes. Since many of the studies focused on a single factor such as teaming practices, planning tools, resources utilized for instructional planning, and resources

used for instructional delivery while co-teaching, it can be assumed that it takes a plethora of

different factors when implementing co-teaching in inclusive settings.

CHAPTER 3

METHODOLOGY

As a result of the federal mandates, students with disabilities are being provided services according to their individualized plans, inside the general education classroom under the direction of two teachers. This plan of instruction is the co-teaching setting which requires professional parity that builds effectively when the co-teaching partnership is one consistently rooted in collaborative efforts. Co-teaching has become an increasingly common option for educating students with disabilities in order to comply with the federal mandates (Friend, 2014). The general education teacher and the special education teacher must engage in a series of partnerships to create and design instructional plans that take into consideration willingness, ability, and preparation to provide accommodations and modifications for proper access to curriculum in an inclusion setting.

The inclusion process has brought about concerns for general education teachers, special education teachers, and school leaders, despite how legislation for educational reforms have increased the awareness and importance of supporting diverse sets of learners. Current research provides co-teachers and prospective co-teachers with recommended practices useful for effective co-teaching in inclusion settings; yet, the available research is often not accompanied by how the recommendations for collaboration impact student achievement data. Unfortunately, existing research does not elucidate the extent to which school districts are implementing co-teaching in a manner that corresponds with researched practices on the presence of known factors that lead to effective co-teaching. Therefore, the purpose of this study was to examine co-teaching methods and practices in a selected school district to determine the presence of elements that may contribute to effective co-teaching and student achievement.

Research Questions

This study was guided by the following overarching research question: What is the relationship between the quality of co-teaching partnerships and student achievement in middle school inclusive classrooms? In addition, the following two sub-questions served to add to this investigation:

1. What is the relationship between the level of agreement with the perceived presence of personal prerequisites, professional relationship, and classroom dynamics and student achievement in English Language Arts?

2. What is the relationship between the level of agreement with the perceived presence of personal prerequisites, professional relationship, and classroom dynamics and student achievement in Mathematics?

Research Design

In an effort to determine whether any relationship between the quality of the co-teaching partnerships and student achievement (i.e., SGPs) as measured by the GMAS, the researcher employed a quantitative approach in this study. According to Creswell (2014), "quantitative approaches focus on carefully measuring a parsimonious set of variables to answer theory-guided research questions and hypothesis" (p. 147). The variables within this quantitative study consisted of the factors related to the quality of co-teaching practices as measured by the CO-ACT instrument as well as students' growth performance on the English Language Arts and Mathematics portion of the GMAS. The variables consisted of SGPs collected from student achievement and the three factors that comprise the CO-ACT as follows: Factor I (Personal Prerequisites), Factor II (Professional Relationship), and Factor III (Classroom Dynamics). Although the CO-ACT has two scales, one measuring the importance, and one measuring

presence, for the purposes of this study the scale measuring presence was used alone to capture

behaviors and practices occurring within the co-teaching partnership. Assessment data helped to

determine any correlations that existed among practices within co-teaching partnerships in

grades six through eight as measured by the CO-ACT and student achievement.

To determine relationships between the quality of the co-teaching partnerships and

student achievement, the researcher collected numerical data which further supports the approach

of utilizing the quantitative research design. Creswell (2014) stated that quantitative research

examines the variables and the relationship the variables have with one another. In measuring

relationships, numerical data were collected and analyzed utilizing statistical procedures

(Creswell, 2014).

With the quantitative approach being the overall design of this research study, the

researcher specifically utilized a correlational study approach in measuring the relationship the

variables have with one another. This measurement demonstrated by the data that was collected

using a survey instrument administered to participants via an online platform (Qualtrics™). This

tool required teachers to rate the presence of factors in their co-teaching assignment. Survey

research involved collecting information from a sample of individuals by asking them questions

and securing responses from the questions (Check & Schutt, 2011). The researcher did not

manipulate any variables, yet only collected data from survey results and reported SGPs to

examine the extent to which the variables related to one another, in other words determined if the

value of one variable changed when the variable of another changed.

Population, Sample, and Sampling

The researcher selected one district in Georgia that employed a co-teaching methodology

(i.e., co-teaching partnerships) to deliver instruction to SWD and SWOD in inclusion classes in

middle grades six through eight in English Language Arts and Mathematics class. The researcher utilized this school district due to easy accessibility of school personnel. The school district is a public-school servicing grades Pre-kindergarten through 12, enrolling over 30,000 students in 56 schools. Of the total schools, there are 11 middle school programs with grades six through eight configuration. The researcher obtained permission to conduct this study in the identified district as substantiated by a Letter of Cooperation from the District.

The population included middle school general education and special education teachers participating in co-teaching partnerships. All co-teachers in the selected district participating in co-taught inclusion classes were eligible to participate in the study. The participants for the study were co-teachers facilitating instruction to students receiving education within an inclusion class. Participants for the study were selected using a criterion sampling process, which required them to meet a set of criteria to be eligible to participate (Savin-Baden & Major, 2013). The criteria for participation was that the participant had to be employed in a middle school within the selected district, assigned to the role of co-teacher in an inclusion class with SWD and SWOD, and lastly assigned to an English Language Arts or Mathematics co-teaching position with the same co-teacher for a minimum of one year. It was important that the teachers had knowledge of the co-teaching process and were able to give a first-hand account of the current co-teaching program and practices to give feedback. In order to identify the sample of co-teaching partnerships, the following selection criteria was applied to the list of all middle school co-teaching partnerships for the year to be researched 2018-2019: minimum of one-year co-teaching experience; assigned as a co-teacher in the core subject English Language Arts or Mathematics; and, partnered with the same co-teacher for the 2018-2019 school year.

In order to maintain confidentiality, pseudonyms were assigned for the school district, as well as for the schools and teachers participating in this study. The pseudonym utilized for the school district was *TM School District*. Each middle school was assigned a pseudonym as an identifier such as middle school campus and a number (i.e., MSC 1, MSC 2,… MSC 10, etc.). Once approval was ascertained from the Georgia Southern University Institutional Review Board (IRB), the principal of each school was contacted and asked for assistance with identifying co-teaching dyads. The co-teaching dyads were assigned pseudonyms containing the school campus identifier and an identifier per teacher. The pseudonyms for the co-teaching dyads included the assigned campus pseudonym, followed by "G" for general education teacher or "S" for special education teacher; the numbers six through eight will represent the associated grade level, and lastly the letter "E" or "M" will represent English Language Arts or Mathematics, respectfully (i.e., MSC1-G6M or MSC1-S6E).

Response Rate

For the purposes of this study, the researcher's goal was to involve 10 middle schools. The selected school district has a total of 11 traditional middle schools that were comprised of grades six through eight. The researcher expected to obtain at least 10 out 11 schools to participate. Having all 10 schools out of the 11 schools total would provide a representative population of the school district for the purpose of this study. One of the middle schools was not be asked to participate in the study because they were established in 2019 and have no GMAS data available. It was expected that within each traditional middle school, each grade level had a minimum of one co-taught English Language Arts class and a co-taught Mathematics class across grades six, seven, and eight. The researcher sought to obtain at least 120 teachers representing 60 co-teaching partnerships, which were referred to as *co-teaching dyads*. For each

school, the goal was to obtain a minimum of 12 participants, two teachers, per co-taught content areas, per grade level. However, the response rate at the conclusion of the study was calculated to be a 45% completion rate due to only capturing 56 participants, equating to 27 co-teaching dyads.

Instrumentation

Two sets of data were collected to answer the research questions. The data collection systems for co-teachers were gathered via an online platform (Qualtrics™) using the CO-ACT instrument. Student assessment data were gathered from the Georgia statewide growth results (i.e., mSGPs) in English Language Arts and Mathematics.

Colorado Assessment of Co-teaching

The CO-ACT (see Appendix A) was the main instrument used in this study. The CO-ACT is a survey type instrument designed to assist co-teachers in understanding critical components of co-teaching; the instrument has been found to differentiate exemplary teams from other co-teaching teams (Adams et al., 1993). The instrument was developed as part of a federally funded project, is based on extensive interviews with experienced co-teachers, and resulted in items being developed from co-teacher's descriptions of their practices.

Description of CO-ACT Factors. The factor descriptions below explain the statements selected per section that were used to elicit teacher ratings on identified critical components of exemplary co-teaching practices. Factor I: Personal Prerequisites are "the skills and characteristics that each teacher brings to the co-teaching situation" (Adams, 1993). Examples of statements co-teachers responded to within Factor I include: (a) "Co-teachers have a distinct but essential purpose in the co-taught class," (b) "Co-teachers are competent problem-solvers," and (c) "Co-teachers are confident of their skills as individual teachers" (Adams et al., 1993, p. 2).

Factor II: Professional Relationship describes the collaborative interaction of Co-teachers themselves (Adams, 1993). Examples of statements co-teachers responded to within Factor II include: (a) "Co-teachers are equally responsible for what happens in the classroom," (b) "Co-teachers make important decisions together," and (c) "One co-teacher can pick up where the other leaves off" (Adams et al., p. 4). Factor III: Classroom Dynamics includes the beliefs and actions that give added benefit to the Co-taught classroom" (Adams, 1993). Examples of statements co-teachers responded to within Factor III include: (a) "Co-teachers believe students' needs determine classroom practice," (b) "Co-teachers believe co-teaching is worth the effort," and (c) "Co-teachers share a philosophy about learning and teaching" (Adams et al., 1993, p. 6). Factors IV and V are pragmatic issues associated with co-teaching, noted as temporal conditions. Examples of statements co-teachers could respond to within Factors IV and V include: (a) "Co-teachers regularly set aside a time to communicate," (b) "Co-teachers trust each other," and (c) "Co-teachers respect each other's professionalism" (Adams et al., 1993, p. 8). Factors IV and V were not be used within this study.

Ratings from the instrument were collected from Factor I (Personal Prerequisites), Factor II (Professional Relationship), and Factor III (Classroom Dynamics). Each participant was asked to rate statements on how much they agreed or disagreed with the statement concerning co-teaching. The scale provides a series of statements and respondents were asked to indicate their level of agreement to each statement as: (1) *strongly disagree*; (2) *disagree*; (3) *neutral*; (4) *agree*; (5) *strongly agree*.

Student Achievement

For the purpose of this study, student achievement data were taken from the Spring 2019 administration of GMAS English Language Arts and Mathematics, the most recent data

available. Student achievement data were taken from these standardized criterion-referenced state assessments (i.e., GMAS) and were analyzed per class using the growth percentiles. Specifically, the mSGPs were used to represent the growth of the SWD group and the SWOD group. For growth percentiles, the median was reported as a numerical value and provided the mean of the two middle values of student growth (GaDOE, 2017). A median was well suited for general conversation and improvement planning as it was straightforward to interpret, indicating half of the students demonstrating growth above the median and the other half demonstrating below the median (GaDOE, 2017). The GMAS are the current Georgia state-mandated assessments that meet federal and state accountability criteria necessary to measure SWD and SWOD academic progress. According to the GaDOE (2017), "SGPs describe the amount of growth a student has demonstrated relative to academically similar students across the state. Growth percentiles range from one to 99, with lower percentiles indicating lower academic growth and higher percentiles indicating higher growth" (p. 1).

Data Collection

The researcher obtained a Letter of Cooperation from the superintendent of the district in which the study took place. After the approval from the IRB was obtained, the researcher communicated to all middle school principals in reference to the principals' school being a part of this study in the form of an email. The researcher shared with the principals the set of criteria for co-teachers to be eligible to participate and asked that the principal identify six co-teaching dyads; one dyad from English Language Arts class and one dyad from Mathematics class from each of the three grade-levels. The researcher gave the principals a one-week time frame in order to return names of co-teachers to the researcher. Once the names and emails were received, an

introductory email was sent to the teachers and provided a description of the study, an

approximate time commitment, and a request for the CO-ACT instrument.

