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**RESEARCH BASED CO-TEACHING PRACTICES AND THEIR REALIZATION
IN THE NEW JERSEY HIGH SCHOOL CLASSROOM**

by

Thomas K. Donovan

A Dissertation

Submitted to the
Department of Educational Services and Leadership
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at
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December 7, 2017

Dissertation Chair: Dr. Michelle Kowalsky Ed. D.

Dedication

I dedicate this dissertation to my parents, John and Ellen Donovan for their unconditional love and support. To my love, my wife Dr. Kristina Donovan for being an inspiration and, to my daughters Caelan and Blake for teaching me what is truly important.

Abstract

Thomas K. Donovan
RESEARCH BASED CO-TEACHING PRACTICES AND THEIR REALIZATION IN
THE NEW JERSEY HIGH SCHOOL CLASSROOM
2017-2018
Dr. Michelle Kowalsky Ed. D.
Doctor of Education

This qualitative research study reviews co-teaching practices suggested to high school educators by their professional literature. Through a systematic analysis of published studies on the topic, a comprehensive list of suggested co-teaching practices from the past ten years was created. The study then explored the realization of these practices in the high school co-teaching classroom through surveys of 61 high school co-teachers in New Jersey. Both phases of this study assisted with the identification of opportunities for improving co-teaching practices, professional development on co-teaching, and instructional pedagogy.

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Chapter 1

Introduction

Consider the following common scenario in high schools across the country. On the first day of school, many high school students enter their classrooms and are greeted by two teachers, a general education teacher and a special education teacher. The students are confused. They check their schedule and see only one teacher's name on it. The students wonder, why there are two teachers in my classroom? As the class begins, each teacher calls the names of their students on their roster aloud in order to take attendance. The students wonder, but why are there two different lists of people in this class? The teachers distribute a syllabus for the class, and again, the syllabus only has one of the teacher's names on it. The students wonder, who is this other teacher and why are they here?

As the class progresses, the co-teachers divide tasks, with the general education teacher taking the lead role in developing lesson plans and providing instruction. The special education teacher assumes the role of assistant teacher or helper, suggesting accommodations and modifications to the general education teacher, taking attendance, writing hallway passes, handing out worksheets, etcetera. Occasionally, as Austin, (2001) asserts, the special education teacher will take a lead role, but often functions as the main teacher's helper.

As the school year progresses, tension develops between the teachers. The general education teacher feels that they do all of the work for the class, preparing the lesson plans and materials, delivering the instruction, and grading the assignments (Austin, 2001). They resent sharing their class with another teacher -- after all, it is their class,

they are the real teacher, as well as the content and curriculum expert. It seems to them that the special education teacher does not really do anything, and they believe that a second teacher's presence is not only a waste of energy but also an intrusion on their classroom. Dev & Haynes (2015) point out that the special education teacher resents the general education teacher for never letting them do anything except for basic housekeeping or clerical work, tasks that are not commensurate to their position, education, and certification. They wonder why the general education teacher will not let them teach, and as Murawski (2009) reports, they start to feel as if they are not a real teacher in this class.

This scenario or one like it is repeated countless times a day at schools all across the nation. Surely, this is not the way that co-teaching was intended to function. Is it possible that inclusion and co-teaching have evolved very differently from their original intentions?

Problem Statement

According to the National Center for Education Statistics (2011), roughly six million school-aged children, or approximately ten percent of all K-12 students in America, are eligible for special education services. Over half of all special education students spend the majority of their day in general education classrooms, according to the National Center for Education Statistics (2011). Co-Teaching is one way to provide them services in a least restrictive environment. The concept of Least Restrictive Environment or LRE can be traced from the landmark 1954 civil rights case Brown v. Board of Education and two subsequent 1972 cases influenced by Brown: Pennsylvania Association for Retarded Children (PARC) v. Pennsylvania and Mills v. Board of

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Education. Prager (2015) contends that in tandem, these cases helped to end the practice of segregating students with disabilities from their non-disabled peers.

Each year in the United States, billions of dollars are spent to fund special education. Shah (2012) asserts that finding or creating efficiencies in special education could lead to an increase in student outcomes and a savings of $10 billion per year. According to Samuels (2011), a key aspect of this plan is the inclusion of students with disabilities in the general education classroom via the co-teaching process. However, common experience shows that this implementation is neither seamless nor easy.

The local numbers also speak for themselves. An analysis of data from one New Jersey High School reveals that in this New Jersey school, 18.7% of the student population is eligible for special education services. The Special Education department is the school's largest department, comprising 23% of the faculty. Co-Teaching classes comprise 44.5% of the schedule for the department, with 74.1% of its teachers having at least one co-teaching relationship. There are 45 distinct co-teaching pairs in the school, involving 90 teachers; these pairs comprise 69.2% of the teaching faculty.

In this school alone, these numbers represent a significant investment of resources and finances that could be saved or used more effectively. Extrapolated across the district, state, or country these numbers and costs are staggering. According to data presented by The New Jersey Department of Education (2013), there were 220,253 students in New Jersey eligible for special education services. That number constitutes 15.3% of New Jersey's entire student population between the ages of 3 and 21 years. Molenaar and Luciano (2007) estimate that it costs 1.6 times more per pupil to educate special education students, totaling over $3 billion per year in New Jersey alone.

Inclusion classes rely on co-teaching to educate students. Kirby (2017) explains that inclusion is the process of educating students with disabilities in the same classes and, using the same curriculum as with their non-disabled peers. Inclusion provides academic and social benefits to general education students as well as to special education students (Frisk, 2004) and teachers (Buckley, 2005) alike. Co-Teaching models as described by Friend & Cook (1992) call for a team of two teachers, one general education, and one special education, to work together sharing responsibility for students in the inclusion classroom. Much has been written about co-teaching, and many suggestions have been made regarding how teachers should enact the co-teaching model. However, research by Weiss and Brigham (2000) indicates that co-teaching practice, in reality, is not embracing these pedagogical suggestions. Weiss and Brigham (2000) contend that teachers tend to stick to their traditional roles with the general education teacher providing instruction and the special education teacher occupied with behavior management or modifications. Moreover, Weiss and Brigham (2000) posit that individualized instruction may not be occurring.

Education is a cornerstone of a successful society. Creating an educated citizenry is of paramount importance to the success of an individual. As a nation, we must realize that education is a matter of human rights and social justice. Preparing every child to succeed in an ever-expanding global society is a moral responsibility and must be a motivating principle for all educational leaders and their institutions (Theoharis, 2007). A significant responsibility for school leaders is providing a high- quality public education for all, thus creating positive outcomes for students with disabilities.

Co-Teaching is an area that theoretically holds promise for all stakeholders yet, in practice has not lived up to expectations and therefore remains problematic. Scruggs, Mastropieri, and McDuffie (2007) assert that classroom instructional practice has not adapted to meet the needs of students with disabilities, but rather special education teachers have been attempting to adapt to the dynamic of the general education class when proven co-teaching strategies are not being implemented. Zigmond and Baker (1994) conclude that although special education students are receiving instruction in the general education classroom albeit with assistance, these special education students are not getting special education.

Teacher training or professional development in co-teaching is a key area that may help students and co-teachers to reach their potential. Many studies (Walther-Thomas, 1997; Buckley, 2005; Rice & Zigmond, 2000) have identified teacher training or professional development as integral in creating an environment that is conducive to co-teaching and for the success of co-teaching with the introduction of research based co-teaching strategies via the professional development of teachers.

Politics and Economics of Special Education

This section explores the development of key pieces of legislation that impact co-teaching through funding for special education. The political and policy environment of education in the United States must be examined closely, and the importance of this issue as a matter of social justice points to the benefits of state waivers from federal legislation.

Political environment. For the past five decades, the federal government has been exerting its power in what Fowler (2013) would describe as the phase of wielding

authority and economic dominance, especially since special education funding for states has been tied to compliance with federal legislation.

Politically, as DeBray and Houck (2011) explain, America has become increasingly partisan and polarized, and government officials have become more divided and less willing to compromise. Stolberg and Fandos (2018) explain that the lack of a spirit of bipartisanship or cooperation between political parties has become painfully obvious to all, as evidenced in part, by the 2013 budget sequestration and most recently the 2018 federal government shutdown.

Examining the issue from the perspective of policy processes, as presented by Anderson (2011), illustrates that the policy process for special education funding is complex and dynamic. Almost simultaneously on the national and state levels, policy is being formulated, adopted, implemented and evaluated, and new agendas are continually being developed. According to Samuels (2011), there seems to be little agreement among stakeholders in addressing funding for special education; however, one thing that all stakeholders seem to be able to agree on is that funding for special education is a complicated and confusing process. One of the common pressing concerns, as stated by DeBray and Houck (2011), is the lack of sufficient monitoring of expenditures or data to help guide policy.

The Elementary and Secondary Education Act. As a key component of the Great Society, the Elementary and Secondary Education Act (ESEA) was a cornerstone of President Lyndon B. Johnson's "War on Poverty." At the time of its passage in 1965, the Elementary and Secondary Education Act was the most comprehensive and far-reaching piece of educational legislation. Among its numerous provisions, the ESEA

established funding for education, while providing for equal access to a quality education for all students. Additionally, The ESEA sought to close the achievement gaps between students of all subgroups regardless of race or socio-economic status (St. John, Daun-Barnett & Moronski-Chapman, 2011).

The ESEA was initially reauthorized by Congress in 1970 and subsequently renewed with changes from Congress every few years until the administration of President Reagan in the early 1980s, which largely shifted control from the federal government to the state and local governments. In 1994, during President Clinton's administration, the ESEA was changed and reauthorized. The subsequent reauthorization became known as the Improving America's Schools Act, as Yettick (2015) explains, the Improving America's Schools Act extended funding to disadvantaged schools and students along with establishing standards of accountability for schools and students alike.

No Child Left Behind Act. The most significant reauthorization of the ESEA came in 2001, under President Bush. This reauthorization became known as the No Child Left Behind Act (NCLB). NCLB was developed by the Bush administration along with Democratic Senator Ted Kennedy and was passed in Congress with bipartisan support. NCLB sought to establish standards of accountability and sought to address the closure of educational gaps between all subgroups of students including students with disabilities as explained by McNeil (2014).

These standards included the development of assessments of student learning, the results of which were tied to aid for school districts. NCLB was to be monitored by the federal government's expanded role in education that included the development of the

concept of highly qualified teachers and implementation of high-stakes testing. NCLB also had implications for students with disabilities whose progress, largely measured by test scores, would be factored into equations designed to assess each school's overall progress. NCLB has brought both negative and positive aspects to education in America. Under NCLB, funding for students with disabilities was to be shared between federal, state and local government, with (according to Snyder, 2009) the federal government contributing 40% of the cost to educate students with disabilities.

The Individuals with Disabilities Education Act. The Individuals with Disabilities Education Act or (IDEA) is a federal law governing numerous educational issues for children. IDEA became law in 1990, replacing the Education for All Handicapped Children Act of 1975. Both IDEA and the Education for All Handicapped Children Act of 1975 were made possible as a result of the landmark civil rights case Brown v. Board of Education, which overturned the doctrine of separate but equal in public education. IDEA was most recently reauthorized in 2004 and established many principles that have become cornerstones of special education. Among them are the concepts of Free Appropriate Public Education (FAPE), the Least Restrictive Environment (LRE) and Child Find. FAPE mandates that schools must provide an Individualized Education Plan or IEP for students with identified disabilities. Child Find places the onus on each district to identify and provide special education for qualifying children in their respective districts, regardless of the child's placement. IDEA further mandates that each student be educated in the Least Restrictive Environment (LRE), Wright & Wright (2009) explain that LRE stipulates that students with disabilities be educated with their non-disabled peers to the greatest extent possible. LRE sets up the

practice of inclusion also commonly known as mainstreaming of special education students in general education classes

Every Student Succeeds Act. The Every Student Succeeds Act or ESSA, is the most recent reauthorization of 1965's Elementary and Secondary Education Act. The ESSA is bipartisan legislation that was signed into law by President Barack Obama in December of 2015. The ESSA took effect with the beginning of the 2016-2017 school year. The Every Student Succeeds Act looks to expand upon gains made in the recent past. The ESSA (2015) protects at-risk students by promoting equity for disadvantaged students and requiring that all students be held to standards that would help them be successful in college or their careers. Furthermore, the law requires that the states involve educational stakeholders in the process of creating accountability plans. Perhaps most importantly as Samuels (2017) explains, ESSA continues the push to improve the educational performance of students with disabilities through results-driven accountability.

The ESSA grants greater autonomy to the states in terms of accountability of student performance. Waivers have been or will be replaced with systems of accountability devised by the states. Ferguson (2016) asserts that the pendulum swing of local versus federal control, which curtails the authority of The Secretary of Education and Department of Education, will also likely cause growing pains as states and districts retool to meet the new requirements of ESSA.

Special education funding. To fund IDEA, Congress agreed to pay for 40% of the per pupil cost for each special education student, the remainder of the costs would be borne and shared by state and local residents. The National School Boards Association,

(2016) asserts that since its inception, Congress has failed to fully fund IDEA usually contributing roughly half of its commitment leaving the balance to be covered by state and local taxpayers. The National Education Association (2016) asserts that Congress' failure to fully fund IDEA has placed undue stress on States, local communities, school districts and taxpayers who must bear the financial burden not carried by the federal government.

In 2009, President Obama signed the American Recovery and Reinvestment Act (ARRA), which according to Snyder (2009) raised special education funding by the federal government to 34%. The ARRA provided $12 billion in additional funding for special education and IDEA. This ARRA money was, however, part of a stimulus package, and as such was a one- time-only payment and not a commitment to more fully fund special education or IDEA.

The 2008 downturn in the American economy created a political and fiscal environment that is more conscious than ever about funding issues. Federal, state and municipal governments have experienced a tightening of funds. The effects of this have been more competition on every level for a decreasing amount of funding, and more frequent calls for education to become more cost-efficient.

Shah (2012) posits that special education funding in public schools could be decreased by simultaneously reducing staffing and increasing educational outcomes for special education students. One way that schools are attempting to create fiscal efficiency is through the inclusion of special education students in the general education classroom, which can save the district money (Samuels, 2011). This puts a greater emphasis on the

importance of co-teaching and doing it well, and as a result, students with disabilities perform better.

Special education and social justice. Today's special education students are at great risk, and in many ways, their very lives hang in the balance. Children who are at the greatest risk are students of color, the economically disadvantaged and students who are emotionally disturbed or have other disabilities. The National Council on Disability (2015) claims, "Recent studies show that up to 85 percent of children in juvenile detention facilities have disabilities that make them eligible for special education services." The National Council on Disability (2015) asserts that only 37% of these students received special education services, pointing to failures in the educational and justice systems.

The Individuals with Disabilities Education Act, known as IDEA, endeavors to address and protect the rights and needs of children with disabilities to a quality education (US Department of Education, 2010). Some of the chief provisions of IDEA are that each school district is responsible for identifying students with disabilities in its district. All children with disabilities are guaranteed under the law to a free education (US Department of Education, 2010). This education is to be provided in the least restrictive environment possible, and an educational plan is to be fitted to the unique needs of each individual. This plan is known as an IEP. In assessing the child and developing an IEP, IDEA mandates the use of unbiased testing and evaluation (Friend, 2008). IDEA also mandates that in disciplinary matters, the student's disability must be taken into account (Friend, 2008). Unfortunately, often and for a myriad of reasons,

school districts are either unwilling or unable to fulfill their legal obligations to students with disabilities as mandated under IDEA.

Perhaps one of the most significant contributors to this failure are disciplinary issues. In the wake of tragic school shootings and in addition to a post-September-11th reality, many schools have adopted a zero-tolerance policy toward student discipline. According to Losen and Wald (2003),

> the result is a near-doubling of the number of students suspended annually from school since 1974 (from 1.7 million to 3.1 million), and an increase in the presence of police in schools, in the use of metal detectors and search and seizure procedures in schools, and in the enactment of new state laws mandating referral of children to law enforcement authorities for a variety of school code violations (p. 2).

Under zero tolerance policies, students are often pushed into the legal system, many as adults. Since the legal system often cannot take into account the circumstances involved in a given situation in the same manner as educational institutions, they have little latitude in dispensing judgments on these children. The failure of IDEA to identify and protect children contributes to criminalizing those very individuals it is designed to protect.

As school districts struggle with student performance on testing mandated under No Child Left Behind and The Every Student Succeeds Act the pressure on districts to show progress on these tests increases. The stakes are so high that the ACLU (n.d.) has claimed that in some cases, "schools have an incentive to push out low-performing students to boost overall test scores" (p.1).

New Jersey in particular faces severe challenges regarding disproportional representation of minority students in special education. Kolbe, McLaughlin, and Mason (2007) assert that the number of special education students educated in the general education classroom, and the percentage of special education students are racially disproportionate compared to other states. Chey (2016) reports that students of color are nearly 2.5 times more likely than white students to be identified with a disability.

Waivers. American schools struggled with trying to comply with all of the elements of NCLB. A point of particular contention for school districts and their states was the requirement regarding testing. All special education students needed to be able to pass, by 2014, standardized assessments designed to indicate proficiency for general education students in academic areas. To provide relief from this requirement, states began to apply for waivers from this aspect of NCLB. Numerous states applied for and were granted waivers from NCLB.

In return for the granting of a NCLB waiver, states had to adopt new systems to evaluate students, teachers, and administrators. These evaluations seek to measure and take into account not just scores on assessments but also the growth of students, teachers, and administrators. An additional requirement for receiving a waiver was that achievement gaps between demographic subgroups must continue to be addressed. Flexibility was granted to each state to proceed toward this goal.

As a result of the widespread necessity of the granting of waivers by The US Department of Education for states failing to meet the requirements of NCLB. The Federal government passed the bi-partisan educational reform legislation that is known as The Every Student Succeeds Act or ESSA. Ferguson (2016) contends that the ESSA

grants greater autonomy to the states in terms of accountability of student performance. Waivers are now replaced with new systems of accountability devised by the states themselves, affording greater local control over accountability of students with disabilities.

