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Effect of Coteaching on the Achievement of Middle School Students With Disabilities

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Abstract

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Project Study Submitted in Partial Fulfillment

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Abstract

From 2014 to 2015, full inclusion through coteaching practices (2 or more professionals providing instruction in the same classroom environment) was implemented at a rural southeastern middle school in Georgia to improve the low academic achievement of students with disabilities (SWDs). The problem is that 8th-grade SWDs score low on the reading and mathematics sections of the Standardized Assessment for Reading and Mathematics (STAR). The purpose of this quantitative quasi-experimental study was to examine the effect of coteaching on the achievement of 8th-grade SWDs in reading and mathematics as measured by the STAR. Vygotsky's zone of proximal development was the theoretical framework for this study because cognitive development can be enhanced with adult guidance and peer collaboration. The research questions focused on the difference in STAR gain scores between the coteaching SWDs participants and the SWDs with no coteaching. The sample was 96 8th-grade SWDs. A *t* test was used to compare the reading and mathematics gain scores between the academic years 2012-2014 (without inclusion/coteaching),46 SWDs and 2015-2017 (with inclusion/ coteaching), 50 SWDs. Results showed that there were significant differences in the STAR performance after coteaching implementation in reading and mathematics, $p = .045$ and $p = .004$, respectively. This study may lead to positive social change by providing data to the local educational agency leaders, administrators, teachers, and the educational community to make informed decisions about the implementation of coteaching practices, to enhance instructional practices and teaching strategies, and to improve the academic achievement of SWDs allowing them the opportunity to become college and career ready, thus enhancing their postsecondary options.

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Dedication

This degree is not mine alone, it is dedicated to the Lord Jesus Christ because without him I can do nothing and the many people who prayed for me, encouraged me, and pushed me to achieve this goal. I would like to thank my mother, Bettye Drayton-Williams, who refused to allow me to give up when I became discouraged. Thank you for reminding me of Jeremiah 29:11: 'For I know the thoughts that I think toward you, saith the Lord, thoughts of peace, and not of evil, to give you an expected end'. I thank God for giving me to YOU! To my brother, Avery and my sister, Ina, my sister-in-law, Marsha and my brother-in-law, Johnny, thank you for your love, understanding, patience and support on this journey. To my nieces and nephews: Xzadrian, Avia, Isaiah, Tyler, Averi and Trinity, you all are my motivation, knowing you all are watching pushes me to greatness. I pray that this serves an example that with God, all things are possible. I love each of you and always remember, put God first, hold tight to your dreams, do what is right, work hard and reach for the stars! To my aunt, uncle and cousins, thank you for your prayers and support as I worked to reach my goal. To my entire family, thank you for establishing the foundation, setting a tone of expectancy; never letting me be anything less than my potential would allow me to be. I am the young woman that I am because of each of you and for that I am forever grateful. To my friend (you know you are are), thank you for being simply who you are in my life. To the Allen Chapel AME Church Family, thank you for being the village that surrounded me with prayers, love and encouragement. WE DID IT!

Dedicated with much love to my father; the late Joseph Bobby Holmes; my maternal grandparents; the late Hance and Ethel Pope and my paternal grandparents; the late Rev. Aaron and Lillian Holmes.

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Section 1: The Problem

Introduction

The path of public education to accountability began during the mid-1960s (Ludlow, 2012). According to Ludlow (2012), the history of public education for students with disabilities (SWDs) can be viewed as an evolving cycle from exclusion (i.e., not allowed to attend school) to segregation (i.e., allowed to attend school in separate buildings/facilities) to physical inclusion (separate resource rooms/self-contained classrooms in a general education environment) to social inclusion (peer socialization in elective/nonacademic classes such as art, physical education, music) and finally to instructional inclusion (access to the curriculum in the general education classroom. Inclusion is the process used to ensure that SWDs in the general education classroom receive high quality instruction using the general education curriculum and support to access the content curriculum (Alquraini & Gut, 2012). Within instructional inclusive education settings, SWDs access the general education curriculum with their peers by way of their individualized education plan (Aron & Loprest, 2012). The onset of this historical shift began with the passage of the Education for All Handicapped Children Act (EAHCA) in 1975, which established a precedence that guaranteed a free, appropriate public education (FAPE) for all students regardless of the exceptionality or severity of the disability. This passage also known as PL-94-142 brought students with either moderate or severe disabilities into the public school environment and started the transference of placing SWDs in the general education setting (Mackey, 2014).

According to the U.S. Department of Education (2011), the goal became to ensure equal access to public education and the same curriculum for all SWDs and improve the academic

achievement of this group of students. More recently, The No Child Left Behind Act (NCLB) and the reauthorization of the Individuals with Disabilities Education Improvement Act (IDEA) along with Every Student Succeeds Act (ESSA) have brought much attention to the academic achievement of SWDs as compared to their general education peers (U.S. Department of Education, 2015). Consequently, many school districts implemented coteaching practices along with physical, social, and instructional inclusive education, which work collectively, to fulfill the required mandates (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010) for SWDs.

Collaborative coteaching occurs in instructional inclusion classrooms to ensure that all students are taught the same content and are exposed to the same educational standards (Morin, 2014). According to Friend (2008), *coteaching* is defined as, a partnership between a general education teacher and a special education teacher which requires collaborative planning, instructing and assessing students. The coteaching team is responsible for the delivery of instruction and accountable for the learning of all students (Friend, 2008).

The Local Problem

The problem was the low academic achievement of 8th-grade SWDs in a rural southeastern school district in Georgia, in the years 2012 to 2014, students were not meeting the academic performance targets of the STAR reading and mathematics assessments (Georgia Department of Education [GaDOE], 2015). In both content areas, SWDs have improved their scores, but have not made significant growth as compared to the state performance targets.

Coteaching has become a common occurrence in schools since administrators and teachers understand the value of two educators sharing the responsibility for student learning (Nierengarten & Hughes, 2010). The local district had not examined any achievement data to

determine whether a difference exists between the reading and mathematics scores prior to and after the implementation of inclusion through coteaching. To respond to this accountability measure, many school districts throughout the United States have implemented inclusive education through coteaching instructional practices, which is viewed as the viable practice for conquering both obstacles (Kloo & Zigmond, 2008). The overall goal of this educational practice is to establish a learning environment whereby all students have the possibility to learn and participate in classrooms that offer the opportunity for challenges, as well as, successes (Mackey, 2014). According to U.S. Department of Education National Center for Education Statistics (Mackey, 2014), approximately 59% of SWDs are in the general education classroom setting at least 80% of the school day and some students even more.

Research has been completed on the effectiveness of coteaching in the classroom (Bryant-Davis, Dieker, Pearl, & Kirkpatrick, 2012; DeVecchi & Rouse, 2010; Simmons, Carpenter, Dyal, Austin, & Shumack, 2012), as well as, the attitudes and perceptions toward the practice (Ashby, 2010; Hampshire, Butera, & Bellini, 2012). However, the majority of the literature on instructional inclusion through coteaching focuses on the planning phase and the critical component descriptors that drive effective inclusion through coteaching practices rather than examining the effect of the practice. Roden, Borgemenke, and Holt (2013) found that in Texas the number of SWDs meeting the state requirements increased when students received instructional inclusion through co-teaching in the general education classroom.

Rationale

In 2004, an extensive effort focused on improving the achievement of SWDs and ensuring the least-restrictive environment (LRE) for this subgroup of students. The GaDOE

began designing and providing resources on the topic of coteaching practices in inclusive classrooms and training school districts on the implementation of these instructional practices. Locally, prior to the requirement from GaDOE and prior to academic year, 2014-2015, SWDs were provided academic instruction through self-contained classes/resource classrooms and for non-academic courses the students were pulled out for peer socialization. However, after an analysis of repeated poor performance on the state's standardized assessments, the local education agency directors and the administrators of a Georgia middle school decided that significant instructional revisions must be employed for SWDs and implemented full inclusion through coteaching practices in Grades 6-8 in the content areas of reading and mathematics. Each cotaught reading and mathematics classroom had no more than 10 SWDs and the students were served based on their academic needs; usually all students received three segments of coteaching education each day.

The stakeholders in the education profession (i.e., local education agency directors, administrators and teachers) are eager to know and understand the effect of inclusion through coteaching practices in working with SWDs (personal communication, October 19, 2016). A study on the effect of these practices is imperative because in Georgia, all students regardless of their disability or exceptionality are expected to perform at the same levels as their peers who did not have disabilities on the annual standardized assessment (GaDOE, 2016). Both directors and administrators in the district have shared their concern and supported the need for further examination of the effect of inclusion through coteaching on the academic achievement of SWDs (personal communications, October 19, 2016). My purpose in this study was to determine the effect of inclusion through coteaching on the academic achievement of 8th--grade SWDs in

reading and mathematics by comparing pre-coteaching and post coteaching performance as denoted by the gain scores on the standardized assessments.

Definition of Terms

Collaboration: As related to coteaching, collaboration occurs when members of an inclusive learning community work together to assist students to succeed in the classroom. (Friend & Cook, 2007).

Coteaching: Two or more professionals (usually a general education teacher and a special education teacher) providing instruction in one classroom environment to students of various ability groups, to include general education and special education students (Friend, 2008).

College and career ready performance index (*CCRPI)*: An inclusive accountability report based on a compilation of data including student achievement data which is used to promote college and career readiness for all Georgia public school students (GaDOE, 2016).

General education: A program of instruction based on an organized curriculum designed for all children which is meant to meet state standards, or namely the Common Core State Standards or Georgia Performance Standards (Stach, 2016).

Inclusion: An approach to teaching whereby SWDs are in the general education classroom with their same-aged, nondisabled peers (Gilchrist, Katz, Kirkpatrick, & Makotsky, 2016).

Least restrictive environment: A principle that is a part of the IDEA which guides the educational program of SWDs whereby ensuring that SWDs are educated with their nondisabled peers to the maximum extent appropriate (IDEA, 2004).

Standardized Assessment of Reading and Mathematics (*STAR*): A research based, computer-adaptive, comprehensive assessment in the content areas of reading and mathematics designed to provide reliable and valid data combining technology with a specialized psychometric test design that utilizes item response theory (Renaissance Place, 2013). The company has created STAR assessments for skills in reading and other content domains.

Students with disabilities (*SWDs*): An individual who is determined by a school multidisciplinary eligibility team to have a disability according to state rules and regulations and who by reason of that disability requires special education and reading services (GaDOE, 2011).

Significance of the Study

The information gathered from this study is paramount to address this problem because it provides significant information about the effectiveness of inclusion through coteaching practices in the classroom. The results of this study promote positive social change by ensuring that effective inclusion through coteaching practices are implemented to support the best possible education for SWDs. This study was conducted to gather information to provide more insight beyond the perceptions of coteaching to the effectiveness of coteaching in this local district.

The findings are beneficial to the local educational agency and the middle school in future planning. The focus of the future planning includes: funding, staffing and professional development for the continued implementation of inclusion/coteaching practices. With this research, the educational community can make decisions about coteaching and determine any challenges or changes that need to be addressed.

Research Questions and Hypotheses

In implementing instructional practices to improve the academic achievement of SWDs, each school district selects what they view as "best practices." One practice that can be found in many schools is full inclusion through coteaching to provide sufficient support for SWDs in accessing the general curriculum and assisting in increasing the academic achievement of this subgroup of students. The research questions of this study focused on the effectiveness of inclusion through coteaching on the achievement of 8th-grade SWDs in reading and mathematics.

RQ1: What is the difference in reading gain scores on the STAR between 8th-grade SWDs who were not being co-taught in spring 2012-2014 and 8th-grade SWDs who were cotaught in spring 2015-2017?

H_{01}: There is no statistically significant difference between reading gain scores between 8th-grade SWDs who were not being cotaught in spring 2012-2014 and 8th-grade SWDs who were cotaught in spring 2015-2017.

H_{A1}: There is a statistically significant difference between reading gain scores between 8th-grade SWDs who were not being cotaught in spring 2012-2014 and 8th-grade SWDs who were cotaught in spring 2015-2017.

RQ2: What is the difference in mathematics gain scores on the STAR between 8th-grade SWDs who were not being cotaught in spring 2012-2014 and 8th-grade SWDs who were cotaught in spring 2015-2017?

H_{01}: There is no statistically significant difference between the mathematics gain scores of 8th-grade SWDs who were not being cotaught in spring 2012-2014 and 8th-grade SWDs who were cotaught in spring 2015-2017.

H_{A2}: There is a statistically significant difference between the mathematics gain scores of 8th-grade SWDs who were not being cotaught in spring 2012-2014 and 8th-grade SWDs who were cotaught in spring 2015-2017.

Review of the Literature

The issue of SWDs being educated with their nondisabled peers and having access to the general education curriculum has been discussed for many years within the public school sector (Hanover Research, 2012). The legislation that brought heightened attention to the accessibility and accountability of educating SWDs are the Individuals with Disabilities Education Act (IDEA) of 1997, which stated that SWDs, to the greatest extent possible have access to the general education curriculum. The Individuals with Disabilities Improvement Act (2004) further specified that SWDs should be instructed in the LRE, more specifically the general education classroom. Together, these legislative pieces brought forth the development of inclusive education.

The search for this review of literature was conducted using the following research databases found on the Walden University website: Education Source, ERIC, Education Research Complete, Education Source, Academic Research Complete, ProQuest Central, PsycArticles, Dissertations and Theses at Walden University and Google Scholar. In conducting the search, the following key terms were used: *inclusion*, *inclusive*, *coteaching*, *effects of coteaching*, *effects of inclusion*, *inclusive learning environment*, *collaborative teaching*, *team*

teaching, *coteaching models*, *coteaching learning environment*, *special education*, *SWDs*, *middle school*, *academic achievement*, *student academic achievement and quantitative research about inclusion/coteaching*. Several books, presentations, and articles were found published during a range of years using the key term searches. For example, some of the articles focused on the classroom management of coteaching environments (McCray, Butler, & Bettini, 2014; Rytivaara, 2012), teacher education and professional development (Pancsofar & Petroff, 2013; Strieker, Logan, & Kuhel, 2012), strategies for building a coteaching environment (Brown, Howerter, & Morgan, 2013; Strogilos & Tragoulia, 2013), the importance of the collaboration component between regular education and special education teachers (McCray et al., 2014; Strogilos & Tragoulia, 2013; Van Garderen, Stormont, & Goel, 2012) and the importance of coplanning between general education and special education (Pratt, Imbody, Wolf, & Patterson, 2017).

I conducted a literature review to provide more insight into the topic of inclusion through coteaching practices. The review of literature includes the identified theoretical framework with an explanation of how the theory relates to the topic of study. It also includes background information about special education, defining and descriptive information about inclusion, the historical movement towards inclusion and defining and descriptive information about coteaching.

Theoretical Foundation

The theoretical foundation guiding this research study is the zone of proximal development (ZPD) developed by Vygotsky who focused on the learning and development of children. Vygotsky (1978) believed that the social setting of where the learning occurred greatly

affected the learning of children. His theoretical approach to education is that learning is social and learning is perceived as the interaction between a teacher and a student (Roberts, 2013). From this school of thought, Vygotsky developed the concept of ZPD which classified the learning and development of children in two distant levels; the real level, the level at which children can solve problems independently and the potential level, the level at which children can problem solve with the help of adults or higher achieving peers (Gredler, 2012; Vygotsky, 1978). The idea is that cognitive development occurs through socialization and that the role of education is to provide children with learning experiences which are in their ZPD, thereby encouraging and improving their individual learning (Murphy, Scantlebury, & Milne, 2015; Vygotsky, 1980).

The learning of both general education and special education students is affected by the ZPD (Rutland & Campbell, 1996). The ZPD which is constantly changing, connects to inclusion/coteaching because both teachers must understand this zone to successfully grow students academically (Vygotsky, 1978). According to Stetsenko (2010), the processes of thinking, learning and communicating are significantly supported and strengthened through social interaction between the student and teacher. The social setting of the classroom aligned with the diverse instructional practices and strategies implemented by teachers can develop the problem solving skills of students which enhance critical thinking skills thus increasing content knowledge (Harland, 2003).

From the ZPD theory, although Wang (2009) highlighted several significant viewpoints, only three of the viewpoints set the precedence for inclusive or coteaching educational practices. They are as follows:

1. Cognitive development is a course of social interaction.
2. The development principles for normal and disabled children are almost the same, for which reason these two kinds of children should be educated together and take part in connatural activities.
3. Assistance and guidance helps the cognitive zone of disabled children to expand (Wang, 2009).

Vygotsky's (1980) concept of ZPD provides the basis for this research study in that the components of inclusion through coteaching educational practices are based on the significance of SWDs being educated together with their nondisabled peers and being taught through the integrated instructional efforts of teachers to meet the learning needs of each child. Inclusion through coteaching addresses the ideals set forth in Vygotsky's zone of proximal development in that these practices provide an environment for social interaction and learning to occur for all students and provide the opportunity for teachers to collaborate and differentiate classroom instruction.

The Move Toward Inclusion

Public education was viewed as a birthright and a priority in the United States (Levine & Wexler, 1981). By 1918, all states had established compulsory educational school attendance laws governing student attendance; however, although these laws were in place, more than one million children with disabilities were excluded from attending public school (Yell, 1998). The exclusion of this subgroup of students brought about significant changes after several years; whereby several legal cases would be presented and resulted in legislation being signed giving

SWDs the rights to the same free, FAPE as their nondisabled peers (Causton & Tracy-Bronson, 2015).

In 1975, the Education for EAHCA signed by President Ford was passed which provided federal funding to states to assist them in providing an education for SWDs. This law was renamed in 1990 to be called the Individuals with Disabilities Act (IDEA), which continued the move for more constitutional rights for SWDs. The IDEA mandated that school districts ensure the following:

1. To the maximum extent possible, SWDs are educated with students who are nondisabled.
2. That special classes or other removal of SWDs from the general education environment only occur when the disability is so severe that the education in a general education classroom with the use of supplementary aids and services cannot be achieved (IDEA, 1997).