Once teachers responded to the researcher via email regarding the request to participate, a

second email was sent with a link to the instrument via Qualtrics™. Respondents were asked to

provide minimal demographic information to ensure that respondents met the criteria to

participate in the study and so that the researcher could properly match the co-teaching dyads

responses. The researcher asked the participating teachers to self-report their mSGPs as reported

in the Statewide Longitudinal Data System (SLDS) for the SWD group and the SWOD group.

This information was collected along with the minimal demographic information requested from

respondents along with completion of the CO-ACT survey.

Once responses were received, the researcher was able to record the mSGPs for SWD

and SWOD per co-teaching dyad. Again, assessment data were obtained by the participating

teachers from the SLDS portal. Only data of students who were enrolled in the co-taught English

Language Arts or Mathematics class were utilized within this study. The data collection took

approximately three weeks, which included contacting teachers and receiving completed surveys.

Once the data were organized, the researcher reviewed participants' results on the instrument and

the respondents remained confidential.

Data Analysis

The research questions were answered by conducting a zero-order correlation analysis.

Pearson's *r* correlation between the total co-teaching partnership ratings were collected as dyad

scores and the mSGPs of English Language Arts and Mathematics data and calculated.

Correlation methods were used to explore whether a relationship existed between co-teaching

partnerships and student achievement. Partnership ratings were determined by calculating the

average of the *presence* partnership scores of the co-teacher pairs. The variables consisted of SGPs collected from student achievement and the CO-ACT variables which were as follows: Factor I (Personal Prerequisites), Factor II (Professional Relationship), and Factor III (Classroom Dynamics). The software used for data analysis was Microsoft Office Excel and IBM SPSS Statistics Version 25 for analysis. SPSS is a computer program used for statistical and data analysis. The researcher used Excel to store, organize, sort, and process calculations such as sum, mean, standard deviation. A dataset was imported into SPSS for statistical analyses in order to answer each research question. Cohen (1988) provided the following interpretive guidelines for *r*: .20-.399 as weak; .40-.599 as moderate; and ≥ .600 as strong.

The researcher disaggregated the students' mSGPs and used co-teaching partnership ratings. Student achievement data were used as variables and the two different subjects was analyzed individually instead of an aggregate of both subject areas. Both research questions were answered using a correlation analysis of the data sources.

Limitations, Delimitations, and Assumptions

There were variety of limitations within this study. One limitation of this study consisted of only measuring the presence of specific actions and behaviors of the co-teaching instructional program within the researcher's selected school district. Due to factors such as service needs of SWD, the structures of co-teaching assignments (i.e., school schedules, teacher allocations, district enrollment numbers) collaborative practices differed. A second limitation was the impact of human variability from one context to the other because the participants only rated how much they agreed with each factor on the instrument tool based on their own experiences at their specific schools. A third limitation was that the study was limited to teachers who participated in co-teaching in English Language Arts and Mathematics middle school inclusion classrooms.

This limitation was placed to ensure that perspectives shared on inclusive practices are based on teacher experience and exposure. The geographic location chosen for the study was a delimiting factor.

Research was conducted using teachers co-teaching in inclusion settings. The design of this study identified any correlations between the qualities of co-teaching partnerships and student achievement measured by student assessment data for SWD and SWOD. It was assumed that teachers at selected schools had co-taught and evaluated their perceived effectiveness of co-teaching. It was also assumed that the participants responded honestly and objectively while responding to the statements on the CO-ACT instrument, and that the CO-ACT accurately measured what it was purported to measure.

Chapter Summary

The purpose of this study was to identify any correlations that may exist among the qualities of co-teaching partnerships in grades six through eight as measured by the CO-ACT as related to academic achievement as measured by SGP data in middle school English Language Arts and Mathematics content areas. This study employed a correlational approach where the researcher maintained a detailed data collection process which involved the collection of data from the students' performance on the 2019 English Language Arts and Mathematics GMAS as well as the co-teacher participants' responses to the CO-ACT instrument. This study sought to determine the extent to which the level of agreement with the perceived presence of personal prerequisites, professional relationship, and classroom dynamics and their relationship to student achievement in English Language Arts and Mathematics co-taught inclusion classes. Understanding any relationships of co-teaching partnerships and student achievement could help

school leaders and teachers increase the utilization of impactful practices with desires to support

co-teaching partnerships, co-teaching practices/programs, and student achievement.

CHAPTER 4

REPORT OF THE DATA AND DATA ANALYSIS

The purpose of this study was to identify any correlations among the qualities of co-teaching partnerships in grades six through eight as measured by the CO-ACT and student achievement as measured by growth percentiles from the Georgia Milestones Assessment (GMAS) data in middle school English Language Arts and Mathematics content areas. This study sought to explore whether a relationship exist between co-teaching partnerships and student achievement. Partnership ratings were determined by calculating the average of the "presence" partnership scores of the co-teacher pairs.

The participants included middle school general education and special education teachers participating in co-teaching settings. Through an online survey, each participant was asked to respond to the scale measuring the presence of behaviors within the co-teaching partnership by rating how much they agreed or disagreed with provided statements on the CO-ACT instrument. In addition, student assessment data were gathered from the Georgia statewide assessment (i.e., GMAS) in English Language Arts and Mathematics. For the purpose of this study, student achievement data were taken from the Spring 2019 administration of GMAS in the English Language Arts and Mathematics assessments, the most recent data available. Student achievement data were analyzed per class using growth percentiles. Specifically, the median (i.e., SGPs) were used and reported as a numerical value to represent the combined summarized growth of the class per SWD group as well as the SWOD group. The researcher sought to determine if there were any correlations between the dyads and student achievement using the mSGPs for SWD and SWOD in English Language Arts and Mathematics and for comparison

purposes. In this chapter, a brief overview of the research design and a description of the

respondents are presented along with key findings of the study.

Research Questions

The increased prominence of co-teaching requires specific collaborative practices to be

implemented to deliver instruction especially as the percentage of SWD being educated in

inclusive settings alongside SWOD increases. Unfortunately, many school leaders lack

understanding of the importance for collaborative practices and co-teaching supports. In this

study, the researcher sought to add to the decreasing void in educational leadership research and

literature regarding the relationship between co-teaching practices and student achievement. The

overarching research question that this study sought to address was: What is the relationship

between the quality of co-teaching partnerships and student achievement in middle school

inclusive classrooms? In addition, the following two sub-questions served to add to this

investigation:

1. What is the relationship between the level of agreement with the perceived

    presence of personal prerequisites, professional relationship, and classroom

    dynamics and student achievement in English Language Arts?

2. What is the relationship between the level of agreement with the perceived

    presence of personal prerequisites, professional relationship, and classroom

    dynamics and student achievement in Mathematics?

Research Design

With the quantitative approach being the overall design of this research study, the

researcher utilized a correlational study approach in measuring the relationship the variables had

with one another. Specifically, the researcher sought to determine whether any relationship

existed between the quality of the co-teaching partnerships and student achievement (i.e., SGPs) as measured by the GMAS; therefore, the researcher employed a correlational approach. The variables consisted of the factors related to the quality of co-teaching practices as measured by the CO-ACT instrument as well as students' growth performance on the English Language Arts and Mathematics portion of the GMAS. The variables consisted of SGPs collected from student achievement and the three factors that comprise the CO-ACT as follows: Factor I (Personal Prerequisites), Factor II (Professional Relationship), and Factor III (Classroom Dynamics). Although the CO-ACT has two scales, one measuring the importance, and one measuring presence, for the purpose of this study the scale measuring presence was used alone to capture behaviors and practices occurring within the co-teaching partnership.

Description of Respondents

The researcher selected one district in Georgia that employed a co-teaching methodology (i.e., co-teaching partnerships) to deliver instruction to SWD and SWOD in inclusion classes in middle grades six through eight in English Language Arts and Mathematics class. The school district is a public-school servicing grades Pre-kindergarten through 12, enrolling over 30,000 students in 56 schools. Data were collected from 10 middle schools and from student achievement as reported from the Spring 2019 GMAS. There were a total of 27 dyads that participated in this study from the selected 10 middle school programs with grades six through eight configuration.

Study participants were comprised of co-teachers who were partnered together for the 2018-2019 school year and whose classes were administered the GMAS in English Language Arts and Mathematics. Of the middle school population, 120 co-teachers were sent recruitment emails with the secured survey link generated from Qualtrics to the associated school system's

assigned email. Participants gave implied consent by accessing the survey link for completion.

Of the 120 participants sought for the intended 60 co-teaching dyads, 56 completed the survey

and 27 co-teaching dyads were able to be matched. There were 14 co-teaching dyads in

Mathematics and 13 co-teaching dyads in English Language Arts.

Survey participants were asked to respond to items based on self-identification. The

gender of the participants consisted of both male and female co-teachers. The educational

experience of participants in this research ranged from one year to 30 years for general education

teachers and two years to 29 years of experience for Special Education teachers. Descriptive

information provided by co-teachers is summarized in Table 1.

Table 1: Co-teachers' Total Years of Educational Experience

Years of Experience	Number of Participants	Percentage of Participants
0-5	15	27.8
6-10	12	22.2
11-15	9	16.7
16-20	7	13
21-25	8	14.8
26-30	3	5.5

Note: $N = 54$

Findings

The study examined the relationship between variables which were the three factors that

comprise the CO-ACT: Factor I (Personal Prerequisites), Factor II (Professional Relationship),

and Factor III (Classroom Dynamics). Scores for level of agreement with the presence of Factor

I, Factor II, and Factor III were formed by computing composite mean scores of the co-teachers'

responses on the given five-level Likert scale for each respondent on the respective items for

each construct. The average response to items 1-10 formed the composite mean score for the measure for Factor I, the average response to items 11-27 represented the composite mean score for Factor II, and the average response to items 28-39 represented the composite mean score for Factor III. The mSGP were also examined as the measure for student achievement for English Language Arts and Mathematics.

The main interest to this study was to examine whether a relationship existed between the quality of co-teaching partnerships and any correlation to student achievement in middle school inclusive classrooms. The descriptive statistics of variables and the correlation between perceived presence of personal prerequisites, professional relationship, classroom dynamics, and student achievement in English Language Arts and Mathematics are presented in the following tables. The following findings address the strength of the relationships between each of the factors examined and student achievement.

Relationship Between Co-teaching Partnerships and Student Achievement in English Language Arts

The first research sub-question of this study sought to examine if there exists a statistically relationship between the level of agreement with the perceived presence of the quality of co-teaching partnerships as measured by the factors of personal prerequisites, professional relationship, and classroom dynamics, and student achievement in English Language Arts. Descriptive Statistics per CO-ACT factor is found in Table 2.

Table 2: Descriptive Statistics of Variables (Personal Prerequisites, Professional Relationship, and Classroom Dynamics)

Variables	M	SD	Min Value	Max Value	Median
Personal Prerequisites	4.43	.27	4.00	4.80	4.50
Professional Relationship	4.23	.54	3.10	4.90	4.40
Classroom Dynamics	4.45	.23	4.10	4.90	4.40

Note: $N = 13$

These results indicate that while slight differences exist among subgroups per CO-ACT factors, there was overall general agreeability within composite mean scores with the presence of practices and behaviors of each factor. The correlation between Factor I: Personal Prerequisites, Factor II: Professional Relationship, Factor III: Classroom Dynamics, and student achievement in English Language Arts are presented in Table 3.