Conceptual Framework

The conceptual theoretical framework for this research will seek to connect the divergent elements of the research process in the manner Ravitch and Riggan (2012) describe. The conceptual framework for this research includes both Critical Theory and Social Justice.

As an issue of social justice, students with disabilities are a historically marginalized population (Mertens, 2007). Schools must play a part in responding to the needs of students with disabilities by implementing practices and procedures that are aligned to equity and social justice. It is important to gain an understanding of the barriers, obstacles, and challenges that prevent students with disabilities from experiencing positive outcomes, and then to initiate the development of effective educational programs that will decrease the incidence of marginalization (Theoharis, 2007).

My experiences, assumptions, and beliefs about co-teaching have undeniably shaped who I am as an educator and as a researcher for this project. These lived experiences have helped formulate beliefs and opinions on the nature of co-teaching, as evidenced in the structure of this study. Theoretical considerations that impact classroom and co-teaching dynamics, as well as my own experience as a teacher, include social constructivism as explored by Vygotsky (1978). Vygotsky discusses the impact of the

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classroom environment and culture on student learning in addition to offering theories on inclusion and co-teaching. Perhaps the most influential of the contributions made by Vygotsky (1978) and, the most germane to co-teaching, is what Vygotsky labeled the Zone of Proximal Development (ZPD). ZPD theory explores the differences in what a student can or cannot do with and without adult guidance. In this research, guidance provided by the adult takes the form of co-teaching in the inclusion classroom with each of the co-teachers responsible for student guidance and development.

Critical Theory was developed in the late 1920's to early 1930's at The Frankfort School in Germany by Western Marxist theorists, led in by Max Horkheimer and Theodor Adorno (Rothe & Ronge, 2016). According to Guba and Lincoln (1994), Critical Theory posits that various realities contribute to and create a composite reality. Critical Theory seeks to examine existing structure through the process of critical analysis, identifying areas that are concerning or problematic and, as Fay (1987) asserts, to ultimately engender reform by endeavoring to overcome structural constraints and barriers for the marginalized. The reality for many students including those with disabilities in American schools is that all students are not being treated equally or being provided with equal opportunities (De Valenzuela, Connery and Musanti, 2000).

The goal of Critical Theory according to Brookfield (2001) is to not merely interpret information but to enact change in society. The research on co-teaching indicates that there is a crisis of representation. Educational leaders and researchers alike ought to be engaging in critical analysis of not just their practice and organizations but also, as Foster (1989) maintains, as a means of organizational and social reconceptualization. Ultimately, the goal of Critical Theory is to develop, as Brookfield

(2001) contends, a new and improved paradigm, and an idealized vision of how things should be. This research will endeavor to provide a connection between research and practice on co-teaching that can start the conversation to effect change in our schools for all students with disabilities.

Chapter 2

Literature Review

Existing literature on co-teaching could according to a meta-synthesis conducted by Scruggs et al. (2007), be divided into the following categories: background or history of co-teaching, suggestions for improving the practice of co-teaching, educator's perspectives on co-teaching and the effectiveness of co-teaching.

Qualitative studies have comprised much of the research that been conducted in the realm of co-teaching. The thrust of the bulk of these studies have sought to understand the perceptions of teachers involved in co-teaching, to understand what the perceived benefits of co-teaching are, determine what impediments exist and, to assess if co-teaching impacts student achievement.

History of Co-Teaching

Research by Friend, Cook, Hurley-Chamberlain and Schambereger (2010), Nichols, Dowdy, and Nichols (2010), and Scruggs et al. (2007) provides a historiography on the subjects of inclusion and co-teaching and traces their genesis and evolution as a paradigm.

Friend et al. (2010) explain that although collaboration had always been a key aspect of the professional practice of special educators, largely, the collaboration was among special educators themselves: teachers of students with disabilities, counselors, psychologists, therapists, etcetera. This collaboration most often did not include general education teachers and personnel.

It was not until the 1980's that the concept of inclusion began to gain traction in American public schools. The Individual with Disabilities Education Act of 1997

established the justification for inclusion and co-teaching based largely on legal mandate of educating students in the least restrictive environment as required by federal law. Currently, federal mandates emanating from the 2001 No Child Left Behind Act, the 2004 reauthorization of the Individual with Disabilities Education Act and the Every Student Succeeds Act of 2015 require that all students, including students with disabilities, have access to the general curriculum and be taught by highly qualified teachers. This has shaped developments in educating students with disabilities as Nichols, Dowdy, and Nichols (2010) discuss, special education students have gone from being educated in separate classrooms, being pulled out of mainstreamed classes for special education services to more recently being pulled into regular education classrooms. The method of delivery for students in this new setting has become known as co-teaching.

Suggestions for Improving Co-Teaching

The bulk of research conducted deals with teacher's perspectives on co-teaching and methods or suggestions for improving the co-teaching relationship or the inclusive classroom.

The importance of developing a co-planning framework in the development of successful working relationships among co-teachers is examined and discussed by Pratt, Imbody, Wolf and Patterson (2017) who present a detailed plan for developing co-teacher relationships through the process of co-planning. Pratt et al. assert that active co-planning increases the involvement of each teacher and allows co-teachers to bring their expertise to the partnership for the benefit of their students.

Improving the co-teaching process by highlighting and embracing the differences between co-teachers is the focus of Beninghof (2015) who asserts that rather than

attempting to dull the differences between co-teachers, the uniqueness of each teacher along with their areas of expertise should be embraced. A checklist for team building was also developed and presented by Beninghof (2015).

Keefe, Moore and Duff (2004) discuss the inherent challenges involved in co-teaching and present ideas for building solid co-teaching relationships. Keefe et al. (2004) discuss four concepts that teachers must know in order to be successful in co-teaching. These key tenets are that teachers must know themselves, their co-teacher, the students in the classroom and, "their stuff." Achieving these can be easier said than done as it is not unusual for secondary school special educators to find themselves teaching in multiple classrooms with multiple co-teachers without sufficient planning time for these classes, and most importantly in academic areas that they are not highly qualified.

Beninghof (2014) suggests that very early on in their collaboration, co-teachers select from one two overarching perspectives, either working as a duet where everything is shared between teachers or in a one lead one assist model which allows both teachers to assert their expertise. Beninghof (2014) asserts that once the approach has been determined the specifics of day to day instruction are easier to decide upon and manage.

Methods for retaining established co-teaching teams are identified by Murawski and Dieker (2008), who suggest training and preparation for co-teachers and the importance of common planning time. In addition to offering a list of 50 tips to improving co-teaching Murawski and Dieker (2008) offer the advice for co-teachers to be willing to be equals, try new things and be willing to listen to all voices including students, parents and of course each other.

Ende (2015) suggests that regardless of the co-teaching approach being

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implemented, both teachers should become comfortable in stepping outside of their perceived normal role. Ende posits that the fluidity of this relationship dynamic benefits both co-teachers and ultimately the students alike.

The importance of communication between co-teachers is expressed by Baptiste (2015), who describes her experiences as a special educator in a forced co-teaching partnership that was not working. In her narrative Baptiste (2015) describes the importance of the long-term process of relationship building, using communication, especially between co-teachers from different cultural backgrounds.

Perspectives on Co-Teaching

The perspective of general education teachers on was explored by Legutko (2015) who found that although general education teachers believed special education teachers were great to have in the classroom, the special educators lack of content knowledge frequently led to special educators serving in the role of a glorified aid rather than co-teacher. Legutko stressed the importance of special educator content knowledge as well as time to co-plan.

Teacher's perceptions of success in the co-teaching classroom was examined by Whisnant (2015). Whisnant indicates that while collaboration between co-teachers is important, access to planning time and the ability to co-plan effectively are even more important. A lack of planning time, reticence of general education teachers to share instruction, tied to a lack of special educator content knowledge were key findings of this study.

A study conducted by Abbye-Taylor (2014), explored the perceptions of co-teachers and concluded that teachers who believed that co-teaching was successful, also

believed that inclusion had both academic and social benefits for students. Participants reported developing positive relationships as their respect for each other's teaching ability and work ethic increased. Co-planning was also cited as a key aspect of co-teaching.

Austin (2001) conducted mixed methods research of teachers' beliefs about co-teaching. This study claims that teachers are not being provided with training and professional development capable of producing effective co-teaching teams or tangible practices. Barnes (2017) asserts that professional development has had a positive effect on both co-teaching practices and teacher perspectives on co-teaching.

Suggestions for K-12 school administrators on how to provide effective professional development for co-teaching to teaching staff are presented by Murawski and Bernhardt (2015). However, in contrast, Abbye-Taylor (2014) asserts that while administrators deemed professional development for co-teachers to be very important, teachers downplayed its importance.

Batalo (2014) studied how a school's culture impacts co-teacher's planning and implementation. Batalo found that school culture impacted both of these areas. Co-planning time can only be scheduled by school administration and co-planning time was not provided thereby having a negative influence on the ability of teachers to plan.

Six Approaches to Co-Teaching

Perhaps the most seminal work on co-teaching is that of Marilyn Friend. Cook & Friend (1995) developed and described six approaches to co-teaching to be implemented based on the intent of the instruction in addition to the needs of the students. These six approaches remain the basis for co-teaching (Friend, 2015). The six approaches and a

brief description for each follow:

1. *One teach, one assist*, is when one teacher leads instruction and the other assists the lead teacher and students.

2. *One teach, one observe*, similar to one teach, one assist however the other teacher gathers data on the class or individuals in the class.

3. *Station teaching*, which entails dividing the class into three groups, the teachers lead instruction at two of the stations while student work at the third independently.

4. *Parallel teaching* involves splitting the class in two with each teacher leading instruction of the same material.

5. *Alternative teaching*, describes one teacher working with the bulk of the class while the other works with a small group of students to reinforce or enrich concepts.

6. *Teaming,* both teachers lead instruction presenting differing opinions and perspectives.

The research seems to indicate that most co-teachers are not applying the methods that have been developed for the inclusive classroom. Weiss and Brigham (2000), assert that general education teachers tend to deliver content and special education teachers engage in modifications and classroom management Weiss and Brigham (2000), report that these approaches may not be filling the needs of students with disabilities.

Effectiveness of Co-teaching

Kohler-Evans (2006) contends that co-teaching holds the potential to be a great way to meet the academic needs of all students. Kohler-Evans (2006) conducted

qualitative research of general education and special education high school teachers using both open-ended and closed-ended questions. The anonymous responses indicated that 77% of those surveyed believed co-teaching had an influence on the achievement of the students involved. Of these respondents, all believed that the influence was a positive one that included academic benefits for students.

A study by Strogilos and Avramidis (2016) examined whether co-teaching had an effect on students with disabilities. Findings indicate that co-teaching has a positive effect on students particularly in the engagement level of students with disabilities.

Inclusion may also provide social and developmental benefits for participants that transcend academic benefits. Bhagat (2007) asserts that co-teaching contributes to equal rights and social justice for special education students. Wilson and Michaels (2006) surveyed nearly 350 high school students, one-third of the respondents were students with disabilities. The students heavily supported co-teaching contending that they received better grades, more help was available, and a higher level of skills developed in the co-taught classroom.

A quantitative study by Garrett-Rainey (2014) sought to determine the impact of co-teaching on student test scores. This study examined the scores of general education students in co-taught and classes compared to general education students in single-instructor classes. Garrett-Rainey assert that students in single-instructor classes outperformed their counterparts in co-taught classes. In contrast, teachers interviewed by Legutko (2015) report that students there are performing better in their co-taught classes compared to their single-instructor counterparts.

Friend et al. (2010) point to the necessity of future research to document the

effectiveness of co-teaching on increasing student outcomes. Friend et al. (2010) explain

that data on the effect of co-teaching on student's academic achievement presents a

somewhat murky picture. Rea, McLaughlin, and Walther-Thomas (2002) point to

improvements in the attendance and report card grades of students in co-taught classes,

whereas scores on standardized assessment measures remained constant.

Issues with Inclusion

According to Nichols, Dowdy, and Nichols (2010) with the introduction of the

Individuals with Disabilities Act Amendments in 1997, and The No Child Left Behind

Act in 2001, school districts began implementing a co-teaching model as a means of

complying with the mandate that students be educated in the least restrictive environment

possible for that student. This legislation provides special education students equal access

to the curriculum and a quality education. This legislation expands on the landmark

Brown v. Board of Education decision that separate is not equal, in effect, applying this

doctrine to students with disabilities. Compliance with the mandates of No Child Left

Behind and the Individuals with Disabilities Act should, therefore, be not just a matter of

educational equity or social justice but a civil rights issue as well. Bhagat (2007)

contends that the key issue is not that that inclusion or co-teaching is not working but

instead that it could be working much better than it is if supported.

Schools have of course complied with the letter of the law by providing special

education students with the services required under the letter of the law. Given the rush to

implement changes, a question among researchers that remains is whether the intent of

the law is being fulfilled. Nichols, Dowdy, and Nichols (2010) assert that the reality of

co-teaching models is that they have been put into place without sufficient training for all

parties involved and are more concerned with complying with the law than successfully education special education students. This assertion is supported by Kohler-Evans (2006) who contends that many schools use the co-teaching model incorrectly, providing services merely to comply with the mandates of NCLB and IDEA. Those assertions aside, it may be more accurate that teachers and administrators are not following suggestions from the literature.

Needs and Benefits

Nichols, Dowdy, and Nichols (2010) identify professional development specifically for purposes of improving co-teaching as an area that most schools do not address. School administrators will also benefit from this research through an increased understanding of how teachers enact the co-teaching process and how they learn to do so. Administrators will be able to use the information on how to improve co-teaching relationships and district professional development which has been provided via the review of the literature and through the teachers' own words. As a result, the most important potential beneficiaries will be those students in an inclusive setting, both special education and general education students alike.

Rice & Zigmond (2000) point to the increased academic benefits for students with disabilities who have extra attention from the presence of two teachers in the classroom. In their interviews with teachers and students, Walther-Thomas (1997) described how the efficacy of students with disabilities in the co-taught classroom setting increased. Once these students realized initial success, the students appeared to work harder and be better behaved. Dieker (2001) concluded that students perceived that their needs were being met better in the co-taught classroom, compared to classrooms with only one teacher.

Improvements in both attendance and the report card grades of students in co-taught classes are touted by the research of Rea, McLaughlin, and Walther-Thomas (2002).

Preston-Smith (2015) solicited general education and special education student's perceptions on co-teaching. The findings illustrate that students report that they like having two teachers in the room and perceive that the two teachers are not equal in stature, with the general education teacher seen as more important.

A common theme heard from co-teachers is a lack of administrative support or guidance. Murawski and Dieker (2008) claim that in many cases school leadership is not following established methods to ensure successful co-teaching and illustrate how co-teachers can succeed despite these administrative obstacles. The importance of administrative involvement in co-teaching is supported by Sileo (2011) who explains that guidance and direction from administration will help in providing methods and avenues for the resolution of the inevitable conflicts that arise between co-teachers. In the absence of this administrative guidance Wilson (2008) presents suggestions for co-teachers that will benefit students since and when true co-teaching is not occurring.

Pratt (2014) asserts that to overcome issues of parity, teachers must work independently using their unique skills and abilities to overcome challenges in co-teaching and to create relationships that rely on each other's strengths and embrace differences.

Both administrator and teacher alike need the other to perform his or her respective roles. Scott (2003) theorizes that both leaders and followers hold power over each other. This concept can be described as a type of passive resistance. Administrators

and teachers alike can slow down or halt an effort such as co-teaching merely by failing to embrace it, not giving their best and not seeing it through to fruition.

Murawski and Bernhardt (2015) developed a co-teaching guide for administrators that offers suggestions and advice on how to implement a successful co-teaching program. Suggestions include: providing professional development, establishing scheduling strategies to support co-teaching, creating and maintain successful co-teaching partnerships, understanding co-teaching before evaluating it and to consolidate successes in co-teaching by improving and expanding co-teaching practices and culture.

Definitions of Important Terms

Research based, as used in this study refers to strategies, suggestions and approaches that that appear in articles on co-teaching, that were uncovered during this study. For an article to be considered to be research based in this study, it was either from a dissertation or appeared in journal describing empirical research.

Lived Experience, as used in this study refers to the concept of phenomenological qualitative research. Moustakas (1994) explains that lived experience is where the feedback from survey respondents are examined to understand and make sense of the essence of the respondent's experiences. For this study, an article was considered to be lived experience if it was presented from an individual's perspective or based on their practices without evidence to support.

The term approach, or approaches, as used in this study, refer to six specific over-arching methods of delivering co-teaching services in the co-taught, or inclusive classroom. For the most part, all types of activities in the co-taught classroom can be sorted into one of these six approaches. These methods, initially identified, developed

and popularized by noted co-teaching researcher Marilyn Friend, (1995) have consistently since the mid-1990s been referred to as "co-teaching approaches" or just "approaches."

The terms "strategy," "teaching strategy," or "teaching strategies" as used in this study, refer to the various methods and processes, culled from across all pedagogical areas that are available to teachers, to facilitate student learning. These include, but are not limited to the areas of instruction, planning, lesson planning, classroom management, professional development, etcetera.

The term "suggestion," as used in this study describes the input, via thoughts, and opinions based on experiences of others, which seek to influence the pedagogical practice of co-teaching. This input, in the form of suggestions, is widespread, and research based, perhaps even incorporating the use of teaching strategies and approaches.

Chapter 3

Methodology

This qualitative case study consisted of two stages. The first was a comprehensive analysis of documents through a review of literature on suggested co-teaching practices. This resulted in the construction of a list of the most frequently suggested co-teaching practices from the most commonly used and widely available education literature. The second stage was a teacher survey which was conducted in three public high schools in New Jersey. This gathered demographic information about the survey respondents and their practices to ascertain if and to what extent the suggested co-teaching practices are being implemented in high school co-teaching classes.