According to Yell (1998), there were three significant court cases which were key in establishing what constituted the LRE. These cases were: *Daniel R. R. v State Board of Education* (June 12, 1989), *Sacramento City School District v Rachel H.* (argued and submitted on August 12, 1993 and decided on January 24, 1994) and *Hartmann v Loudoun County Board of Education* (argued on May 9, 1997 and decided on July 8, 1997).

The voices of advocacy and these crucial pieces of legislation, ensured that SWDs be provided the same educational opportunities as those without disabilities. With the passage of the IDEA and continued legislative statues, the history of education for SWDs has gone from exclusion, to being educated only with peers with disabilities (self-contained classrooms) to

inclusion, being educated with their nondisabled peers in the same classroom learning the same curriculum. According to national reports, more than 6 million students being served under the IDEIA, which makes up greater than 10% of the overall school population (U.S. Department of Education, 2012). According to Mackey (2014), almost 59% of SWDs spend 80% or more of each school day in the general educational classroom.

As the focus on ensuring that SWDs receive the same educational opportunities as their nondisabled peers continued, the mandates continued to increase. In more recent years, the reauthorization of the IDEA and other crucial legislature have mandated that schools ensure that SWDs not only learn in the same environment as their nondisabled peers, but also that they are exposed to the same content and demonstrate competence on the same standardized assessment as their nondisabled peers (Nichols & Sheffield, 2014). Thus, with the integration of theory and policy, inclusion is viewed as the most likely instructional strategy for accomplishing these instructional goals (Nichols & Sheffield, 2014).

Instructional Inclusion

Several definitions of inclusion exist, but most have in common that, inclusion is "a process based on the premise that all individuals have a right to participation, access and achievement" (Nichols & Sheffield, 2014, p. 32). *Inclusion* is defined as a practice that merges regular and special education and provides support to all learners (Harpell & Andrews, 2010; Ryan, 2010) and minimizing exclusion by establishing a learning environment that welcomes and supports SWDs (Obiakor, 2011; Obiakor, Harris, Mutua, Rotatori, & Algozzine, 2012). According to Mackey (2014), the goal of inclusive education is to provide all students with the

most appropriate learning environment and learning opportunities for them to achieve their highest potential.

The principle of LRE required SWDs to be educated with their nondisabled peers in the same classrooms as much as possible. Although, the word inclusion was not written in the laws and statues, it was founded on the principles of the LRE (Causton & Theoharis, 2013; Yell, Rogers, & Lodge, 1998). As the legislative laws evolved from the IDEA (1990 and 1997) to the reauthorizations, NCLBA of 2001 and the Individuals with Disabilities Educational Improvement Act (IDEIA, 2004), SWDs are able to access the general curriculum in the general education environment, thus the implementation of inclusion through coteaching practices.

As federal mandates required that school districts move to inclusive classroom settings, more studies have been done to assess the general effectiveness of placing SWDs in the general education classrooms. Roden et al., 2013 found that the number of SWDs who met the expectations of the standardized assessments and state performance targets increased as a result of inclusion through coteaching practices. Tremblay (2013) also found that when comparing the effects of inclusion and a regular special education class, the inclusion model was shown to be substantially more effective.

Components of Inclusion. Within the local study mentioned in this study, administrators and teachers must ensure that the necessary components of inclusion are in place. As educational communities work toward inclusive learning environments whereby quality teaching and learning is occurring, there are four essential components that must be present to promote effective inclusive practices. According to Brooks (2016), the four components are collaboration, personal supports, universal design and administrative support.

Collaboration. According to DuFour (2016), a collaborative team is the essential building block of the educational environment between the general education teacher and the special education teacher. Effective collaboration between the special education teacher and general education teacher is paramount to the success of the coteaching relationship (Cohen & Hoffman, 2014; Scruggs & Mastropieri, 2017; Tzivinikou, 2015). According to Ronfeldt, Farmer, McQueen and Grissom (2015), educators and schools that engage in quality collaboration have better academic achievement gains in reading and mathematics. The expertise and experience of this instructional team can strengthen the quality of teaching and learning (Brooks, 2016). With the wealth of knowledge of the strategies, goals, accommodations and modifications from the special education teacher; he/she is able to provide SWDs strengths, weaknesses, processing deficits and supports that should be in place to assist the students accessing the general curriculum in the general education setting. The general educator's content knowledge then allows scaffolding and differentiation to provide the best explanation of the content being taught. In ensuring that a positive, collaborative environment is established, practices such as morning meetings, extension presentations and community and individualized learning should occur resulting in an inclusive and intellectually challenging learning environment (Murdock, Finneran, & Theve, 2016).

Personal Support. In most classrooms, there is personal support for SWDs through paraprofessionals or classroom peers who encourage independence and peer interaction in order to promote student growth and learning and social interaction (Brooks, 2016).

Universal Design. According to the National Disability Authority (2014), universal design is "the design and composition of an environment so that it can be accessed, understood

and used to the greatest extent possible by all people regardless of their age, size, ability or disability" (p. 1). If universal design is used at the beginning of the lesson planning process by constructing appropriate learning targets from the curriculum standards, then the need for extensive accommodations and modifications lessen (Brooks, 2016; Sailor, 2015).

Administrative Support. Leaders in a school are an important link to quality teaching and learning in inclusive environments. The principal's beliefs, attitude and perception concerning inclusive practices are paramount in the successful implementation of inclusion (Schmidt & Venet, 2012). As instructional leader, the principal must also increase their understanding of special education and SWDs (Fullan, 2009; Lynch, 2012; Waldron, McLeskey, & Redd, 2011). If the expectation is for successful teaching and learning to occur through collaboration time, personal supports, curriculum design and professional development, administrative support must be present. The presence of administrative support is important in determining how students are taught and the confidence level that staff feel when implementing inclusive instructional practices in their classrooms. According to Causton and Theoharis (2014), one of the most effective planning processes for administrators to lead inclusive school reform is composed of the following: setting a vision, determining what is occurring by creating service delivery maps, aligning school structures, creating instructional teams, ongoing monitoring, adjusting and celebrating and continuously ensuring a positive school culture of belonging.

Quality teaching and learning in inclusive learning environments is an attainable goal and is "deserving of every student" (Brooks, 2016, p. 13) in today's schools. However, this level of education success does not just occur, it must be saturated in a strong foundation of collaboration, personal supports, universal design with accommodations and/or modification and

support from administration. When these key components are present, teachers and students feel supported and both experience success.

Advantages and Disadvantages of Inclusion

Within inclusive practices, there are advantages and disadvantages which affect both disabled students and their nondisabled peers. The advantages of inclusion include that: all students will gain an understanding of how to work with different people, build acceptance of others and gain knowledge about diversity and this setting also builds socialization skills of both groups of students, but is especially helpful for SWDs (Bui, Quirk, Almazan, & Valenti, 2010). However, only as other instructional practices, inclusion also presents disadvantages. The inclusive classroom setting may not be a positive experience for all SWDs (Bui et al., 2010). SWDs may not receive the same intensive, individualized or small group instruction as they are accustomed to in a resource setting due to the student-teacher ratio. Because of the grade level standards based material presented, these students may require more reteaching or reviewing. General education teachers may not have an in-depth knowledge or extensive training to effectively work with SWDs (Willis, 2007).

Coteaching

As inclusive practices emerged, one specific inclusive practice is coteaching. However, coteaching was not a widespread educational practice in the United States until after the passage of the IDEA of 2004 (U.S. Department of Education, 2004). Coteaching was first known as team-teaching; where one team of teachers were responsible for one group of students (Friend, Reising, & Cook, 1994). Since then, the practice of coteaching has been more specified and refined. Coteaching is an instructional delivery approach in which there is a partnering of a

general education teacher and a special education teacher who deliver instruction together to a group of diverse or blended group of students in the same classroom (Cook & Friend, 1995; Landrum, 2012) with different areas of expertise (Beninghof & Leensvaart, 2016). Coteaching is viewed as one of the instructional support strategies used to confront the challenges and to increase opportunities for SWDs in the general education classroom (Nierengarten, 2013). According to Friend (2016), coteaching not only provides SWDs access to the general curriculum, but also specially designed instruction which is directly linked to their individual educational plans.

The research base on coteaching is continuously increasing, but studies completed thus far have demonstrated positive outcomes from implementation of the coteaching model (Bronson & Dentith, 2014; Chitiyo, 2017). Literature reviews completed by Hightower (2014) and Walker (2013) discussed quantitative studies on coteaching, with inconclusive findings (Stach, 2016). Some research pertaining specifically to middle school inclusion has focused on the effectiveness of coteaching and the effect of specific teaching strategies (Bryant-Davis et al., 2012; Magiera & Zigmond, 2005; Scruggs, Mastropieri, & Marshak, 2012). According to Nichols, Dowdy, and Nichols (2010), more research needs to be completed to determine the effectiveness of coteaching practices on the academic performance of SWDs. Coteaching requires three important components to be described as effective coteaching: coplanning, coinstruction and coassessment (Honigsfeld & Dove, 2016; Martin, 2015; Murawski & Lochner, 2011; Shamberger, Williamson-Henriques, Moffett, & Brownlee-Williams, 2014). According to Murawski and Lochner (2011), if all three components are not present, effective coteaching is not occurring.

Coplanning. Coplanning is a vital component of effective coteaching practices. The purpose of coplanning it to allow the special education teacher and the general education teacher to both have input into the instructional planning phase. The special education teacher's knowledge of differentiation, strategies, accommodations, modifications and positive behavior supports can assist in creating a lesson that will allow SWDs to be successful with the general education content (Conderman & Hedin, 2014; Murawski & Lochner, 2011). The general education teacher's expertise in the content area along with the knowledge from the special education teacher provides a more enriched learning environment (Miller & Oh, 2013). According to Friend et al., (2010), teachers who coplan should have a planning meeting with an agenda focused on a 3-part sequence:

1. Prior to the coplanning meeting, the general education teacher should prepare an overview of curriculum topics to be discussed such as concepts, language of the standards, stories, etc.
2. During the meeting, the special education teacher share ideas for teaching the content using the coteaching approaches and
3. Both the general education teacher and special education teacher discuss individual students and their needs.

Furthermore, Howard and Potts (2009) developed a coplanning checklist to guide the coplanning process. The checklist focused on identifying learning standards which align with the lesson, building assessments that address the standard, instructional strategies and teaching methods and other logistical information (attendance, copying materials, and so forth). Murawski

and Dieker (2008) suggested that coteachers ask the following questions during the coplanning meeting:

- How will we divide the responsibilities so that the process will be beneficial for both teachers?
- What are our strengths and weaknesses?
- What are some effective strategies that will help our students improve academically and behaviorally?
- How can we address high, average and low achieving students? and
- How does the lesson meet all learning styles and behavioral needs of the students?

As coplanning is occurring, these ideas can enhance the process, thus resulting in better results for students accessing and learning the curriculum, the first time the information is presented (Murawski, 2009).

Coinstructing. Coinstructing involves the in-the-classroom part; whereby the two teachers implement the instructional strategies and models designed during coplanning (Conderman, 2011). Within the coinstructing phase, coteachers need to use the model that aligns with the instructional objective being taught and the teachers' expertise (Pratt et al., 2017). There are five coteaching approaches described in the literature: one teach-one assist, station teaching, parallel teaching, alternative teaching and team teaching (Kloo & Zigmond, 2008; Friend et al., 2010; Murawski, 2012). Researchers have provided descriptions of some common coteaching models, but there is limited evidence on the effects of these approaches. Keeley (2015) found that students perceive more positive benefits when teachers use station teaching, alternative

teaching, parallel teaching or team teaching. The descriptions of the coteaching models include the following:

1. One Teach, One Assist. The one teach, one assist model requires one educator to lead the instruction in the classroom while the other teacher circulates through the classroom providing assistance and support to the students as needed (Kloo & Zigmond, 2008).
2. One Teach, One Observe. The one teach, one observe model consist of one teacher leading the instruction while the other teacher observes the students (Friend et al., 2010).
3. Station teaching. Station teaching involves dividing the instructional content and the physical space of the classroom usually into two or more centered areas (Cook & Friend, 1995; Kloo & Zigmond, 2008). Within station teaching each teacher is responsible for teaching a part of the content while students rotate through the stations. This model can also include a station where students complete work independently.
4. Parallel teaching. The parallel teaching model requires the two teachers to concurrently provide instruction (the same information) to the students by dividing the class into heterogeneous groups (Cook & Friend, 1995; Kloo & Zigmond, 2008).
5. Alternative teaching. Alternative teaching allows the teachers to form one large group and one small group (this group usually requiring more intensive instruction). This model supports intensive instruction for SWDs in a reduced teacher-student ratio and

the other teacher provides instruction to the large group (Cook & Friend, 1995; Kloo & Zigmond, 2008).

6. Team teaching. In the team teaching model, which is viewed as the most complex model, both teachers deliver instruction at the same time. Some teachers describe this model as "tag team teaching" because the teachers continually switch the role of lead instructor (Cook & Friend, 1995; Kloo & Zigmond, 2008).

One important concept about coinstructing is that instruction does not look the same as in the general education classroom (Murawski & Lochner, 2011).

Coassessing. Within the coassessing component, coteachers gather and reflect on information from varying sources about the effectiveness of their instruction (Conderman, 2011). According to Murawski and Dieker (2008), coteachers should focus their discussion on these key questions during the coassessing phase:

- Does evidence suggest that successful learning has/is occurring in the classroom?
- How will the data collection be conducted and who will collect the necessary data?

Although, these questions will guide the discussion, the coteaching team should focus on what went well with the instruction, areas of need improvement, aha moments and students who may need more individualized attention and differentiation of the lesson(s).

Benefits and Challenges of Coteaching

Although coteaching is viewed as one of the most widely used inclusive instructional practices in schools, there are benefits and challenges of this practice. Coteaching is described as benefitting everyone involved, students and teachers alike (Lawter, 2013). The students benefit from having two teachers providing instruction, providing explanations and providing more

feedback and instruction. Other literature also identifies the benefits of coteaching for students (Nichols & Sheffield, 2014). Some likely benefits include an increase in individualized attention (Harpell & Andrews, 2010; Scruggs et al., 2007), increase in student achievement and social skills, heightened self-esteem and reduction in behavioral issues (Rea, McLaughlin, & Walter-Thomas, 2002). The coteachers benefit by being supportive of one another, collaborating about lessons and ideas to enhance the lessons and a shared responsibility for planning and assessing student growth and performance (Lawter, 2013). Coteachers also reported that this practice enhances professional growth (Murawski & Lochner, 2011; Rytivaara & Kershner, 2012; Scruggs et al., 2007), and increases the use of instructional strategies, improves morale and reduces teacher burnout (Friend et al., 2010).

Coteaching has benefits, but it also presents challenges. Some challenges include: difficulty in partnering with a teacher who possesses a different teaching philosophy and teaching style, the presence of inequality in the classroom, whereby students do not view the special education teacher as an equal partner in the classroom, determining who is responsible for the grading of SWDs and the lack of team reflection (Fluijt, Bakker, & Struyf, 2016; Kaplan, 2012). These challenges present issues that must be handled through proper planning, communication and collaboration of the school community.

Implications

The implementation of inclusion and coteaching practices may provide a positive social change by ensuring that SWDs, academically and socially, are exposed to the general education curriculum with their same grade level, nondisabled peers in the same classrooms (Blecker & Boakes, 2010); however more research is needed on this topic. When school leaders select an

initiative to address the needs of their students, it is vital that the time is set aside to examine the data to ascertain the effectiveness or ineffectiveness of the initiative. In researching the problem that the school district has not examined data to determine if the academic achievement of SWDs is improving from pre to post coteaching, I collected valuable information that will be beneficial for the local school district and all involved stakeholders. Although there are several possible projects that could arrive from this study, it is important to determine what would be most supportive for administrators and teachers in utilizing inclusion through coteaching to raise the academic achievement scores of SWDs.

The project resulting from this study involved creating a professional development for learning (PDL) opportunity for administrators and teachers focusing on the critical components of effective coteaching since no school-wide professional development has been conducted since the onset of the practice. As an addendum to the professional development, an implementation plan will be developed which can be used as a guide for future administrators and teachers. Within the data collection and analysis phase, coteaching improved student achievement on standardized assessments, those involved can continue to provide professional learning opportunities and make changes to the current inclusion program to continue improving student learning and achievement. The findings from this study serve as another essential piece of research to substantiate or refute the effectiveness of inclusive/coteaching practices found in many of our educational institutions.

Summary

The practice of inclusion coupled with coteaching instructional practices has been an answer to the call of the various laws and mandates regarding the academic achievement of

SWDs. The concern of educating SWDs has been and continues to be a tremendous focus of national, state and local stakeholders. In Section 1, I presented the local problem, rationale, definition, significance of the study and the review of literature as associated with the effectiveness of inclusion through coteaching practices. In Section 2, I presented the methodology which was used for this study to include; an introduction to the quantitative research design approach, setting and sample, instrumentation and materials and the collection and analysis of the data. The assumptions, limitations, scope and delimitations of the study and a summation about the protection of participants' rights were also shared.