Table 3: Zero-Order Correlation Matrix for Personal Prerequisites, Professional Relationship, Classroom Dynamics and ELA Achievement for Students with Disabilities and for Students without Disabilities

Variables	Personal Prerequisites	Professional Relationship	Classroom Dynamics	ELA Achievement for SWD	ELA Achievement for SWOD
Personal Prerequisites	-	.85*	.85*	-.11	-.36
Professional Relationship		-	.94*	.07	-.24
Classroom Dynamics			-	-.17	-.34
ELA Achievement for SWD				-	.51*
ELA Achievement for SWOD					-

Note: * $p < .01$ $N = 13$

The zero-order correlation (Table 3) indicates the correlation of the three variables. The results of this analysis show that there is a weak negative relationship between Factor I: Personal Prerequisites and student achievement in English Language Arts for SWD and Factor III: Classroom Dynamics and student achievement in English Language Arts for SWD. The analysis also shows that there is a weak positive relationship between Factor II: Professional Relationship and student achievement for SWD in English Language Arts. Additionally, the results indicate that there is a weak to moderate, negative relationship between both Factor I: Personal Prerequisites and student achievement in English Language Arts for SWOD and Factor III: Classrooms Dynamics and student achievement in English Language Arts for SWOD. There exists a weak negative relationship between Factor II: Professional Relationship and student achievement in English Language Arts for SWOD.

The *p*-value for Factor I: Personal Prerequisites and student achievement in English Language Arts was .36 for SWD; in addition, the *p*-value for SWOD was .12. Statistical analysis revealed that Factor I: Personal Prerequisites does not have a statistically significant relationship although positively related at the .01 level of significance in student achievement in English Language Arts for neither SWD nor SWOD. It appears that Factor I: Personal Prerequisites within a co-teaching partnership does not impact student achievement in English Language for neither SWD nor SWOD.

The *p*-value for Factor II: Professional Relationship and student achievement in English Language Arts was .42 for SWD and .23 for SWOD. Statistical analysis reveals that Factor II: Professional Relationship is not statistically significant although positively related at the .01 level of significance in student achievement for English Language Arts. It appears that Factor II:

Professional Relationship being present within a co-teaching partnership does not impact student achievement in English Language for neither SWD nor SWOD.

The *p*-value for Factor III: Classroom Dynamics and student achievement in English Language Arts was .28 for SWD and .13 for SWOD. Statistical analysis reveals there is not a statistically significant relationship between Factor III: Classroom Dynamics and student achievement in English Language for both SWD and SWOD. It appears that Factor III: Classroom Dynamics being present within a co-teaching partnership does not impact student achievement in English Language for neither SWD nor SWOD.

Relationship Between Co-teaching Partnerships and Student Achievement in Mathematics

The second sub-research question of this study sought to examine if there exists a statistically significant relationship between the level of agreement with the perceived presence of personal prerequisites, professional relationship, and classroom dynamics and student achievement in Mathematics. Descriptive Statistics per CO-ACT factor is found on Table 4.

Table 4: Descriptive Statistics of Variables (Personal Prerequisites, Professional Relationship, and Classroom Dynamics)

Variables	M	SD	Min Value	Max Value	Median
Personal Prerequisites	4.20	.61	3.10	4.80	4.43
Professional Relationship	3.78	.81	2.00	4.70	4.05
Classroom Dynamics	4.10	.88	2.10	4.80	4.45

Note: *N* = 14

These results indicate that although differences in responses exist among subgroups per CO-ACT factors, there was overall general agreeability within composite mean scores with the presence of practices and behaviors for Factor I: Personal Prerequisites and Factor III: Classroom Dynamics and slightly less agreeability with Factor II: Professional Relationship. The correlation

between Factor I: Personal Prerequisites, Factor II: Professional Relationship, Factor III:

Classroom Dynamics, and student achievement in Mathematics are presented in Table 5.

Table 5: Zero-Order Correlation Matrix for Personal Prerequisites, Professional Relationship, Classroom Dynamics and Mathematics Achievement for Students with Disabilities and for Students without Disabilities

Variables	Personal Prerequisites	Professional Relationship	Classroom Dynamics	Mathematics Achievement for SWD	Mathematics Achievement for SWOD
Personal Prerequisites	-	.85*	.85*	-.14	-.34
Professional Relationship		-	.94*	.02	-.17
Classroom Dynamics			-	-.05	-.26
Math Achievement for SWD				-	.51*
Math Achievement for SWOD					-

Note: * $p < .01$ $N = 14$

The zero-order correlation (Table 5) indicates the correlation of the three variables.

The results of this analysis show a weak negative relationship for both Factors I: Personal

Prerequisites and Factor III: Classroom Dynamics and student achievement in Mathematics for

SWD. However, there is a weak positive relationship between Factor II: Professional

Relationship and student achievement in Mathematics for SWD. Additionally, the results show

that there is weak to moderate, negative relationship between Factor I: Personal Prerequisites and

student achievement in Mathematics for SWOD. While results show a weak negative

relationship for both Factor II: Professional Relationship and Factor III: Classroom Dynamics

and student achievement in Mathematics for SWOD.

The *p*-value for Factor I: Personal Prerequisites and student achievement in Math was .32 for SWD; in addition, the *p*-value for SWOD was .12. Statistical analysis reveals that Factor I: Personal Prerequisites and student achievement in Mathematics are not statistically significantly and positively related at the .01 level of significance in student achievement in Mathematics for SWD and SWOD. It appears that Factor I: Personal Prerequisites being present within a co-teaching partnership does not impact student achievement in Mathematics for SWD nor SWOD.

The *p*-value for Factor II: Professional Relationship and student achievement in Mathematics was .48 for SWD, while the *p*-value for SWOD was .28. Statistical analysis reveal that Factor II: Professional Relationship and student achievement in Mathematics, are not statistically significant and positively related at the .01 level of significance. It appears that Factor II: Professional Relationship being present within a co-teaching partnership does not impact student achievement in Mathematics for neither SWD nor SWOD.

The *p*-value for Factor III: Classroom Dynamics and student achievement in Mathematics was .44 for SWD and .18 for SWOD. Statistical analysis reveal that Factor III: Classroom Dynamics and student achievement in Mathematics are not statistically significant although positively related at the .01 level of significance. It appears that Factor III: Classroom Dynamics being present within a co-teaching partnership does not impact student achievement in Mathematics for SWD nor SWOD.

Response to Research Questions

The following provides a response to each of the two research sub-questions as well as the overarching research question that guided this study. The first research sub-question sought to answer the question: What is the relationship between the level of agreement with the perceived presence of personal prerequisites, professional relationship, classroom dynamics and

student achievement in English Language Arts? Analysis revealed weak and weak-to-moderate relationships between the level of agreement with the perceived presence of personal prerequisites, professional relationship, and classroom dynamics. Findings are inconclusive regarding the presence of the three factors within a co-teaching partnership and the impact of student achievement in English Language Arts for either SWD or SWOD.

The second research sub-question sought to answer the question: What is the relationship between the level of agreement with the perceived presence of personal prerequisites, professional relationship, and classroom dynamics and student achievement in Mathematics? Analysis revealed weak and weak-to-moderate relationships between the level of agreement with the perceived presence of personal prerequisites, professional relationship, and classroom dynamics. Findings are inconclusive regarding the presence of the three factors within a co-teaching partnership and the impact of student achievement in Mathematics for either SWD or SWOD.

The overarching research question that guided this study was: What is the relationship between the quality of co-teaching partnerships and student achievement in middle school inclusive classrooms? The results of the analysis are inconclusive between the quality of co-teaching partnerships and student achievement in middle school inclusive classrooms. The results revealed overall general agreeability with the three variables, Factor I: Personal Prerequisites, Factor II: Professional Relationship, and Factor III: Classroom Dynamics for English Language Arts and Mathematics co-teaching dyads among the participants. While there was general agreeability, results also indicated that there existed no statistically significant relationships between any Factor and student achievement in English Language Arts or Mathematics. Though most of the relationships revealed negative correlations, there was a

positive relationship between Factor II: Professional Relationship and student achievement for SWD in English Language Arts and Mathematics. Overall, the results of the analysis were inconclusive due to the findings of weak and weak-to-moderate relationships revealed through analysis regarding the presences of behaviors and practices from the CO-ACT factors and the impact on student achievement in English Language Arts and Mathematics for SWD nor SWOD.

Chapter Summary

Analysis of the CO-ACT instrument and student achievement were explored to determine if a relationship existed between co-teaching partnerships and student achievement for SWD and SWOD in middle school inclusive classes. The study examined the relationship between variables that consisted of the three factors that comprise the CO-ACT: Factor I (Personal Prerequisites), Factor II (Professional Relationship), and Factor III (Classroom Dynamics), and the mSGP, which was used as the measure for student achievement for English Language Arts and Mathematics. Ten middle schools with grades six through eight configuration and inclusive classes in English Language Arts and Mathematics participated in this study with a provided 47% response rate, rendering 56 participants, 27 co-teaching partnerships. There were 14 co-teaching dyads in Mathematics and 13 co-teaching dyads in English Language Arts.

Overall, the results revealed overall general agreeability with the three variables (i.e., CO-ACT factors) for English Language Arts and Mathematics co-teaching dyads among the participants. However, there was no significant relationships between co-teaching partnerships and student achievement for either SWD or SWOD in English Language Arts or Mathematics. In other words, there was no evidence that the presences of behaviors and practices from the CO-ACT factors impact student achievement in English Language Arts and Mathematics for SWD nor SWOD. Of the analysis conducted, results revealed no statistical significance, and

inconclusive results between perceived presence of personal prerequisites, professional relationship, and classroom dynamics, and student achievement in English Language Arts and Mathematics. Most of the relationships revealed negative correlations, with the exception of a weak, positive correlation between Factor II: Professional Relationship and student achievement for SWD in English Language Arts and Mathematics. Chapter Five presents a detailed analysis of these findings, implications of findings and by recommendations for further research and practice.

CHAPTER 5

SUMMARY, CONCLUSION, AND IMPLICATIONS

The purpose of this study was to identify any correlations among the qualities of co-teaching partnerships in grades six through eight, as measured by the CO-ACT, and student achievement as measured by growth percentiles from the GMAS data in middle school English Language Arts and Mathematics content areas. This study employed a quantitative approach along with descriptive data analysis of one overarching research question and two sub-research questions. The overarching research question was: What is the relationship between the quality of co-teaching partnerships and student achievement in middle school inclusive classrooms? In addition, the following two sub-questions served to add to this investigation:

1. What is the relationship between the level of agreement with the perceived presence of personal prerequisites, professional relationship, and classroom dynamics and student achievement in English Language Arts?

2. What is the relationship between the level of agreement with the perceived presence of personal prerequisites, professional relationship, and classroom dynamics and student achievement in Mathematics?

Survey data were obtained from middle school general education and special education teachers who employed a co-teaching methodology (i.e., co-teaching partnerships) to deliver instruction to SWD and SWOD in inclusion classes in middle grades six through eight in English Language Arts and Mathematics class. The participants were selected from one public school district in Georgia that serviced grades Pre-kindergarten through 12. The findings of this study were to provide insight into the existence of any relationship between the quality of the co-teaching partnerships and student achievement.

Analysis of Research Findings

Descriptive statistics were collected from co-teachers in order to determine the relationship between the perceived presence of co-teaching factors and student achievement. The CO-ACT, by design, identifies the quality of co-teaching partnerships as exemplary and non-exemplary using a rating system of different factors in the three categories: personal prerequisites, professional relationship, and classroom dynamics. The CO-ACT has two scales, one measuring the importance and one measuring the presence of behaviors. For the purposes of this study, only the scale measuring the presence of behaviors within the co-teaching partnership were utilized. Student outcomes were measured through the state assessments GMAS that were administered during the Spring of 2019. The participants were comprised of co-teachers across grades six through eight in English Language Arts or Mathematics, who were partnered together during the 2018-2019 school year.