Purpose

The purpose of this qualitative research study was to evaluate the co-teaching literature and to determine the extent of practice and professional development needs for co-teachers at the high school level. First, using document analysis, the study reviewed suggested co-teaching practices by creating a comprehensive list of the most frequently suggested co-teaching practices found in the most commonly available educational, professional literature. Then, by gathering data through surveys with teachers, the study explored the realization, or lack thereof, of these practices in the New Jersey high school co-teaching classroom. Analysis of these two sets of data provides perspective on which, if any, of these suggested co-teaching strategies that the literature recommends, are actually implemented in the high school classroom. As a result, this data can ultimately drive suggestions for teacher awareness and administrator planning for professional

development on co-teaching, so that research based co-teaching practices can truly be incorporated into high school classrooms for the benefit of all students.

Improvements in pedagogy can be implemented immediately based on the results of the first part of this study, which developed the list of the most frequently suggested and documented practices in the teacher education literature. Since teacher preparation programs and graduate programs in most education fields also utilize the core list of journals and databases on which this work was based, these results can serve as a baseline for future tracking of literature on the topic of co-teaching. Furthermore, data collected from the teacher surveys, which helped to identify the scope of classroom use of the most frequently suggested research based co-teaching strategies, can naturally help educators in those districts which participated. In addition, the survey questions can be offered to teachers throughout the state of New Jersey and in other states, providing more information about research into practice and providing opportunities for more in-depth study. Teacher leaders and administrators can use this information when formulating strategies to improve co-teaching professional development based on teachers' own experiences.

Research Questions

Several research questions guided this investigation into understanding frequently suggested co-teaching practices and their ultimate realization in the high school co-teaching classroom. The research questions are:

Research Questions for First Stage: What does the literature say are the most frequent suggestions for co-teaching practices in the classroom? Which of these most

frequently recurring suggestions are research based, and which are based solely on lived

teacher experience?

Research Questions for Second Stage: What co-teaching suggestions as indicated

by the literature are teachers' familiar with? Why did teachers choose, or not chose, to

implement them? What do co-teachers report are the most useful strategies they are

implementing?

First Stage: Sources of Documents for Analysis.

Online library database searches were conducted using the ERIC and Academic

Search Premier databases on the EBSCOhost platform. EBSCOhost is a searchable

database provider whose products -- databases which contain collections of journal

articles -- are accessible via the Internet as a result of our university library's annual

licensed subscription. EBSCOhost provides advanced search options within their

collection of a wide variety of information sources with results often available as full-text

articles.

The Education Research Information Center (ERIC), is one of the databases

provided through the EBSCO interface. It contains over 1.3 million records culled from

scholarly educational journals and including hundreds of thousands of full-text articles.

The library at Teachers College at Columbia University (2013) further explains that when

it comes to searching for periodical literature in education, ERIC is the leading database,

offering articles from over 800 educational journals.

Academic Search Premier (ASP), according to the Rowan University Library

(2015), provides a broader database search since it is considered multidisciplinary. It is

the database most common to a wide variety of libraries including academic libraries,

school libraries, and public libraries, and offers and full-text available for over 4,500 journal titles.

This study selected these two library databases as the most authoritative source of information for teachers about teaching practices, and which would be familiar to teachers who were trained in New Jersey, or who now employed as teachers in New Jersey. The most commonly used academic databases of journal articles were determined to be two online databases from EBSCO™, Academic Search Premier™ and, ERIC™. All of New Jersey's institutions of higher education which prepare teacher educators have access to these databases, and all K-12 school libraries also have access to them through JerseyClicks, a series of electronic resources provided by the New Jersey State Library and the Institute for Museum and Library Services. Via informal polls of educators at all levels, as well as by agreement of the members of the dissertation committee, these two databases provided the sources of documents for analysis.

Searches were conducted by accessing online databases available from the Rowan University Campbell Library home page. From the library's web page, the "Databases" tab was selected, and ERIC (on the EBSCOhost platform) was selected from the available databases list. This action moves the search to the EBSCOhost search page. By clicking on the "Choose Databases" hyperlink within the EBSCOhost interface, a detailed view of other databases becomes available to the researcher. Academic Search Premier was then selected by clicking on the box next to this database name. The search now included both ERIC and Academic Search Premier simultaneously via the EBSCOhost platform.

The researcher searched each of these sources on its opening search screen using the simple keyword term *co-teach**.

The term "co-teach*" was entered into the top search box. The asterisk was added to the term "co-teach" and is known as truncation. Truncation keeps the root of the word the search. All possible endings of the term co-teach were then returned in the results, for example co-teaching, co-teacher, co-teachers, etcetera. This search returned a total of 981 articles from the years 1973 to 2017. Without the asterisk, the term "co-teach" returns only 88 articles. These articles represented every article that was available on ERIC and Academic Search Premier via the EBSCOhost platform during the database search process.

Particular attention was paid to the sources returned in the results list which pertained to co-teaching themes at the high school level. The variable NOT elementary was added to the search parameters. The variable of NOT elementary was introduced to attempt to remove articles that were written about preschool to eighth grade, focusing search results on the grades nine through twelve. Including the variable NOT elementary to the search parameters omitted 319 articles, reducing the number of articles to 662. The Boolean/phrase search term for this aspect of the search was, therefore "co-teach* NOT elementary."

The search parameters were set to return results between the years 2007 and 2017, covering nearly ten years, (9.5 years since the data collection was performed in the summer of 2017) of materials available for teacher professional development. Ten years was considered the longest period of time for which pedagogical materials on co-teaching would be most relevant for and available to teachers. The publication dates were focused in to include only articles published from 2007 to the present (2017). The year 2007 was selected because of its significance in that this was the first year that all teachers, with

some exceptions, were supposed to be highly qualified pursuant to IDEA 2004 legislation. Narrowing the years to this ten-year window had the effect, in this case, of excluding 200 articles, narrowing the results from 662 articles to 462 articles. 218 or 47% of these articles were from Academic Search Premier and 243 or 53% from ERIC. The last filter was applied to provide only results that were published in English. This further reduced the number of articles to 458.

Although the search results indicate 456 articles, this total includes duplicates that the EBSCOhost database automatically removes. Upon viewing the 416th article the results end, and the database provides the following message: "Note: Exact duplicates removed from the results." So, in actuality, there are 416 unique articles encompassed by this search.

According to the information provided by the database itself, the results produced articles in English from 9 countries in addition to the United States. Examining the data provided by EBSCOhost on the 458 articles yields the following information.

The articles, therefore, came from the following sources: 295 articles from Scholarly (Peer Reviewed Journals), with 231 articles were listed as providing full-text; 292 articles from academic journals; 78 from magazines. In addition, 77 items were reports, plus four reviews, three news articles, two trade publications and one a book.

First Stage: Process for Document Analysis

Data collection for the first phase of this study will be conducted using document analysis techniques discussed by Creswell (2008). A methodical search of documents regarding co-teaching suggestions and practices spanning the past ten years will be conducted targeting journals and publications from the fields of education, special

education, teaching, co-teaching and, psychology. Rigor will be maintained using constant comparison method and by employing the emergent coding practices described by Saldaña (2009) and Creswell (2007).

The results from the spreadsheet were sorted through and analyzed. Initial themes were identified among the findings. Themes emerged and were honed with each subsequent coding pass using emergent coding practices. As suggested by Saldaña (2009) in the process of recoding and categorizing major categories were identified, and results were checked by a second coder. Suggested co-teaching strategies were identified in a similar fashion. A tally was created of each strategy, and multiple coding passes were made. In subsequent coding passes, strategies were refined as themes emerged from the responses.

Findings were coded by hand. This data was refined with successive coding passes. To ensure thorough and complete coding, a second reviewer checked coding and the subsequent master list of research based and general suggestions for co-teaching. From this data, a master list of suggested best practices was developed, and a checklist created for distribution to study participants to determine their current use of these practices in the classroom.

More details of the emergent coding process and results are discussed in greater detail in Chapter Four.

First Stage: Data Collection Spreadsheet

A data collection tool was developed using a Microsoft Excel spreadsheet to collect and log information about the articles in the database. The data collection tool or spreadsheet gathered information in nine separate columns. These columns detailed the

database the article came from, a permalink to the article itself, the publication in which the article appeared, the year in which the article was published, whether the article was research based and, if so, the research design of the article, a summary of the article, and any notes on or about the article. A ninth column enumerating the strategies suggested in the articles themselves was populated during a subsequent pass through the articles.

The first column logged the database in which the article was found. As described above all of the articles were from the ERIC & ASP databases, 218 or 47% of these articles were from Academic Search Premier and 243 or 53% from Education Research Information Center or ERIC on the EBSCOhost platform.

The second column was for a permalink. Each article in the spreadsheet has an associated permalink for that article. The permalink would allow a second coder, or another researcher with access to The Rowan University Library, to access the article itself, even though the database collection tool was not published with the study.

The third column lists the name of the publication in which the article appeared.

The fourth column indicates the year in which the article was published.

The fifth column indicates if the article was research base or if the article was not available in full-text, indicated by NFT in the column. If the article was research based, the research design of the article was cataloged in the adjacent sixth column.

The seventh column gives a summary of the article itself. This may include how the article relates to co-teaching.

The eighth column list notes about the article. These may include the country or region that the article comes from, and, or, why the article may not be applicable to or excluded from the final database of articles on co-teaching.

The ninth column was added after all of the other eight columns were populated after subsequent data analysis, coding and massaging. This column lists the specific recommendations or strategies suggested in each of the articles themselves.

First Stage: Data Analysis Process & Coding

After the researcher had populated the spreadsheet with the articles from the database. The spreadsheet was sent to a second coder who examined the spreadsheet and checked the accuracy of the articles in particular which articles were research based, or not and the types of research designs that were used.

A coding scheme was developed and implemented for use in determining the types of articles included in the spreadsheet. Articles were highlighted in several colors, the most important being red, blue or green. These articles were subsequently sorted into three categories.

Articles highlighted in red are dissertations. These are empirical research studies. These articles are easy to find and readily available to teachers or administrators, but because of their length and detailed nature they are not likely to have been thoroughly read by practitioners.

The articles highlighted in blue are largely articles that describe empirical research in a journal or similar publication. These are shorter than dissertations yet very detailed and specific. The blue articles contain abstracts, literature reviews, methods sections and numerous references. It is likely that these articles would be more widely read than the red/dissertation articles, though not as widely read as the green articles.

The green articles are short articles that are largely aimed at teachers or administrators. These articles are research based. They are reports of empirical research

presented so that practitioners can read them. They provide practical suggestions, tips and information for working teachers and administrators seeking to augment their knowledge or pedagogy. For the most part, they do not include numerous references. These green articles are the most likely to have been read by teachers both because of the size and ease of reading the article and the nature of the publications in which the articles appear.

After completing the first pass through of gathering information on the articles and populating the database 28% or 116 articles were marked for consideration since they were considered research based.

Second Stage: Design of Teacher Survey

The survey was then designed with two distinct sections: demographics and co-teaching strategies. The first section focused on co-teaching strategies and included a total of 21 multiple choice and open-ended response with the questions separated into four subcategories; approaches to co-teaching, approaches to co-planning, professional development and, culture of support for co-teaching. The second section focused on demographics of the respondents and consisted of eight multiple choice questions designed to gather demographical information on the survey respondents.

Second Stage: Pilot Test of Survey Questions

The ten strategies were each assigned to a subcategory. Survey questions were then developed for each of these subcategories in consultation with the three research questions guiding this study. With the survey questions in place, copies of the survey were printed out and distributed to four teachers at the researcher's high school, two special education teachers and two general education teachers as a pilot study to get their feedback on the survey and suggestions for improving the survey as well as determining

how long the survey would take to complete. Fink (2008) explains that a pilot test helps create a more usable survey as well as one that is better able to gather the intended information. The printed surveys were distributed by hand, to four teachers at the researcher's high school, two special education teachers, and two general education teachers. Two completed surveys were returned, one from a special education teacher and one from a general education teacher. The researcher then asked questions about the survey to gather feedback about the survey. Feedback gathered during the pilot test was used to make changes to the both the design or layout of the survey as well as to questions on the survey.

Second Stage: Process for Teacher Survey

After the development of the master checklist, a survey was designed and distributed to potential participants using guidelines suggested by Fink (2008). The survey gathered both demographic data and data on participants' implementation and knowledge of suggested co-teaching strategies from survey respondents with the use of a two-part questionnaire. The surveys were distributed using the Survey Monkey website.

This study focuses on the co-teachers working at the high school level in grades 9-12. High schools were selected because, as Keefe et al. (2004) explain, high school teachers do not view co-teaching as highly as their elementary and middle school counterparts. This study gathered data from these types of schools via an e-mail based online survey that included both demographic and open-ended response sections.

Upon receipt of the e-mail containing the link to the survey, the first screen that a respondent saw was an informed consent page. Once, and if, the respondent gave their consent by clicking on the 'next' button, they were taken to a new page that asked only

one question: "Are you a classroom teacher in a co-teaching partnership(s) during the current school year?" They were informed that "a 'no' answer will end the survey." Since this study strives to determine the perceptions of co-teachers, current co-teaching classroom experience would provide more immediate context from which respondents could base their answers. A 'no' answer brought the respondent to a page thanking them for their time, while a 'yes' answer led the respondent to the first section of the survey, which started with questions about co-teaching strategies.

Second Stage: Survey Distribution

A link to the survey was distributed via e-mail, to approximately 300 teachers at the three high schools. At two of the schools, the link was forwarded to teachers by the school principal with a request from the principal for the teachers to complete the survey as soon as possible at the third school the researcher distributed the link via e-mail to fellow faculty members noting that the solicitation had been approved by the building principal. The survey was distributed in June, at the end of the school year. This will have provided an entire school year for co-teachers to reflect upon and draw from their knowledge and use of co-teaching.

Participating schools data. Three New Jersey high schools were selected to conduct this study. The schools were selected using data generated from The New Jersey Department of Education school performance reports implemented in 2016. The three schools selected were culled from within one New Jersey Department of Education Peer Group. A peer group as defined by The New Jersey Department of Education (2016) is a homogeneous cohort of 30 schools grouped by The New Jersey Department of Education based on similarities in student demographic characteristics. These characteristics

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incorporate elements of socio-economic status and include the percentage of students in special education programs, economically disadvantaged students measured by free and reduced lunch program enrollment and English language learners. These cohort or peer groups were created by using a statistical technique known as propensity score matching (New Jersey Department of Education, 2016).

These three schools were specifically selected because of their similarities in a large percentage of students with IEPs. The larger number of special education students presented a potentially larger sample size of teachers involved in co-teaching, in addition to the impact on school programming and logistics of a larger population of students with disabilities. In total, approximately 60 co-teachers, both general education, and special education were surveyed. Permission needed to be obtained from school administration at each school where the survey was conducted. Several schools from the peer group refused permission to conduct the survey.

Rather than selecting schools that were different in demographic and socioeconomic terms, similar schools were purposely selected. It was postulated that selecting homogeneous schools might remove divergent variables and provide more insight into the approaches, strategies, and perspectives rather than selecting heterogeneous schools. Furthermore, Hagaman & Wutich (2017) conclude that data saturation is reached easier, with lower sample sizes, among homogeneous groups when compared to heterogeneous groups.

According to The New Jersey Department of Education, (2016) School A has a student enrollment of approximately 2000 students. The student population is 65% White, 21% Asian, 9.0% Hispanic and 5% Black. The data indicates that 16% of the

students are eligible for special education services and 10% are classified as economically disadvantaged. English is the primary language spoken for 86% of students. School A has a 11:1 student to faculty ratio.

The New Jersey Department of Education (2016) data shows that School B has a student enrollment of approximately 750 students. The student population is 71% White, 19% Black, 6 % Hispanic and 1% Asian. The data indicates that 14% of the students are eligible for special education services and 16% are classified as economically disadvantaged. English is the primary language spoken for 99% of students. School B has a 10:1 student to faculty ratio.

According to The New Jersey Department of Education, (2016) School C has a student enrollment of approximately 450 students. The student population is 91% White, 3% Black, 2% Hispanic and 1% Asian. The data indicates that 16% of the students are eligible for special education services and 16% are classified as economically disadvantaged. English is the primary language spoken for 100% of students. School C has a 10:1 student to faculty ratio.

Second Stage: Data Analysis Process & Coding

The survey responses can be placed in two categories open-ended questions and multiple choice questions. Each of the categories was analyzed in different ways. Multiple choice question responses were analyzed and tallied. Responses were examined for trends and themes among respondents. Percentages of respondents were then tabulated. Data analysis was conducted using both Survey Monkey and Microsoft Excel spreadsheet software.

Open-ended responses were hand tallied, with each response written on an extensive list. The researcher made several subsequent coding passes and emergent themes were identified and grouped in similar categories. With each additional coding pass, themes became more focused until responses were distilled to a minimum number of emergent themes. For each open-ended question, a tally was kept for each coding pass. A second coder was consulted with and examined the responses and coding process.

Limitations

A limitation of this study was that teachers were encouraged by their supervisors to participate in the survey. Although the survey instructions clearly stated that their responses would be anonymous, this may have impacted the nature of teachers' responses during the survey.

A second limitation is that teachers were ruled out from participating in the survey if they were not in a current co-teaching relationship during that academic year. This was intentionally done to give current, up-to-date data and responses. However, this rule-out removed many teachers who had previous, but not current co-teaching experience and may have wished to participate in the survey. At most, this could have potentially impacted a maximum of three possible respondents.

Another potential limitation is that there is a chance that the researcher may have unintentionally brought his own professional or personal bias to the study. Procedures regarding collection and analysis of all data were documented to demonstrate transparency. Every effort was made, including the use of multiple coders to remain unbiased in coding, data collection, etcetera.

Although several limitations exist in the study, the usefulness of the data on co-teaching gathered by this study outweighs any potential limitations of the study.