Section 2: The Methodology

Research Design and Approach

The research approach chosen for this study was quantitative and the research design was a quasi-experimental comparison group pre-posttest design. I chose a quantitative approach for this study because I gathered data using quantifiable variables and statistics to determine differences among the variables (Allwood, 2012). Quasi-experimental research is a form of experimental research in which the researcher has no control over the assignment of individuals to conditions (Lodico, Spaulding, & Voegtle, 2010). According to Hong (2009), quasi-experimental design is a structured organized method without random assignment used to determine whether some program of treatment causes some outcome or outcomes to occur (if X, then Y). This design is extensively used in the social sciences and is widely used to measure social variables due to its ease of use, reduction of time and resources, and usefulness in generating results for general trends (Hong, 2009). The quasi-experimental comparison group pre-posttest design is well suited for this study because the SWDs were not randomly assigned to the intervention where the pre-posttest was administered. The purpose of this study was to examine the effect of coteaching on the academic achievement of 8th--grade SWDs in reading and mathematics as measured by the STAR assessment. The independent variable was the implementation of inclusion/coteaching practices and the dependent variable is the academic achievement gain of SWDs.

Setting and Sample

A rural school district in southeastern Georgia is the setting for this research study. This Title I school district consists of 2 elementary schools (Pre-K through Grade 5), 1 middle school

(Grades 6 through 8) and 1 high school (Grades 9 through 12). The student population is approximately 2,000 students in the 2017-2018 school year. The Governor's Office of Student Achievement Georgia School Reports indicated that 91% of the students were receiving free lunch/reduced lunch; however due to all schools in the district being Title I schools, 100% of the students receive free lunch and 14% were identified as English Language Learner. The racial origin of the student population consists of 17% African American, 37% Hispanic, 45% Caucasian, and 1% multiracial. Of the 2,000 students, 12% were SWDs, meaning 240 students whose racial composition is not similar to the ones from the overall student population. The sample for this study was a total of 96 88th- grade SWDs with 50 SWDs from the years 2015, 2016, and 2017 who were in a coteaching classroom, the treatment group, and 46 SWDs from the years 2012, 2013, and 2014 who were in 8th- grade before coteaching was implemented, the control group.

From the treatment group, 29 were males and 21 were females, and from the control group 26 were males and 20 were females. Thus, the sample was $n = 96$ SWDs. Unlike the total population, the racial origin of the sample consists of 37 Caucasian (39%), 30 African American (31%), and 29 Hispanic (30%). The total sample was selected because the archival STAR scores of the entire target population in this specific middle school will be retrieved throughout the time period of prior to and after the inclusion through coteaching instruction. To use the total sample, I defined the population characteristics as SWDs in the 8th- grade (2012-2014) and (2015-2017), I created a list of participants with de-identified information, and I eliminated students who did not meet the subgroup characteristics (Lund Research, 2012). The G*Power software version 3.1.9.2 was used to calculate the sample size with the standard input parameters for educational

research of $a = 0.05$, a power value = 0.80, and a medium effect size of 0.50. For a *t* test, the required sample size would be 64 per group which means that both groups of this study were too small. As there were no other student scores available to me, I had to conduct the study knowing that it is underpowered.

Table 1

Demographics of Total Population and Sample

Ethnicity	All students	%	Sample	%
White	900	45	37	39.0
African American	340	17	30	31.0
Hispanic	740	37	29	30.0
Multiracial	20	1		
Gender				
Males	1212	61	55	57.3
Females	788	39	41	42.7

Note. The demographics of the sample include 39% White students, 31% African American students, and 30% Hispanic students (PowerSchool Student Information System, 2012 & Infinite Campus Student Information System, 2016).

Instrumentation and Materials

The GaDOE Testing and Assessment Division requires annual standardized testing for the majority of its students. For the purposes of this study, I focused on the reading and mathematics STAR assessment administered to 8th- grade SWDs during spring 2012-2017. The STAR assessment was designed to assess and measure students' level of understanding of reading and mathematics skills.

The test format of the STAR assessment is a fixed length test, composed of 34 selected response items per event to represent a balanced range of cognitive complexity. The STAR

assessment multiple choice items assess an array of skills of higher levels of learning (Pop ham, 2003). The scale scores range from 0 to 1400 for reading and mathematics assessments and are useful for comparing student performance over time.

Renaissance Learning established reliability and validity of the aforementioned assessment. STAR reading and mathematics assessments had reliability coefficients of .90 (Renaissance Learning, 2010). The content validity was established by the educational experts Salvia, Ysseldyke, and Bolt (2010). The assessment scores had a strong correlation with other reading and mathematics achievement measures (Renaissance Learning, 2013). This was achieved through the extensive effort to develop reading and math learning progressions and to check the correlation, schools were asked to submit students' STAR assessment results along with their scores on other assessments, such as the California Achievement Test, DIBELS, FCAT, Iowa Test of Basic Skills, Comprehensive Test of Basic Skills, Metropolitan Achievement Test, and Stanford Achievement Test. The analysis showed high correlations with these tests. In fact, the correlations exceeded the guidelines provided by the National Center on Response to Intervention (NCRTI). The validity of these assessments ranges from .55 to .80; moderate to strong.

Data Collection and Analysis

I obtained approval from the Walden University Institutional Review Board (IRB) with the approval number 02-14-18-0449200. I then submitted a letter to the superintendent of the school district and the principal at the selected school site to secure district and school permission to obtain archival data. After permission was granted and a data-use agreement was signed, I received de-identified mathematics and reading test scores and SWDs grouping for 8th-

8th-graders for the spring 2012-2017 STAR Assessment. Student performance scores on these standardized assessments were chosen because taking the STAR is part of the regular school practice and the scores of the students are provided annually.

The score gains were calculated by deducting the test scores of two consecutive years. Descriptive statistics such as minimum, maximum, average value, and standard deviation of score gains were calculated for the treatment and control group. Hypotheses testing is used to determine if a relationship exists and if there is enough information to reject the null hypotheses (Creswell, 2014).

RQ1: What is the difference in reading gain scores on the STAR between 8th-grade SWDs who were not being cotaught in spring 2012-2014 and 8th-grade SWDs who were cotaught in spring 2015-2017?

Null Hypothesis: H_{01}: There is no statistically significant difference between reading gain scores between 8th-grade SWDs who were not being cotaught in spring 2012-2014 and 8th-grade SWDs who were cotaught in spring 2015-2017.

Alternative Hypothesis: H_{A1}: There is a statistically significant difference between reading gain scores between 8th-grade SWDs who were not being cotaught in spring 2012-2014 and 8th-grade SWDs who were cotaught in spring 2015-2017.

RQ2: What is the difference in mathematics gain scores on the STAR between 8th-grade SWDs who were not being cotaught in spring 2012-2014 and 8th-grade SWDs who were cotaught in spring 2015-2017?

Null Hypothesis: H_{02}: There is no statistically significant difference between the mathematics gain scores of 8th-grade SWDs who were not being cotaught in spring 2012-2014 and 8th-grade SWDs who were cotaught in spring 2015-2017.

Alternative Hypothesis: H_{A2}: There is a statistically significant difference between the mathematics gain scores of 8th-grade SWDs who were not being cotaught in spring 2012-2014 and 8th-grade SWDs who were cotaught in spring 2015-2017.

The independent variable is coteaching implementation while the reading and mathematics gain scores of 8th-grade SWDs serve as the dependent variable. The *t* test is used to compare the means of the overall gain scores in 8th-grade SWDs reading and mathematics achievement for the 3 years prior to the implementation of coteaching and the 3 years after the implementation of coteaching.

Assumptions, Limitations, Scope and Delimitations

I assumed that all administrators and teachers received initial training prior to the implementation of the inclusion through coteaching model. I also assumed that the special education director and administrators at this school conducted follow-up observations to ensure that coteaching was occurring. Finally, I assumed that the student participants in this study performed to their best potential on the STAR assessment and that the test scores are accurately reported by Renaissance and kept by the district.

The scope was limited to 96 SWDs. The racial composition of the sample is not similar to the total student population. A limitation of the study is that the results have to be interpreted with caution because the stud was underpowered. There were only 96 SWDs in all years, meaning that the 64 minimum sample size per group has not been reached. However, it was not

possible to retrieve data for more students because the study was limited to the 8th-grade SWDs of one middle school and the results cannot be generalized to a larger population. Several studies have shown that applying a *t* test on a small sample size is reasonable (Winter, 2013).

The scope of the study was one school where the participants are 8th-grade SWDs and therefore, the results cannot be generalized to other middle schools or other grade levels. My focus was on two types of teaching; noncoteaching and coteaching and on reading and mathematics assessment numeric scale scores. Initially, the study focused on a comparison of 1 year without coteaching practices to 1 year with coteaching practices, but there were not enough students to include in the sample. I included 3 years without coteaching and 3 years with coteaching using all possible data for the academic years, 2012-2017. The data were retrieved from one school and were generated from the reading and mathematics STAR assessments.

The study was delimited to only a group of 8th-grade SWDs at a small, middle school in rural Georgia. Using academic achievement data in reading and mathematics for the study was the most important delimitation. Therefore, the study is delimited by the research design.

Protection of Participants' Rights

The Walden University IRB has established ethical guidelines that researchers must follow in order to ensure that participants are protected from harm and confidentiality is maintained (Lodico et al., 2010). Upon approval from Walden University IRB, I obtained permission from the superintendent of the school district (Appendix B) and permission from the principal of the middle school (Appendix C). Once approval was granted from the school district and school, I received the de-identified archival data. Due to students' identifying information

being removed from the archival test data, there was no direct contact or interaction with parents or students, I did not need informed consent.

Data Analysis Results

The results presented in this section indicate the difference between non-coteaching/coteaching and the academic achievement of 8th-grade SWDs to examine the effect of coteaching on 8th-grade SWDs in reading and mathematics as measured by the Standardized Assessment for Reading and Mathematics (STAR). The independent variable was the participation in the coteaching practice with the two levels "no" because SWDs were in 8th-grade before coteaching was implemented and "yes" because SWDs were in 8th-grade after coteaching was implemented. The dependent variables were the reading and mathematics STAR gain scores of 8th-grade SWDs based on the STAR reading and mathematics test scores.

In this section, I discuss the sample in detail as it relates to descriptive and inferential statistics. Descriptive statistics such as the mean, minimum and maximum values and the standard deviation were calculated and summarized in a table to begin the identification of patterns in the results. I calculated the mean gain scores for the non-coteaching years and the coteaching years by entering the individual score for each student into SPSS version 24 for analysis. I used the reading and mathematics STAR scale scores for the SWDs in Grade 8 for the spring of 2012, spring of 2013, spring of 2014 and for the spring of 2015, spring of 2016, and spring of 2017 which included three years of 8th-grade SWDs for each group. I then conducted an inferential *t* test to determine the difference between the mean of the gain scores of the two groups. I also used an independent *t* test for data analysis to measure the variance in scale scores between the two groups of SWDs. The level of significance was set at .05.

Research Question 1

Based on the findings from the study, Table 2 presents the results of the data analysis testing for research question 1 indicating that the group of students who took the STAR test after the implementation of coteaching instructional practices had higher performance scores than the group of students who took the STAR test prior to the implementation of coteaching instructional practices. The results of the descriptive statistics for reading achievement indicated a minimum of 79 and 152 for non-coteaching/coteaching years, respectively and a maximum of 849 and 937, respectively. An independent samples *t* test was conducted to compare the reading gain scores of middle school SWDs who were not cotaught in spring 2012-2014 and those students who were cotaught in spring 2015-2017. There was a significant difference in the scores for students who were not cotaught ($M = 453.22$, $s = 158.09$) and scores for students who were cotaught ($M = 514.94$, $s = 139.71$); $t\ (94) = -2.030$, $p = .045$. These results indicate that the implementation of coteaching instructional practices had a significant effect on the academic achievement of SWDs in the area of reading, therefore the null hypothesis was rejected. These results appear consistent with other researchers' findings when coteaching was the instructional learning model (Hang & Rabren, 2009; Walsh, 2012). I concluded that the implementation of full inclusion through coteaching practices in reading may have been the contributing factor to SWDs academic growth in this content area.

Table 2

Mean Gains for STAR Reading Scores for Control and Treatment Groups

	M	Minimum	Maximum	*SD*	N
2012-2014	453.22	79	849	158.09	46
2015-2017	514.94	152	937	139.71	50

Figure 1 presents a graph illustrating the growth between the mean gain scores. The graph shows a trend line representing an improvement from non-coteaching years to coteaching years.

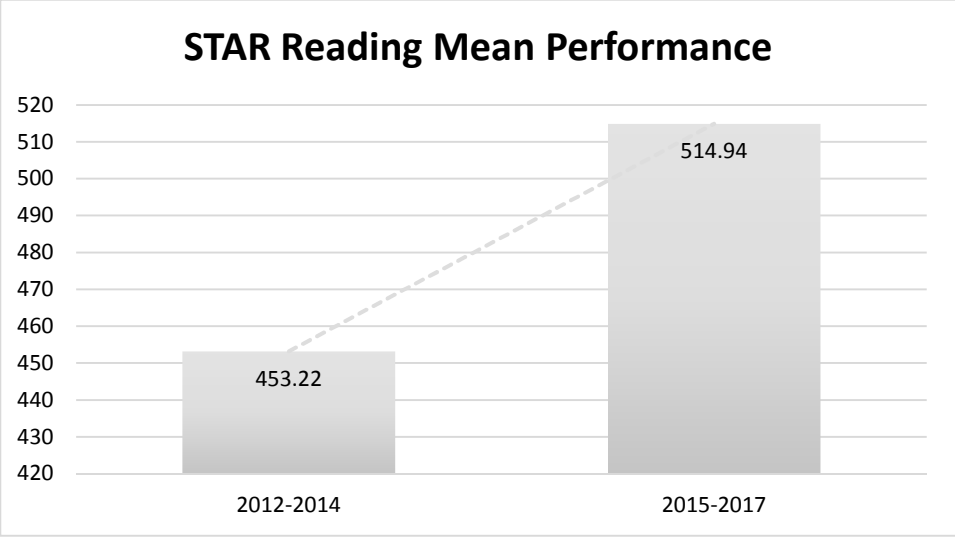

Figure 1. STAR reading mean performance.

Research Question 2

Based on the findings of the study, Table 3 presents the results of the data analysis testing for research question 2 indicating that the group of students who took the STAR test after the implementation of coteaching instructional practices had higher performance scores than the group of students who took the STAR test prior to the implementation of coteaching instructional

practices. The results of the descriptive statistics for mathematics achievement indicated a minimum of 179 and 190 for non-coteaching/coteaching years, respectively and a maximum of 717 and 863, respectively. An independent samples *t* test was conducted to compare the mathematics gain STAR scores of middle school SWDs who were not cotaught in spring 2012-2014 and those students who were cotaught in spring 2015-2017. There was a significant difference in the scores for students who were not cotaught ($M = 502.57$, $s = 168.69$) and scores for students who were cotaught ($M = 601.64$, $SD = 162.01$); $t\ (94) = -2.935$, $p = .004$. These results suggested that the implementation of coteaching instructional practices had a positive effect on the academic achievement of SWDs in the area of mathematics, therefore rejecting the null hypothesis at a level of significance of .05. These results appear consistent with other researchers' findings when coteaching was the instructional learning model (Nevin, Cramer, Voight, & Salazar, 2008; Pickard, 2009). I concluded that the implementation of full inclusion through coteaching practices in mathematics may have been the contributing factor for SWDs academic growth in this content area.

Table 3

Mean Gains for STAR Mathematics Scores for Control and Treatment Groups

	M	Minimum	Maximum	*SD*	N
2012-2014	502.56	179	717	168.69	46
2015-2017	601.64	190	863	162.00	50

Figure 2 presents a graph illustrating the growth between the mean gain scores. The graph shows a trend line representing an improvement from non-coteaching years to coteaching years.

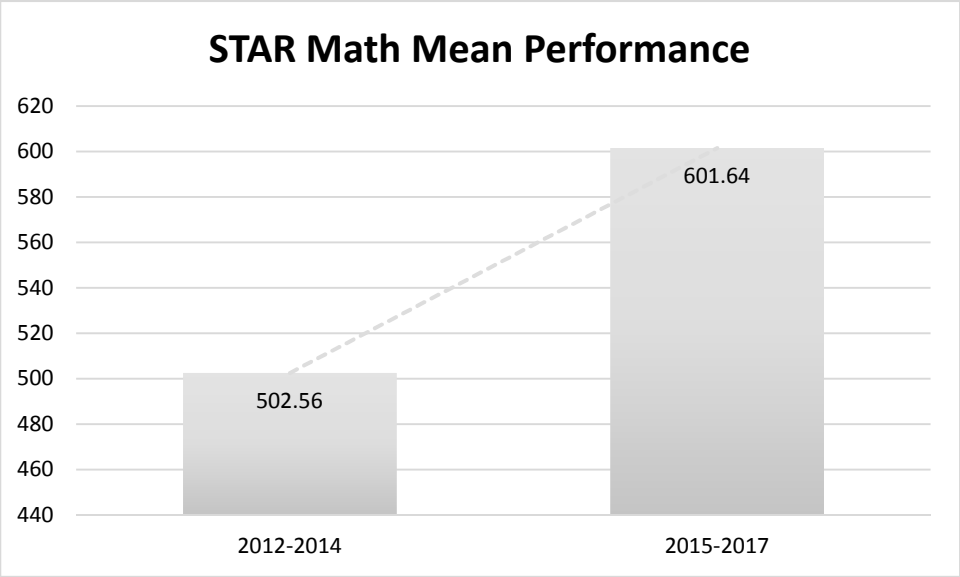

Figure 2: STAR mathematics mean performance.

The *t* test analysis results indicate that the implementation of coteaching instructional practices within the inclusion classroom had a positive effect on both the reading and mathematics STAR scores for this group of students. In further examining the significance of the study, Table 4 presents the Leverne's Test for Equality of Variance, which shows in reading the sig. = .203 being greater than .05 resulting in the variability being similar and the sig. (2-tailed) = .004 being less than .05 resulting in there being a statistically significant difference. In mathematics, the sig. = .643 being greater than .05 resulting in the variability being similar and the sig. (2-tailed) = .029 being less than .05 resulting there being a statistically significant difference.