The results of this study revealed overall general agreeability with the three variables, Factor I: Personal Prerequisites, Factor II: Professional Relationship, and Factor III: Classroom Dynamics for English Language Arts and Mathematics co-teaching dyads among the participants. While there was general agreeability, results indicated that there existed no statistically significant relationships between any Factor and student achievement in English Language Arts and Mathematics. Though most of the relationships revealed negative correlations, there was a positive relationship between Factor II: Professional Relationship and student achievement for SWD in English Language Arts and Mathematics. Overall, the results revealed that there was no evidence that the presence of behaviors and practices from the CO-ACT factors impact student achievement in English Language Arts and Mathematics for either SWD or SWOD.

RQ #1: Relationship Between CO-ACT Factors and Student Achievement in English Language Arts

The first research sub-question sought to uncover if a relationship existed between the level of agreement with the perceived presence of personal prerequisites, professional relationship, and classroom dynamics and student achievement in English Language Arts. A correlation analysis was used to answer research question one. Scores for level of agreement with the presence of Factor I (Personal Prerequisites), Factor II (Professional Relationship), and Factor III (Classroom Dynamics) were formed by computing composite mean scores of the co-teacher's responses on the given five-level Likert scale and student achievement. Co-teacher's responses revealed overall general agreeability on each CO-ACT factor (refer to Table 2). The general agreeability suggested that co-teachers recognized and supported the practices as ideal for items on each construct on the CO-ACT as beneficial to the collaborative partnership.

Despite overall general agreeability of the analysis conducted in this study, there were no statistically significant results that indicated having the presence of behaviors within co-teaching partnerships correlate with student academic achievement in English Language Arts. The analysis also revealed a negative correlation between co-teacher's level of agreement regarding the presence of specific practices within their co-taught classrooms as evident across Factor I and Factor III for SWD and achievement in English Language Arts. A negative correlation was also revealed in Factor I, Factor II, and Factor III and achievement in English Language Arts for SWOD. As co-teachers' level of agreement increased, student achievement decreased. It seems intuitive that if co-teachers exhibit consistent levels of agreeability, there would be a positive correlation in student academic achievement. However, this correlation analysis did not indicate that the co-teaching partnership scores were associated with student achievement as there were no strong

relationships across any factor. Although there were weak, negative relationships revealed across certain Factors for SWD and SWOD, there were weak to moderate relationships consistently across Factor I and Factor III in English Language Arts for SWOD. A positive correlation between co-teachers' level of agreement regarding the presence of specific practices was evident across Factor II for SWD and student achievement in English Language Arts. This revealed that as teachers' level of agreement increased, student achievement also increased.

RQ #2: Relationship Between CO-ACT Factors and Student Achievement in Mathematics

The second research sub-question sought to uncover if a relationship existed between the level of agreement with the perceived presence of personal prerequisites, professional relationship, and classroom dynamics and student achievement in Mathematics. A correlation analysis was also used to answer research question two. Scores for level of agreement with the presence of Factor I, Factor II, and Factor III were formed by computing composite mean scores of the co-teacher's responses on the given five-level Likert scale and student achievement. Co-teacher's responses revealed overall general agreeability on each CO-ACT factor (refer to Table 4). The general agreeability suggested that co-teachers recognized and supported the practices as ideal for items on each construct on the CO-ACT as beneficial to the collaborative partnership in Mathematics.

Overall general agreeability of the analysis conducted in this study revealed no statistically significant results that would support having the presence of behaviors within co-teaching partnerships correlate with student academic achievement in Mathematics. The analysis also revealed a negative correlation between co-teacher's level of agreement regarding the presence of specific practices within their co-taught classrooms as evident across Factor I and Factor III for SWD and achievement in Mathematics while showing a positive correlation for

Factor II. A negative correlation was also revealed in Factor I, Factor II, and Factor III for SWOD and achievement in Mathematics, with weak to moderate showing in Factor I. As co-teachers' level of agreement increased, student achievement decreased. This correlation analysis did not indicate that the co-teaching partnership scores were associated with student achievement as there were no strong relationships across any factor. Although there were no strong relationships for neither SWD nor SWOD, there was a weak to moderate relationship consistently across Factor I in Mathematics for SWOD.

Quality of Co-Teaching Partnerships and Student Achievement

The overarching research question that guided this study sought to determine the relationship between the quality of co-teaching partnerships and student achievement in middle school inclusive classrooms. This correlation analysis did not indicate that the quality of the co-teaching partnership was associated with student achievement as there were no strong relationships across any factor. Overall, the results revealed that there was no evidence that the presence of practices from the CO-ACT factors impact student achievement in English Language Arts and Mathematics for neither SWD nor SWOD.

Discussion of Research Findings

The findings of this study were unexpected and contradictory to current literature. Strogilos and Avramidis (2016) reported that effective parity (i.e., effective co-planning, co-assessing, and relationships) underlie perceived co-teachers benefits, which consequently leads to student benefits. The researcher is unclear what would be classified as student benefits, yet one assumption is that student benefits includes student achievement. The researcher confirmed that the practices listed within the CO-ACT were still accepted as current viable practices. For example, Ruble and McGrew (2013) shared that teachers share the role of monitoring progress

both formally and informally as an effort to have students make academic progress. Classroom Dynamics, Factor III of the CO-ACT, speaks on assessment usage and despite participants in this study agreeing to mentioned behavior, there was no strong correlation with student achievement to support that students make academic progress as noted in this research. Although there is a gap in quantitative data to substantiate how a student benefits from effective parity, this study revealed that high levels of agreeability across Factor I, Factor II, and Factor III which may indicate effective parity does not ensure student achievement.

High levels of agreeability on the CO-ACT indicated that co-teachers typically agreed with having ideal practices present across all three Factors which lends itself to exemplary co-teaching; however, there exists no significant relationship between co-teaching partnerships and student achievement across Factors in English Language Arts and Mathematics for SWD and SWOD, albeit weak ones. This may be due to discrepancies between co-teachers' definition of the stated practice and its meaning within the context of recommended co-teaching practices (Brendle et al., 2017). Furthermore, variations in co-teaching experiences, co-teaching preparation, and existing pedagogical skills may have impacted the responses on the CO-ACT (Brendle et. al., 2017). Co-teachers could have perceived specific factors to be present; yet again, their perception is subject to their experience which may not match their co-teaching partner's extent of perception due to lack of clearly defined roles (Viel-Ruma et al., 2010).

Additional contradictory findings were evident with regard to the research and literature regarding collaborative teaching and its ability to establish a core set of the expected educator behaviors within a collaborative teaching setting (Brawand & King, 2017). The latter research indicated proper assignment of responsibilities between co-teachers is imperative for students to conceptualize content and benefit from having two teachers. Results in this study revealed

negative correlation, which is contrary to the ideal that students would conceptualize content and benefit from having two teachers. Additional literature by Mielke and Rush (2016) purported that teachers need assistance with division of tasks because teachers may not yet have known how to mitigate differences in their training, their backgrounds, their skills, and their challenges. Considering proper assignment of responsibilities between co-teachers is needed yet teachers are challenged with division of tasks, could explain why student achievement is not positively correlated with co-teaching partnerships and student achievement. Co-teachers may perceive that within their relationship specific practices are present, but due to their differing levels of training and backgrounds it may be a misunderstood agreement of practices present as well as ineffective implementation of practices which consequently impedes desirable outcomes, which would ultimately be achievement for all students. Unfortunately, teachers may continue to operate under the same level of potential faulty understanding without being provided corrective measures from evaluative feedback from school leaders. The process of receiving clear evaluative feedback could be further impacted because of leaders' unfamiliarity with collaborative partnerships.

As acknowledged in literature by Benedict et al. (2013), it is important for teachers to use the feedback received from evaluations to inform professional learning goals and prepare for instruction. Benedict et al. (2013) reported that periodic checkpoints support teachers in professional reflection and development of their instructional practices. Friend et al. (2010) also explained that administrators can help close the gaps in teacher knowledge and experiences related to co-teaching regardless of the lack of professional preparation or inconsistencies that still exist in co-teaching.

One might assume that amicable professional parity with the presence of practices identified in exemplary co-teaching partnerships would yield a positive correlation between co-teaching partnership and student achievement; however, the results of this study showed otherwise. It is likely that the practices listed within the CO-ACT help establish and maintain amicable co-teaching partnerships and promote professional parity, yet the sole presence of the Factors within a collaboration does not lend itself to any consistent expected level of performance. Moving from parity to actionable steps may yield gains in student achievement.

There was an interesting finding within the analysis of this study that did not align with the pattern of the other analysis. Most of the analysis yielded a pattern of weak negative relationships, yet findings also revealed a weak positive relationship between Factor II: The Professional Relationship and student achievement in English Language Arts and Mathematics for SWD. Indicating, as co-teachers' level of agreement increased, student achievement in English Language Arts and Mathematics also increased for SWD. Many of the declarative statements existing in Factor II are prevalent across different literature that specifies behaviors necessary within a co-teaching partnership. In the literature, Murawski (2017) stated that professional responsibilities within co-teaching partnerships have three strands: communication, collaboration, and problem-solving that are required continuously between educators as key components of co-teaching partnerships. DuFour et al. (2010) also recognized that collaborative teams with shared visions, missions, and values could accomplish more together for student achievement than they could alone. Statements found within Factor II of the CO-ACT instrument express, "Co-teachers share a philosophy about learning and teaching," "Co-teachers use collaborative strategies for problem-solving" (Adams et al., 1993, p. 2). It is likely that regardless of the personal prerequisites that co-teachers may bring to a co-teaching relationship,

the skillsets are not useful if co-teachers are not willing to work to combine skills for a common

goal. "Co-teachers are committed to building and maintaining their professional relationship,"

the leading declarative statement in Factor II seems to tie the other factors together (Adams et al.,

1993, p. 2). Factor I: Personal Prerequisites deal with skillsets of co-teachers that join

collaboratively and become evident within Factor II: Professional Relationship, to then put in

action within the classroom setting which becomes the core of Factor III: Classroom Dynamics.

Conclusions

A correlation analysis between co-teacher agreement regarding the presence of behaviors

within co-teaching partnerships and student achievement scores indicated weak relationships and

weak to moderate relationships; however, no statistically significant relationships existed between

the variables. As teachers became closer in agreement regarding the presence of practices within

their partnership, then generally student achievement scores were lower. However, it would seem

the level of agreement between co-teachers would play a role in increasing student achievement.

In other words, regardless of whether a partnership agreed (according to their CO-ACT

responses) that they were implementing exemplary practices as prescribed in the CO-ACT, there

was little correlation as indicative of weak relationships with student achievement.

While the design of this study contained an additional limitation due to a small sample

size, the study itself is expected to provide valuable information to the growing body of research

on co-teaching and practical implications for implementation of the co-teaching model for school

practitioners. As presented in the literature review, there is limited research on the effectiveness of

co-teaching for SWD and SWOD in grades six through eight correlated to specific quantitative

academic outcomes. Therefore, this study adds additional insight related to the effectiveness of

co-teaching. Research explains that teachers frequently express barriers because of concerns

regarding logistics of inclusive practices, belief that working with students with disabilities becomes time intrusive, lack of knowledge regarding the specialized teaching strategies for students with disabilities, and that general education staff are not equipped with adequate skills needed to work with students with special needs (Gee & Gonsier-Gerdin, 2018; Mitchell, 2019). The latter research paired with the poor secondary outcomes for high-need student groups (i.e., SWD) such as lower education completion rates, lower employability opportunities, and lower earning capacities, reminds educational leaders and teachers to not support practices due to their popularity; but to ensure processes such as inclusion to help SWD who are not progressing on a commensurate levels as SWOD. It is also important for school leaders to be reminded that the increased usage of inclusion did not become a widespread practice due to a robust evidence base supporting its effectiveness (Gilmour, 2018).