Chapter 4

Results

First Stage: Themes in the Literature on Co-Teaching

Results of the document analysis show many common themes represented within the professional literature on co-teaching. As described above, results of the first coding pass for the library database searches showed a saturation of topics within the time frame examined. The data shows that 175 articles were about team teaching, 93 were about teacher collaboration, 85 were about teaching methods, 81 were about the relationships between general education and special education teachers, 79 were about disabilities, 75 were focused on higher education, 74 were about special education teachers, 66 were about inclusion, 55 were about teacher attitudes, 51 were about special education in general. Of the remaining articles, 44 were interviews, 44 were focused on post-secondary education, 37 were focused specifically on high schools, 36 were case studies, and 36 were focused on middle schools. There were 34 other subjects that had single digits results when thematically coded in this manner. The articles on co-teaching were published in 50 different publications, with the largest being ProQuest LLC dissertations and theses with 65 items; the journal *Educational Leadership* with 27 articles; and the journal *Teaching Exceptional Children* with 23 articles.

A second coding pass used a broadened perspective of what should qualify for inclusion as a green or practitioner focused article. This had the effect of removing four articles overall while adding articles to the included list. In addition, one article in Spanish and three duplicate articles were removed. This is a .007 rate of duplicates, indicating that the database is effective at excluding duplicate articles. The working sub-

total of unique articles that are listed in the spreadsheet now stands at 411 articles. Overall from the total of 411 total unique articles 155 articles or .38% were selected as research based. Of the 411 articles, the breakdown of articles by categories is shown in Table 1.

Table 1

Breakdown of Co-Teaching Articles by Category.

Articles by Category	Percent
Dissertations (red articles)	15
Journal articles (blue articles)	13
Articles for practitioners (green articles)	10

Moreover, 59 articles or .14% were cataloged as NFT, indicating that there was not a full-text version of the article available online. There were 53 articles or .13% from 21 countries other than the United States and one article from indigenous Native America. The top five countries with the most articles were; Great Britain with eight articles, Australia with seven articles, Finland and Greece with six articles each and Canada with five articles.

Articles were published in 185 different publications. ProQuest published the most articles with 63 while *Educational Leadership* published the second most with 27 articles and *Teaching Exceptional Children / Teaching Exceptional Children Plus* published 21 for the third largest total. *English Journal* was next with nine articles,

however these articles were not Special Education related. *The New York Times Education Supplement* was responsible for nine articles, *Teaching and Teacher Education* eight, *Intervention in Schools and Clinic* published eight while *Preventing School Failure, Teacher Education, and Special Education*, *European Journal of Special Needs Education* and Online Submissions all published six articles each.

Yet another coding pass through the spreadsheet was made in an effort to focus the articles further to be used for creating the survey. Through several coding passes 15 different categories of articles were identified. These categories were:

Pre-K to 8th-grade co-teaching

Higher education

Pre-service teachers

Colleagues/co-workers (not co-teaching)

Not in the U.S.

Co-Teaching/not special education

Co-Teaching for administration

Professional development

Strategies - not research based

Collaboration/relationships

Overview/history

Perspectives/experiences

Tips for co-teaching

Effectiveness of co-teaching

Co-Teaching methods

From this list of 15 categories, three overarching broad themes have developed from the literature they are articles for teachers, administration and, pre-service teachers/professors. Since the focus of this research is the strategies that teachers are using in the New Jersey High School classroom, articles on or for Pre-service teachers have been omitted leaving those results that focus on what is currently occurring in high schools.

From the list of 155 articles originally considered eligible, the articles were culled to a total of 86 articles. The articles removed included articles that were for Pre-K to eighth grade, did not provide strategies, were from outside the United States, not for Special Education, did not include full-text, were for university or pre-service teachers.

First Stage Results: Suggested Strategies in the Literature on Co-Teaching

The next phase was to identify what were the most frequently recurring strategies for co-teaching in the inclusion classroom as identified by the 86 articles in the literature. Each of the 86 articles was accessed from the online database, downloaded and was thoroughly perused. Strategies and recommendations from the articles were paraphrased or coded and listed on the original spreadsheet in the ninth column entitled "Suggested Strategies." Some articles offered one or two suggestions while others offered dozens of suggestions.

With the strategies for all 86 of the articles entered, the spreadsheet was adapted so that only the red, blue or green color-coded articles were visible. These articles were printed out in landscape mode so that all suggested strategies for each article were visible. This produced 38 pages of articles. Articles were then crossed out and eliminated based on variables discussed above for example: outside the United States, duplicates, not

full-text, pre-K-eighth grade, pre-service, etcetera. this process was checked by a second

coder, who is a current Ph.D. doctoral candidate. Of the 86 articles, 39 or .45% are red

articles or empirical research studies/dissertations, 35 or .41% are green articles or

empirical research presented so that practitioners can read them, and 12 articles or .14%

are blue articles or articles that describe empirical research in a journal or similar

publication. The breakdown of co-teaching articles by category is shown in Table 2.

Table 2

Breakdown of Suggested Strategies in Co-Teaching Literature by Category

Articles by Category	Percent
Dissertations (red articles)	45
Articles for practitioners (green articles)	41
Journal articles (blue articles)	14

When all of the articles were marked and correctly identified, a master list was

created with each suggested strategy from each article listed. This created a list of 102

different co-teaching strategies. A second pass was made over the articles and strategies.

The suggestions were tallied using red, green or blue pen to indicate which type of article

the suggestion came from. Dissertations were color-coded red, articles for practitioners

were color-coded green and journal articles were color-coded in blue.

Of the 102 co-teaching strategies, 35 strategies were determined to appear more

than one time. A list of these 35 strategies was created in order of how frequently they

occurred, 24 strategies were suggested three or more times. 17 strategies were suggested four or more times. 11 strategies were suggested five or more times. Eight strategies of 102 or .76% were from only one-category of articles/color group. All three categories/color-coded groups suggested nine of the top 10 most frequent strategies! These were the only strategies suggested by all three groups. Although they accounted for just .09% of the 102 strategies, there were 141 suggestions for these top nine strategies! This underscores the importance of these nine strategies – they appear in all categories of the research literature. In comparison, the next 15 most recommended strategies accounted for only 55 suggestions.

The redundancy of these multiple strategies appearing in each of the three (color-coded) categories indicates the data saturation. Data saturation is explained by Hagaman & Wutich, (2017) as the presence of thick, rich data in qualitative research that provides robust answers.

The themes were grouped during another coding pass. All 102 suggested strategies were grouped into seven subgroups that helped define them: Class Instruction, Pedagogy, Good Practices, Inter-personal, Professional Development, District/Building Policies and For Administration.

The seven coded subgroups were reduced further to broader categories. Defined as those that can be implemented by co-teachers, inter-personal issues and administrative. The category -those that can be implemented by teachers, encompasses approaches and strategies that are able to be implemented by teachers in their classroom and not dependent on administration. The most frequently suggested strategies were placed into

these three categories and then used to design the survey questions shaped by the research questions.

Second Stage: Creation of the Teacher Survey from the Document Analysis Results

Coding was again used in the process of designing the questions for the survey and the layout of the survey. The most frequently suggested strategies in order of their number of occurrences starting with the most frequently suggested were:

1. Co-planning (41) *

2. Professional Development (26) *

3. Six Approaches to Co-Teaching (17) *

4. Support from Administration (17) *

5. Special Education Teacher Content Knowledge (13) *

6. Communication (10) *

7. Shared Roles/ Responsibilities (9) *

8. Collaboration (9) *

9. Protect/Keep Good Co-Teaching Teams Together (5)

10. Teacher Equity/Parity (5) *

11. Co-instruction (5)

Several subsequent coding passes were made, and strategies were again grouped into five different subcategories namely: approaches to co-teaching, co-planning, relationships, professional development, and culture of support. After analysis of the data, it was determined to focus on these top most frequently suggested strategies, as it was determined by the literature that nine of these ten strategies were recommended by all three categories (color-coded groups: red, blue and green).

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Second Stage: Teacher Survey Results

The first question was designed to qualify which teachers were able to access the survey and rule out those that were not. Only those teachers that responded that they were in a co-teaching relationship during the current school year were able to continue and respond to the rest of the survey. A no response would disqualify a potential respondent. This was done to ensure that only current co-teachers were able to input the co-teaching approaches in use during the current school year. Only co-teachers that were in a current relationship were allowed to respond to the survey to provide responses that were from their current lived experience. These experiences would be the most accurate and timely. Teachers with co-teaching experience in prior years may have had valuable data, however, their responses may have also been clouded given the time since they were last actively involved in co-teaching.

The survey received 102 responses. Of the 102 responses, 72 teachers, or 71% indicated that they were in a co-teaching relationship during the current school year, while 30 teachers or 29% indicated that they were not currently in a co-teaching relationship. These 30 teachers or 29% were then politely disqualified from continuing the survey. This disqualification left 72 current co-teachers as eligible survey respondents.

The link was initially sent to approximately 300 teachers. It is estimated that perhaps half of the 300, or 150 teachers would have been engaged in a current co-teaching relationship at the time of the survey. The initial survey response rate was approximately 33% of the entire target audience and approximately 50% of those teachers that were in current co-teaching relationships. It is possible the high response

rate indicates that teachers, in particular, co-teachers are engaged and interested in advance scholarship and research on co-teaching. Another explanation for the higher than average response rate is that the survey was sent from a direct supervisor in two cases and a colleague in the third, thereby making respondents more willing to respond. Of the 72 qualified respondents that answered the first question 61 or 84% went on to complete the survey in its entirety. This sets the final response rate at approximately 20% from the entire target audience of 300 teachers originally e-mailed and, approximately 40% from those 150 teachers that were likely in current co-teaching relationships.

In regard to why 11 respondents or 16% failed to continue the survey it is possible that those individuals felt that the first question "are you a classroom teacher in a co-teaching partnership(s) during the current school year?" was the end of the survey, and they failed to click on the next button. It is also possible that they lost interest at this point.

The survey took on average six minutes based on all 102 responses. This includes the 41 people who were disqualified or did not complete the survey. The average time for completion was longer for the 61 people that completed the survey. Demographics of the participants appear below:

Participants' gender, age, and teaching experience. Of the 61 completed responses 49% indicated that they were female, an equal amount indicated that they were male with one person or 2% of respondents identifying as other.

Comparing demographics of female and male teachers shows that males tend to be a little bit older with the largest group being 33% aged 40-49, while females were most represented with 37% in the 30-39 age range.

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In terms of experience in teaching grades K-12 males have more experience. 70% of male respondents have ten or more years teaching experience while 54% of females have the same experience. 59% of female teachers have zero to ten years of experience compared to 29% of males the same age.

The gap narrows for experience with co-teaching where males have slightly more experience. Fifty percent of male respondents have ten or more years co-teaching experience while 43% of females have the same experience and 57% of female teachers have zero to ten years of experience compared to 50% of males the same age.

In comparing the educational levels of respondents, 53% of females had completed a bachelor's degree compared to 30% of males, 27% of females had a master's degree compared to 43% of males and, 20% of females indicated that they had master's degrees plus compared to 27% of males. Overall, there is a sizeable difference between females and males as 23% more males have earned a master's degree or higher, 47% of females and 70% of males respectively.

The age range of respondents was surveyed, the responses indicate that 16% were between the ages of 21-29, 31% were ages 30-39, 28% were aged 40-49, 15% were 50-59 10% were 60 years or older. A majority of respondents - 59% were between the ages of 30 and 49 years old as illustrated in Figure 1.
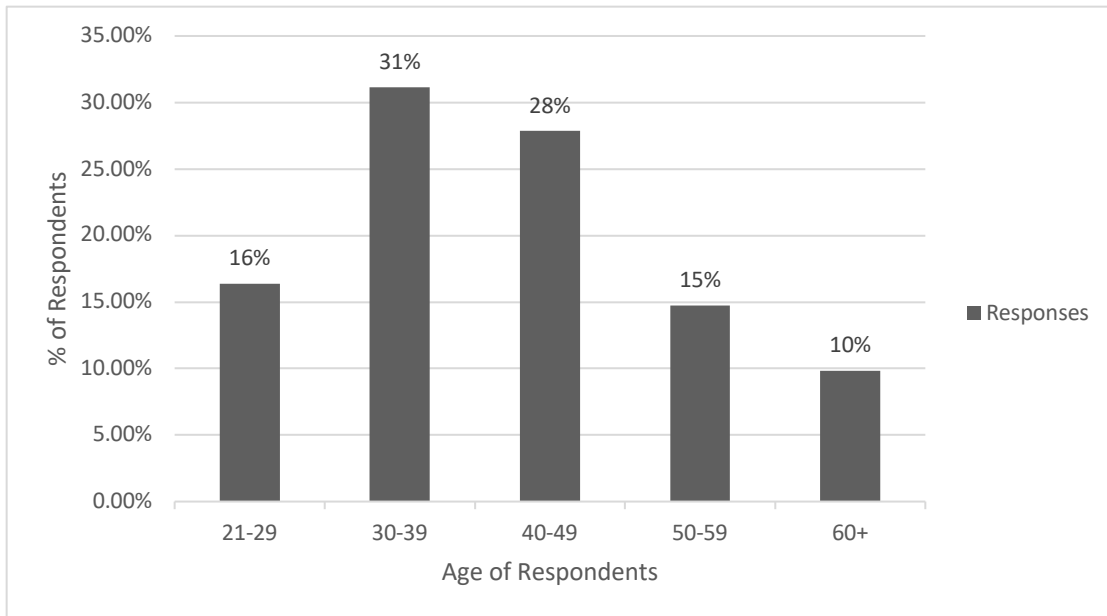
Figure 1. Age of Survey Respondents

Respondents were asked two questions about their years of teaching experience: "how many years have you taught in K-12?" and "Of those, how many years have you co-taught?"

For the question - "how many years have you taught in K-12?" the largest response was from 44% of the teachers with 15 years or more of experience, 20% of teachers had six to ten years of experience, 18% had two to five years of experience, 16% had ten to 15 years of teaching experience, while only 2% indicated that they were in their first year of teaching. Sixty percent of those who responded were very experienced teachers with over ten years of teaching experience while a further 80% of respondents reported more than six years of teaching experience.

Analysis of the response data pertaining to age shows, that as is to be expected, older teachers have more experience in teaching. However, teachers aged 50 and older do

not have as much experience with co-teaching, where 39% of those over age 50 report 15 plus years of co-teaching experience compared to the 52% of those between the ages of 39 and age 50 with 15 plus years of co-teaching experience.

Participants' co-teaching experience and education. For the question, "how many years have you co-taught?" The data shows that 26% have ten to 15 years of experience in co-teaching, while an equal 26% are relatively new to co-teaching with two to five years of experience. Meanwhile, 23% of respondents report six to ten years co-teaching, 20% are co-teaching veterans with over 15 years of experience, and 5% indicated that this was their first year co-teaching. The data shows that the respondents have a good deal of experience with 69% of them reporting six or more years of co-teaching experience.

Data analysis shows that a minimum of 82% of the respondents, with less than 15 years of teaching experience have been co-teaching for the majority of their career. Teachers with over 15 years of teaching experience report that only 44% of them have over 15 years of co-teaching experience. This likely could be could due to the lower number of co-taught classrooms prior to the year 2002.

When queried about their highest level of education achieved, respondents answered that 43% had earned a bachelor's degree, 34% a master's degree and 23% of respondents had some level above a master's degree and below a doctorate, since no respondents had earned a doctorate. The respondents are highly educated with 57% reporting advanced degrees.
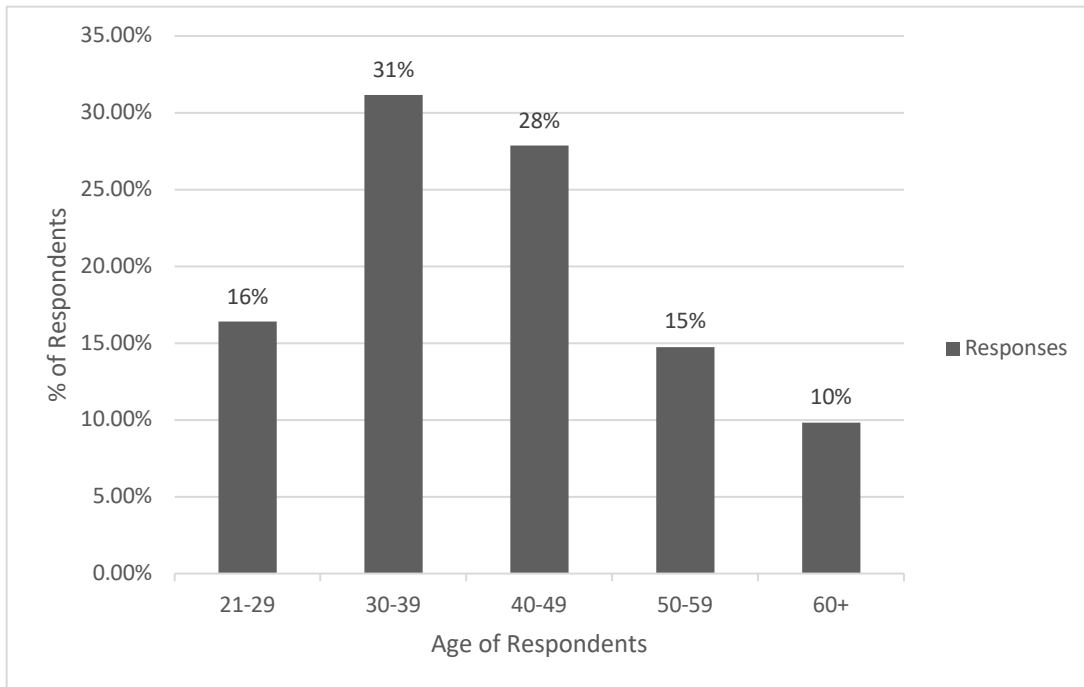
Figure 2. Highest Level of Education Achieved.

The level of education is fairly well balanced between the age groups, with two exceptions. The youngest teachers have the highest percentage of respondents with bachelor's degree 70% of those aged 21-29, while 100% of the oldest segment of age 60 years plus have master's degrees or above. Among respondents, educational levels among those teachers with co-teaching experience are similar to the educational levels based on the overall years of experience in teaching and also for the age of teachers.