Table 4

Leverne's Test for Equality of Variances

	Sig.	Sig. (2-tailed)
Reading	.203	.004
Mathematics	.643	.029

The null hypotheses were rejected and the alternative hypotheses were accepted indicating a difference in gain scores between the implementation of coteaching and the academic achievement of 8th- grade SWDs in the reading and mathematics content areas. The STAR assessment scores were improved by the implementation of coteaching instructional practices; specifically reading scores improved 61.72 points and mathematics scores improved 99.08 points. One factor that may influence the great increase in mathematics is the universality of mathematics as compared to the more difficult skills of fluency and comprehension in reading.

The findings showed that the academic achievement outcomes of this subgroup of students can be improved by the using coteaching practices in inclusion classroom settings. According to a study conducted by Nevin et al., 2008, the implementation of coteaching practices resulted in social and academic progress of SWDs as demonstrated on statewide assessments in the areas of reading and mathematics. Walsh (2012) reported positive academic outcomes for SWDs at the elementary and middle school level when educated in the cotaught setting. In his study, he gathered data over 20 years and found that SWDs who received their services in the cotaught setting showed an improvement in state standardized testing scores. Another study which focused on the effectiveness of coteaching on the academic achievement of 8th- grade SWDs with a specific learning disability conducted by Fontana (2005) supported

these findings. She found that the SWDs who received instruction in the cotaught classroom, had higher grades when compared to those SWDs who did not receive cotaught instruction. However, Magiera and Zigmond (2005), in their study of SWDs in the middle school cotaught classroom found a different perspective when examining the effectiveness of coteaching. They reported that there is limited data to support the effectiveness of coteaching instructional practices. Magiera and Zigmond (2005) found that SWDs received less attention and direct instruction from the general education teacher during the cotaught class.

Because the null hypotheses of the study are rejected showing there is a significant relationship between the middle school's coteaching practices and the academic achievement of 8th- grade SWDs, a professional development project was designed to guide the administrators and teachers in continuous implementation of effective coteaching practices to maximize student learning. This finding could indicate that an inclusive environment with coteaching instructional practices can challenge and support learning which aligns with the concepts shared by Vygotsky in his social development theory. Vygotsky believed that the social setting of where the learning occurred greatly affected the learning of children (Vygotsky, 1978).

This research project was done to determine if the implementation of full inclusion through coteaching practices would have a positive effect on the academic achievement of SWDs. The focus on the research was designed to elucidate if SWDs who were served in coteaching environments would show an improvement in reading and mathematics. Coteaching is a widely used instructional strategy and has been found to benefit all students especially SWDs (Nevin et al., 2008). The more educational researchers work with educators in effectively implementing coteaching practices at various grade levels, the more all stakeholders will gain

from the collaborative partnership of the general education and special education teacher (Murawski & Swanson, 2001).

Section 3: The Project

Introduction

The project for this study is a PDL opportunity focusing on effective practices for improving inclusion through coteaching practices, thus improving the teaching and learning in cotaught classrooms. Based on the data gathered from this quantitative study and due to the lack of continuous professional development in coteaching instructional practices, it will be beneficial for administrators, general education teachers and special education teachers to participate in a PDL opportunity where they can collaborate with each other to develop and enhance their skills for implementing these instructional practices. This opportunity will allow administrators and teachers to share successes with coteaching, aha moments, and ideas for improving instruction and learning in the cotaught classroom. In this section, I provide a (a) description and goals of the project, (b) rationale for the project, (d) literature review that supports the project study, (e) evaluation plan, and (f) project implications.

The PDL opportunity will be planned for 3 days with an introduction to the development of effective professional learning communities (Day 1), overview and review of coteaching components (Day 2), and creating learning plans for specialized instruction (Day 3). After sharing my research findings, participants will discuss the critical components of coteaching; planning, teaching and learning. The overarching goal of the project is to increase administrators, general education teachers and special education teachers' knowledge and understanding of effective coteaching implementation that may lead to an improvement in student achievement.

Research on coteaching practices indicate that to ensure significant results from this instructional delivery model continuous training is needed to be effective (Pratt, 2014). For PDL

opportunities to be effective for teachers at various stages of their careers, the learning should be meaningful for the deliverer, the audience and the learners who are the recipients of the learning (Ende, 2016). The professional development must also be relevant to each teacher's need and content area (Masuda, Ebersole, & Barrett, 2013). This learning opportunity will allow the participants to conduct a plan, do, and review phase (Bradshaw, Gallastegi, Shohel, & Younie, 2014) whereby they can share, ask, and plan based on where they are with inclusion through coteaching practices and where they need to be to improve the academic achievement of our SWDs. As the administrators and teachers meet throughout the year, it will be possible for them to reflect on this cycle of continual improvement.

Rationale

The rationale of selecting this facilitated PDL opportunity is crucial for several reasons. First, since no quantitative data has been collected since the implementation of inclusion through coteaching practices, the data provided in this study is important in deciding if changes are needed to enhance these instructional practices. Second, this approach will provide established time for administrators and teachers to reinforce their knowledge and understanding of coteaching. If time is not provided to enrich learning experiences, it will be difficult to have high expectations for teaching and learning. According to Snider (2016), "In order to get wanted outcomes, one must have effective practices and effective implementation" (p. 6). Third, a PDL will allow for collaboration, reflection and follow-up with feedback. According to the International Society for Technology in Education, PDL opportunities should be an engaging, in depth learning opportunity which focuses on the needs and role of the learner and requires continuous monitoring for implementation (Basye, 2014).

As administrators, general education teachers and special education teachers gain more clarity about coteaching practices resulting in effective practices and effective implementation, the academic achievement of SWDs should improve. With a school level plan in place, future administrators and teachers will be able to follow through with the plan for improving teaching and learning. This PDL opportunity will not only impact the academic achievement scores of SWDs, but will also positively affect the academic achievement of regular education students.

Review of Literature

PDL provides an imperative opportunity for educators to strengthen previously acquired knowledge and skills necessary to succeed in the education profession. According to Ende (2016), no matter what organization we work for, no matter what profession we belong to and no matter what role we hold, we must strive to keep getting better. The purpose of this literature review is to discuss the significance of professional development, key elements of high quality professional learning and the characteristics of effective professional development and what teachers are looking for from professional development. The review of literature will focus on a PDL opportunity, on the topic of improving coteaching practices.

The search for this review of literature was conducted by using the following research databases found on the Walden University website. The databases used were: ERIC, Education Research Complete, Education Source, Academic Research Complete, ProQuest Central, Google Scholar and Dissertations and Theses at Walden University. The following key terms/phrases were used: *professional development*, *effective professional development*, *PDL*, *characteristics of effective professional development*, *professional learning communities*, *coteaching professional development*, *specialized instruction*, *professional development models*, *teachers and*

professional development, *designing professional development*, *high quality professional development and types of professional development.* I found books, articles and presentations from a range of years using the key term searches. Some of the peer-reviewed articles were found directly from the databases and some were found from examining the reference list of printed articles. The majority of the sources used were within the last 5 years; however, some seminal sources were used to provide substantial information on the development of professional development.

Theoretical Foundation

Andragogy, the theory of adult learning sets the basis for this PDL project. Andragogy was first used by Alexander Kapp in 1833 to describe Plato's elements of education (Miroballi, 2010). However, in later years, Malcolm Knowles associated andragogy with adult education. According to Knowles, andragogy is the "art and science of adult learning" (Kearsley, 2010, p. 4). For many years, the pedagogical model, the art of teaching children, was the only existing educational model. Within this model, the teacher is fully responsible for the what, how, when and if of learning (Knowles, Holton, & Swanson, 2015).

However, as time evolved, Knowles did not lessen the importance of pedagogy, but in searching for a more effective way to teach adults, he developed the andragogical model. The presumptions of this model are different from the pedagogical model. These presumptions are based on the learning characteristics of adults:

1. The need to know.
2. Self-concept of the learner.
3. Experience of the learner.

4. Orientation to learning.
5. Motivation to learn (Knowles, et al., 2015).

In developing PDL opportunities, it is important to understand that adult learning is different from the learning of youth. Adults have a more varied knowledge and experience background from which to draw information. According to Knowles, et al. (2015), there are four principles that are applied to adult learning:

1. Involvement of adults in the planning and evaluation of their instruction is imperative.
2. The experiences that adults have had creates the foundation for their learning.
3. Adults are interested in learning information that will affect their personal or professional goals.
4. The learning experience for adults is usually problem-centered instead of content-based (Kearsley, 2010).

Important contributions to learning theory have come from the area of psychotherapy. One psychologist whose ideas provided theoretical information that supports adult learning through PDL opportunities is Carl R. Rogers. Rogers developed a student-centered approach to education. The approach was based on 5 basic assumptions:

1. Direct teaching is not effective, the facilitation of learning is most effective.
2. A person only learns ideas and information that he/she deems as important to their self-concept.

3. Sometimes learning experiences that will possibly illicit a change in self are resisted.
4. Self-organization is enhanced when adults do not foresee a threat.
5. The most effective educational learning experiences are nonthreatening to participants and differentiation is facilitated (Knowles, et al., 2015).

Implementation of Professional Learning Communities

The heightened emphasis on accountability has been conducive to the growth and development of PLCs in many school districts. According to DuFour, DuFour, Eaker (2008), professional learning communities (PLCs) are "educators committed to working collaboratively in ongoing processes of collective inquiry and action research to achieve better results for the students they serve" (p. 14). Many times, within schools, PLCs are viewed as groups of teachers meeting together to discuss various topics, however PLCs are more than just groups (DuFour, 2004; Owen, 2014). PLCs focus on the idea that improved student learning is a result of continuous, job-embedded learning for educators (DuFour et al., 2008). According to Wells and Feun (2013), an effective PLC must have three distinct characteristics: (a) collaborative teamwork focusing on student learning, (b) commitment of resources, time and materials, and (c) able to shape the school culture. Collaborative PLC practices such as peer observation, providing feedback on instructional strategies and practices, analyzing student work, and discussing student-centered educational issues are more likely to enhance the quality of classroom instruction, thus improving student achievement (Powers, Kaniuka, Phillips, & Cain, 2016; Ratts, Pate, Archibald, Andrews, Ballard, & Lowney, 2015).

DuFour (2004) further elaborated that PLCs are built around big ideas that drive the work of the PLCs. The big ideas of PLCs are: ensuring that students learn, a culture of collaboration and a focus on results. These big ideas are the characteristics that distinguish effective PLCs from ordinary, traditional initiatives. Within a school culture, that supports PLCs, the focus shifts from teacher learning to student learning. It is imperative that each professional within the school embrace three crucial questions:

1) What information do we want each student to learn?
2) How will we know when the student has learned the information?
3) How will we respond when a student does not learn or master the skills (DuFour, 2004)?

Although, all three questions are significant, the determining factor for distinguishing a learning community from traditional schools is the final question, the response to students who are experiencing difficulty in understanding the learning concepts. In a PLC, professional educators have a school wide, systematic process that guides the response solution to assisting those students who are experiencing learning difficulty. The response is timely, in that the school immediately identifies the students who need additional academic support; the response is an intervention to the issue, instead of remediation after the issue; and it is directive, students must receive the additional time and assistance until the learning targets are mastered (DuFour, 2004).

Secondly, a PLC supports a culture of collaboration. In developing a PLC, educators recognize that they must work together to achieve the desired results (DuFour, 2004). Collaboration within a PLC moves beyond discussions about general school procedures and issues, it becomes a learning cycle for teachers, working together to analyze and improve their

teaching practices (Chaseling, Boyd, Robson, & Brown, 2014). Within a PLC, teachers work through thought-provoking questions that promote a deeper understanding and learning which results in improved student achievement (DuFour, 2004).

The third big idea, a focus on results, is the tool by which the effectiveness of PLCs are judged. The focus on results becomes a school wide pattern of identifying the achievement levels of students, setting a goal to improve the achievement levels, working collaboratively to achieve the goal and conducting periodic progress monitoring to check for progression or regression. According to DuFour (2004), during this stage of the PLC, many schools suffer from what he denotes as DRIP (Data Rich/Information Poor). However, one significant characteristic of an effective PLC is it results-oriented, the data is available and is made into useful and relevant information to guide decisions.

School administrators and teachers must clearly understand the purpose of a PLC and how it fits into the dynamics of the school culture (Lippy & Zamora, 2012). Leadership is vital in establishing and maintaining effective PLCs (Timperley, 2011). DeMatthews (2014) emphasized the importance of principals to the successful implementation of a PLC within a school. Although, the principal is viewed as the leader in this regard, to maintain an effective PLC, there must also be distributed leadership (Spillane, 2012). Principals and teachers must work together to engage in leadership that focuses not only on traditional roles, but more importantly on the problem or task and who has the knowledge base to lead most effectively (Heikka, Waniganayake, & Hujala, 2013). The role of the principal is key in recognizing the leadership capabilities of teachers and ensuring that all teachers work towards a common goal with a

common vision (Alkert & Martin, 2012; DuFour & Mattos, 2013) and building an effective teacher mentoring program (Callahan, 2016).

PLCs are viewed as a powerful way of teacher teams working together that greatly affects the instructional and learning practices of a school (DuFour, 2004) and provides the best environment for powerful professional development (DuFour, 2014). According to Pirtle and Tobia (2014), there is a positive correlation between effective PLCs in schools and improved teacher learning and instruction resulting in increased student achievement. This initiative is a result of hard work, commitment and an investment in the work that is done (Stewart, 2014) focusing on the how and the why of teaching (West, 2013). Teachers must be willing to stay focus and provide the work and administrators must provide the necessary support required to sustain a PLC. The focus must shift from teaching to learning, embrace a collaborative mindset about learning and be accountable for the results which will provide improved student academic outcomes.

Significance of Professional Development

PDL has become an essential component in the world of education. Professional development is the strategy utilized by school districts and schools to ensure that continual learning and development of teaching practices are occurring for educators (Althauser, 2015). Recently, with the high demands of accountability, effective professional development is a priority on the agenda of all stakeholders involved in the education profession to develop instructional practices and introduce teachers to the most recent thoughts in their profession (Klinger, 2004). Effective professional development is the catalyst for change and teachers are viewed as change agents (Ellili-Cherif, & Romanowski, 2013). According to Snider (2016),

before we can improve learning, we must improve teaching. When effective professional development is employed, the following occur within schools: a) teachers set higher expectations for students, b) students are confident that help is available as they work towards meeting their learning goals, c) higher classroom pedagogy and, d) increased student academic achievement (DuFour, 2016; Louis, 2006; Mizell, 2010). As professional development is constructed, one of the most significant focal points should be ensuring that the professional development will prepare teachers to meet the needs of their students.

Key Elements of Professional Development. PDL opportunities must be enhanced within our schools to result in improved outcomes. Professional development must transition beyond "sit and get" to more collaborative and personalized learning experiences (Cunningham, Etter, Platas, Wheeler, & Campbell, 2015; McLeskey, 2011; Smith & Mihalakis, 2017; Spelman & Rohlwing, 2013). When professional development aligns with collaboration and personalized learning experiences, a learning culture within the school develops that results in the professional growth of teachers (Darling-Hammond & Richardson, 2009; Smith & Mihalakis, 2017).

There are 3 key elements for high quality professional development. According to Smith and Mihalakis (2017), if professional development includes the following three elements, the learning opportunity will be meaningful for all involved. The three key elements are:

Professional development should occur during the school day and be job-embedded.

1) Professional development is more advantageous when teachers are able to work with their same grade level/specific content area to work together to share best practices.

2) Professional development should be structured in an instructional system that is based on high standards.

With these key elements in place, professional development will have a positive effect on school level improvements. Although teachers possess tremendous knowledge, they must be provided adequate time to share their knowledge. Thus, making it a necessity to develop PDL opportunities that support communication and collaboration.

Characteristics of Effective Professional Development

As educational leaders continue to plan PDL opportunities for teachers, they must be mindful of the defining characteristics of effective professional development. A study conducted by Bayar (2014) indicated that an effective professional development activity should focus on the following components: 1) focus on current teacher needs, 2) focus on existing school needs, 3) teacher involvement in the planning of professional development activity, 4) opportunities for participation, 5) long-term commitment, and 6) high-quality instructors. According to Hunzicker (2011), the characteristics are: professional development should be supportive, should be job-embedded, should be instructionally focused, and should be collaborative and ongoing.

Supportive. First and foremost, teachers must feel that they have a hand in and are supported in the learning process. Intrinsic motivation is the ingredient that drives all individuals regardless of age; more so than tangible rewards (Knowles, et al., 2015). Effective professional development connects the individual goals with the school and/or district goals and provides learning for educators at all levels, building administrators, teachers and paraprofessionals (Guskey, 1995; Guskey, 2014; National Staff Development Council (NSDC), 2009).

Job-embedded. Effective professional development for teachers is job-embedded, which makes a connection between the learning that occurs within the professional development and the teacher's work in the classroom. According to Mathison and Windle (2017), teachers desire for their professional development to directly align to their daily responsibilities in providing the needs of their students. Professional development should also be targeted to the individual learning needs of educators (Desimone & Stuckey, 2014; Evans, 2014). Job-embedded professional development provides a platform for teachers to learn, implement and evaluate for effectiveness (Guskey & Yoon, 2009).

Instructional-focus. Effective professional development should be instructionally focused because it should emphasize the content area, the pedagogical principles and student outcomes (Desimone & Garet, 2015). According to NSDC (2009), effective professional development focuses on the teachers' learning of the subject content and how to teach the information. Instructionally focused professional development results in instructionally sound teaching and learning in the classroom environment, thus impacting student performance.