Finally, the findings of this study will aid practitioners in understanding how the sole purpose of the co-teaching relationship must move beyond parity to ensure that what co-teachers perceive as acceptable behaviors are facilitated and implemented with fidelity.

Implications

This study demonstrates that specific behaviors and a range of factors may influence co-teaching partnerships as far as professional parity but is not related to academic outcomes (i.e., student achievement); thus, the findings of this study have several implications. First, the implementation of training regarding inclusion and co-teaching has not been thoroughly addressed in educational preparation programs for leaders nor teachers; therefore, school leaders are often not aware of how to provide support to co-teaching programs and teachers are not clear on how to engage in co-teaching partnerships.

The lack of quantitative research data involving co-teaching partnerships and student achievement presents many challenges for leaders and teachers implementing inclusion. Although inclusion has vastly expanded and is being mandated in many school districts, teachers and leaders struggle with identifying the most effective type of co-teaching collaborations or effective factors with classroom dynamics while engaging in co-teaching. Co-teachers must fundamentally understand the theoretical and practical meaning of recommended co-teaching practices. Increasing the number of inclusive settings has not decreased levels of subjectivity found across districts and across states, which is why there is a lack of consistency with co-teaching logistical plans and evaluation instruments. It must be acknowledged that teachers could essentially agree on invalid implementation of practices as both teachers may lack professional knowledge. Lacking professional knowledge and being able to exhibit pedagogical skills and best practices as relevant to the subject, may impact SWD as well as SWOD ability to acquire key knowledge and skills.

A second implication is targeted toward school leaders who are responsible for evaluating and supervising inclusive settings. Beninghof and Leensvaart (2016) asserted that it is important to actively supervise and provide co-teachers with supportive feedback to minimize challenges such as ineffective division of labor. It is equally important for teachers to be able to self-assess, evaluate their current skillset, and build self-efficacy in order to be able to remain objective while dealing with differing perspectives within a co-teaching dyad.

Despite the importance of providing feedback to teachers, school leaders find it further challenging to do so due to the lack of familiarity with identifying exemplary and non-exemplary co-teaching partnerships. As a result of specific feedback being often omitted from evaluations of teachers participating in co-teaching partnerships, there exists a lack of understanding on how

to develop instructional next steps. Co-teachers should be supported in a clear and concise method for understanding on how the implementation of factors within the CO-ACT are facilitated with fidelity as their perspective of what and how a practice is done may differ. In short, school leaders are uncertain if teachers are co-teaching in a manner that optimizes positive student academic outcomes. Holdheide et al. (2010) noted that evaluations are beneficial yet evaluating general education and special education teachers using the same evaluation methods may be problematic as this method fails to account for the roles and responsibilities special education teachers contribute to the cognitive development of SWD. Therefore, it is important for school leaders to provide feedback from evaluations but should seek to have some form of instrumentation that communicates a standard of practices and expectations for teachers to use as a guide while engaging in co-teaching and the need for a separate co-teaching instrument to assess co-teaching situations.

A third implication of this research study is that these recommendations provide key knowledge on the perception of co-teaching implementation in terms of personal and professional factors that may be useful with improving inclusive settings to yield gains in student achievement. Finding practices and evaluation methods that could build co-teachers' efficacy in a manner that encompasses ideal collaborations to give students adequate access to curriculum remains a challenge. Current research does not include ways in which student achievement could be improved, which makes the results of this study valuable to school leaders and teachers alike, specifically because of high need students and to help both understand that simply constructing a solid co-teaching partnership does not automatically benefit student achievement. As a result of school accountability systems and teacher evaluation systems, school leaders have a greater responsibility to gauge teacher proficiency in order to ensure the best academic outcomes of

students. The information in this study examined different co-teaching dynamics that may be beneficial to SWD and SWOD in inclusive classrooms. Accountability measures are set across many states and are required within evaluation processes for leaders and teachers to emphasize the attention needed for targeted school improvement. School leaders interested in school improvement measures must acknowledge the (poor) academic outcomes for SWD to improve the effectiveness of practices such as inclusion.

<div align="center">**Impact Statement**</div>

Evolving legislation requires school leaders to become innovative with developing school plans and providing resources to support various initiatives. Enhancing school performance is a multi-faceted focus. The implementation of co-teaching is one entity that school leaders use to enhance student achievement and advance educational equity through the implementation of inclusive settings. The concept of co-teaching emerged from the philosophy that two teachers with different perspectives and professional backgrounds can bring a plethora of pedagogical strategies to the classroom (Friend & Cook, 2016). However, there is difficulty with implementing co-teaching partnerships in a manner where school leaders and co-teachers understand how to mitigate between challenges to work collaboratively in a manner that is beneficial to students and that positively impact student achievement.

This quantitative study helped capture practices occurring within the co-teaching partnership. Understanding co-teaching partnerships and student achievement may increase the opportunity for school leaders to utilize impactful practices to support co-teaching partnerships, co-teaching practices/programs, and student achievement. The latter helps school leaders build comprehensive supportive plans for holistic support of co-teaching partnerships. Finally, as school leaders work to tailor school initiatives with outcome-based measures, the findings of this

study may contribute to the growing body of literature on co-teaching partnerships and student achievement which may be of use to educational practitioners. This may also encourage school leaders to focus beyond professional parity and focus on helping teachers understand effective implementation for specific behaviors necessary for co-teaching and co-facilitation. Teachers agreeing that a variety of co-teaching structures/formats, presentations, and methods to assess students' progress exist within their co-teaching practices is ideal. However, co-teachers understanding how to analyze results of co-teaching structures/formats, presentations, and assessment methods in order to develop instructional next steps may prove more beneficial with making gains in student achievement, especially for SWD. It is now necessary to move beyond simply exposing students to curriculum toward ensuring adequate content knowledge exists and the knowledge of how to facilitate instruction is understood.

Research Limitations

The findings of this study have to be seen in light of the variety of limitations within this study. Initially there were three limitations. One limitation of this study consisted of only measuring the presence of specific actions and behaviors of the co-teaching partnership within the researcher's selected school district. A second limitation was the impact of human variability from one context to the other because the participants only rated how much they agreed with each factor on the instrument tool based on their own experiences at their specific schools. A third limitation was that the study was limited to teachers who participated in co-teaching in English Language Arts and Mathematics middle school inclusion classrooms which was necessary to gain perspectives based on teacher experience and exposure. Additionally, there were two limitations revealed in this study that may have potentially impacted study results yet

could be addressed in future research. Those limitations included a small sample size and the use of self-reported data.

Sample Size

A criterion sampling process was used for participant selection. As a result of the cancellation of the 2020 Spring GMAS due to the coronavirus (COVID-19), the researcher was only able to use the last available student data which was the 2019 Spring GMAS administration. Being required to use 2019 scores also required that the researcher solicit participants from the previous academic school year of 2018-2019. In doing so, there were some challenges with obtaining and locating participants due to principal and teacher reassignments/retirements. The sample size may have been further impacted because the analysis was disaggregated by subject area instead of as an aggregate of both subject areas.

Self-Reported Data

Using self-reported data for the CO-ACT responses and for reporting student achievement data were also revealed as a limitation because the researcher was unable to confirm the accuracy and/or how objectively participants were while responding to the statements on the CO-ACT instrument. Teacher differences in knowledge of behavior and practices within co-teaching as well as teacher interpretation of how to implement those practices may have impacted responses to CO-ACT. The self-reported data derived from the CO-ACT responses and student achievement yielded quantitative measures that were analyzed; however, the quality of that data was still reliant on teachers' perception of their implementation of co-teaching practices and honest reporting of student data. Conducting research that attempts to measure the academic achievement of a group, related to the quality of the instructional programming, again is limited by the human variability from one context to another. The limitations of this study and consideration for future similar studies are discussed in the next section.

Recommendations

This study presented valuable insight related to potential correlations among the qualities of co-teaching partnerships in grades six through eight as measured by the CO-ACT and student achievement. As a result, the researcher provided recommendations for practices as well as recommendations for future research.

Recommendations for Practice for Leaders

Currently serving in the capacity of an educational leader and understanding how experience shapes perspectives and leads to subjectivity with practices, the following recommendations are for leaders to take into consideration. First, it is recommended that leaders establish a set expectation for how co-teaching will be facilitated throughout the building (i.e., a general structure/guidelines). Leaders should develop a shared vision and detail the expectations at a minimum regarding professional relationships and classroom dynamics. Once a consensus is agreed upon, school leaders could spend time determining how to evaluate and supervise co-teaching practices. Prior to evaluating practices, it is further recommended that leaders conduct performance calibrated non-evaluative observations. Non-evaluative performance calibrated observations will allow leaders to see practices and behaviors in action, allow opportunity for clarity on what leaders set as expectations in order to apply a consistent set of standards. Even if the opportunity to use a separate evaluation tool for co-teachers is unavailable, leaders could focus in on the roles and responsibilities which each teacher contributes according to the previously identified set of expectations. Being mindful that when teachers receive feedback on their pedagogical practices, they in turn are able to use the feedback for improvement in teaching practices to positively impact student achievement.

Second, it is recommended that leaders intentionally plan job-embedded professional learning opportunities. Providing professional learning opportunities on the core practices and

expectations may allow teachers to build a frame of reference. There is no guarantee that teachers will join any school community with prior knowledge or with co-teaching experience. There is also no guarantee that teachers will have the opportunity to pair with the same teacher as they were paired with the prior year, so it becomes necessary to have practices that one could easily acquire. Leaders must provide professional learning beyond building amicable relationships between co-teachers but should look into instructional practices that are designed to deliberately address learning differences with the inclusive setting. The latter is imperative due to many teachers lacking experience with content mastery or differentiating lessons well enough to reach a set of diverse learners.

A third recommendation is to create a master schedule that promotes common planning aligned with co-teaching assignments and is supportive of collaborative needs. Co-teachers need the opportunity to plan classroom dynamics collaboratively. Allotting time for teachers to communicate frequently to work on how to co-facilitate instruction, divide instructional task, and identify roles/responsibilities, will be a solid foundation on other shared decisions in co-teaching partnerships such as grading, behavior plans, and instructional resources.

Recommendations for Practice for Teachers

Co-teaching parity is highly dependent upon the professional relationships and how co-teachers can collectively combine their professional skillset and personal prerequisite skills to co-facilitate instruction. Co-teachers are not often granted the opportunity to personally select their co-teacher partner; thus, it becomes necessary to communicate consistently once engaged in a co-teaching partnership. As a result, the use of a lesson planning tool that helps co-teachers identify roles and delineate instructional task is recommended. The latter will help cultivate communication and the professional relationship between co-teachers as they work to create a

shared vision of what their professional parity will consist. Another recommendation is that co-teachers participate in various forms of professional learning opportunities that are geared toward behaviors identified in the CO-ACT instrument. Professional learning opportunities will help to strengthen personal prerequisite skills, the professional relationship, and classroom dynamics assisting teachers to create classroom environments that support diverse groups of learners (i.e., SWD and SWOD). Teachers may perceive that the presence of specific behaviors exist; however, the correct form of implementation must be understood.