Participants' classroom role and current content areas taught. Asked what their role was in the co-taught classroom, 61% indicated that their role was as the general education teacher while 39% responded that they were special education teachers. Of female respondents, 67% are general education and 33% special education teachers, compared to males where 57% are general education and 43% special education teachers.

The age of respondents does not seem to impact their representation in the role in the classroom, though the widest gaps between special education and general education teachers by age are with the oldest and youngest respondents at a nearly 70% to 30% split in favor of general education teachers.

Examining the relationship between the number of years of co-teaching experience and the role in the classroom, of either special educator or general educator, shows that while teachers with more than six years of co-teaching experience are represented almost evenly, novice teachers, those with more than one, and less than six years of co-teaching experience, are heavily represented by general education teachers at 81% compared to 19% for special education teachers.

Comparison of education level for teachers in their respective roles as general and special educators illustrates that general educators appear to have achieved a higher level of education. The surveys show that 54% of those with a bachelor's degree are special educators compared to 46% in general education, 76% of those with a master's degree are general education teachers, and 64 of respondents with higher than a master's degree are also general education teachers.

When queried what content areas that they were currently teaching, 28% answered Language Arts, 25% are teaching Math; another 25% are teaching Science classes, 21% are teaching Social Studies, 8% are teaching Physical Education classes another 8% reported teaching other classes. These classes included Engineering, Physics and Life Skills/Transition classes. Finally, 5% of respondents reported that they are currently teaching World Language classes.

In looking at the content areas that respondents were currently teaching by gender, females answered that 37% teach Language Arts, 23% are teaching Science classes, 20% are teaching Math, 10% are teaching Physical Education classes, 7% are teaching Social Studies, 7% World Languages, while another 3% reported teaching other classes, there was no information reported on what the other classes were.

In comparison, the responses to what areas that male respondents were currently teaching shows that 37% are teaching Social Studies, 27% are teaching Math, 23% are teaching Science classes, 17% reported they teach Language Arts, 13% reported teaching other classes, 7% are teaching Physical Education classes, and 3% World Languages.

The data shows that in most of the content areas and females and males are fairly equally represented with the exception of two content areas, Language Arts and Social Studies. In Language Arts, there are 20% more female teachers, and in Social Studies there are 30% more male teachers. Examining the age of respondents in terms of the content areas taught indicates that there is a balance among all of the age groups and content areas taught, with the exception of World Language which is under-represented in the survey response data.

In response to an inquiry on what other content areas they have taught, responses showed that 30% had co-taught Math, another 30% Science classes, while 28% had taught Language Arts, 28% had taught Social Studies, 16% were teaching Physical Education classes another 16% reported teaching other classes. No further responses were given to explain what other classes that these respondents had taught. World Language again reported the lowest amount with 15% indicating that they had previously co-taught World Language.

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In looking at the content areas that respondents had previously taught by gender, females answered that 37% had taught Language Arts, 30% taught Math, 27% had taught Science classes, 23% had taught Social Studies, 20% World Languages, 13% had previously taught Physical Education classes, while another 13% reported having taught other classes.

In comparison, the responses to what areas that male respondents had previously taught shows that 33% are teaching Social Studies, 33% are teaching Science classes, 30% are teaching Math, 20% reported they teach Language Arts, 20% are teaching Physical Education classes, 17% reported teaching other classes, and 10% World Languages.

The data shows that in most of the content areas that teachers have taught in the past, females and males are again, fairly equally represented with the exception of three content areas, Language Arts, Social Studies and World Language. In Language Arts there are 14% more female teachers, in Social Studies there are 14% more male teachers and there are 10% more females that have taught World Languages.

Second Stage: Participants' Responses about Their Co-Teaching Practices

Questions on six approaches to co-teaching initially discussed by Cook & Friend (1995) were presented to teachers, along with a brief description of each of the approaches, the questions were designed to gauge teachers' familiarity with, opinions on, and measure of their use of each of the approaches.

Co-Teaching Approaches

Familiarity with approaches to co-teaching. The first question asked, "How familiar are you with each of these co-teaching approaches: one teach, one assist, one teach, one observe, station teaching, parallel teaching, alternative teaching and, team teaching?" Teachers responses provide insight into which approaches they are or are not using and why. Not surprisingly, the approaches that were identified as the least well known, namely parallel teaching, station teaching, and alternative teaching were also the least used. Results are shown in Table 3.

Table 3

How Familiar Are You With Each of These Co-Teaching Approaches?

Co-Teaching Approach	Not Familiar	Never Used	Tried but Don't Use	Used Occasionally	Used Frequently
One teach, one assist	0%	3%	7%	28%	62%
One teach, one observe	5%	41%	12%	22%	20%
Station teaching	10%	43%	17%	22%	8%
Parallel teaching	14%	45%	12%	24%	5%
Alternative teaching	12%	27%	7%	41%	13%
Team teaching	3%	23%	10%	28%	36%

One teach, one assist was the most well-known of the approaches with 100% of respondents indicating that they were familiar with the approach, furthermore only 3% of teachers report that they have never used this approach. This was the most used approach as well with 62% reporting they use it frequently and compared to the next highest response of 35% frequently using team teaching. Ninety percent of the respondents indicated that they used one teach, one assist occasionally or frequently during the school year.

One teach, one observe was third most known approach with 95% of teachers reporting that they were familiar with the approach. Interestingly, it was also one of the least implemented approaches with only 20% of teachers reporting frequent use and, 44% using occasionally or frequently. In addition, it was also not used by 41% of teachers and was the second most likely approach to be used and discarded at 12%.

Station teaching was the approach that teachers reported being most unfamiliar with and the least used. 14% of teachers were not familiar with station teaching while another 45% of teachers indicate that they have never used station teaching and, 12% reporting that they had tried but do not use the approach. Moreover, only 5% of teachers claimed to use station teaching frequently in the classroom.

Parallel teaching was the most tried and discarded of these approaches with 17% of teachers reporting that they have tried the approach but are not currently using it. Parallel teaching was being used frequently by only 8% of teachers while, 70% were either not familiar with, never used or have tried and discarded it.

Alternative teaching was the second most unfamiliar approach, with 12% of teachers not familiar with it. 41% of teachers reported they use Alternative teaching

occasionally, making it the highest rated in that category while a mere 7%, the lowest amount, indicated that they had tried the approach and were no longer using it.

Team teaching was the second most used approach reported with 64% of teachers indicating they use team teaching either frequently or occasionally, Consequently, 23% shared that they have never used the approach. 97% of teachers reported familiarity with team teaching.

Based on the data reported by co-teachers their familiarity with the six co-teaching approaches is presented in Table 4.

Table 4

Percentage of Familiarity With Co-Teaching Approaches

Co-Teaching Approach	Not Familiar	Most Familiar
One teach, one assist	0	100
Team teaching	3	97
One teach, one observe	5	95
Station teaching	10	90
Alternative teaching	12	88
Parallel teaching	14	86

Selection of co-teaching approaches. An open-ended follow-up question sough to gather more insight into the reasons why co-teachers had chosen to implement those of the six co-teaching approaches the strategies that they had been using. The question

asked, "of the approaches you have tried, why did you choose them?" Teachers open-ended responses were read and re-read, sorted through in 3 subsequent coding sessions and analyzed. Five main themes were identified in teacher's responses to why they chose to implement the specific co-teaching approaches. Those themes, in order, were: effectiveness, co-teacher relationship dynamics, special educator content knowledge, ease of implementation and, situational or instructional based. The frequency of responses per category is shown in Table 5.

Table 5

Of the Approaches You Have Tried, Why Did You Choose Them?

Reason Chosen	% Identified
Effectiveness	30
Co-Teacher relationship dynamics	25
Special educator content knowledge	23
Ease of implementation	12
Situational or instructional based	10

The theme of effectiveness was the most frequently recurring appearing in 30% of the responses. Responses fell into the ideas of what works the best or helps the students the most. One response put it succinctly "these seemed to meet the needs of our students the best."

Co-teacher relationship dynamics comprised 25% of responses. Responses in this category stressed establishing and maintaining equality among co-teachers for the benefit of both the teachers and students. Equally the importance of having a long-established relationship or good co-teaching partnership was emphasized. One respondent wrote "I have worked with my co-teacher for three years and we have formed a very good teaching relationship where we take turns leading the class through content and activities." Consequently, responses also reported tension between general education and special education partners. Several general education teachers pointed to uneven workload or ineffectiveness while special education teachers reported a lack of sharing control or power with their co-teacher. A special education teacher responded, "much depends on how much "power" the regular education teacher wants to share in their classroom. Many regular teachers have a hard time accepting the in-class support person as an equal." Meanwhile this response comes from a general education teacher "I can't stand co-teaching with the people I work with. The approach I have used for the past two years is: I do all the teaching, prepare all the lessons, and run off all of the paperwork because two of my three co-teachers would prefer to do nothing. For the most part that's exactly what they do. If I don't take charge and teach the lessons I don't think we would accomplish anything meaningful. I can't let that happen."

The topic of special educator content knowledge accounted for 23% of responses as to why co-teaching approaches were selected. Some teachers reported that their special education co-teachers had the required content knowledge, and this enabled them to use different approaches however the vast majority, 77% of respondents point to a lack of content knowledge from their co-teachers. One response states "one teach, one observe is

the most frequently used because the special education teacher in my room does not feel comfortable teaching content." A special education teacher notes "I was moved from one subject area to another I did not have the expertise to teach it to the students." Another teacher stated, "the approach that I used really depended on the content knowledge of the special education teacher." It is important to note that in New Jersey in a high school in-class resource setting only one teacher is required to have content expertise, what would formerly be known as "highly qualified" status.

Many responses showed that often co-teachers select approaches because they are the easiest, 12% of responses fell into the category of ease of implementation. These responses also include the five percent of respondents who cited a lack of planning time. A respondent stated that approaches were chosen because they were "easy to implement without a lot of preparation."

With 10% of the response, the smallest category of response is situational or instructional based. These include the number of students in the class, the physical size of the classroom, the classroom dynamic or need to differentiate instruction. As one teacher reports "I have classes with a mix of high and low students, I need to be able to break them up into their respective groups to offer support to the low and mid students."

Each of these categories shares an interconnectedness with each other. One can extrapolate that if special education teachers possess the required content knowledge, they may assume a different role which could impact the co-teaching relationship dynamic, impact the situational selection of co-teaching approaches, the ease of implementing approaches and ultimately the effectiveness.

Co-teaching approaches not used. A follow-up open-ended question was then posed to teachers to ascertain why they were not using certain approaches. The question asked, "Of the approaches you have not tried, why haven't you tried them?" With this question six themes were identified in teacher's responses to why they chose not to implement the specific co-teaching approaches. Those themes, were the same five identified in the previous question with the emergence of a new theme, lack of familiarity. For this question – why haven't you tried them? The frequency of responses per category is shown in Table 6.

Table 6

Of the Approaches You Have Not Tried, Why Haven't You Tried Them?

Reason Approach Was Not Tried	% Identified
Lack of familiarity	21
Ease of implementation	17
Special educator content knowledge	17
Situational or instructional based	17
Co-Teacher relationship dynamics	14
Effectiveness	14

The new theme -- lack of familiarity -- shows that according to their feedback, teachers are not using approaches that they are unfamiliar with. 21% of respondents

indicated that they were not familiar with one or more of the approaches and were therefore not attempting to implement them.

The most frequent response in this theme was that teachers hadn't tried an approach because of lack of training or, knowledge of the approach. One teacher reflectively responded, "haven't though much about alternate techniques, you get into a habit of how you do things, it's probably a great idea to reevaluate every so often." Yet another lamented "we do not have a training program for co-teachers. The last time I received professional development for co-teaching was 13 years ago when I was at a different high school."

The other themes: ease of implementation, special educator content knowledge, situational or instructional based, co-teacher relationship dynamics and effectiveness presented many similar responses as the previous question "Of the approaches you have tried, why did you choose them?" with some notable differences.

Chief among these differences in the ease of implementation was the most common answer comprising 17% of responses, that co-teachers do not have enough planning time, and/or the approach requires too much time to plan. One teacher succinctly responded, "they require more planning time than we can give." The idea of approaches creating too much noise or a being distraction in the classroom was described by several teachers and appears in the situational or instructional based theme.

Several new responses were identified under the effectiveness theme. Some teachers indicated that they were not selecting co-teaching approaches because they believe what they use works, so why mess with it. Still others responded that an approach

was not beneficial and one opined that "these are not realistic to utilize in the ICR classroom. They are more of a distraction to the students."

The topic of lack of content knowledge of special educators was again very prevalent. 12% of all responses indicate that lack of content knowledge by special education co-teachers impacts why they may not select a co-teaching approach.

Perceived success of co-teaching approaches used. Teachers were asked to describe how successful they been with each of the six co-teaching approaches through the school year. There were three options to select from haven't tried, successful and unsuccessful. The results are shown in Table 7.

Table 7

How Successful Have You Been With Each of These Approaches This Year?

Co-Teaching Approach	% Haven't Tried	% Successful	% Unsuccessful
One teach, one assist	6	92	2
One teach, one observe	45	47	7
Station teaching	53	38	9
Parallel teaching	59	27	14
Alternative teaching	41	52	7
Team teaching	25	63	12

The results show that nearly all of the respondents (94%) had used One teach, One assist during the school year, 75% had used team teaching making One teach, One assist and Team Teaching the most used approaches, while the other four approaches saw less implementation with usage rates at 59% for Alternative Teaching, 54% for One teach, One Observe, 47% for Station Teaching and, 41% for Parallel Teaching.

The success rates for each of the approaches follow the usage rates. Nearly all teachers (92%) rated One teach, One assist as successful, while 63% felt Team Teaching was successful, followed by 52% for Alternative Teaching, 47% for One teach, One Observe, 38% for Station Teaching and, only 27% for Parallel Teaching.

Responses on which approaches were unsuccessful also held true to form with one exception - Team Teaching. Only 2% rated One teach, One assist as unsuccessful, while 7% felt Alternative Teaching and One teach, One Observe were unsuccessful, followed by 9% for Station and then,12% who believed Team Teaching was unsuccessful, followed lastly by 14% for Parallel Teaching.

Perceived usefulness of each of these approaches. Co-Teachers were asked to rate how useful they believed each of the six approaches was, based on how frequently they implement the approach. Choices were: not using, not at all, slightly, moderately, very, or extremely. Results of this question are shown in Table 8.

Table 8

Frequency With Which Respondents Implement the Approach in Percent

Approach	Not Using	Not at All	Slightly	Moderately	Very	Extremely
One teach, one assist	3	2	8	22	40	25
One teach, one observe	35	10	15	13	22	5
Parallel teaching	49	5	7	10	15	14
Station teaching	46	2	7	9	24	12
Alternative teaching	39	0	7	14	26	14
Team teaching	22	3	5	9	19	42

Results, shown in Table 8 indicate that co-teachers find one teach, one assist to be the most useful approach garnering the highest percentage of respondents that found the approach to be moderately, very, and also extremely useful. Meanwhile, one, teach one observe was the approach most selected as not at all useful.

Next results were combined into two basic responses, useful or not useful. A response of moderately, very, or extremely useful was counted in the useful category, while not using, not at all, or slightly useful responses were counted as a negative response and listed in the not useful Combining response categories to indicate whether respondents believed the co-teaching approaches useful or not useful yields the information in Table 9.

Table 9

Perceived Usefulness of Co-Teaching Approaches in Percent

Approach	Not useful	Useful
One teach, one assist	13	87
One teach, one observe,	60	40
Parallel teaching	61	39
Station teaching	55	45
Alternative teaching	46	54
Team teaching	30	70

The data in Table 9 shows that 87% of co-teachers find one teach, one assist and 70% believe team teaching are useful co-teaching approaches with just over half adding alternative teaching to the useful category. Consequently 61% reported that one teach, one observe was not useful while 60% felt the same about parallel teaching and 56% on station teaching.

Willingness to try unused approaches. Next, an open-ended question was posed to co-teachers to ascertain what would help them to try co-teaching approaches that they were not currently using. The question asked, "What would help you to try approaches that you are not currently using?" The results of this question were analyzed and code several times. With this question eight themes were identified in teacher's responses to what would help them to try co-teaching approaches that they were not currently using. These themes that emerged, listed from highest to lowest, were: Professional

Development, Planning, Special Education Content Knowledge, Nothing, Retaining

Teams, Evidence of Effectiveness, Bigger Classroom Spaces, and Smaller Class Sizes.

For this question "What would help you to try approaches that you are not currently

using?" the frequency of responses per category is shown in Table 10.

Table 10

What Would Help You to Try Approaches That You Are Not Currently Using?

Co-Teacher Responses	% of Responses
Professional development	36
Planning time	15
Special educator content knowledge	15
Nothing	11
Retain teacher teams	10
Building issues & miscellaneous	7
Evidence of effectiveness	6

The top five responses above were clearly focused, comprising 51% of all

responses, while the bottom 49% of the responses were much more diffuse covering 55

topics. The most frequent response by a wide margin, was Professional Development.

36% of all responses suggested that professional development, whether it was training, an

in-service or modeling, in person or with video presentations of effective examples of

how the co-teaching approach should work would help them try an approach they are not currently using.

Planning which included sharing scheduled prep or planning time with each co-teacher was the second most common response tied at 15% along with the importance of special education teachers being scheduled to teach in content areas that they were certified or had sufficient content knowledge.

To underscore the impact of special educator's content knowledge on co-teaching teams -trying varied approaches a frustrated math teacher responded that they would be willing to try different approaches "if I had the confidence that any of my co-teachers understood the math material enough to effectively help the kids or teach it." The frustration in teaching in a content area, without sufficient content knowledge is also present among special educators. One teacher responded "I feel I would have to become a certified teacher in the specific content to justify being the lead teacher. Being certified Teacher of the Handicapped doesn't make me an expert in that field. At the high school level, content teachers need to be experts in their field."

The next most popular theme was "nothing". This response comprised 11% of responses. Responses in this category included answers such as: I don't want to share, I have tried them all and the others don't work.