Collaborative and ongoing. Collaboration is essential to effectual professional development. Professional development that allows teachers time to collaborate and discuss their professional development experiences is more effective (Sun, Penuel, Frank, Gallagher, & Youngs, 2013). Collaboration emphasizes active learning in which teachers are engaged cognitively and physically through sharing, discussing, role play, application, follow through, feedback and self-reflection (NSDC, 2009). According to Tate (2009), if active learning opportunities are a part of professional development, teachers remember approximately 90% of the content presented; with increased teacher learning comes increased student learning.

High quality professional development is viewed as an ongoing process. Within ongoing professional development, the opportunity is provided to implement learning gained from the professional development and receive feedback from the implementation. Sustainability of professional development, increases the impact of effective instructional practices and student achievement (Dunst, 2010).

Differentiation of Instruction

One of the essential components of the coteaching process is instructional planning. A significant part of planning is differentiation of instruction which is a widely used research based instructional strategy to support SWDs in inclusive classrooms (Ford, 2013). The concept of differentiation of instruction refers to "reflective and responsive" (p. 30) teaching of both general education and special education teachers, based on an understanding of the differences of learners within the classroom (Fattig & Taylor, 2008; Bajrami, 2013; Strougilos, Tragoulia, Avramidis, Voulagka, & Papanikolaou, 2017). Differentiation of instruction can further be defined as a teaching philosophy that focuses on the idea that students' learning is more effective when teachers meet the students where they are on the learning continuum (Morgan, 2014; Thakur, 2014). More specifically, the teachers plan based on the difference in readiness levels, interests and learning profiles; providing different approaches to understanding content, process and product (Dixon, Yssel, McConnell, & Hardin, 2014). The overall objective is to minimize whole group instruction while maximizing teaching that addresses the needs of all learners through the use of varied instructional strategies. According to Darrow (2015), the process of differentiation of instruction includes the adaptation of learning activities and assessments which supports the academic growth of each student.

One theory that supports this philosophy is Vygotsky's ZPD. As previously mentioned, the ZPD is the distance between a student's ability to perform a task with assistance and the student's ability to perform a task independently, which is the zone where student learning occurs (Vygotsky, 1978). Therefore, with differentiation of instruction teachers need to identify the independent learning level of students (actual) and differentiate learning tasks and scaffold support to enhance students' academic skills for learning independently (potential) (Thakur, 2014; Vygotsky, 1978).

According to Taylor (2015), differentiation of instruction can occur in three ways: content (the what of instruction), process (the how of instruction) and the product (the evidence of instruction). However, Tomlinson (2017) in her research added two more ways for differentiation to occur: affect (the climate that encompasses the learning and interactions among students and teacher) and learning environment (the personal, social, and physical arrangements in the classroom). In differentiating the content, which is the curriculum, educators must adapt their instruction based on what students already know (Thakur, 2014). Each student is taught the same curriculum, but there may be a quantitative or qualitative difference in the content (Levy, 2008). According to Thakur (2014), the content can be differentiated in two ways. The teacher may differentiate by choosing and planning learning tasks using the levels of Bloom's Taxonomy. For example, students with a lower level of understanding of a specific skill may be provided learning tasks based on the knowledge and comprehension levels of Bloom's Taxonomy; while students with a level of mastery, may be given tasks in the synthesis and evaluation levels. Secondly, the teacher can differentiate the resources given to the students to

access the learning while focusing on the same learning outcomes. For example, students can use printed material or work in groups and use interactive software to learn the skill objectives.

Differentiating the process focuses on how students are engaged to learn the content material (Thakur, 2014). As student learning varies, so must the teaching style vary to reflect the needs of students (Levy, 2008). After gathering pre-assessment data which shows student readiness, the teacher should make a decision about the various ways to deliver the instruction. For example, teachers may use cooperative learning methods which include flexible grouping. Flexible grouping includes different students working together on different activities or some students may work individually. Another part of the process is classroom management, for differentiation of instruction to be effective, teachers must conscientiously select curriculum planning and instructional strategies and consider time management.

Product differentiation is the culminating evidence of what the student completes to show mastery of a learning skill or objective based on their level of understanding (Thakur, 2014). Some examples of the summative assessments that can be used are standardized tests or performance tasks and these assessment tools does not have to be the same for all students (Levy, 2008). For example, as a culminating task to show mastery, a student in an English/Language Arts class may be asked to write a book report, perform a play, construct a model or compose a poem.

In building differentiation into the classroom, there are strategies that teachers can utilize to assist them in working with students of varying levels. According to Thakur (2014), the use of big question teaching, centers or stations, project-based instruction, curriculum mapping and tiered assignments are some of the most effective strategies for differentiation in the inclusive

classroom. The strategy of big question teaching consists of framing lessons and units as open-ended questions. This strategy stimulates thinking and allows for different responses from students, which can result in further student inquiry. Centers or stations, are widely used as a strategy especially in elementary schools are organized areas in the classroom where students complete disparate tasks concurrently on their abilities and at their learning pace. This is an ideal strategy to use in inclusive classrooms because it allows teachers to work with individual students or small groups of students (Thakur, 2014). Centers or stations may be teacher led if new content is being presented or they may be student led if there are students who have mastered the learning targets. The third strategy of differentiation is project-based instruction. Within this learning strategy, many student needs and learning styles can be addressed. Projects can be assigned as individual task or group based which increases the opportunity for students to work collaboratively. Curriculum overlapping is another strategy of differentiation that is beneficial in an inclusive classroom. Students who are in need of academic support may work on foundational objectives as their peers work on different learning objectives with the same learning target. The last strategy shared by Thakur (2014), is the use of tiered assignments. Tiered assignments are learning tasks which are designed at varying complexity levels. The complexity levels are aligned to student readiness levels and student learning preferences.

The key of differentiation of instruction is to provide instruction and instructional strategies that accommodate each student's learning needs while assisting him/her in reaching their full academic potential. A learning environment is established that is flexible, student-focused and incorporates whole class, small group and individual teaching and learning. Differentiation of instruction, just as other educational initiatives requires commitment and

support from administrators, teachers and students. According to King-Sears (2008), effective differentiation of instruction results in an increase in the academic performance of SWDs, at-risk students, typical students and gifted students.

Project Description

The project for this doctoral study is a PDL (PDL) opportunity for general education and special education teachers in grades 6-8, beginning and veteran teachers. The administrators to include the school principal, assistant principal and special education director will be invited to attend the PDL opportunity. The three day PDL opportunity will focus on an overarching goal of assisting teachers in implementing coteaching strategies more effectively thus improving teacher learning resulting in improving student achievement. The goals of the PDL opportunity will emphasize 1) building collaborative relationships, 2) reviewing the coteaching models, and 3) differentiation of instruction in the coteaching classroom.

Resources

The resources needed for this PDL opportunity include a place to meet, preferably the media center, where the teachers will have access to tables which will provide a more supportive environment for working in groups/pairs, accessibility to the internet, a smartboard, Chromebook/laptops and printed training materials. The support for project deliverables would be the local educational agency and the local middle school which will ensure availability of the meeting venue and ensure that technology use is available. The 3-day workshop will occur in the summer prior to the onset of the new school year prior to pre-planning calendar days, no substitutes will be needed. However, the central office staff such as curriculum director, the special education director and the principal would meet to select the specific dates of the 3-day

training and will be responsible for notifying the coteaching teams that will participate in the PDL opportunity. I will provide the agenda and copies of all printed training materials and handouts.

Potential Barriers and Solution

Although, the PDL opportunity will occur during the summer which will be off contract days for the teachers, one potential barrier will be the cost to the system. The general education and special education teachers would have to be paid stipends for participating in the 3-day workshop. However, a possible solution would be for the curriculum director, the special education director and the title programs director to divide the total amount for stipends paid to the participants which should help with reducing the financial strain on any one department.

Implementation Proposal

The proposed timeline for implementation will include a daily agenda with hourly details for the three days. I will coordinate the specific dates and location of the PDL opportunity with the administrator and acquire a list of all coteaching teams who will be participating in the training to prepare materials. In the following section, I will discuss the details of the daily agenda.

The first day of training will begin with a welcome continental breakfast as participants enter the meeting room, signing in and brief introductions; most of the participants already know each other, so the new administrators/teachers will introduce themselves. The goals and objectives of the PDL opportunity will be then be shared. As the facilitator, I will discuss the learning targets for the PDL opportunity. The Day 1 agenda will consist of an ice breaker activity, an overview of coteaching and the benefits of this practice, a self-assessment activity, a

PowerPoint presentation to explain how to build parity and collaborative partnerships within the coteaching environment with discussions and breaks throughout the scheduled day.

The second day of training, the facilitator will begin with a review of the learning targets for the PDL opportunity followed by a recap of the material learned from Day 1 and any 'aha' moments shared as a result of the exit slips on Day 1. The focus of the session will be providing instruction on the six models of coteaching; participants will view videos of each of the models being demonstrated. Participants will also have a work session to plan lessons incorporating each of the six coteaching models and they will choose one lesson to share with the class after lunch. There will be various discussions and activities to support learning throughout the day concluding with a wrap-up session and formative assessment.

The final day of training, Day 3, will focus on using a variety of learning environments such as flexible grouping, which leads to differentiation of instruction in the cotaught classroom. The participants will work together to discuss how to successfully incorporate flexible grouping within their classrooms. As facilitator, I will then provide instruction on differentiation of instruction through content, process and product. The group will then plan differentiated lessons from their content and with their coteacher. There will be various discussions and learning activities presented throughout the session. At the conclusion of Day 3, participants will do a final wrap up of discussions, complete the daily formative assessment and also complete the confidential summative assessment which will provide critical information in the planning of future PDL opportunities. In closing, I will recap the learning targets and provide the participants with the summative assessment which is composed of a Likert scale evaluation and then the following open-ended questions/statements:

1. During this PDL opportunity, what have I learned about coteaching?
2. How will I take the information that I have learned and apply it within my classroom for more effective implementation of coteaching practices?
3. My final thoughts or questions are . . .

Roles and Responsibilities

During the PDL opportunity, I will serve as the training facilitator and/or trainer as needed. The facilitative/trainer role will provide me with the opportunity to directly work with the administrators and coteaching teams and provide more in-depth knowledge about agenda topics as needed. The roles and responsibilities of the teachers participating in the PDL opportunity are attendance for the 3 days with an open-mind, punctuality, participation in the discussions and activities, collaborate with other teachers and bring the necessary resources to aid them as they focus on effective coteaching practices (i.e., Chromebook, lesson plans). The teachers will have to commit to the implementation of the information shared during the PDL opportunity. The administrators will be responsible for ensuring implementation by providing support, monitoring and feedback thus improving teacher learning and improving student achievement.

Project Evaluation Plan

The project evaluation will consist of formative and summative assessments to allow participants to share their reactions, feedback and learning. During the three days of training, I will utilize the ticket out the door/exit slip as a formative assessment tool. All participants will be given a colored sheet of notebook paper to answer assessment questions. The participants will then post the exit slips on the large post-it paper (class parking lot) on the walls of the training

room prior to leaving for the day. Each day, I will gather the exit slips and review the information as provided, which may modify the start of the next day's training session. The three formative assessments questions/open-ended statements which will be used daily are as follows. Three things I learned were:

1. How can I use what I learned to collaborate with my coteacher?
2. As I focus on more effective coteaching practices, I need help with . . .

At the conclusion of Day 3, all participants will be asked to complete a summative assessment which will be an evaluation of the entire PDL opportunity. The evaluation form will consist of the learning targets with a three-proficiency level scale (located in the project in Appendix A) and open-ended questions. This evaluation form will allow the participants to reflect on their learning and provide in-depth thoughts about the PDL opportunity.

Justification of Evaluation

The justification for utilizing these types of evaluative methods are to ensure that the participants can provide effective feedback on the content presented as aligned to the learning targets. Ongoing formative assessments will enhance student learning, as well as, teacher learning. The information gathered from using formative assessments can assist in more effective planning for the next day's training session or for future PDL opportunities. The summative assessment will provide participants the opportunity to demonstrate conceptual understanding of the effective implementation of coteaching practices and apply this understanding to improve student outcomes (NRC, 2001).

Project and Evaluation Goals

The overall goals of this project study will have an impact on all stakeholders. The overall goals include (a) To build the capacity and knowledge in reference to effective coteaching practices to continuously reflect and improve these practices, and (b) to effectively implement learning in the inclusive classroom environment which will increase the academic achievement of SWDs. The overall evaluation goals focus on professional learning goals, standards of performance and student learning goals. Although the participants will evaluate the PDL opportunity, student achievement data will also be used to measure the completion of the evaluation goals.

Description of Key Stakeholders

After completion of the three days, the participants will have information and should be more effectual in (a) establishing, building and maintaining parity and positive teambuilding, (b) collaborating and communicating with other colleagues, (c) implementing the coteaching models and (d) lesson planning supporting differentiation of instruction in the classroom. This information will be valuable to the key stakeholders involved in ensuring that coteaching practices are being implemented with fidelity and the occurrence of increased academic achievement of SWDs. The key stakeholders include the superintendent, the special education director, the school administrators, general education and special education teachers, the parents and the students.

Project Implications

Teachers are viewed as key agents in bringing about change in the lives of people and communities (Bourn, 2015). The aforementioned project can have positive influences on both the

coteachers and the students. This project supports both professional and personal growth for teachers. Teachers can collaborate with their colleagues to enhance their instructional skills and strategies (Mastoropieri, 2007), which will assist them in providing support to all students and building a cohesive school culture of inclusion through coteaching practices. Effective cotaught instruction provided to SWDs results in enhanced academic performance, an improvement in social skills and a positive classroom environment (Dugan & Letterman, 2008). Coteaching supports positive social change by establishing a learning environment of collaborative, shared instructional practices, among teachers, building confidence and self-efficacy in students and developing of understanding of diversity at the school, district and community level.

This project could benefit local stakeholders because it would improve the coteaching implementation within this school, as well as, can benefit the entire school district. The administrators, teachers, parents and students could gain from the outcomes of the project. Within this project, administrator and teacher learning will improve resulting in an improvement of student learning outcomes ensuring that SWDs are equipped to become successful citizens.

This project can be added to the current knowledge base about PDL opportunities focusing on nuts and bolts of effective coteaching practices, possibly extending to schools or school districts outside of this rural, Georgia school. The effective implementation of this viable pedagogy can enhance the teaching and learning of SWDs (Friend, 2016). This learning environment provides them with the opportunity to experience academic and social success with their non-disabled peers. These students are then able to transition through school and strive for the same opportunities as non-disabled students, becoming college and career ready and engaging in productive college, technical school or employment endeavors.

Section 4: Reflections and Conclusions

Project Strengths and Limitations

This project of study can strengthen the coteaching practices of educators at the elementary, middle and high school levels. The 3-day PDL opportunity provides administrators and teachers with a strong foundation about coteaching models and ways to enhance coteaching practices. According to Johnson and Brumback (2013), coteaching environments are beneficial to both general education and special education teachers. The project deliverables can benefit general education teachers by illustrating the importance of varying instructional strategies and differentiation of instruction, while special education teachers can become more knowledgeable about the content and clearer about their specific role during instruction.

A limitation of this project is that in many instances, the project deliverables cannot be implemented as taught. The PDL opportunity provided the pertinent information to assist in more effective implementation, but challenges may somewhat affect the plan of implementation. Some of the challenges include the lack of time for collaborative planning, the absence of common planning time, the lack of parity due to personality conflicts (Beninghof, 2012) and scheduling conflicts whereby the coteacher may serve in various content areas.

Recommendations for Alternative Approaches

The problem as mentioned in Section 1 of this study focused on the low academic achievement in reading and mathematics of 8th-grade SWDs prior to and after the implementation of full inclusion through coteaching practices. I could have addressed the local problem in other ways based on how the problem was discussed. For example, an alternate definition of the problem could be the attitude of the administrators and teachers concerning

coteaching or the high turnover rate of general education and/or special education teachers. Another way to address the problem could have been to design a qualitative study focusing on the administrators' and teachers' attitudes, feelings and perceptions about coteaching. This approach would provide a view of how the teachers perceived coteaching within their school resulting in the ineffectiveness of these practices.

Scholarship, Project Development, and Leadership and Change

During my tenure as a student at Walden University for the past 4 to 5 years, I have grown as a scholarly practitioner. Throughout this tenure, as a student I have gained more insight into the substantial time and effort required to transition through a doctoral journey. I have learned to continuously press and persevere through the surmountable tasks of scholarly research, while overcoming obstacles in my professional and personal life to arrive at the point of completing my doctoral studies. This process has significantly helped me in building self-confidence as a scholar of change in conducting research and maneuvering through the detailed components of the research process to include identifying the problem, composing quality research questions, selecting the research design/methodology, completing data analysis and developing a project as a viable solution to the problem of study. I have gained a more extensive appreciation for those that have navigated this doctoral journey before me, this process indeed builds self-discipline and self-motivation.

As a young child, my mother drew my attention to this quote from Dr. Seuss, "The more that you read, the more things you will know. The more that you learn, the more places you'll go" (Geisel, 1978). As an educator and a doctoral student at Walden University, these words resonate with me today and kindles a fire for continuous learning. This process has provided the

internal motivation needed to help me become a more effective educator and leader for supporting and ensuring student learning. The entire process has improved my skills for conducting action research which will be beneficial in my career. From this experience, I have been equipped with the research skills needed to conduct scholarly research to help address future educational issues.