Recommendations for Future Research

Due to the state of Georgia cancelling the administration of the 2020 GMAS as a result of the Coronavirus, the researcher had to resort to using data from the Spring 2019 GMAS administration. Challenges with matching co-teaching dyads and achievement data accessibility collectively impacted the sample size. Additionally, there were 54 participants equating to 27 partnerships that responded to the CO-ACT instrument from a potential 120 teachers and a potential 60 co-teaching partnerships. This limited sample size posed a limitation on the study. Future studies of a similar nature may want to explore research study methods to increase response rates and increase survey participation. Research conducted during a pandemic may not be optimum for achieving a maximum sample size.

Research was found that supported practices written within the CO-ACT instrument as relative to this study; however, there were several related topics of interest that may be of consideration for future studies. Future research recommendations for consideration include the following:

1. It is recommended that the study is replicated to determine if significant findings or patterns of practice in any factor of the CO-ACT are similar or different across other school districts implementing co-teaching models.

2. It is recommended that a replication of this study include other factors such as teaching years of experience, certification areas, and the analysis of these results may help future researchers determine the level of agreements are higher with co-teachers who have experience and/or assigned to the a class within their certification field.

3. It is recommended for future studies to include elementary and high school co-teachers and student achievement.

4. It is recommended that replications of this study include an examination of how teachers understand and define specific behaviors or practices listed on the CO-ACT within their co-teaching partnerships.

5. It is recommended that a longitudinal study be conducted to examine student achievement results when co-teachers are partnered to co-teach for two or more years.

6. It is recommended that the study be replicated to determine if there exist any relationship between co-teaching partnerships and other factors outside of academic scores such as attendance or behavior incidents.

<div align="center">Dissemination</div>

Internal Dissemination

The findings and recommendations of this study may be of interest to district level personnel who are responsible for district professional learning opportunities that are targeted toward building leaders who evaluate co-teaching and co-teachers co-facilitating instruction in inclusive settings. The researcher has plans to present these findings to the Special Education department within the TM

School District, which could help district leaders coordinate resources to support co-teaching

programs in middle schools around the district. Providing resources and tailoring professional

learning opportunities pertaining to different dynamics of co-teaching may benefit school leaders by

expanding school leaders' knowledge of fundamental co-teaching logistics to include teachers'

roles and responsibilities, prep for common concerns with challenges of co-teaching, methods for

evaluation/supervision of co-teaching programs, and varied approaches to co-teaching logistics.

School leaders will then be able to align resources to address needs according to the dynamics of

their school. The school leaders (i.e., principals) who agreed to allow access to the teachers for

participation will be provided a copy of the results of this study via email.

The findings of these studies may also be of interest to co-teachers who are interested in

strengthening professional parity and building co-teaching capacity. Co-teachers could engage in

discussion regarding how to improve the level of agreement and increase the presence of

recommended behaviors and practices. The latter could help gain stronger solidarity and positively

impact student achievement.

External Dissemination

District personnel, building leaders, co-teachers, and other school districts may be interested

in the findings of this study as they work through co-teaching logistics. The aforementioned benefits

such as providing resources and tailoring professional learning opportunities pertaining to different

dynamics of co-teaching could be utilized and serve as a resource. The results of this study will be

made accessible to school leaders once this dissertation has been approved. These educational

leaders will be able to access the results of this study by accessing the dissertation via the

Electronic Thesis and Dissertation (ETD) for Georgia Southern University upon final approval.

Concluding Thoughts

Evolving legislation and the convergence of initiatives and legislation require school systems and educators to determine how to provide equitable educational experiences and services for students. The information from this study will contribute to decreasing the gap in educational leadership research and literature regarding the relationship between co-teaching partnerships and student achievement. The conduction of this study also provided valuable information on practical implications for implementation of co-teaching and professional parity between co-teaching partners. With the percentage of SWD being educated in general education settings among SWOD, educational leaders must remain reflective about practices implemented and aim to create collaborative leadership that will permit governance in which all stakeholders are in the decision-making process. The latter will increase strategic creation of outcome-based practices directed toward school improvement and ultimately improved student achievement gains especially in middle schools where students are administered state assessments across subject areas in every grade. The lack of research regarding the relationship between co-teaching partnerships and student achievement presents challenges for school personnel (i.e., district leaders, school administrators, teachers) who desire to make improvement and/or sustain improvement on state and local accountability measures. The over general agreeability in participant's responses reveal teachers support of various valued practices for co-teaching partnerships. Understanding methods to improve teacher's interpretation of how to implement specific practices within co-teaching partnerships and student achievement, especially for SWD, could help with the latter as well as assist school leaders and teachers with intentional utilization of impactful practices that support co-teaching partnerships, co-teaching practices/programs, and student achievement for both SWD and SWOD.

REFERENCES

Adams, L. (1993). *Effectiveness indicators of collaborative efforts in special education/general education co-teaching*. (Grant No. H159F-10004) [Grant]. Colorado Department of Education.

Adams, L., Cessna, K., & Friend, M. (1993). *Colorado Assessment of Co-Teaching: CO-ACT* [Questionnaire instrument]. Colorado Department of Education.

Agoratus, L. (2017). What families need to know. *Exceptional Parent*, *47*(5), 47-49.

Alexander, K., & Alexander, M. D. (2011). *American public-school law* (8th ed.). Wadsworth Group.

Anderson, K. P., & Ritter, G. W. (2017). Disparate use of exclusionary discipline: Evidence on inequities in school discipline from a U.S. State. *Education Policy Analysis Archives*, *25*(49), 1-32.

Ashton, J. R. (2016). Keeping up with the class: A critical discourse analysis of teacher interactions in a co-teaching context. *Classroom Discourse*, *7*(1), 1-17.

Aviles, N., & Grayson, K. (2017). *Backwards planning-how assessment impacts teaching and learning.* https://www.idra.org/resource-center/backward-planning-assessment-impacts-teaching-learning/

Benedict, A. E., Thomas, R. A., Kimerling, J., & Leko, C. (2013). Trends in teacher evaluation. *Teaching Exceptional Children*, *45*(5), 60-68.

Beninghof, A., & Leensvaart, M. (2016). Co-teaching to support ELLs. *Educational Leadership*, *73*(5), 70-73.

Boyle, C., Topping, K., Jindal-Snape, D., & Norwich, B. (2012). The importance of peer-support for teaching staff when including children with special educational needs. *School Psychology International*, *33*(2), 167-184. https://doi.org/10.1177/0143034311415783

Braward, A., & King, S. M. E. (2017). Maximizing pedagogy for secondary co-teachers. *Support for Learning, 32*(3), 216–230. https://doi.org/10.1111/1467-9604.12166

Brendle, J., Lock, R., & Piazza, K. (2017). A study of co-teaching identifying effective implementation strategies. *International Journal of Special Education, 32*(3), 538-550.

Brown, N. B., Howerter, C. S., & Morgan, J. (2013). Tools and strategies for making co-teaching work. *Intervention in School and Clinic*, *49*(2), 84-91.

Campbell, B., & Jeter-Iles, P. (2017). Educator perceptions on co-teaching more than a decade later. *Journal of Behavioral and Social Sciences*, *4*(3), 156-163.

Cassel, S. (2019). How to choose a co-teaching model. *Edutopia*. https://www.edutopia.org/article/how-choose-co-teaching-model

Check, J., & Schutt, R. (2011). *Research methods in education*. Sage Publications.

Chitiyo, J., & Brinda, W. (2018). Teacher preparedness in the use of co-teaching in inclusive classrooms. *Support for Learning*, *33*(1), 38-51. https://doi.org/10.1111/1467-9604.12190

Cohen, J. 1988. *Statistical power analysis for the behavioral sciences*. Laurence Earlbaum Associates.

Cooc, N. (2019). Teaching students with special needs: International trends in school capacity and the need for teacher professional development. *Teaching & Teacher Education*, *83*, 27–41. https://doi.org/10.1016/j.tate.2019.03.021

Copeland, S., & Cosbey, J. (2008). Making progress in the general curriculum: Rethinking effective instructional practices. *Research and Practice for Persons with Severe Disabilities*, *34*(1), 214-227. https://doi.org/10.2511/rpsd.33.4.214

Creswell, J. W. (2014). *Research Design: Qualitative, quantitative and mixed methods approaches* (4th ed.). SAGE Publications, Inc.

Davis, K. E. B, Dieker, L., Pearl, C., & Kirkpatrick, R. M. (2012). Planning in the middle: Co-planning in the middle: Co-planning between general and special education. *Journal of Educational and Psychological Consultation*, *22*(3), 208-226. https://doi.org/10.1080/10474412.2012.706561

DeMartino, P., & Specht, P. (2018). Collaborative co-teaching models and specially designed instruction in secondary education: A new inclusive consultation model. *Preventing School Failure*, *62*(4), 266-278. https://doi.org/10.1080/1045988X.2018.1446413

Dieker, L., & Rodriguez, J. (2013). Enhancing secondary cotaught science and mathematics classrooms through collaboration. *Intervention in School and Clinic, 49*(1), 46-53.

DuFour, R., DuFour, R., Eaker. R., Many, T. W., & Mattos, M. (2010). *Learning by doing* (3rd ed.). Solution Tree Press.

Every Student Succeeds Act of 2015, Pub. L. No. 114-95, 114 Stat. 1177 (2015-2016).

Fitzell, S.G. (2018). *Best practices in co-teaching and collaboration.* Cogent Catalyst Publications.

Fleischer, D., & Zames, F. (2011). *The disability rights movement: From charity to confrontation*. Temple University Press.

Florian, L., & Black-Hawkins, K. (2011). Exploring inclusive pedagogy. *British Educational Research Journal*, *37*(5), 813-828. https://doi.org/10.1080/01411926.2010.501096

Friend, M. (2019). *Co-teach! Building and sustaining classroom partnerships in inclusive schools* (3rd ed). Marilyn Friend, Inc.

Friend, M., & Cook, L. (2013). *Interactions: Collaboration skills for school professionals* (7th ed.). Pearson/Merrill.

Friend, M., & Cook, L. (2016). *Interactions: Collaboration skills for school professionals* (8th ed.). 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 & Psychological Consultation, 20*(1), 9-27. https://doi.org/10.1080/10474410903535380

Friend, M. P. (2014). *Co-teach: Building and sustaining effective classroom partnerships in inclusive schools*. Marilyn Friend.

Friend, M., Embury, D., & Clarke, L. (2014). *Co*-teaching versus apprentice teaching: An analysis of similarities and differences*. Teacher Education and Special Education, 38*(2), 79-87. https://doi.org/10.1177/0888406414529308

Friend, M., & Bursuck, W. D. (2018). *Including students with special needs: A practical guide for teachers* (8th ed.). Pearson Education, Inc.

Gee, K., & Gonsier-Gerdin, J. (2018). The first year as teachers assigned to elementary and middle-school special education classrooms. *Research & Practice for Persons with Severe Disabilities*, *43*(2), 94-110. https://doi.org/10.1177/1540796918771708

Georgia Department of Education. (2015). *Georgia Milestones Assessment System*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/Georgia-Milestones-Assessment-System.aspx

Georgia Department of Education (2017). *Georgia Student Growth Model*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/GeorgiaStudent-Growth-Model.aspx

Georgia Department of Education. (2017). *Students make gains on spring 2017 Georgia milestones assessments*. http://www.gadoe.org/External-Affairs-and-Policy/communications/Pages/PressReleaseDetails.aspx?PressView=default&pid=552

Georgia Department of Education. (2020). *Teacher Keys Effectiveness System*. https://www.gadoe.org/School-Improvement/Teacher-and-Leader-Effectiveness/Pages/Teacher-Keys-Effectiveness-System.aspx

Gerlach, S. M. (2017). *A Quantitative Study of Co-Teaching as an Instructional Model to Serve Elementary Students*. [Unpublished doctoral dissertation]. Stephen F. Austin State University.