Retaining co-teaching teams comprised 10% of the responses. One teacher stated they would be more likely to try approaches they had not if they "had a consistent special education co-teacher from year to year, instead of a new one each year."

Yet another theme that emerged from the responses is that 6% of respondents indicated that they would be more likely to try unused co-teaching approaches if there

was evidence of the effectiveness for these approaches or if the teacher themselves believed that the approaches helped kids.

Lastly, rounding out the themes, multiple responses stated that issues beyond their control such as having smaller class sizes, less special education students in the classroom or classrooms that physically were too small, rendered some approaches not applicable for their classrooms. Changing these elements would ostensibly make those teachers more likely to try the co-teaching approaches that they have not been implementing.

Co-Planning

Familiarity with approaches to co-planning. This section of the survey asked six questions on and about approaches to co-planning. These six questions were presented to teachers, along with a brief description of the process of co-planning. The questions were designed to gauge teacher's familiarity with, opinions on and to measure their use of co-planning approaches.

The first question of the section on co-planning asked, "how familiar you with co-planning are?" Response options were: not familiar with it, never used, tried it but don't use, used occasionally this school year and, used frequently this school year. The percentage of responses per choice are listed in Table 11.

Table 11

How Familiar Are You With Co-Planning?

Co-Teacher Responses	% of Responses
Not familiar with it	2
Never used	6
Tried it but don't use	16
Used occasionally this school year	43
Used frequently this school year	33

The responses show that co-teachers indicate that they are familiar with co-planning approaches, with only 2% of respondents reporting that are not familiar with co-planning, while 16% of co-teachers have tried co-planning and discarded it. 24% of all respondents reported that they are either not familiar with or, not using co-planning. A third of respondents indicate that they used co-planning frequently. Furthermore, 76% of respondents used co-planning occasionally or frequently throughout the school year.

A follow-up question asked teachers "how often do you co-plan?" The possible response options were: never, seldom, sometimes, often and almost always. The results are shown in Table 12.

Table 12

How Often Do You Co-Plan?

Co-Teacher Responses	% of Responses
Never	15
Seldom	26
Sometimes	28
Often	26
Almost always	5

The responses here show the frequency with which co-teachers co-plan. While nearly a third of teachers co-plan often, or almost always, 95% report that they do not co-plan all of the time, and 69% report co-planning only seldom, sometimes or never.

The next question sought to ascertain whether co-planning time was built into teacher's schedules, it asked the yes or no question "Do you have scheduled co-planning time with at least one co-teacher?" The results show that majority of teachers do not have scheduled co-planning time and are shown in Table 13.

Table 13

Do You Have Scheduled Co-Planning Time With At Least One Co-Teacher?

Co-Teacher Responses	% of Responses
Yes	38
No	62

The responses to the question "If you have more than one co-teacher, do you have scheduled co-planning time with EACH of them?" are shown in Table 14.

Table 14

If You Have More Than One Co-Teacher, Do You Have Scheduled Co-Planning Time With Each of Them?

Co-Teacher Responses	% of responses
Yes	18
No	37
Does not apply	45

These responses show that 45% of respondents have only one co-teaching partner while 55% of respondents more than one co-teaching partner. Of co-teachers that do have more than one co-teacher 67% of respondents do not have scheduled co-planning time

with each partner while 33% reported that they do have scheduled time with each co-teacher.

Perceived effect of scheduled planning time on frequency of co-planning. The data was analyzed to explore if teachers with scheduled planning time co-plan more or less than those teachers without scheduled co-planning time. The results are shown in Table 15.

Table 15

How Often Do Teachers With Scheduled Planning Time Co-Plan?

Co-teacher Responses	% of Responses
Never	0
Seldom	13
Sometimes	35
Often	43
Almost always	9

The effect of scheduled planning time on the frequency of co-planning was explored by comparing the responses of all respondents with scheduled planning time to those without scheduled planning time to the earlier question "how often do you co-plan?" The responses are shown in Table 16.

Table 16

Effect of Scheduled Planning Time on Frequency of Co-Planning

Co-teacher Responses	% of All Respondents	% With Scheduled Planning Time	% Without Scheduled Planning Time	% Impact of Scheduled Planning Time
Never	15	0	24	-24
Seldom	26	13	34	-21
Sometimes	28	35	23	-12
Often	26	43	16	-27
Almost always	5	9	3	-6

The responses here show that scheduled planning time has a large impact on the frequency with which co-teachers co-plan. Those with scheduled planning time are much more likely to co-plan than those who do not have scheduled planning time.

Those with scheduled planning time reported co-planning often or almost always 52% compared to 19% of those without scheduled planning time. Consequently 58% of those without scheduled planning time report co-planning seldom or never, compared to 13% of those with scheduled planning time.

Perceived reasons for not co-planning. An open-ended follow-up question sought to gather more insight into the reasons why co-teachers had chosen to not to co-plan. The question asked, "if you do not co-plan, why not?" Teachers open-ended responses were again read and re-read, sorted through in three subsequent coding sessions and analyzed. Six themes were identified in teacher's responses to why they

chose not to co-plan. Those themes, in order were: no common planning time, not enough

time, co-teacher relationship dynamics, special educator content knowledge, ease of

implementation and, situational or instructional based. The frequency of responses per

category is shown in Table 17.

Table 17

If You Do Not Co-Plan, Why Not?

Reason for not Co-planning	% identified
No common planning time	32
Not enough time	21
Co-Teacher relationship dynamics	15
Special educator content knowledge	15
Ease of implementation	13
Situational or instructional based	4

The lack of common planning time between co-teachers most frequently recurring

theme appearing in 32% of the responses. The second most popular theme with 21% of

the responses was that there is not enough time. Teachers shared different variants of this

response several examples being "I have four other classes to prep. for" and, "I am too

busy doing other things."

Co-Teacher relationship dynamics comprised 15% of responses. Responses in this

category again reported tension between general education and special education co-

teachers. Several general education teachers pointed to uneven workload or ineffectiveness while special education teachers reported a lack of sharing control or power with their co-teacher.

The lack of special educator content knowledge accounted for 15% of responses as to why co-planning was not occurring. 13% of responses fell into the category of ease of implementation. These responses cited using the general education teacher's existing plans for, allowing the general education teacher to keep all of their sections the same by not changing lessons and one instance of noting that the team had co-planned the previous year and were together again, so they did not feel the need to co-plan again.

The smallest theme of the responses was the situational or instructional based category. These included the belief that co-planning was not beneficial and another reporting that co-teaching roles were not defined by administration so therefore the general educator's plans were used with modifications made by the special education teacher.

Interpersonal Aspects of Co-Teaching Partnerships

The next question was actually a series of questions that probed how co-teachers described interpersonal aspects of their relationships with their co-teachers. The question asked "to what extent would you that say your co-teaching partnerships… Share roles and responsibilities? Communicate effectively? Demonstrate equity and parity? Collaborate effectively? And finally, have compatible or matching philosophies?" Response options were; never, seldom, sometimes, often and, almost always. Results are shown in Table 18.

Table 18

Percentage of Responses Indicating Extent That Partnerships Demonstrated

Characteristics of Partnerships	Never	Seldom	Sometimes	Often	Almost Always
Share roles and responsibilities	3	13	22	42	18
Communicate effectively	0	5	20	43	32
Demonstrate equity and parity	8	15	21	22	32
Collaborate effectively	0	18	28	22	32
Have compatible philosophies	0	12	24	37	27

Responses to perceptions of shared roles and responsibilities show that 60% of co-teachers feel that roles and responsibility almost always or often, 3% responded that they are never shared while only 18% felt that they were always shared.

The data shows that 75% of co-teachers feel that they co-teachers communicate effectively almost always or often moreover, only 5% indicated that they seldom or never communicate effectively.

The responses also show that equity and parity in co-teaching teams is problematic with 8% of teachers reporting that there is never equity, while 23% felt that there is seldom or never parity. Consequently only 54% of respondents felt that equity and parity were present often or almost always in their co-teaching partnerships.

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On the topic of effective collaboration, 18% reported that they only seldom collaborate effectively and just over half, or 54%, believe that their co-teaching partnerships exhibit effective collaboration often or almost always.

The last question in this series asked if teachers felt that they have compatible or matching philosophies with their co-teachers. In response 64% felt that they often or almost always have compatible or matching philosophies while only 12% felt that they never or seldom do. There were no never responses.

Professional Development

Experiences with professional development on co-teaching. The next group of seven questions is centered on gathering information from teachers on their experiences and, opinions on professional development for co-teaching. Other questions sought to identify where, if at all, teachers have, or are receiving training on co-teaching. These questions on professional development are not part of teacher's classroom practice. Professional development might however have an impact on teacher's classroom practice.

The first question asked, "how well trained do you feel on co-teaching?" response options were; not at all, slightly, moderately, very, and extremely. The results are shown below in Table 19.

Table 19

How Well Trained Do You Feel on Co-Teaching?

Co-Teacher Responses	% of Responses
Not at all	5
Slightly	18
Moderately	27
Very	35
Extremely	15

At the extremes, 5% of active co-teachers feel that they are not at all trained for co-teaching, while 15% of their colleagues are at the other end of the spectrum and feel extremely well trained for co-teaching. Half of the respondents indicate that they feel very, or extremely well trained while 23% feel under trained reporting slightly or not at all.

Teachers were next queried if they had learned "about co-teaching in college?" Their responses are shown in Table 20.

Table 20

Did You Learn About Co-Teaching in College?

	% of Responses
No	39
Was mentioned in a course	15
Briefly in several courses	36
A whole course	5
A course & internship	5

Teacher's responses show that 39% did not learn about co-teaching in college and 90% of respondents either received no college training on co-teaching or were limited in exposure to co-teaching while in college. A mere 10% were exposed to an entire class and only 5% received hands-on experience with co-teaching through an internship.

Perceived effectiveness of professional development for co-teaching. The next question asked if teachers had received professional development on co-teaching. Seventy percent of teachers reported that they had received professional development on co-teaching compared with 30% of teachers that had not received professional development on the subject.

Teachers were then asked, "if you have had professional development on co-teaching, was it effective?" Responses are shown in Table 21.

Table 21

Effectiveness of Co-Teaching Professional Development

Co-Teacher Responses	% of Responses
Have not had	26
Not at all	14
Slightly	31
Moderately	22
Very	7
Extremely	0

After adjusting the data by removing the 26% of respondents that had not had professional development, the data shows that no teachers reported their professional development on co-teaching to be extremely effective and only 9% felt it was very effective. The largest group of 42% rated professional development only slightly effective, 30% answered that their professional development had been moderately effective while 19% reported that it was not effective at all. Overall, 61% of respondents felt that their professional development on co-teaching was either not effective or at best only slightly effective as illustrated in Table 22.

Table 22

Effectiveness of Co-Teaching Professional Development for Those Who Had Professional Development

Co-Teacher Responses	% of Qualified Responses
Not at all	19
Slightly	42
Moderately	30
Very	9
Extremely	0

When teachers were asked if they would you attend professional development on co-teaching if it were offered, the vast majority, 72% responded that they would attend professional development on co-teaching if it were offered, while 28% responded that they would not attend professional development.

Reflective practice on co-teaching. To gauge the extent to which teachers try to improve their co-teaching practice on their own initiative, teachers were asked, "how frequently do you look for information about co-teaching to improve your professional practice?" Results are shown in Table 23.

Table 23

Frequency With Which Teachers Seek Information to Improve Their Co-Teaching Practice

Co-Teacher Responses	% of Responses
Never	35
Seldom	30
Sometimes	31
Often	2
Almost always	2

The results show that a mere 4% of respondents look for information about co-teaching to improve their professional practice often or more than often, while 35% never look for information to improve their co-teaching practice and 65% of co-teachers report that they never or seldom look for information about co-teaching to improve their professional practice.

The final question on professional development sought to identify where teachers were accessing or attempting to access information develop your co-teaching skills. This open-ended question asked, "if/when you look for information to help develop your co-teaching skills, where would/do you look for that information?"

Teachers open-ended responses were read several times, analyzed, and sorted through in three subsequent coding sessions. Seven themes were identified as describing where teachers seek information on co-teaching. Those themes, in order were: the

Internet, colleagues, educational websites, college programs, administration, published

research, and professional development. The frequency of responses per theme are shown

in Table 24.

Table 24

Where Teachers Seek Information on Co-Teaching

Co-Teacher Responses	% Identified
The internet	33
Colleagues	26
Educational websites	18
College programs	8
Administration	5
Published research	5
Professional development	5

The largest overall theme that emerged while analyzing responses to the question

of where do you look for information to help develop your co-teaching skills, seems to be

– they do not look! Only 48% of survey respondents supplied answers to this question. Of

those qualified responses, the largest theme of responses was that teachers look to the

Internet to find information on co-teaching with 32% reporting. The generic term "the

Internet" was cited the most followed by Google. Educational websites comprised 18%

of results these included educational websites and blogs. Together, coupled with the

previous theme of "the Internet" these comprise 50% of the responses. The second most popular response indicates that co-teachers turn to their colleagues with 26% reporting this resource another 5% named administrators or department chairs as go-to sources of information. College programs and professional development were named 8% and 5% respectively. Somewhat surprisingly, only 5% of teachers reported seeking out published research or professional journals when they look for information to help develop co-teaching skills.

Culture of Support for Co-teaching

In order to gauge the culture of support for co-teaching, teachers were asked a series of questions that were designed to measure the extent to which teachers felt they were exposed to several of the most cited research based co-teaching practices. The questions asked, "To what extent would you that say that co-planning time is scheduled for each pair? The Special Education teacher has sufficient content knowledge? Are good teams are kept together each year? And, collaborative teaching approaches are encouraged and supported?" Respondents were asked to select from one of five choices: never, seldom, sometimes, often, and almost always. Results are shown in Table 25.

Table 25

To What Extent Would You Say That…?

Co-Teacher Responses	Never	Seldom	Sometimes	Often	Almost Always
Planning time scheduled for each pair	33	28	26	11	2
SPED teacher has content knowledge	5	17	48	25	5
Good teams are kept together	15	32	35	17	1
Collaborative approaches encouraged	5	28	36	25	6

Responses reveal that one-third of the time, there is no co-planning time scheduled for each co-teaching pair, 61% report that there is never or seldom scheduled co-planning time for each pair and only 5% report that there is always scheduled co-planning time for each pair.

Teacher's responses on the issue of special education teacher has content knowledge indicates that only 5% report that the special education teacher almost always has sufficient content knowledge to co-teach the content meanwhile, 5% report that the special education teacher never has sufficient content knowledge with the bulk of responses, 63% stating that special education teachers seldom or sometimes have sufficient content knowledge for the content.

In response to the question examining the retention of good co-teaching teams on a yearly basis, based on the data it appears that this is not taking place at a very high rate.

Only 1% of teachers reported that good teams are almost always kept together with 18% stating they are kept together often or almost always. 15% of responses indicate that good teams are never kept together and, 47% claim that this seldom, or never occurs.

The final question in this series asked to what teachers felt that extent collaborative teaching approaches are encouraged & supported? Responses to this question were split, and no clear answer emerged. Sometimes was the most frequent response at 36%. Nearly equal percentages answered seldom, or often, while 5% responded they never feel collaborative teaching approaches are encouraged & supported, 6% felt encouraged & supported almost always.

Perceptions about Co-Teaching Partnerships

The final question of the survey was designed to uncover which of the concepts were considered the most useful by co-teachers. The question asked teachers, "in your experience, how useful are each of these concepts in developing successful co-teaching partnerships?" The concepts teachers were asked to respond to were: Co-planning, Sharing roles & responsibilities, Effective communication, Equity & Parity, Collaboration, Compatibility and, Special Educator content knowledge. Teachers were asked to select one of five possible responses (not at all, slightly, moderately, very and, extremely) for each of the seven concepts. Results are shown in Table 26.

Table 26

Percentage of Respondents Who Believe the Approach is Useful in Developing Co-Teaching Partnerships

Useful in developing partnerships	Not at All	Slightly	Moderately	Very	Extremely
Co-planning	2	8	20	44	26
Sharing roles & responsibilities	3	3	17	39	38
Effective communication	0	3	13	23	61
Equity & parity	3	7	14	32	44
Collaboration	5	2	18	39	36
Compatibility	3	3	15	28	51
SPED content knowledge	0	2	20	35	43

Analysis of the responses shows that teachers consider each of these concepts to be useful in developing co-teacher partnerships. Each of the seven approaches elicited a minimum of 70% of responses indicating the approaches were either very useful or extremely useful.

Co-planning was the least highly rated of the approaches with 70% of respondents describing it as very or extremely useful. Sharing roles & responsibilities was reported the be very or extremely useful by 77% of respondents. Effective communication was the response most reported as extremely useful. 61% of respondents answered that effective communication was extremely important, (this was 10% points higher than the next

largest response) and 84% reported effective communication to be very or extremely

useful. Equity & Parity was described as very or extremely useful by 76% of respondents,

collaboration was reported very or extremely useful by 75% of teachers, compatibility

was reported to be very or extremely useful by 79% and Special Educator content

knowledge was indicated to be very or extremely useful in developing co-teacher

partnerships by 78% of survey respondents.

Chapter 5

Summary, Discussion, and Recommendations

Summary of Answers to First Stage Research Questions

The first stage of the process entailed document analysis of ten years of online articles on co-teaching, developing a master list of suggested research based co-teaching strategies and identification of the most frequently suggested strategies from the literature.

Research question one. In this stage, the first research question that this study attempted to answer was, "What does the literature say are the most frequently recurring suggestions for co-teaching?" Through multiple coding passes, 86 articles were identified as providing research based co-teaching strategies for the high school classroom. These articles were from three different perspectives and were placed into three categories: dissertations, articles describing empirical research in journals and, short research based articles aimed at practitioners.