When I began the development of this project, the aspiration to improve the academic performance of SWDs was at the forefront of my mind. However, as I delved into this topic a little deeper, I realized that before student learning could improve, teacher learning had to improve. Although coteaching had become an immense instructional initiative in the local school district, there was a lack of ongoing professional development offered to enhance teachers' understanding of how to coteaching effectively and no analysis of data had been completed to view the effect of coteaching. I viewed this as a significant weakness in our inclusion through coteaching practices program. Therefore, in order to assist with finding a solution, through my research, I had to develop a project along with my role as a professional educator and leader. I spoke with the superintendent and the principal who supported the idea and felt that this project was valuable endeavor. As teachers left the school or left the profession, there was no bridge to close the gap of teacher learning about inclusion through coteaching practices. I then began to investigate literature on the topic by reading journal articles and books referencing coteaching practices and I collected and analyzed data comparing the academic performance of SWDs on a standardized assessment prior to and after coteaching practices.

I began the development of this project unsure of the direction it would take or the opportunities that it would initiate for me. However, since the onset of this project I have become

more involved in leading the coteaching initiative within the school and assisting others throughout the district. Becoming more familiar, grasping knowledge about this topic and participating in numerous PDL opportunities have allowed me to select those learning components and activities that would be most essential to share with administrators and teachers. The self-learning experiences have allowed me to increase my conceptual and theoretical knowledge and prepared me to design and facilitate future PDL opportunities on this topic, therefore continuing the improvement of teacher learning resulting in improved student learning.

Reflection on the Importance of the Work

Federal mandates, such as IDEA, IDEIA, NCLB and more recently ESSA have required local educational agencies and school districts to revise their plans for providing instruction to SWDs. As an answer to these mandates, many school districts have implemented coteaching as the instructional framework to serve SWDs in the general education setting with their non-disabled peers and provide instruction from the same curriculum (Solis, Ciullo, Vaughn, Pyle, Hassaram, & Leroux, 2012). This instructional practice provides SWDs the support they need to be successful, academically and socially, as compared to a self-contained/resource learning environment. With this being such a need to enhance the academic achievement of SWDs, research shows that coteachers need specific training to become effective coteachers (Pratt, 2014) and there must be a plan in place for continuous monitoring and feedback (Ende, 2016). As I have transitioned through this doctoral journey, my appreciation for the work done as educators has grown, but also my thinking concerning and planning PDL opportunities that are valuable and ongoing to support improvement in both, teacher and student learning.

Implications, Applications, and Directions for Future Research

When I reflect on the potential impact for social change of this project, I think about the idea that the greatness of the school community is affected by each individual classroom. This project study can positively influence from individual classrooms to the community. Through the work of effective coteaching, SWDs are afforded the same learning opportunities as their non-disabled peers within the same learning environment. However, in order to provide effective coteaching practices, the teachers must receive effective professional development to equip them with the necessary skills to provide support and successfully serve the students in their classrooms. With the learning environment being as such, SWDs then are able to transition into more learning opportunities as they move beyond middle and high school, to become productive citizens who will enhance not only their individual lives, but their community and society as a whole.

The purpose of this study was to examine the effect of coteaching on the achievement of 8th- grade SWDs. The findings of the study indicated that there was some academic growth between the academic years prior to and after coteaching practices were implemented. In reviewing the data and realizing that there was an absence of ongoing PDL opportunities in regards to coteaching, the product of this study is a 3-day professional development workshop. This PDL opportunity will consist of training focused on establishing parity and teambuilding, the six models of coteaching and differentiation of instruction in the coteaching classroom.

The benefits of this project can extend beyond the walls of this specific school to the entire school district and beyond. Through this project, the foundation of an effective coteaching

program can be initiated. According to Ende (2016), after data is analyzed, findings are reviewed and a connection has been established to learning relevant to those involved then a continuous process for improvement should be established to reflect and make the necessary changes for improvement.

Administrators and teachers in local school districts need to partake in ongoing research about the practices for maintaining effective coteaching which will improve student achievement. Within the contents of this project, I focused on the quantitative data to view pre and post coteaching student achievement and how to improve the efforts. However, future research opportunities could involve a mixed-methods design, whereby empirical data is analyzed and perceptions of administrators and teachers could also be analyzed.

Conclusion

My journey as a professional educator began as desired to be a change agent; an advocate and an influencer in the lives of children. Today, these are still the roles and responsibilities that I possess for myself. I immediately realized that not all children are in the same learning place, do not learn the same way and lack motivation or support from home. However, I vowed to be the teacher and administrator who would meet them where they are and take them further.

This project study became a personal initiative as I pondered with the idea of improving the learning of SWDs within our local school. However, I knew that although coteaching was an instructional practice within the school, no teacher learning had occurred since the onset of this pedagogical practice and no data had been collected to determine possible changes in student achievement. Therefore, I knew that if student achievement outcomes were to change, teacher outcomes also had to change. Thus, I set forth in assuming responsibility in being a change agent

in this endeavor with the realization that, “Coteaching does not exist solely to bring two teachers together. Coteaching exists to serve students.”

This project study has become a conduit for better serving teachers and better serving students. Through this project, I have been able to provide administrators and teachers nuggets of learning to effectively build and maintain a culture of coteaching within our school. This journey at Walden University has allowed me to build on the passion that was the driving force behind me becoming a purposeful educator and leader in my profession.

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Appendix A: The Project

IMPROVING CO-TEACHING PRACTICES

Calandra C. Holmes

Housekeeping Items

- Welcome & Breakfast
- Sign-In (Make name tents)
- Amenities
  - *Restroom Locations*
  - *Vending Machines & Water Fountain*
  - *Exits*


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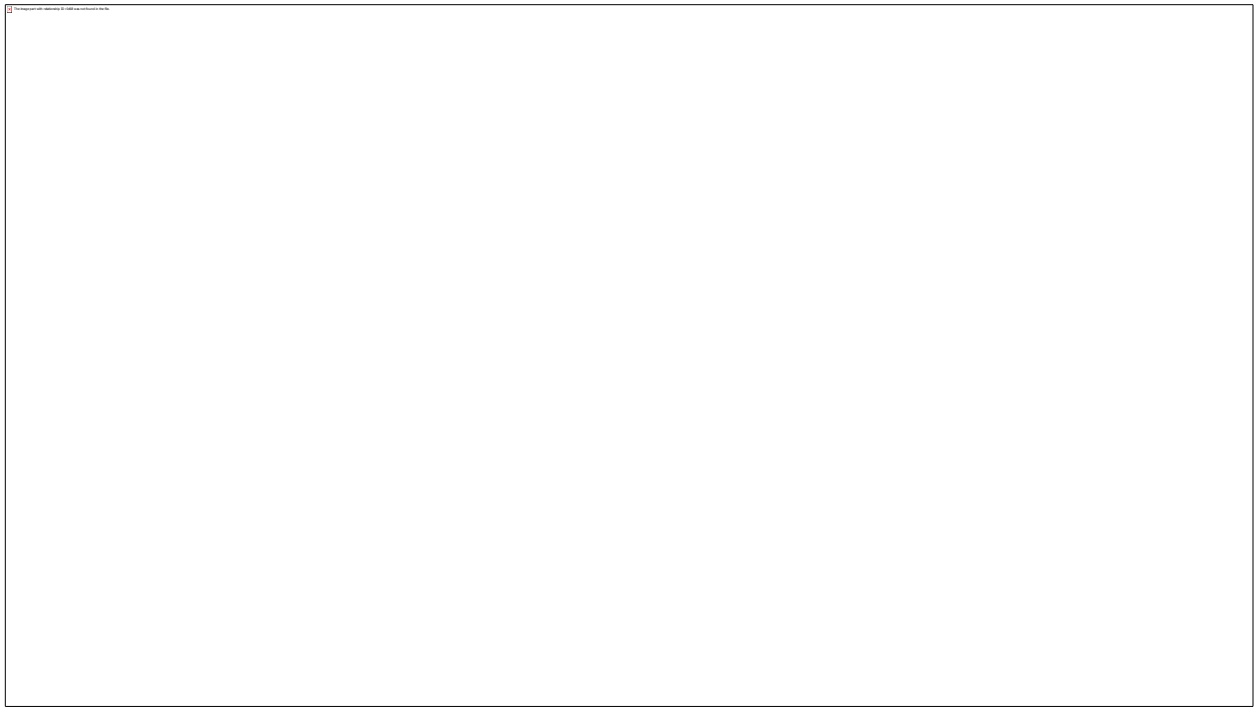

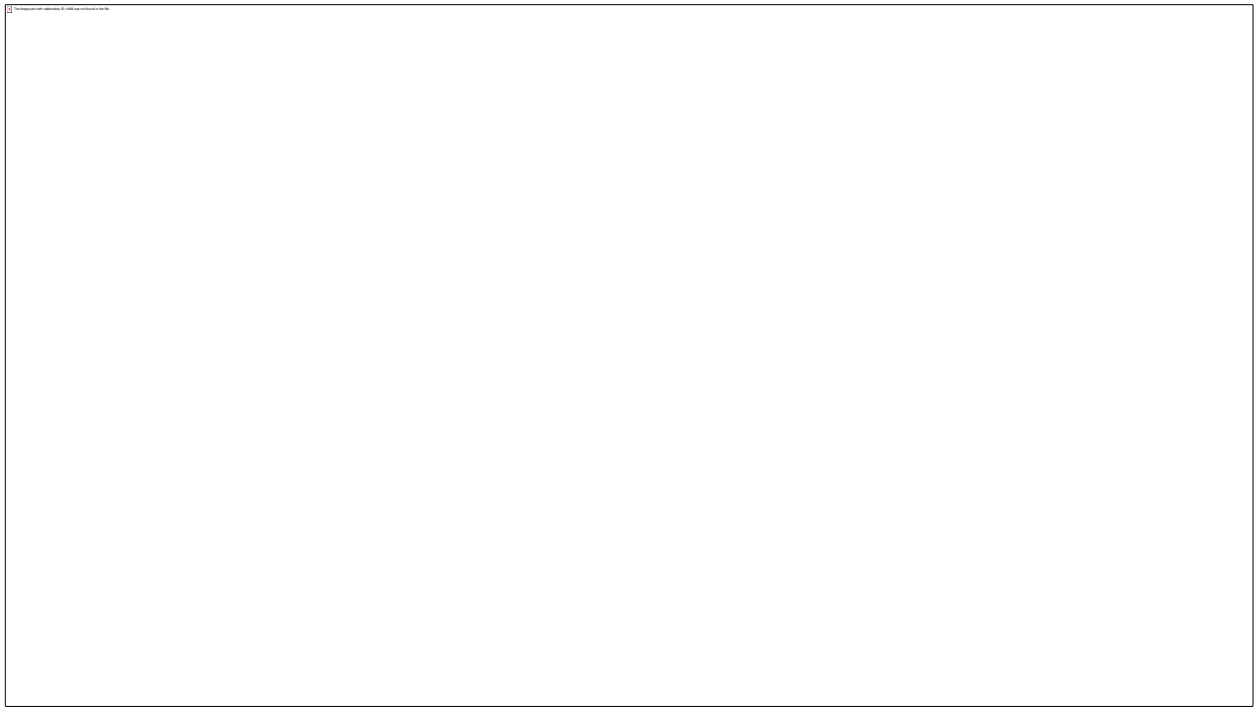


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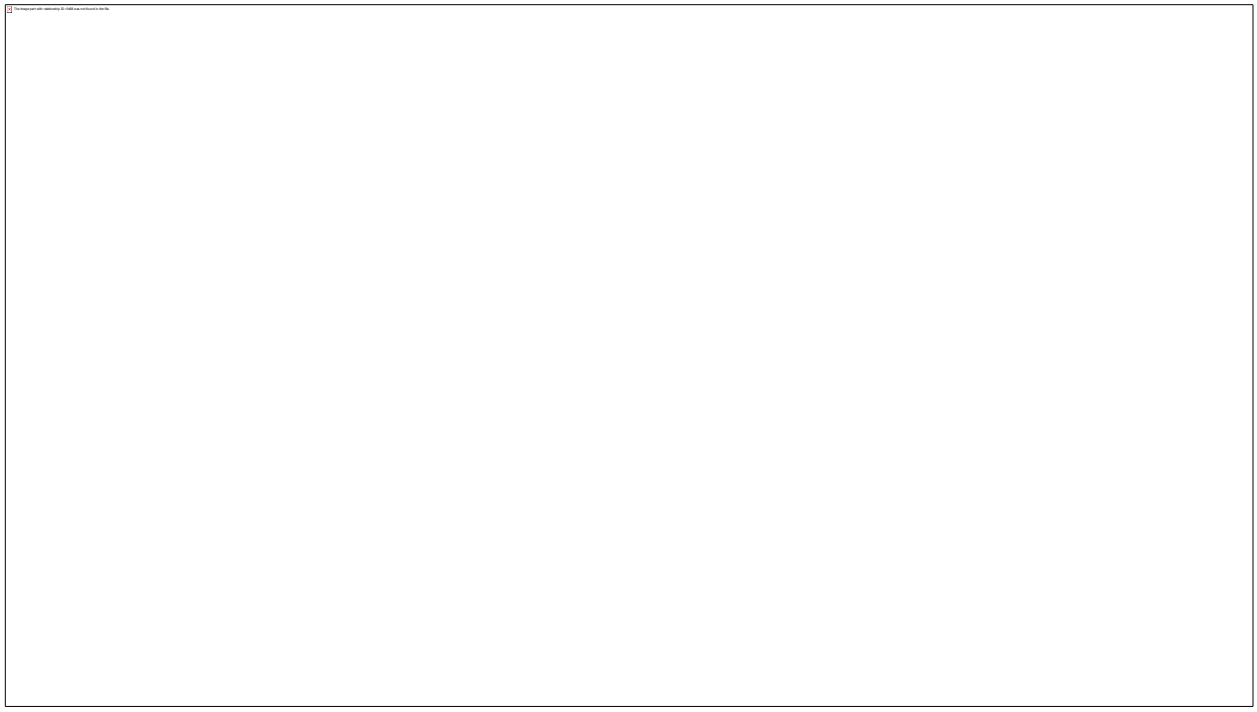