Gilmour, A. F. (2018). Has inclusion gone too far? Weighing its effects on students with disabilities, their peers, and teachers. *Education Next*, *18*(4), 8.

Gilmour, A. F. (2019). Has inclusion gone too far? Weighing its effects on students with disabilities, their peers, and teachers. *Education Digest, 84*(6), 23-32.

Grant, M. (2014). *A tale of two teachers: An analytical look at the co-teaching theory using a case study model*. https://files.eric.ed.gov/fulltext/ED563448.pdf

Gurgur, H., & Uzuner, Y. (2010). A phenomenological analysis of the views on co-teaching applications in the inclusion classroom. *Educational Sciences*, *10*(1), 311-331.

Hackett, J., Bang, M., Goulter, A., & Battista, M. (2019). Crossing risky boundaries: Learning to authentically and equitably co-teach through design and practice. *Teaching and Teacher Education, 86*. https://doi.org/10.1016/j.tate.2019.102889

Hanover Research. (2012). *Effectiveness of the coteaching model. District Administration Practice*. http://www.academia.edu/19201760/Effectiveness_of_Co_TeachingMembership

Heck, T. W., & Bacharach, N. (2015/2016). A better model for student teaching. *Educational Leadership*, *73*(4), 24-29.

Holdheide, L. R., Goe, L., Croft, A., & Reschly, D. J. (2010). *Challenges in evaluating special education teachers and English language learners specialist* [Policy Brief]. National Comprehensive Center for Teacher Quality.

Individuals with Disabilities Education Act of 1990, Pub. L. No. 101-476, 104 Stat. 1142 (1989-1990).

Individuals with Disabilities Education Improvement Act of 2004, Pub. L. No. 108-446, 118 Stat. 2647 (2003-2004).

Kamens, M. W., Susko, J. P., & Elliott, J. S. (2013). Evaluation and supervision of co-teaching: A study of administrator practices in New Jersey. *National Association of Secondary School Principals*, *97*(2), 166-190.

Keely, R. G. (2015). Measurement of student and teacher perceptions of co-teaching models. *Journal of Special Education Apprenticeship*, *4*(1), 1-15.

King-Sears, M. E., Brawand, A., Jenkins, M., & Preston-Smith, S. (2014). Co-teaching
    perspectives from secondary science co‐teachers and their students with
    disabilities. *Journal of Science Teacher Education, 25*(6), 651-680.
    https://doi.org/10.1007/s10972-014-9391-2

King-Sears, M. E., & Jenkins, M. C. (2020). Active instruction for co-teachers in a support
    role. *Intervention in School & Clinic*, *55*(5), 301.

King-Sears, M. E., Jenkins, M. C., & Brawand, A. (2018). Co-teaching perspectives from middle
    school Algebra co-teachers and their students with and without disabilities. *International
    Journal of Inclusive Education*. Advance online publication.

Kramer, A., & Murawski, W. (2017). Beyond just "playing nicely": Collaboration and co-
    teaching. In W. W. Murawski & K. L. Scott (Eds.), *What really works with exceptional
    learners*. Corwin.

Kraus, L., Lauer, E., Coleman, R., & Houtenville, A. (2018). 2017 Disability Statistics Annual
    Report. Durham, NH: University of New Hampshire.

Loertscher, D. V., & Koechlin, C. (2015). Coteaching and the learning commons: Building a
    participatory school culture. *Teacher Librarian*, *2*(12), 8-18.

Macfarlane, M. (2012). The shifting floor on educational opportunity: The impact of
    educational reform on Rowley. *Journal of Law & Education*, *41*(1) 45-69.

Mackey, J. Reilly, N. O., Jansen, C., & Fletcher, J. (2018). Leading change to coteaching in
    primary schools: A "down under" experience. *Educational Review*, *70*(4), 465-485.

Maryland State Department of Education. (2011). *Co-teaching reflection tool*.
    https://sde.ok.gov/sites/ok.gov.sde/files/Coteaching%20Reflection%20Tools.pdf

Mielke, T. L., & Rush, L. S. (2016). Making relationships matter: Developing co-teaching
    through the concept of flow. *English Journal, 105*(3), 49-54.

Morgan, P. L., Farkas, G., Hillemeier, M. M., Wang, Y., Mandel, Z., DeJarnett, C., & Maczuga,
    S. (2019). Are students with disabilities suspended more frequently than otherwise
    similar students without disabilities? *Journal of School Psychology*, *72*, 1–13.
    https://doi.org/10.1016/j.jsp.2018.11.001

Mitchell, C. (2019). Overlooked: How teacher training falls short for English-learners and
    students with IEPs. *Education Week*, *38*(33), 17.

Murawski, W. W., & Bernhardt, P. (2015). An administrator's guide to co-teaching.
    Educational Leadership, *73*(4), 30.

Murawski, W. (2017). *Beyond co-teaching basics: A data-driven, no-fail model for continuous improvement*. ASCD.

Murawski, W. W., & Lochner, W. W. (2010). Observing co-teaching: What to ask for, look for, and listen for. *Intervention in School and Clinic*, 1-10.

Murawski, W. W., & Lochner, W. W. (2011). Observing co-teaching: What to ask for, look for, and listen for. *Intervention in School and Clinic*, *46*(3), 174-183. http://dx.doi.org/10.1177/1053451210378165

National Center for Educational Statistics (2020). *The condition of education 2019: Students with disabilities*. https://nces.ed.gov/programs/coe/indicator_cgg.asp

National Council on Teacher Quality (2015). *State of the states: Evaluating teaching, leading and learning.* file:///C:/Users/17065/Desktop/Dissertation%20Replica/Teacher%20Evaluations.pdf

New Jersey Department of Education. (2015). *Effective instructional strategies: Co-teaching and consultation.* https://www.nj.gov/education/specialed/idea/lre/year1trainings/5/EffectiveInstStratCoTeachandConsult.pdf

Pancsofar, N., & Petroff, J. G. (2013). Professional development experiences in co-teaching: Associations with teacher confidence, interests, and attitudes. *Teacher Education* and *Special Education, 36*(2), 83-96.

Ploessl, D. M., Rock, M. L., Schoenfeld, N. A., & Blanks, B. (2010). On the same page: Practical techniques to enhance co-teaching interactions. *Intervention in School and Clinic*, *45*(3), 158-168.

Pratt, S. (2014). Achieving symbiosis: Working through challenges found in co-teaching to achieve effective co-teaching relationships. *Teaching and Teacher Education*, *41*, 1-12.

Pratt, S. M., Imbody, S. M., Wolf, L. D., & Patterson, A. L. (2016). Co-planning in co-teaching: A practical solution. *Intervention in School and Clinic, 52*(4), 243-249.

Reed, S., & Stanford University, P. A. for C. E. (PACE). (2019). Special education in California schools: The challenges and solutions from multiple perspectives. In *Policy Analysis for California Education, PACE*. Policy Analysis for California Education, PACE.

Reilly, M (2015/2016). Saying what you mean without being mean. *Educational Leadership*, *73*(4), 36-40.

Ronfeldt, M., Farmer, S., McQueen, K., & Grissom, J. (2015). Teacher collaboration in instructional teams and student achievement. *The American Educational Research Journal, 52*(3), 475-514.

Ruble, L., & McGrew, J. H. (2013). Teacher and child predictors of achieving IEP goals of children with autism. *Journal of Autism & Developmental Disorders, 43(12),* 2748-2763. https://doi.org/10.1007/s10803-013-1884-x

Samuels, C. (2015). Co-teaching and specially designed instruction: Is it happening? *Education Week*. https://www.shorturl.at/aPRT4

Savin-Baden, M., & Major, C. H. (2013). *Qualitative research: The essential guide to theory and practice*. Routledge.

Scruggs, T. E., & Mastropieri, M. A. (2017). Making inclusion work with co-teaching. *Teaching Exceptional Children*, *49*(4), 284-293. https://doi.org/10.1177/0040059916685065

Shaffer, L., & Thomas-Brown, K. (2015). Enhancing teacher competency through co-teaching and embedded professional development. *Education and Training Studies*, *3*(3), 117-125. http://dx.doi.org/10.11114/jets.v3i3.685

Sinclair, A. C., Bray, A. E., Wei, Y., Clancy, E. E., Wexler, J., Kearns, D. M., & Christopher, J. L. (2018). Co-teaching in content area classrooms: Lessons and guiding questions for administrators. *NASSP Bulletin*, *102*(4), 303-322.

Solis, M., Vaughn S., Swanson, E., & Mcculley, L. (2012). Collaborative models of instruction: The empirical foundations of inclusion and co-teaching. *Psychology in Schools*, *49*(5), 498-510.

Spaulding, L. S., & Pratt, S. M. (2015). A review and analysis of the history of special education and disability advocacy in the United States. *American Educational History Journal*, *42*(1/2), 91-109.

Stefanidis, A., King, S. M. E., & Brawand, A. (2019). Benefits for co-teachers of students with disabilities: Do contextual factors matter? *Psychology in the Schools*, *56*(4), 539-553. https://doi.org/10.1002/pits.22207

Stefanidis, A., & Strogilos, V. (2015). Union gives strength: Mainstream and special education teachers' responsibilities in inclusive co-taught classrooms. *Educational Studies, 41(4), 393-413.*

Stein, E. (2016). *Evaluating co-teaching through UDL*. CAST Publishing.

Strogilos, V., & Avramidis, E. (2016). Teaching experiences of students with special educational needs in co-taught and nonco-taught classes. *Journal of Research in Special Educational Needs, 16*(1), 24-33.

Strogilos, V., Stefanidis, A., & Tragoulia, E. (2016). Co-teachers' attitudes towards planning and instructional activities for students with disabilities. *European Journal of Special Needs Education*, *31*(3), 344-359.

Strogilos, V., & Tragoulia, E. (2013). Inclusive and collaborative practices in co-taught classrooms: Roles and responsibilities for teachers and parents. *Teaching and Teacher Education*, 81. https://doi.org/10.1016/j.tate.2013.06.001

Texas Education Agency (n.d.). *Coteaching. A how to guide: Guidelines for Co-teaching in Texas.* https://www.esc1.net/cms/lib/TX21000366/Centricity/Domain/59/CoTeachingAccessible.pdf

Timothy, S., & Agbenyega, J. S., (2018). Inclusive school leaders' perceptions on the implementation of individual education plans. *International Journal of Whole Schooling*, *14*(1), 1-30.

Tremblay, P. (2013). Comparative outcomes of two instructional models for students with learning disabilities: Inclusion with co-teaching and solo-taught special education. *Journal of Research in Special Education Needs*, *13*(4), 251-258.

Trites, N. (2017). What is co-teaching? An introduction to co- teaching and inclusion. *Classroom Practice, Special Education*, 1-6.

Turnbull, A., Turnbull, H., Wehmeyer, M., & Shogren, K. (2013). *Exceptional lives: Special education in today's schools*. Pearson.

U.S. Bureau of Labor Statistics. (2015). People with a disability less likely to have completed a bachelor's degree. https://www.bls.gov/opub/ted/2015/people-with-a-disability-less-likely-to-have-completed-a-bachelors-degree.htm

U.S. Department of Education (n.d.). *Every student succeeds act*. https://www.ed.gov/essa?src=rn.