From the literature 102 different strategies were suggested. 35 strategies were determined to appear more than one time. Nine of the top ten most frequent strategies were suggested by all three categories of the literature mentioned above. The top nine strategies were by far the most frequently recurring. The most frequently suggested strategies in order of their number of occurrences, starting with the most frequently suggested were: Co-planning, Professional Development, Six Approaches to Co-Teaching, Support from Administration, Special Education Teacher Content Knowledge, Communication, Shared Roles/ Responsibilities, Collaboration, Protect/Keep Good Co-Teaching Teams Together, and Teacher Equity/Parity.

Research question two. In this stage, the second research question this study attempted to answer was, "Which of these practices are research based, and which are based solely on lived teacher experience?" As detailed above, from hundreds of articles on co-teaching at the secondary level, 86 articles were identified as providing research based co-teaching strategies for the high school classroom. From the literature, 102 different strategies were suggested. 35 strategies were determined to appear more than one time.

Nine of the top ten most frequent strategies were suggested by all three categories of the literature mentioned above. The top nine strategies were by far the most frequently recurring. The strategies are Co-planning, Professional Development, Six Approaches to Co-Teaching, Support from Administration, Special Education Teacher Content Knowledge, Communication, Shared Roles/ Responsibilities, Collaboration, Protect/Keep Good Co-Teaching Teams Together, and Teacher Equity/Parity.

Given the comprehensive nature of the research into co-teaching strategies, each of the suggested strategies has been the subject of both research based and lived experience research. Overall, the preponderance of research on co-teaching is that of lived experience - from the multiple perspectives of all parties involved in the co-teaching process. However, the articles that the strategies were culled from for this study were more carefully selected. Research based articles comprised 72% of the articles used identifying strategies while 28% were solely based on lived experiences.

Summary of Answers to Second Stage Research Questions

The second stage of the study involved the creation and distribution of a survey of a survey to gather data from respondents on their co-teaching practices to ascertain if and

to what extent the strategies suggested by the literature in stage one, were being implemented in co-taught classes in New Jersey High Schools. Suggestions/Strategies can be separated into four broad categories: approaches to co-teaching, approaches to co-planning, professional development and, culture of support for co-teaching.

Research question three. In this stage, the first research question this study attempted to answer was, "What co-teaching suggestions as indicated by the literature are teachers' familiar with?" The data from the survey indicates that teachers are familiar, to varying degrees, with each of the strategies identified during the first stage of this study.

Co-planning. Survey data shows that teachers are familiar with the concept of-co-planning, with only 2% of respondents indicating that they are not familiar with co-planning while 76% report co-planning occasionally or frequently.

Professional development. 70% of respondents reported that they had received professional development on co-teaching. Only 5% of respondents indicated that they did not feel well trained on co-teaching with 95% of their colleagues claiming to be slightly to extremely well trained, or familiar with professional development.

Six approaches to co-teaching. Teachers responses provide insight into which approaches they are or are not using and why. Not surprisingly, the approaches that were identified as the least well known, namely parallel teaching, station teaching, and alternative teaching were also the least used. Meanwhile the approaches teachers are most familiar with: one teach, one assist and team teaching are the most frequently used.

One teach, one assist. This was the most well-known of the approaches with 100% of respondents indicating that they were familiar with the approach. Furthermore only 3% of teachers report that they have never used this approach. This was also the

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most used approach as well with 62% of teachers reporting they used it frequently and compared to the next highest response of 35% frequently using team teaching. 90% of the respondents indicated that they used One teach, one assist occasionally or frequently during the school year.

Team teaching. This was the second most used approach. 97% of teachers reported familiarity with team teaching. 63% of teachers indicated they use team teaching either frequently or occasionally, while 23% report that they have never used the approach.

One teach, one observe. This was third most familiar approach with 95% of teachers reporting that they were familiar with the approach. Interestingly, it was also one of the least implemented approaches with only 20% reporting frequent use with, 44% using it occasionally or frequently. One teach, one observe was not used by 41% of teachers and was the second most likely approach to be used and discarded at 12%.

Station teaching. This was the approach that teachers were most unfamiliar with and not surprisingly, also the least used. 14% of teachers were not familiar with station teaching, 45% of teachers report that they have never used station teaching and, 12% stated that they had tried but abandoned the approach. Only 5% of teachers report using station teaching frequently in the classroom.

Alternative teaching. This was the second most unfamiliar approach reported, with 12% of teachers not familiar with it. 41% of teachers reported using Alternative teaching occasionally, while only 7%, indicated that they had tried the approach and were no longer using it.

Parallel teaching. This was the most tried and discarded of these approaches with 17% of teachers reporting that they have tried the approach but are not currently using it. Parallel teaching was being frequently used by only 8% of teachers and, 70% were either not familiar with, have never used it, or have tried and discarded it.

Support from administration. The perception of support for co-teaching from administration can take many forms including; scheduling co-planning time for co-teachers, protecting or keeping successful co-teaching teams together from year to year and scheduling co-teachers in areas that they have content knowledge.

Administrative support can also take the form of supporting a school culture that emphasizes collaboration, equity and parity, shared roles and responsibilities. Survey responses demonstrate that teachers are familiar with each these strategies/suggestions regardless of whether these suggestions/strategies are being utilized.

Communication. Survey respondents indicated their familiarity with and furthermore the importance of effective communication between co-teachers with 97% of co-teachers expressing it to be moderately to extremely important in developing successful co-teaching partnerships.

Research question four. In this stage, the second research question this study attempted to answer was, "Why did teachers choose, or not chose, to implement them?" Responses are again categorized into four themed sub-groups: approaches to co-teaching, approaches to co-planning, professional development and, culture of support for co-teaching.

The sixty-one particular teachers who volunteered for this study gave their specific responses to these questions. It does not necessarily mean these responses are

indicative of the behaviors of all teachers, or that other teachers would respond in the same way.

Approaches to co-teaching. Six main themes were identified in teacher's responses to why they chose, or did not choose, to implement the specific co-teaching approaches. Those themes, in order were: effectiveness, co-teacher relationship dynamics, special educator content knowledge, ease of implementation, situational or instructional based and lack of familiarity. Asked why certain approaches are not implemented, teachers respond that they are not using the approaches with which they are unfamiliar. 21% of respondents indicated that they were not familiar with one or more of the approaches and were therefore not attempting to implement them.

Effectiveness was the most frequently recurring appearing in 30% of the responses, the notion being that teachers selected approaches based on what they believe works the best or helps the students the most. Some teachers indicated that they were not selecting co-teaching approaches because they feel what they use works, so why bother with other approaches? Still others responded that an approach was not beneficial and one opined that "these are not realistic to utilize in the ICR classroom."

Co-teacher relationship dynamics comprised 25% of responses. Responses stressed establishing and maintaining equity among co-teachers for the benefit of both the teachers and students. Equally the importance of having a long-established relationship or good co-teaching partnership was emphasized.

Consequently, responses also reported tension between general education and special education partners. Several general education teachers pointed to uneven

workload or ineffectiveness while special education teachers reported a lack of sharing control or power with their co-teacher.

Special educator content knowledge accounted for 23% of responses as to why co-teaching approaches were selected. Some teachers reported that their special education co-teachers had the required content knowledge, and this enabled them to use different approaches. The vast majority however, 77% of respondents, point to a lack of content knowledge from their co-teachers. One response states "one teach, one observe is the most frequently used because the special education teacher in my room does not feel comfortable teaching content." A special education teacher notes "I was moved from one subject area to another I did not have the expertise to teach it to the students." In response to why certain approaches were not chosen 12% of all responses indicate that lack of content knowledge by special education co-teachers impacts why they may not select a co-teaching approach.

Ease of implementation accounted for 12% of responses. These responses include the five percent of respondents who cited a lack of planning time. In this area, approaches were chosen because they were "easy to implement without a lot of preparation." When queried as to why they were not using specific approaches ease of implementation was the most common answer comprising 17% of responses, that co-teachers do not have enough planning time, and/or the approach requires too much time to plan.

With 10% of the responses, the smallest category is situational or instructional based. These include the number of students in the class, the physical size of the classroom, the classroom dynamic, or the need to differentiate instruction. The idea of

approaches creating too much noise or a being distraction in the classroom was described by several teachers.

The most frequent response was that teachers had not tried an approach because of lack of training or, knowledge of the approach. One teacher reported, "I haven't thought much about alternate techniques, you get into a habit of how you do things, it's probably a great idea to reevaluate every so often." Yet another lamented "we do not have a training program for co-teachers. The last time I received professional development for co-teaching was 13 years ago when I was at a different high school."

Approaches to co-planning. While nearly a third of teachers co-plan often, or almost always, 95% report that they do not co-plan all of the time, with 69% reporting co-planning only seldom, sometimes or never. 62% of teachers report not have scheduled co-planning time.

Six themes were identified in teacher's responses to why they do not co-plan. In order, those themes are: no common planning time, not enough time, co-teacher relationship dynamics, special educator content knowledge, ease of implementation and, situational or instructional based.

The lack of common planning time among co-teachers appeared in 32% of the responses. the second most popular theme, with 21% of the responses, was that there is not enough time. Co-Teacher relationship dynamics were15% of responses. Teachers reported stress between general education and special education co-teachers with general education teachers primarily pointing to uneven workload, with special education teachers citing a lack of sharing control or power with their co-teacher.

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A lack of special educator content knowledge accounted for 15% of responses as to why co-planning was not occurring, while 13% of responses fell into the category of ease of implementation. This included, for example, using the general education teacher's existing plans and, allowing the general education teacher to keep all of their sections the same by not changing lessons.

Professional development. The majority of teachers have chosen to engage in professional development for co-teaching. 70% of respondents report that they have received professional development for co-teaching and 77% indicate that they feel moderately to extremely well trained on co-teaching.

Research question five. In this stage, the third research question this study attempted to answer was, "What do co-teachers report are the most useful strategies they are implementing?"

Approaches to co-teaching. Co-Teachers were asked to rate how useful they believed each of the six approaches was. Their feedback shows that 87% of co-teachers find one teach, one assist to be useful, and 70% believe team teaching to be useful co-teaching approaches, with just over half of respondents adding alternative teaching to the useful category. Consequently 61% reported that one teach, one observe was not useful while 60% felt the same about parallel teaching and 56% on station teaching.

Teachers were asked to describe how successful they have been with each of the six co-teaching approaches through the school year. Results show 93% had used One teach One assist and, 75% had used Team Teaching making these the most implemented approaches, while the other four approaches saw less implementation.

Co-planning. 76% of co-teachers report using co-planning either occasionally or frequently throughout the school. This is in spite only 38% of teachers having scheduled co-planning time with their co-teacher. Moreover, only 18% had scheduled planning time for more than one co-teaching partner. This high rate of implementation implies that in spite of the lack of time and lack of scheduled co-planning time, teachers believe co-planning to be a useful strategy for co-teaching.

Culture of support for co-teaching. While many aspects of support for co-teaching take place at the administrative level and are therefore beyond the control of teacher's choice to implement or not (e.g., schedule, co-teaching partner, etcetera) there are interpersonal aspects that affect co-teaching. Teachers were queried on interpersonal aspects of their co-teaching partnerships to uncover which of the suggestions they considered to be the most useful. The feedback shows that teachers consider each of these concepts useful in developing co-teacher partnerships. Each of the seven approaches elicited a minimum of 70% of responses indicating the approaches were considered either very useful or extremely useful by respondents.

Effective communication was the strategy reported as most useful by 84% of teachers. 61% of teachers indicated that effective communication was extremely important, this was 10% points higher than the next largest response. Compatibility was considered very or extremely useful by 79% of respondents. Special Educator content knowledge was reported to be very, or extremely useful, in developing co-teacher partnerships by 78% of survey respondents. Sharing roles & responsibilities was reported the be very or extremely useful by 77% of respondents. Equity & Parity was described as very or extremely useful by 76% of respondents, while collaboration was reported very or

extremely useful by 75% of teachers and, co-planning was the least highly rated of the approaches with 70% of respondents describing it as very or extremely useful.

It is important to note that just because a strategy or approach may not have been considered useful by the teachers who responded to this survey, that does not mean that the strategy or approach is not useful!

Discussion

This study illustrates the underlying problems with co-teaching. Approximately ten percent of all K-12 students in The United States, are eligible for special education services. More than half of these special education students spend the majority of their day in general education classrooms (National Center for Education Statistics, 2011). Co-Teaching is one way to provide these students the services they require services in the least restrictive environment as required by federal law (Prager, 2015). Creating efficiencies in special education could, according to Shah (2012), lead to an increase in student outcomes and a savings of $10 billion per year. This could be accomplished by the inclusion of students with disabilities in the general education classroom via the co-teaching process (Samuels, 2011).

This study found that not all of the co-teaching strategies, approaches and suggestions are being implemented by teachers. This can be attributed to several factors: lack of effective professional development on co-teaching in general, and specifically the six co-teaching approaches. Insufficient time for teachers to co-plan which negatively impacts implementation of instructional methods designed for accommodations and modifications for students with disabilities. As well as a culture of support for co-teaching that is not effectively supporting co-teaching from the administrative level

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downward by providing research based suggestions such as special education teachers with sufficient content knowledge, scheduled co-planning time and effective professional development.

At the school level, though the numbers may vary from school to school, a significant number of students receive special education services. Data from one New Jersey High school shows that nearly one in five students are eligible for special education services and, nearly 70% of teachers in the school spend some time in co-teaching classrooms and relationships. In 2013, 15.3% of New Jersey's entire student population was eligible for Special Education services (New Jersey Department of Education, 2013). Extrapolated across the district, state, or country these numbers and costs increase almost exponentially.

This study found that given the number and percentages of students with disabilities educated in the in-class resource settings throughout New Jersey high schools and the substantial resources that are dedicated to these students, improvements could be made to the co-teaching paradigm across the areas of co-teaching approaches, co-planning, professional development and in creating a culture of support for co-teaching.

Inclusion classes rely on co-teaching to educate students. Inclusion is the process of educating students with disabilities in the same classes as, and, providing access to the same curriculum as all students (Kirby, 2017). Many suggestions have been made regarding how teachers should enact the co-teaching model, beginning with the seminal works of Friend & Cook (1992) describing a team of two teachers, one general education and one special education, sharing responsibility for students in the inclusion classroom. Research indicates however that co-teaching practice is not embracing these pedagogical

suggestions (Weiss and Brigham, 2000). Scruggs et al. (2007) posit that co-teaching pedagogy has not been adapted to meet the needs of students with disabilities and assert that co-teaching strategies are not being implemented in the co-taught classroom and therefore students are not receiving special education.

This study found that the suggestions from the literature are not being followed by teachers. The bulk of co-teaching that is occurring is indeed not co-teaching and, arguably is not a "special education". Largely, co-teaching as it is being realized consists of a general education teacher providing instruction and a special education teacher serving as the general education teacher's assistant – the one teach, one assist approach. The special education teacher often lacks sufficient content knowledge for the class. This, coupled with a lack of planning time and other documented factors, contributes to a classroom dynamic that does not differ significantly from one without the special education teacher, run by a solitary general education teacher lacking special education pedagogy and training.

The purpose of this qualitative research study was to evaluate the literature on co-teaching and to determine the extent of practice and professional development needs for co-teachers at the high school level. First, using document analysis, the study reviewed suggested co-teaching practices by creating a comprehensive list of the most frequently suggested co-teaching practices found in the most commonly available professional educational literature. Then, by gathering data through surveys with co-teachers, the study explored the realization, or lack thereof, of these practices in the New Jersey high school co-teaching classroom.

Analysis of these two sets of data provides perspective on which, of these suggested co-teaching strategies are actually being realized in the New Jersey high school classroom. The study found that teachers are using the strategies and suggestions that are most familiar with and consequently are not implementing unfamiliar strategies regardless of whether the strategies may be beneficial. The selection of which strategies to implement are impacted by a lack of training on the strategies, approaches or suggestions. Teachers rate their co-teaching professional development as ineffective and feel left on their own to figure out how to create a co-teaching dynamic, without effective training or administrative support. A lack of research based evidence supporting the effectiveness of a given strategy, the perspective of co-teachers that there is not enough time to co-plan, and co-teachers lacking sufficient content knowledge are other key contributing factors.

As a result, this data can help to shape suggestions for professional development on co-teaching, so that research based co-teaching practices that can be implemented in co-taught high school classrooms. The study found that professional development is the main source of knowledge of teachers on co-teaching. However, teachers overwhelmingly believe that their professional development on co-teaching has been ineffective. Furthermore, this study finds that teachers are largely not seeking to improve or develop their co-teaching practices on their own. Those teachers that do seek self-improvement of co-teaching pedagogy are not consulting research based sources and are instead asking colleagues for their experiences or merely Internet searches.

Improvements in co-teaching pedagogy can be implemented based on the results of the first part of this study, which developed the list of the most frequently suggested

practices in the teacher education literature. Since teacher preparation programs and graduate programs in most education fields also utilize the core list of journals and databases on which this work was based, these results can serve as a baseline for future tracking of literature on the topic of co-teaching. Furthermore, data collected from the teacher surveys, which helped to identify the scope of classroom use of the most frequently suggested research based co-teaching strategies, can help educators in those districts which participated Teachers should look for further professional development opportunities or to observe co-teachers that are considered effective. Teachers should also feel free to try and implement the researched based strategies on a small scale in their classrooms to expand their familiarity with and exposure to the strategies, suggestions and, approaches. Also, the survey questions can be offered to teachers throughout the state of New Jersey and in other states, providing more information about research into practice and providing opportunities for more in-depth study. Teacher leaders and administrators can use this information when formulating strategies to improve co-teaching professional development based on teachers' own experiences. Based on the findings of this study administrators and educational leaders should look at revamping professional development to provide effective, real-world, subject-specific, classroom-based examples of successful implementation of these strategies. Research based information should be made readily available and easily accessible for co-teachers. Perhaps most importantly, administration should further develop the culture of support, using research based strategies, approaches and suggestions for co-teaching making it a more desirable process or assignment for all of those involved.