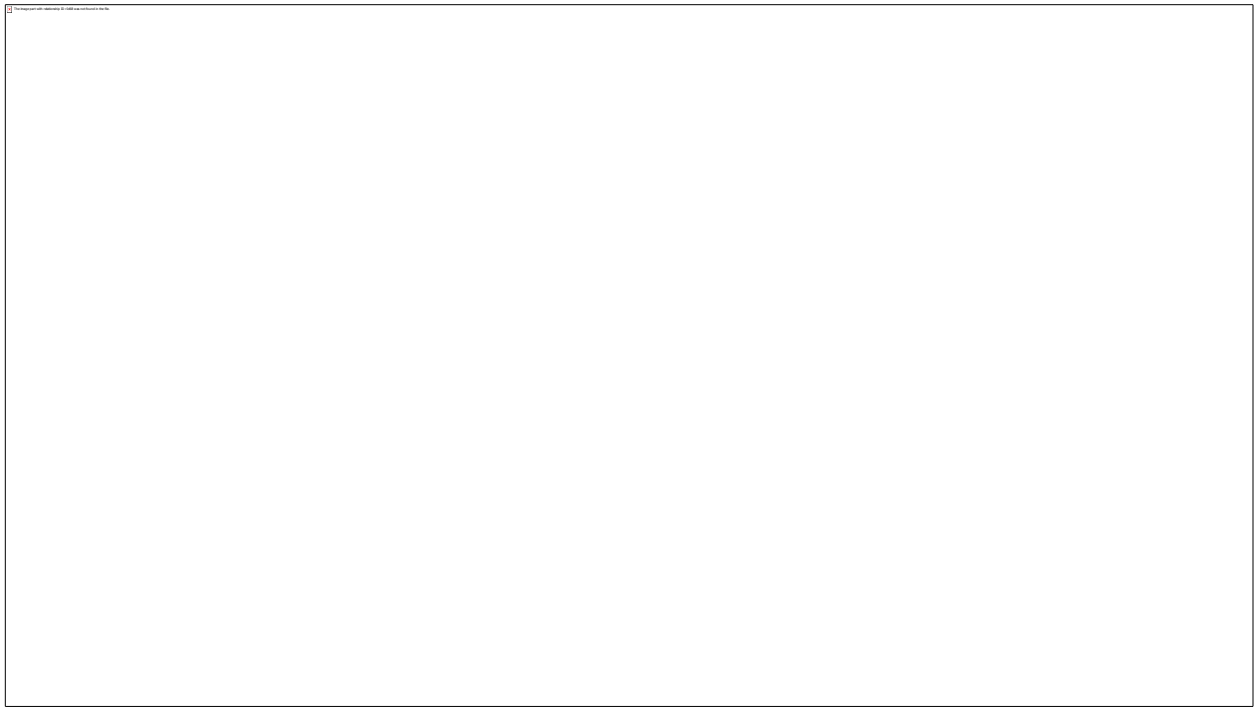

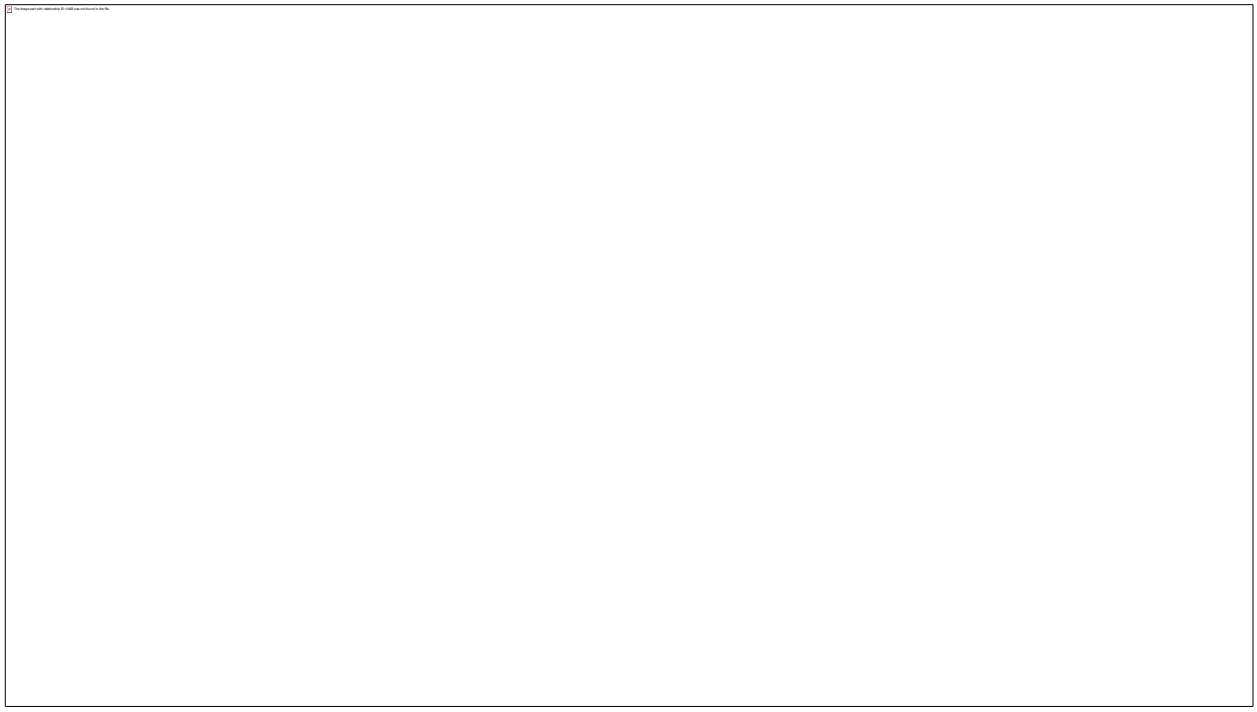

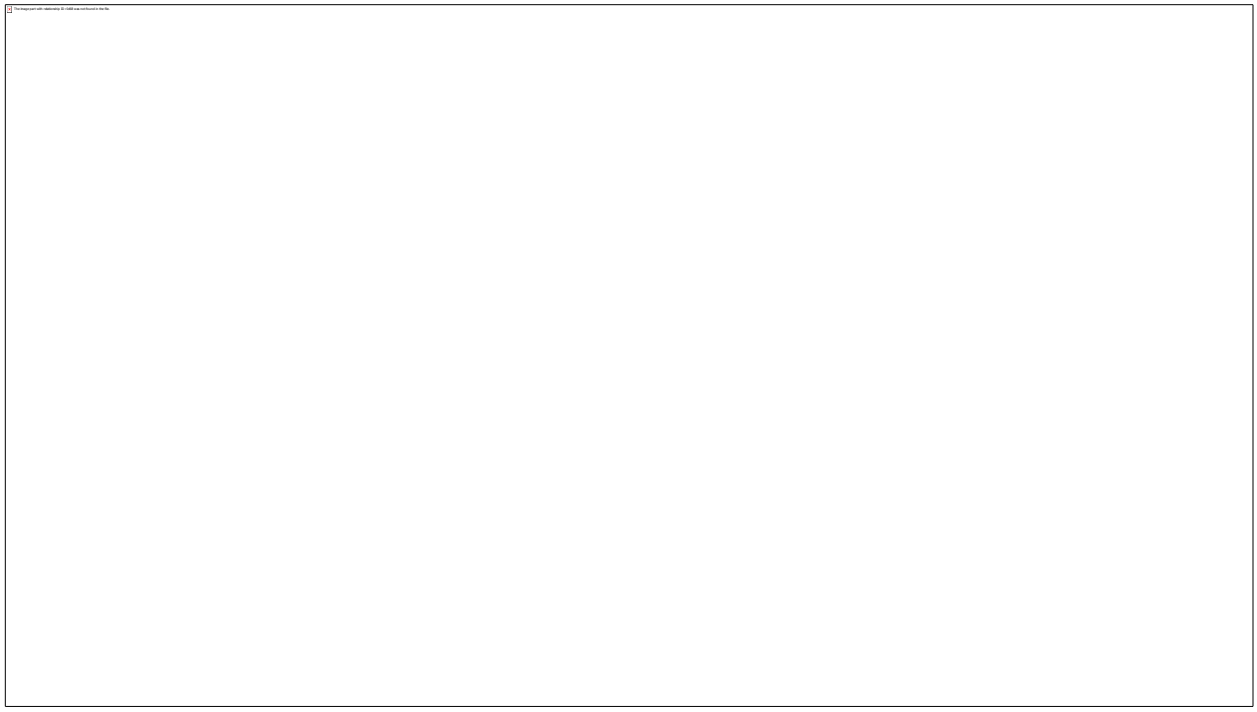

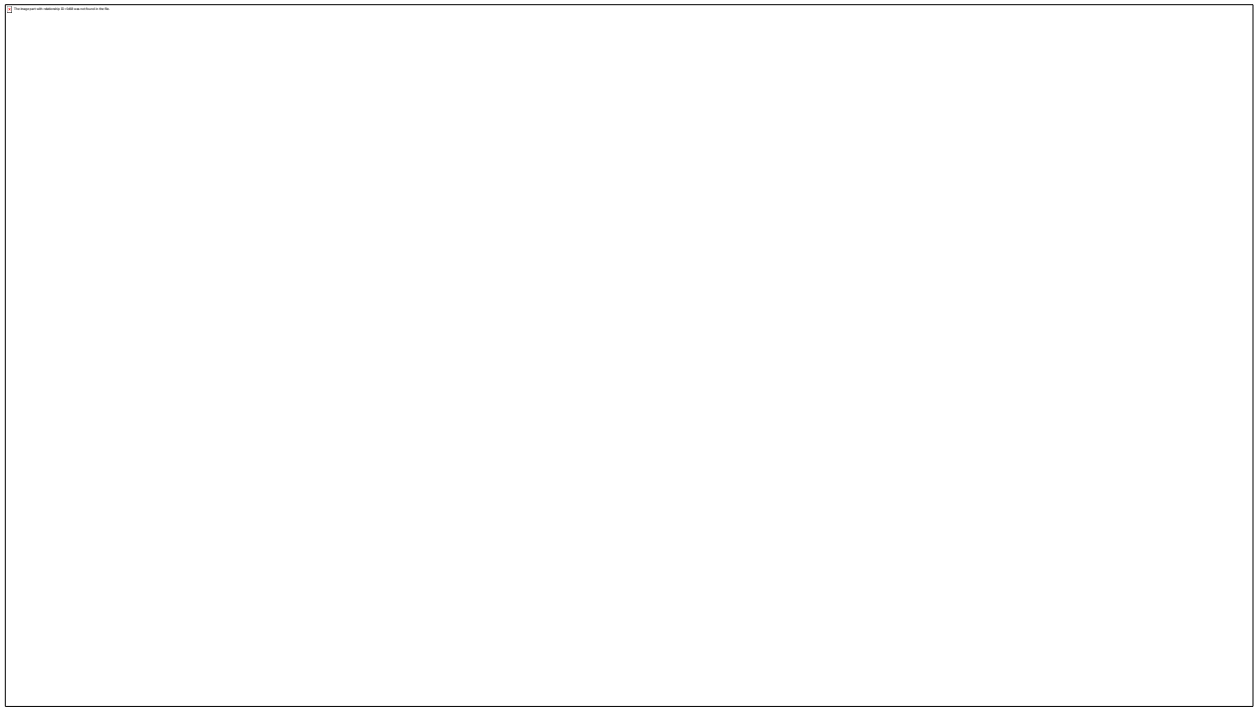

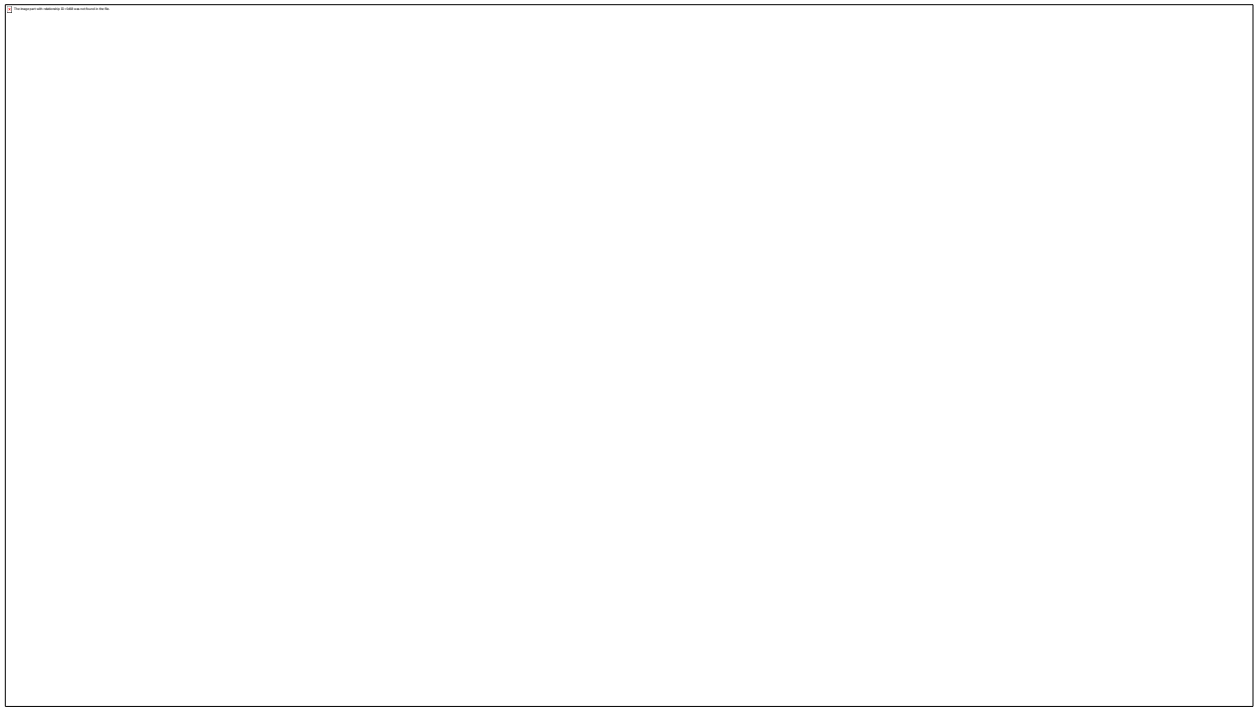

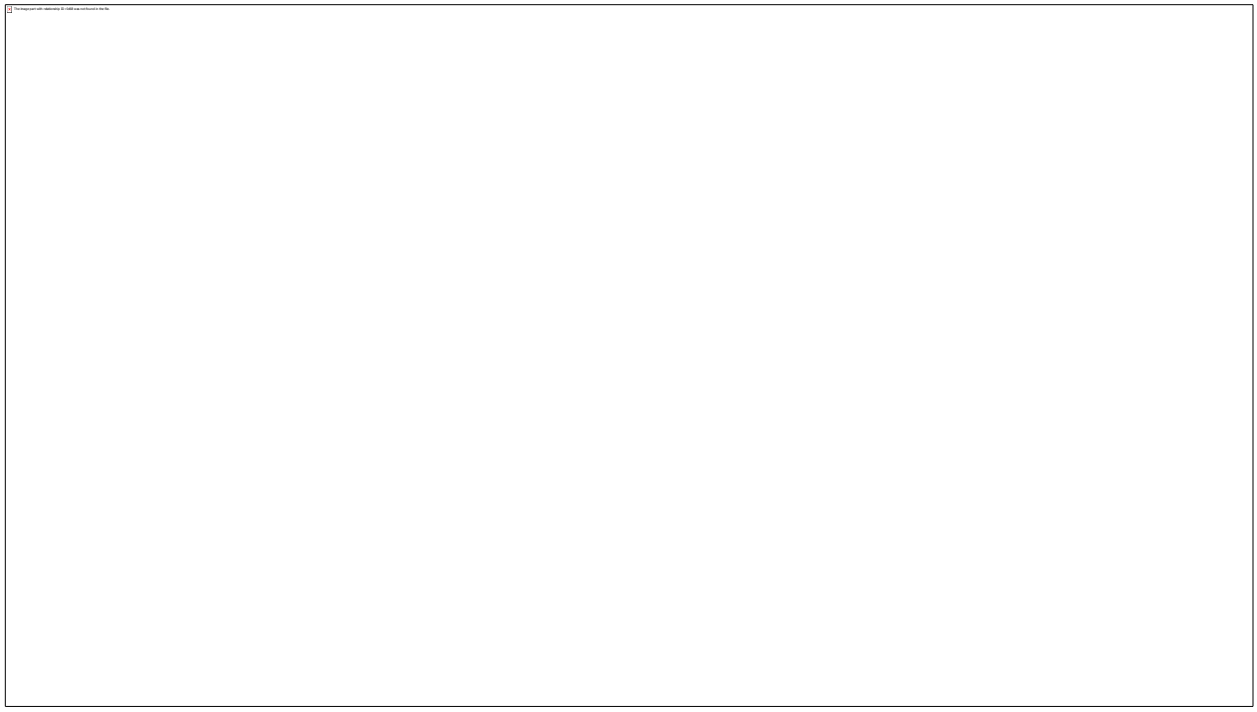

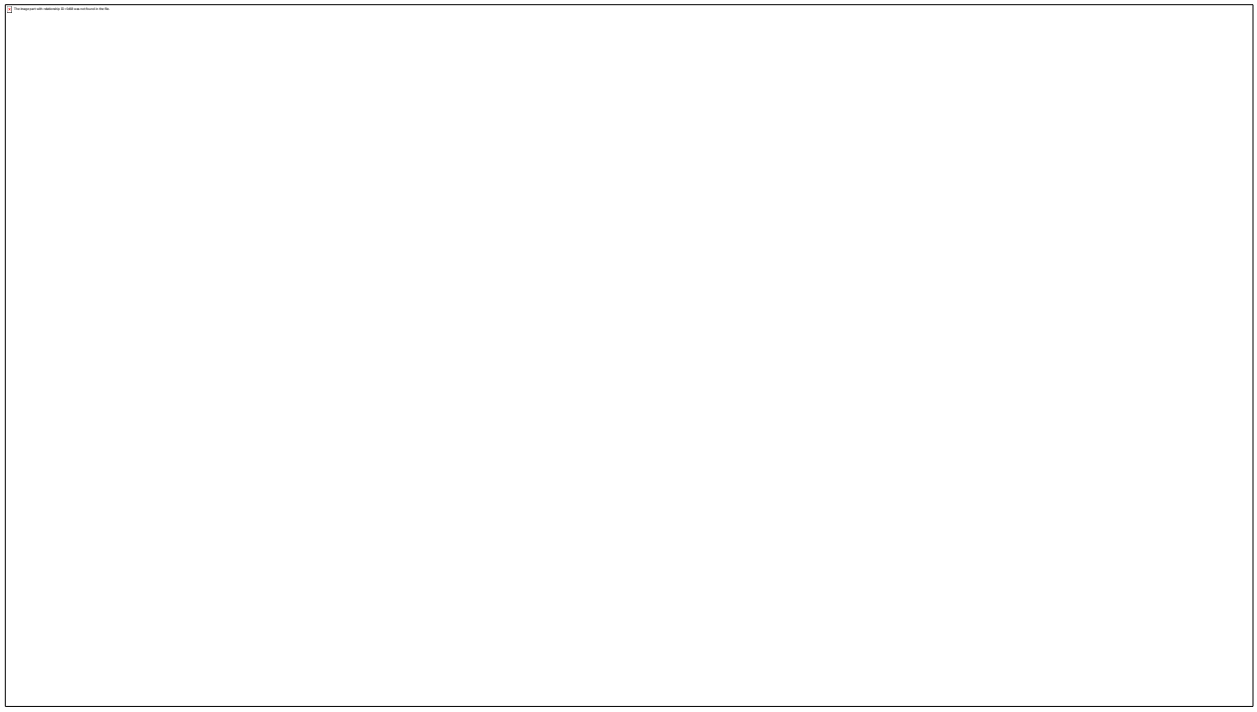

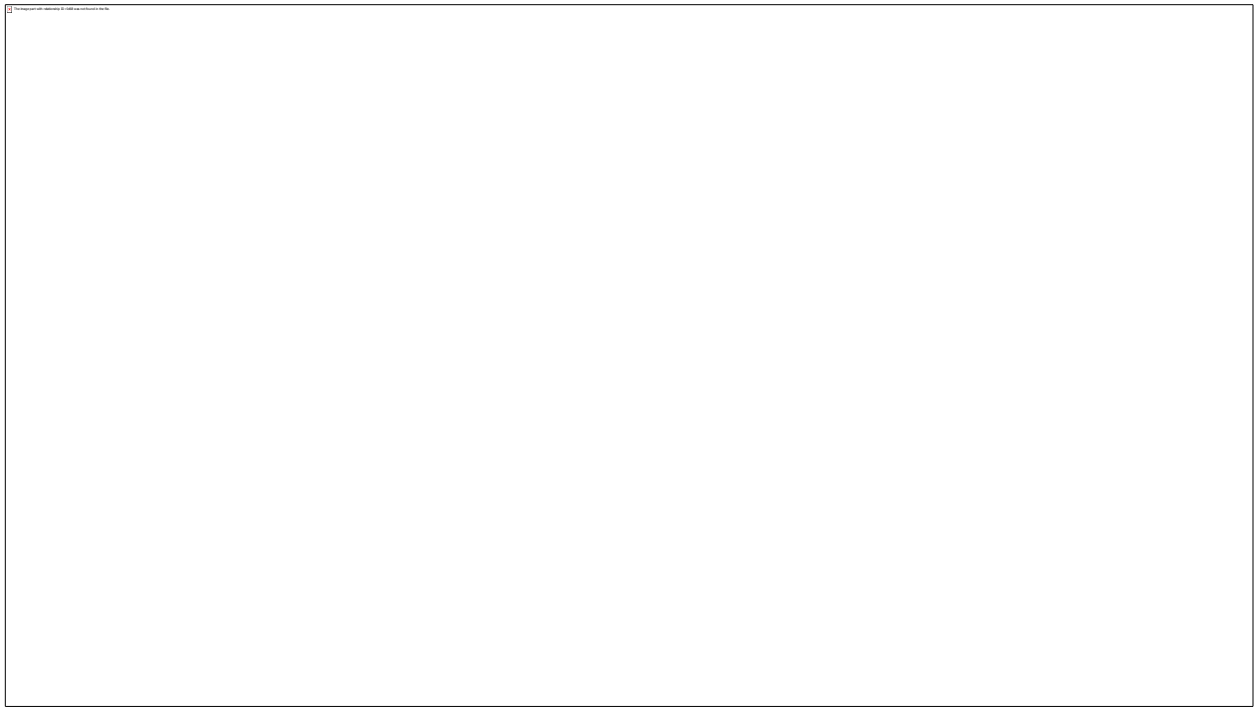

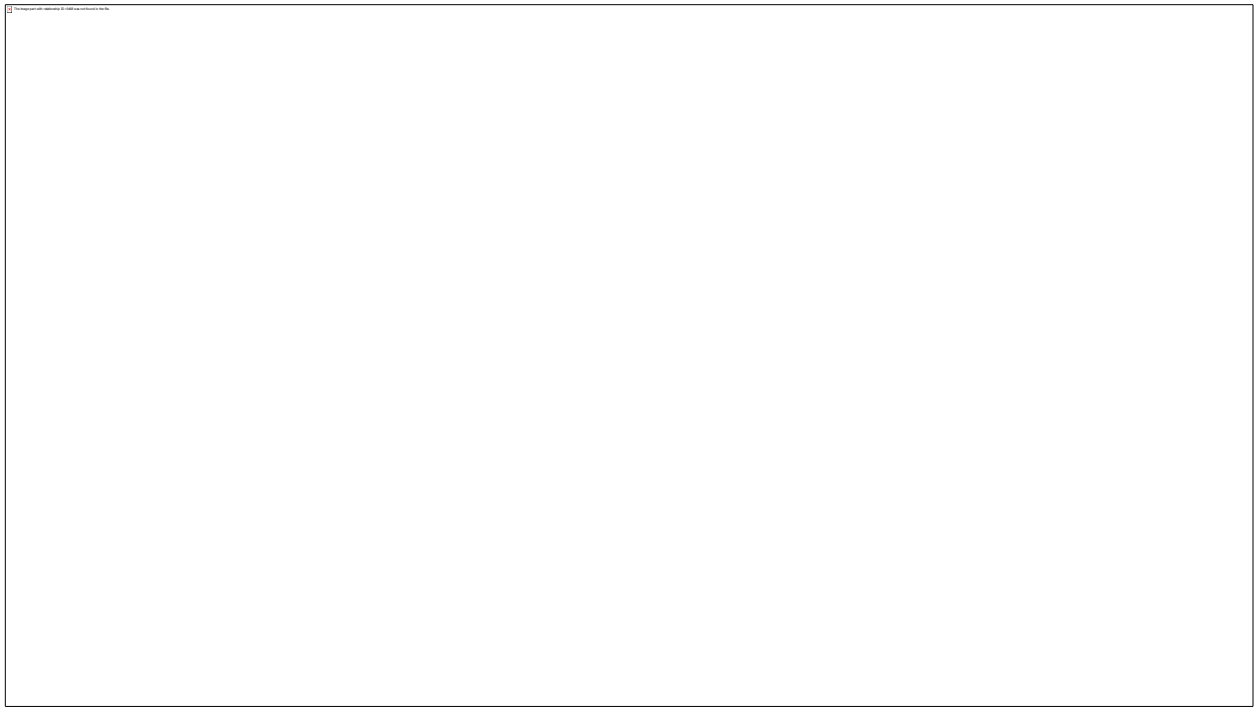

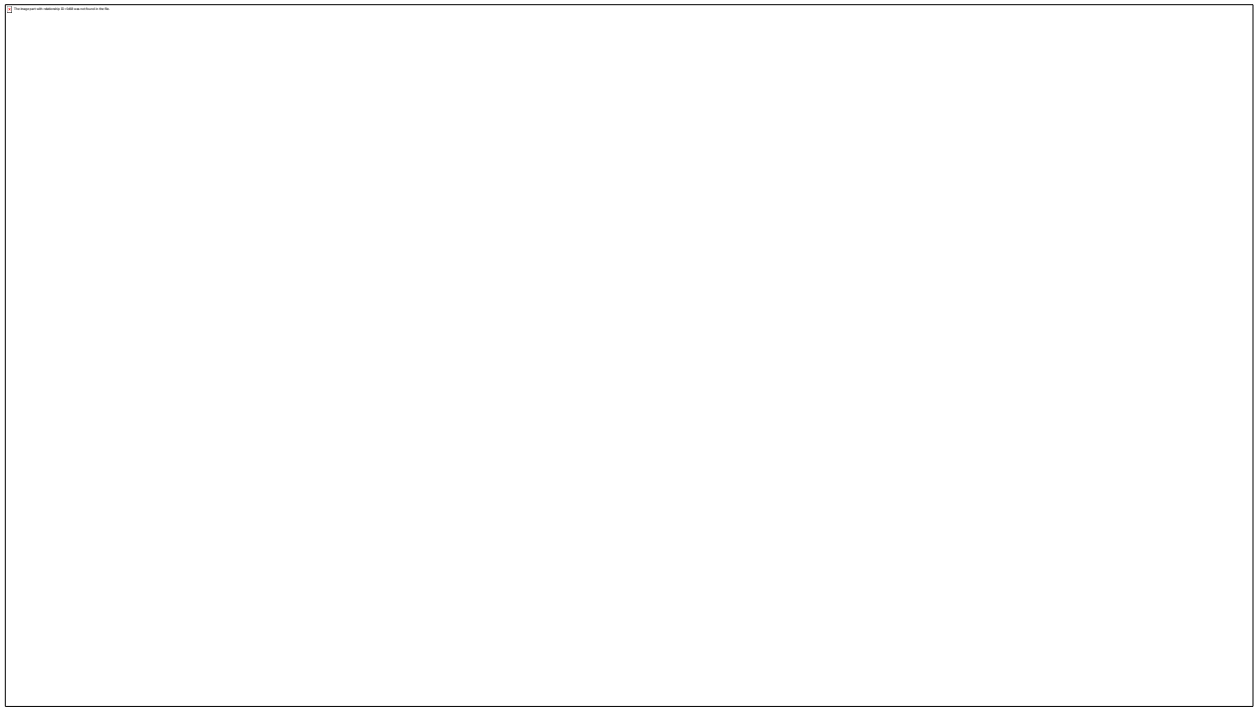

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Self-Assessment Activity 1

"Are We Really Co-Teachers?"

Directions: Check YES or NO for each of the following statements to determine your Co-Teaching Score at this point in time.

YES	NO	In our co-teaching partnership:
		We decide which co-teaching model we are going to use in a lesson based on the benefits to the students and the co-teachers.
		We share ideas, information, and materials.
		We teach different groups of students at the same time.
		We share responsibility for deciding how to teach.
		We are flexible and make changes as needed during a lesson.
		We identify student strengths and needs.
		We share responsibility for differentiating instruction.
		We can show that students are learning when we co-teach.
		We agree on discipline procedures and carry them out jointly.
		We share responsibility for deciding what to teach.
		We make improvements in our lessons based on what happens in the classroom.
		We are both viewed by our students as their teacher.

Adapted from Student Achievement in LRE Project

Self-Assessment Activity 2

What Do I Bring to the Table as a Co-Teacher?

Directions: Complete the chart below based on your personal beliefs about co-teaching.

My Strengths	My Weaknesses

How can my co-teacher and I work together to ensure that we are providing effective co-teaching practices?

_____

_____

Collaborative Teaching Responsibilities Checklist

WHO WILL BE RESPONSIBLE FOR:	NAME	NAME	SHARED	COMMENTS
Identifying goals and objectives for the class?				
Designing individualized objectives for the targeted students?				
Planning instructional activities to achieve the goals?				
Being the content expert?				
Being open to new ideas and instructional models?				
Being responsible for specialized instruction strategies in the classroom?				
Selecting and organizing instructional materials?				
Collecting data on student performance?				
Ensuring accommodations in the student's IEP are provided?				
Designing tests, homework assignments, etc.?				

Providing individual assistance to students?				

Adapted from Beninghof, 2012

Setting Goals Form

Write down 3 goals for work in your **classroom** with your students.

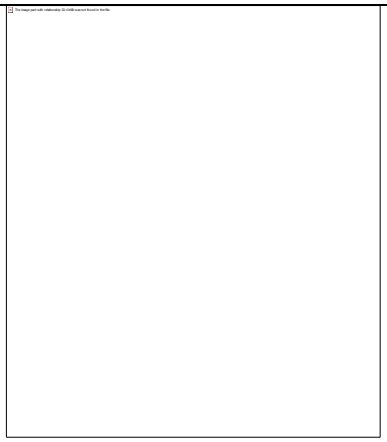
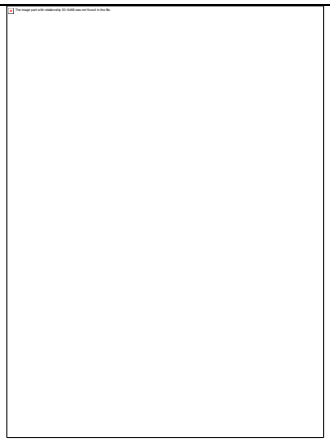
1.
2.
3.

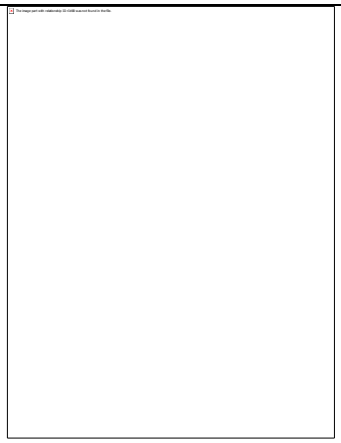
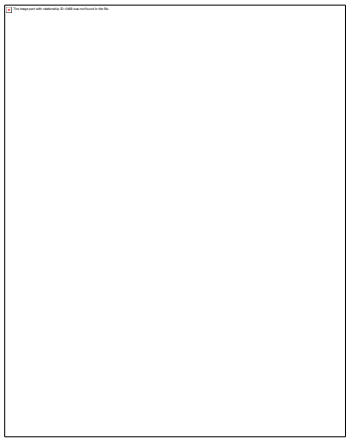
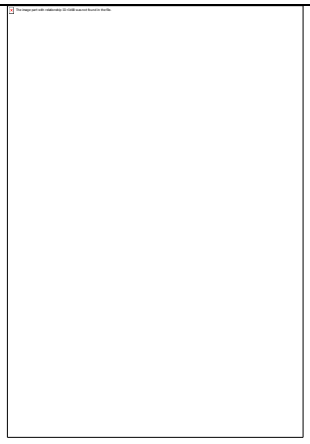
Write down 3 goals specifically for building your co-teaching partnership.

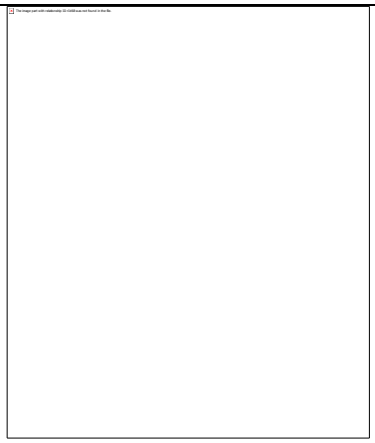
1.
2.
3.

Models for Co-Teaching

Adapted from Co-Teaching: Strategies to Improve Student Outcomes by Marilyn Friend

Co-Teaching Model	What does this LOOK like?	How will this help instruction and the students?
One Teach, One Assist		Recommended Use: *Seldom* One teacher assumes primary role for instruction while the other teacher circulates the classroom assisting individual students. Seldom use is recommended because students interpret the "other teacher" as an aide and not an equal to the teacher presenting the lesson.
One Teach, One Observe		Recommended Use: *Frequent, when collecting data* This model is used for data collection, not direct instruction. One teacher teaches leads the entire class while the other teacher collects necessary data. Examples: identifying how much time a particular student is on task; determining a trend in students who raise their hand and who the teacher calls on to answer; observing student(s) behavior

Alternative Teaching		Recommended Use: *Occasional* A small group of students is created for remediation or re-teaching on a skill or concept, pre-teaching on a necessary skill identified by prior formative assessment, or extension/enrichment of a lesson. The key here is that the small group is not necessarily created of students with disabilities nor does it always have to be for remediation/re-teaching. The make-up of the group is based on needs of the students/class. Moreover, either teacher can lead the small group.
Teaming		Recommended Use: *Occasional* Both teachers contribute to instruction interchangeably; this requires a comfortable, trusting co-teaching relationship as well as collaborative planning. The recommended use is “occasional” because the focus of a co-teaching class should be to also incorporate other teaching models/instructional approaches tailored to the needs of the students in a given class.
Parallel Teaching		Recommended Use: *Frequent* Each teacher provides instruction to half of the class; this provides for a small group setting and allows for more interaction with students and ability to provide assistance to individual students when necessary. Groups can be determined by formative assessments and can be homogeneous or heterogeneous.