U.S. Department of Education, Office of Special Education and Rehabilitative Services (2010). *Thirty-five years of progress in educating children with disabilities through IDEA*. htpps://www2.ed.gov/about/offices/list/osers/idea35/history/index_pg10.html.

U.S. Government Accountability Office. (2018). K-12 education: Discipline disparities for black students, boys, and students with disabilities. https://www.gao.gov/products/GAO-18-258.

Van Garderen, D., Stormont, M., Goel. (2012). Collaboration between general and special educators and student outcomes: A need for more research. *Psychology in Schools*, *49*(5), 483-497.

Vannest, K. J., & Hagan-Burke, S. (2010). Teacher time use in special education. *Remedial and Special Education, 31*(2), 126-142.

Viel-Ruma, K., Houchins, D., Jolivette, K., & Benson, G. (2010). Efficacy beliefs of special educators: The relationships among collective efficacy, teacher self-efficacy, and job satisfaction. *Teacher Education and Special Education*, *33*(3), 225-233. http://dx.doi.org/10.1177/0888406409360129

Villa, R. A., Thousand, J. S., & Nevin, A. I. (2013). *A guide to co-teaching: Practical tips for facilitating student learning* (3rd ed.). Corwin Press.

West Virginia Department of Education. (2019). *Co-teaching foundations: Building blocks to successful co-teaching.* https://wvde.us/wpcontent/uploads/2019/07/CoTeachingFoundationsManual-may-2019-pdf.pdf

Wexler, J., Kearns, D. M., Lemons, C. J., Mitchell, M., Clancy, E., Davidson, K. A., & Wei, Y. (2018). Reading comprehension and co-teaching practices in middle school English Language Arts classrooms. *Exceptional Children*, *84*(4), 384-402. http://dx.doi.org/10.1177/0014402918771543

Will, M. (2018). Special education a growing priority in teacher-training circles. *Education Week*, *38*(15), 12.

Woods, R. (2015). *Assessment & Accountability.* https://pdfs.semanticscholar.org/d55c/8ba8d50e03bed2a9bb310db8ec124c5d5740.pdf.

Woolfson, L. M., & Brady, K. (2009). An investigation of factors impacting on mainstream teachers' beliefs about teaching students with learning difficulties. *Educational Psychology*, *29*(2), 221-238. http://dx.doi.org/10.1080/01443410802708895

Young, N., Fain, A., & Citro, T. (2019). *Creating compassionate classrooms: Understanding the continuum of disabilities and effective educational interventions*. Vernon Press.

APPENDIX A

INSTITUTIONAL REVIEW BOARD LETTER OF APPROVAL

Georgia Southern University	
Office of Research Services & Sponsored Programs	
Institutional Review Board (IRB)	
Phone: 912-478-5465	Veazey Hall 3000
	PO Box 8005
Fax: 912-478-0719 IRB@GeorgiaSouthern.edu	Statesboro, GA 30460

To: Middleton, Tikki

From: Office of Research Services and Sponsored Programs
Administrative Support Office for Research Oversight Committees
(IACUC/IBC/IRB)

Approval Date: July 20, 2020

Subject: Institutional Review Board Exemption Determination - Limited Review

Your proposed research project numbered **H21013,** and titled **"The Relationship Between Co-Teaching Partnerships and Student Achievement."** involves activities that do not require full approval by the Institutional Review Board (IRB) according to federal guidelines.

According to the Code of Federal Regulations Title 45 Part 46, your research protocol is determined to be exempt from full review under the following exemption category(s):

Exemption 2   Research involving only the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, if: Information obtained is recorded in such a manner that human participants cannot be identified, directly or through identifiers linked to them. Please visit our FAQ's for more information on anonymous survey platforms; Any disclosure of the human participant's responses outside the research could not reasonably place the participant at risk of criminal or civil liability or be damaging to the participant's financial standing, employ-ability or reputation; Survey or interview research does not involve children; The research project does not include any form of intervention.

Any alteration in the terms or conditions of your involvement may alter this approval. *Therefore, as authorized in the Federal Policy for the Protection of Human Subjects, I am pleased to notify you that your research, as submitted, is exempt from IRB Review. No further action or IRB oversight is required, as long as the project remains the same. If you alter the project, it is your responsibility to notify the IRB and acquire a new determination of exemption. Because this project was determined to be exempt from further IRB oversight, this project does not require an expiration date.*

Sincerely,

Eleanor Haynes
Compliance Officer

APPENDIX B

COLORADO ASSESSMENT OF CO-TEACHING INSTRUMENT

Default Question Block

Q1. **Participant's Name:**

[   ]

Q2. **Current Position:**

○ General Education Teacher

○ Special Education Teacher

Q2. **Total Years of Educational Experience (including the current year):**

[   ]

Q3. **In what discipline is your certification?**

[   ]

Q4. **Do you have a minimum of one-year of co-teaching experience?**

○ Yes

○ No

Q5. **Did you partner with the same co-teacher for the 2018-2019 school year?**

○ Yes

○ No

Q6. **Co-teacher's Name:**

[   ]

Q7. **Which core subject(s): English Language Arts and/or Mathematics were you assigned to co-teach for the 2018-2019 school year?**

☐ English Language Arts

☐ Mathematics

Q8. **Which grade level were you assigned as a co-teacher in the core subject(s) indicated in Question 7 for the 2018-2019 school?**

☐ 6th Grade

☐ 7th Grade

☐ 8th Grade

Q9. **What was your Median Student Growth Percentile (mSGP) for Students With Disabilities (SWD) in ENGLISH LANGUAGE ARTS for the 2018-2019 school year? If you did not co-teach in the subject enter in N/A. (Information can be found in the Statewide Longitudinal Data System [SLDS]).**

[   ]

Q10. **What was your Median Student Growth Percentile (mSGP) for Students Without Disabilities (SWOD) in ENGLISH LANGUAGE ARTS for the 2018-2019 school year? If you did not co-teach in the subject enter in N/A. (Information can be found in the Statewide Longitudinal Data System [SLDS]).**

[   ]

Q11. **What was your Median Student Growth Percentile (mSGP) for Students With Disabilities (SWD) in MATHEMATICS for the 2018-2019 school year? If you did not co-teach in the subject enter in N/A. (Information can be found in the Statewide Longitudinal Data System [SLDS]).**

[   ]

Q12. **What was your Median Student Growth Percentile (mSGP) for Students Without Disabilities (SWOD) in MATHEMATICS for the 2018-2019 school year? If you did not co-teach in the subject enter in N/A. (Information can be found in the Statewide Longitudinal Data System [SLDS]).**

[   ]

Section 1. **Personal Prerequisites**

	Strongly Disagree - 1	Disagree - 2	Neutral - 3	Agree - 4	Strongly Agree - 5
1. Co-teachers are confident in their skills as individual teachers.	○	○	○	○	○
2. The special educator has skills to suggest instructional strategies to meet unique student needs.	○	○	○	○	○
3. The general education teacher acknowledges the need for accommodations for individual students in the co-taught classroom.	○	○	○	○	○
4. The general education teacher has strong knowledge of the curriculum content.	○	○	○	○	○

	Strongly Disagree - 1	Disagree - 2	Neutral - 3	Agree - 4	Strongly Agree - 5
5. The special educator is confident in his/her knowledge of the curriculum content.	○	○	○	○	○
6. Co-teachers are willing to share their knowledge and skills with each other.	○	○	○	○	○
7. Co-teachers have effective communication skills.	○	○	○	○	○
8. Co-teachers have strong classroom management skills.	○	○	○	○	○
9. Co-teachers are eager to expand their skills.	○	○	○	○	○
10. Co-teachers believe co-teaching is worth the effort.	○	○	○	○	○

Section 2. The Professional Relationship

	Strongly Disagree - 1	Disagree - 2	Neutral - 3	Agree - 4	Strongly Agree - 5
11. Co-teachers are committed to building and maintaining their professional relationship.	○	○	○	○	○
12. Co-teachers share a philosophy about learning and teaching.	○	○	○	○	○
13. Co-teachers respect each other's professionalism.	○	○	○	○	○
14. Co-teachers share common goals for the co-taught classroom.	○	○	○	○	○
15. Each co-teacher has a distinct but essential purpose in the co-taught class.	○	○	○	○	○
16. Co-teachers acknowledge their areas of weakness and seek assistance.	○	○	○	○	○
17. Co-teachers are able to release control to their co-teacher.	○	○	○	○	○
18. Co-teachers share equal responsibility for what happens in the classroom.	○	○	○	○	○
19. Co-teachers regularly set time aside for joint planning.	○	○	○	○	○
20. Co-teachers make important decision together.	○	○	○	○	○
21. Co-teachers carry their part of the workload.	○	○	○	○	○
22. During a lesson co-teachers can sense the others' thoughts and direction.	○	○	○	○	○
23. Co-teachers share the gentle and tough roles.	○	○	○	○	○
24. Classroom space is shared so that both teachers have a work space.	○	○	○	○	○

	Strongly Disagree - 1	Disagree - 2	Neutral - 3	Agree - 4	Strongly agree - 5
25. Co-teachers jointly assess what's working and what isn't on a regular basis.	○	○	○	○	○
26. Co-teachers communicate during lessons to facilitate student learning.	○	○	○	○	○
27. Co-teachers use collaborative strategies for problem solving.	○	○	○	○	○

Section 3. Classroom Dynamics

	Strongly Disagree - 1	Disagree - 2	Neutral - 3	Agree - 4	Strongly agree - 5
28. Both teachers are responsible for teaching all students in co-taught classrooms.	○	○	○	○	○
29. Students with disabilities are intermingled with students without disabilities.	○	○	○	○	○
30. Students receive individual help and structure to complete assignments.	○	○	○	○	○
31. Co-teachers use a variety of student grouping arrangements.	○	○	○	○	○
32. Co-teachers use a variety of co-teaching structures/formats.	○	○	○	○	○
33. Students with disabilities are provided with accommodations.	○	○	○	○	○
34. Instructional delivery in co-taught classes involves the presentation of information in a variety of ways.	○	○	○	○	○
35. Co-teachers make continual adjustments to ensure student success.	○	○	○	○	○
36. Co-teachers employ a variety of methods to assess students' progress.	○	○	○	○	○
37. Co-teachers monitor students' academic progress on a regular basis.	○	○	○	○	○
38. Co-teachers adapt assessment tools and procedures as needed.	○	○	○	○	○
39. Instructional delivery in co-taught classes is different from what occurs in other classes taught by the general education teacher.	○	○	○	○	○

APPENDIX C

PERMISSION TO USE INSTRUMENT

marilynfriend@marilynfriend.com via carrierzone.com   Mon, Mar 11, 2019, 7:11 AM   ☆   ↰   ⋮

to me ▾

Good morning, Tikki. Thanks for your inquiry about the CO-ACT. It has been around for a long time, and it has been used in many dissertations. I will give you permission to use the instrument with these understandings:

1. Permission is granted only for use in your dissertation research. Permission is not granted for any other use (for example, using it as part of professional development you conduct or in a school setting).

2. You may include the instrument in your dissertation document, but you may not publish it in any subsequent publications.

3. The instrument should be used in a manner that it cannot be inappropriately copied. That is, you must ensure that it is distributed in hard copy, of if on an electronic platform, that it cannot be downloaded or further disseminated. This also means that distribution via e-mail is not allowed.

4. Please provide appropriate attribution in using the instrument.

Best of luck in your studies—the hardest part of a doctoral degree is completing the research and getting to the defense.

Marilyn Friend

Marilyn Friend, Ph.D.
Marilyn Friend, Inc.
4200 Wisconsin Avenue NW
Suite 106, PMB 303
Washington DC 20016
marilynfriend@marilynfriend.com
336.286.7050