This study used a sequential exploratory design to conduct a two-stage qualitative research project. The first stage used document analysis of over 400 articles spanning a ten-year period to identify the most frequently suggested research based co-teaching strategies. This analysis via an extensive literature review of online databases identified several key recurring strategies. The most frequently recurring research based co-teaching strategies, in order of frequency of occurrence were: Co-planning, Professional Development, Six Approaches to Co-Teaching, Support from Administration, Special Education Teacher Content Knowledge, Communication, Shared Roles/ Responsibilities, Collaboration, Protect/Keep Good Co-Teaching Teams Together and Teacher Equity/Parity.

Approaches to co-teaching. Analysis of feedback from the survey on the Six Approaches to Co-Teaching show that teachers choose to implement strategies that they are familiar with. Consequently, teachers do not implement approaches that they are not familiar with. Of the six approaches, the two most familiar and most implemented approaches are one teach, one assist and, team-teaching.

Teachers cite a lack of training on specific approaches as to why they choose not to implement the less used approaches. Other important factors influencing the selection and implementation of co-teaching approaches are teacher's perceptions of the effectiveness of the approach, the ease of implementing the approach, the amount of planning time available to the co-teaching pair and, the content knowledge level of the special education co-teacher. One Teach, one assist remains the most widely used of the approaches and is in essence a euphemism for the educational status quo of a lead teacher with a helper.

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Approaches to co-planning. The key findings regarding co-planning show that teachers believe co-planning to be an important element of co-teaching. Teachers cite a lack of time to co-plan with their co-teacher(s) and analysis of survey responses suggest that if co-planning time was built into their schedule by administration, that teachers would co-plan more frequently.

Obstacles to co-planning include the lack of sufficient time to co-plan, and a lack of scheduled co-planning time. Teachers also express that they are reticent to co-plan with special education teachers who do not have sufficient content knowledge.

When accomplished, co-planning, seems to benefit the co-teachers by contributing to the development effective communication between teachers, increasing the likelihood that roles and responsibilities are shared and, having a positive impact on the perception of equity and parity among co-teachers.

Professional development. The findings on professional development illustrate that while teachers overwhelmingly believe that they are well trained on co-teaching, they also don't believe their professional development was effective!

The vast majority of teachers have received professional development on co-teaching. This professional development is the key source of their co-teaching training. Since only a small percentage of teachers report receiving co-teaching training at the university level, this places extra importance on professional development as the major source of instruction on how to co-teach.

Another key finding is that teachers largely do not seek to develop their co-teaching skills as part of their professional practice or self-development. Many teachers

report that if they have questions about co-teaching, they merely ask colleagues for information about co-teaching if the situation arises or use just use Google.

Culture of support for co-teaching. Key Findings regarding Culture of Support for Co-Teaching, can be broken into two categories, those which are interpersonal in nature, and those impacted by administration.

Teachers feedback shows that the interpersonal aspects of co-teaching relationships are very important in establishing and maintaining successful co-teaching partnerships. Effective communication was the most frequently cited skill for co-teachers.

Administration can play a large part in helping to develop and enable successful co-teaching partnerships. Teacher feedback shows that co-teachers would like more time to co-plan, in particular, scheduled co-planning time.

Teachers report that they believe special education teachers with sufficient content knowledge would be beneficial, leading to a willingness to co-plan more frequently, attempt different co-teaching approaches, contribute to greater sharing of roles and responsibilities, equity and parity. Furthermore, teachers also believe that keeping established, successful co-teaching teams partnered from year to year is extremely helpful.

Recommendations for Teacher's Co-Teaching Practice

The two most important suggestion for teachers in a co-teaching partnership are: to work on the interpersonal relationship with their co-teachers and, to focus on improving their own co-teaching pedagogy.

The importance of the interpersonal relationship aspects cannot be overstated. Endeavoring to establish effective communication between co-teachers may help

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compensate for other issues that are outside of their control and have a positive effect on other aspects of the co-teaching relationship. Even in mismatched co-teaching relationships, effective communication helps to develop partnerships that share roles and responsibilities, and can begin the process of moving towards collaboration, equity and parity.

As this study has shown there have been hundreds of articles written about all aspects of co-teaching. With a modicum of effort, teachers can find research based articles in educational publications. These articles can further the co-teaching process. It is recommended that co-teachers build greater familiarity with other co-teaching approaches in the classroom, aside from one teach, one assist and team teaching. Moreover, teams should occasionally take a chance and attempt to implement other less familiar strategies.

Recommendations for 9-12 Leadership and District Administration

There are four recommendations for educational leaders, and school administrators, looking to build capacity for co-teaching: creating a culture of support for co-teaching, professional development, scheduled co-planning time and assigning special education teachers in content areas that they have sufficient content knowledge.

Leaders can begin to build capacity for co-teaching by encouraging and supporting the co-teaching process and nurturing a culture of support for co-teaching. Observations of co-teaching teams should take place with successful teams identified. These teams can be used to model the approaches, strategies and, suggestions for other co-teachers.

Scheduled co-planning time for each co-teaching team should be provided, so that the best approach for the lesson and material is chosen rather than the approach that is the easiest to implement. This time will also afford greater opportunities for accommodations and modifications to be designed for students with disabilities and implemented by the co-teaching team.

Special education teachers should be scheduled in content areas that they have sufficient content knowledge. This would impact both special education teachers and general education teachers alike. Co-Teachers report being more willing to co-plan, try different approaches and strategies if both teachers have sufficient content knowledge. This will also impact sharing of roles and responsibilities as they can be divide up with greater equity among equals rather than as teacher and teacher's helper, leading to greater parity among co-teachers.

In content areas where special education teachers may be scarce such as Math, Science or World Languages, creative approaches should be implemented by leadership perhaps for example, in the form of incentives to gain certification in those content areas or openness to other solutions.

As of late 2015, with the passage of The Every Student Succeeds Act (ESSA), the provision that all teachers must be highly qualified was removed from federal law. This reversed the mandate from No Child Left Behind, that created highly qualified status. Although no longer legally required by the federal government to do so, the New Jersey Department of Education asserts that all teachers in New Jersey must still hold proper licensing for the position that they work in.

According to the New Jersey Department of Education (2018) New Jersey teachers providing Special Education services at the high school level must hold one of the following certifications: Teacher of the Handicapped (TOH) or, Teacher of Students with Disabilities (TOSD). The TOH certification is an older certification, currently held by many New Jersey Teachers but not currently issued by the New Jersey Department of Education. Whereas the newer, currently issued TOSD certification requires that individuals have completed 30 college credits, or earned a subject major, in a specific content area to achieve content knowledge (what was formerly known as highly qualified status), the older TOH certification does not have that content knowledge component.

According to New Jersey Department of Education (2018) regardless of whether a New Jersey special education teacher holds the TOSD or TOH certification, New Jersey state law for co-teaching classrooms requires that only one of the two teachers be certified to teach the subject, that being the General Education teacher. The Special Education teacher is not required by law to have any content specific knowledge when co-teaching.

The final recommendation is for continued improvement of professional development on co-teaching. Teachers indicated in their response, their willingness to attend professional development for co-teaching. Teachers also indicated that they believe that the professional development they have previously had for co-teaching was not effective. Not a single teacher reported their professional development on co-teaching as very effective!

Professional development for co-teaching should be re-imagined. Examples of how to use each of the six approaches should be developed, with specific examples made

available for each content area. Consideration should be given to the implementation of Professional Learning Communities (PLC's) for content specific, ongoing professional development, to address practical needs, issues, and concerns regarding co-teaching.

Rather than teachers asking each other about co-teaching techniques or searching the Internet it is recommended that videos, or presentations of how to implement the co-teaching approaches, and co-planning concepts be created and made readily accessible for co-teachers to have access to information on how to implement these strategies.

Recommendations for University Teacher-Education Programs

This study shows that although 61% of co-teachers report learning about co-teaching in college, only 10% of co-teachers were exposed to a whole course, and/or a co-teaching internship. 51% report co-teaching was mentioned, or only briefly mentioned. Surprisingly 39% of co-teachers stated that they did not learn about co-teaching in college.

The data illustrates that teacher training programs must do a better job at exposing pre-service teachers to co-teaching concepts. Given the prevalence of co-teaching, and the likelihood that university students will co-teach, both general education and special education pre-service teacher candidates need familiarly with co-teaching pedagogy and the other skills needed to be successful at co-teaching

Recommendations for Future Research

For those looking to replicate this study. Oher factors should that are appreciably different between the schools should be taken into consideration when selecting and comparing schools for example, scheduling differences and their impact on

teachers. In this study, an examination of each of the three schools that were surveyed show similarities and differences among each of the schools.

Each of the schools operates under different daily schedules. The length of classes varies between the schools. School A operates an A/B block schedule. There are four classes each day, with each class lasting 84 minutes. Classes alternate each day from an A day schedule then a B day schedule. Out of eight possible blocks, teachers generally teach five or sometimes six classes, have one duty, a prep. period and an administrative prep. period.

School B operates a modified block schedule. Three days of the week there are eight 42-minute classes. On each of the other two days, there are four, 86 minute classes. Over 50% of teachers in School B teach six classes and the rest teach five classes with a duty, regardless each teacher receives a prep. period and an administrative prep. period.

School C operates a standard schedule. There are eight, 42-minute classes each day. Teachers teach five or six sections each day as well as a duty and a prep. period daily.

Though there are differences, primarily in daily scheduling, these do not seem to be appreciable or impactful of co-teaching. The similarities among the schools show that the daily teaching load is similar among each of the schools, as are class sizes which average in the mid 20's for each school. Common planning time is not scheduled for co-teachers in any of the schools. Some teachers may still have common planning time, but it is not scheduled.

Areas for future research. Future research on co-teaching should explore ways to quantify the effectiveness as tied to student achievement, of each of the six co-teaching approaches. An additional area for research is when the approaches should be implemented, as teachers report being reticent to implement different approaches without data to support their effectiveness.

The impact of lack of special education teacher content knowledge in co-teaching should be examined. Is there a connection between special educator content knowledge and successful co-teaching? Are student outcomes affected by special educator content knowledge?

A final area for future research is what is determined necessary to create a successful professional development program that will have a positive impact on co-teachers, co-teaching relationships and, increase knowledge of research based co-teaching strategies and pedagogy.

This could include the creation of easily accessible videos that could give specific examples of co-teaching teams implementing specific strategies and approaches as a best practices guide, similar to the ATLAS, the Accomplished Teaching Learning and Schools website developed by the National Board for Professional Teaching Standards (2018), which provides a library of videos on numerous topics and grades and includes teacher's reflections on the lessons.

Summary

This dissertation explored research based co-teaching strategies and their realization in the New Jersey high school classroom. Through extensive research the most frequently occurring strategies and suggestions for co-teaching were identified.

Teachers were surveyed and their familiarity with, and implementation of strategies was identified along with their perceptions of the usefulness of the recommended strategies and suggestions. Implications and recommendations for co-teachers and administrators were offered in the areas of co-teaching approaches, co-planning, fostering a culture of support for co-teaching and, professional development. The study has provided valuable information regarding teacher's implementation of the research based co-teaching strategies and suggestions and how to further co-teaching at the highs school level.

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Appendix A

Principal Permission Request

May 15, 2017

Dear Principal _____,

My name is Tom Donovan, I am a doctoral candidate in the Educational Leadership Department at Rowan University and a Special Education Teacher at ---- Township High School. I am currently working on my doctoral dissertation, and my study is focused on identifying co-teaching strategies that are taking place in New Jersey high school classroom. I am writing to ask if you would be willing to allow me to survey teachers at your school that are currently involved in co-teaching.

I am conducting research at the school where I work, your school was selected because of its similarity to mine in the most recent New Jersey Department of Education Peer Group, specifically in terms of the percentages of economically disadvantaged and special education students.

No students will be involved in the survey - in any way. The survey will be anonymous no teachers would be identified. Neither your school, nor district will be identified in the final dissertation.

If possible, it would be of great assistance if you could forward a link to all staff to access the survey. I will be happy to provide a copy of the results of my study or present the findings to you or your staff upon completion of my dissertation.

Thank you for taking the time to consider my research request. Please let me know if I am able to contact to distribute the survey to your staff.

Questions about the study can be addressed to myself or to my dissertation committee chair: Dr. Michelle Kowalsky at: kowalsky@xyz.com

Thank you,

Tom Donovan
Doctoral Candidate – Rowan University
Teacher of Students with Disabilities
----- Township High School
donovan@xyz.com

Appendix B

Informed Consent Form

I am conducting a survey on the use of co-teaching strategies in the high school classroom. Your voluntary participation is requested so we can explore how to improve the co-teaching model.

This questionnaire will be conducted on-line and should take about ten minutes. There are two sections. The first is a checklist about your use of co-teaching strategies. The second section is questions of demographic information.

Your responses will remain confidential. Your participation is voluntary, and you may choose to not answer any or all of the questions on this questionnaire - even after you have started. If you are willing to participate in this questionnaire, please continue the survey below and click submit!

If you have any questions about this study, please contact:

Tom Donovan

Doctoral Candidate
Rowan University
Teacher of Students with Disabilities
----- Twp. High School
donova@rowan.edu

Thank you for your participation.

Participant Initials: _____

Date: _____

Questionnaire on Co-Teaching

This questionnaire is designed to gather information about high school teachers that are in a co-teaching partnership or partnerships during the current school year.

1. Are you a licensed high school teacher in New Jersey?

Yes / No* (**a no answer will end the survey*)

2. Are you in a co-teaching partnership(s) during the current school year?

Yes / No* (**a no answer will end the survey*)

Part 1: Co-Teacher Strategies Questionnaire

I. Approaches to Co-Teaching
Cook & Friend (1995) described six collaborative approaches to co-teaching to be implemented based on the intent of the instruction and the needs of the students. The six approaches and a brief description for each follow:
1. One teach, one assist, one teacher leads instruction and the other assists the lead teacher and students.
2. One teach, one observe, similar to one teach, one assist however the other teacher gathers data on the class or individuals in the class.
3. Station teaching, which entails dividing the class into three groups, the teachers lead instruction at two of the stations while student work at the third independently.
4. Parallel teaching, involves splitting the class in two with each teacher leading instruction of the same material.
5. Alternative teaching, describes one teacher working with the bulk of the class while the other works with a small group of students to reinforce or enrich concepts.
6. Team Teaching, both teachers lead instruction presenting differing opinions and perspectives.

1. Rate how familiar you are with each. Check all that apply

Collaborative Co-Teaching Approaches	Not familiar with it	Never used	Tried it but don't use	Used occasionally this school year	Used frequently this school year
One Teach, One Assist					
One Teach, One Observe					
Parallel Teaching					
Station Teaching					
Alternative Teaching					
Team Teaching					

2. Of the approaches you have not tried, why did you choose them?

3. Of the approaches you have not tried, why haven't you tried them?

4. Which approaches have you been successful or unsuccessful with this year?

Collaborative Co-Teaching Approaches	Haven't tried	Successful	Unsuccessful
One Teach, One Assist			
One Teach, One Observe			
Parallel Teaching			
Station Teaching			
Alternative Teaching			
Team Teaching			

5. How useful are each of these approaches?

	Not Using	Not at all	Slightly	Moderately	Very	Extremely
One Teach, One Assist						
One Teach, One Observe						
Parallel Teaching						
Station Teaching						
Alternative Teaching						
Team Teaching						

6. What, if anything, would make you try approaches that you are not currently using?

II. Co-Planning

7. How familiar are you with co-planning?

Not familiar with it	Never used	Tried it but don't use	Used occasionally this school year	Used frequently this school year

8. How often do you co-plan?

Never   Seldom   Sometimes   Often   Almost Always

9. Do you have scheduled co-planning time?

Yes   No

10. If you have more than 1 co-teacher, do you have scheduled co-planning time with EACH?
Yes   No

11. If you do not co-plan, why not?

III. Relationships

12. To what extent would you that say your co-teaching partnerships (choose 1 for each).

	Never	Seldom	Sometimes	Often	Almost Always
Share roles & responsibilities?					
Communicate effectively?					
Demonstrate equity & parity?					
Collaborate effectively?					
Have compatible or matching philosophies?					

IV. Professional Development

13. How well trained do you feel on co-teaching?

Not at all,   Slightly,   Moderately,   Very,   Extremely

14. Did you learn about co-teaching in college?

No, was mentioned in a course,   briefly in several courses,   A whole course,

A course & internship

15. Have you had professional development on co-teaching?

Yes, No

16. If you have had professional development on co-teaching, was it effective?

Not at all,   Slightly,   Moderately,   Very,   Extremely

17. Would you attend professional development on co-teaching if it was offered?

Yes No

18. How frequently do you look for information about co-teaching to improve your professional practice?

Never   Seldom   Sometimes   Often   Almost Always

19. If/When you look for information to help develop your co-teaching skills, where would/do you look for that information?

V. Culture of Support

20. Select the best answer for each

	Never	Seldom	Sometimes	Often	Almost Always
Co-planning time is scheduled for each pair?					
Special Education teacher has sufficient content knowledge?					
Good teams are kept together each year?					
Collaborative teaching approaches are encouraged & supported					

21. How useful are each of these concepts?

	Not at all	Slightly	Moderately	Very	Extremely
Co-planning					
Sharing roles & responsibilities					
Effective communication					
Equity & Parity					
Collaboration					
Compatibility					
Professional Development					
Special Educator content knowledge					

Part 2: Demographics

1. Are you:

Female

Male

Other

2. What is your age?

21-29

30-39

40-49

50-59

60+

3. How many years have you taught?

This is my first year

2-5 years

6-10

10-15 years

15+ years

4. How long have you co-taught?

This is my first year

2-5 years

6-10

10-15 years

15+ years

5. What is your highest level of education achieved**?**

Bachelor's degree

Master's degree

Master's degree plus

Doctorate

6. What is your role in the co-taught classroom?

Special Education Teacher

General Education Teacher

7. What content area(s) do you currently co-teach? Check all that apply

Math

Language Arts

Social Studies

World Language

Science

Phys. Ed. / Health

Other: _____

8. What areas are you licensed / certified to teach in? Check all that apply

Math

Language Arts

Social Studies

World Language

Science

Phys. Ed. / Health

Other: _____