Station Teaching		Recommended Use: *Frequent* Station teaching typically involves 3-5 stations and students rotate between the stations every 20-25 minutes. Each teacher will work at a particular station with each group of students as they visit that station; this could be to provide new instruction, remediation/re-teaching of a skill or concept, enrichment/extension. The task at stations without a teacher should be something the students can complete without the aid of a teacher. They may work independently, in pairs, or as a group at these independent stations.

Six Models of Co-teaching Activity Sheet

Directions: Complete the worksheet with your partner by considering how each co-teaching model can be used. You will also need to identify advantages and disadvantages for each model.

Co-Teaching Model	How can it be used?	Advantages & Disadvantages
One Teacher-One Observe		
Station Teaching		
Parallel Teaching		
Alternative Teaching		
Team Teaching		
One Teach – One Assist		

Adapted from Friend & Cook, 2010.

Planning Template: Tiered Differentiated Lesson

(Adapted from: *Tools for High Quality Differentiated Instruction, ASCD Tool*)
This is a template to help you design a tiered task. Using the template, think about your content and design more than two tiers that will help students arrive at the KUDs you have designed.

Planning a Tiered Differentiated Lesson

Subject: **Grade level:**

Topic:
Standard (if relevant):

Brief Description of the Unit (i.e. Where does this lesson fall?):

OBJECTIVES

Students will know (essential information to be learned):

Students will understand (big ideas, principles, generalizations, "punch lines"):

Students will be able to (essential skills, observable and measurable):

WHO?

Who are the students in the class? What specific traits or needs do they have that require differentiation? In what ways do they vary most (reading level, interest in subject, need for structure, etc.)? How do I know? How will I find out?

1. Think about an advanced student. Design an activity (clearly related to your KUD goals) that would stretch this student.

Explain how you decided what that activity/task would look like – how to structure it. Use the equalizer to help you think about this activity. Describe which facets of the equalizer you adjusted, how you adjusted them and why you think this will help students access the advanced level task.

2. Now, figure out ways to scaffold the task so that students at or near where the KUDs are can be successful with it. **Create a second version of the task.** Make sure this

version still matches your KUD goals, is engaging, inviting, respectful, and high level. Use the *equalizer* to help you think about this activity.

Describe which facets of the equalizer you adjusted, how you adjusted them, and why you think this will help students access the advanced level task.

3. Now, figure out ways to further scaffold the task so that students who would struggle with the above task could be successful**. Create third and fourth versions of the task.** Double-check that you have not watered down the task and that KUD goals, engagement, and high level thought are still evident. Use the *equalizer* to help you think about this activity.

Describe which facets of the equalizer you adjusted, how you adjusted them and why you think this will help students access the advanced level task.

NOW WHAT?

How will you know if today's lesson "worked"? What will you watch for? How will you use what happens in this lesson to improve the next day's instruction?

THINKING ABOUT THE LESSON

What did you differentiate? Content? Process/Activity? Product?

PDL Assessment Evaluation

Circle One: Day 1 Day 2 Day 3

Thank you for your participation in today's training session. Your evaluation will provide valuable insight for future PDL opportunities. Please select an answer for each question and provide an answer for the open-ended questions.

Survey Key: 1- Strongly Disagree, 2- Disagree, 3-Agree, 4- Strongly Agree

1. The goals of the training were stated: 1 2 3 4
2. The goals of the session were met: 1 2 3 4
3. The session was relevant to the co-teaching experience: 1 2 3 4

4. During this PDL opportunity, I have learned the following about co-teaching?

5. How will I take the information that I have learned and apply it within my classroom for more effective implementation of co-teaching practices?

6. My final thoughts or questions are:

PDL Summative Evaluation

Day 3

1. Did you meet the learning goals of this PDL opportunity?

2. What information was most valuable to you?

3. What information was least valuable to you?

4. Overall, what improvements would you recommend for this PDL opportunity?

Appendix B: Sample Letter for Superintendent Approval

Calandra C. Holmes
Ed.D Student,Walden University
Administrator Leadership for Teaching and Learning
155 5th Ave. S. Ste 100
Minneapolis, Minnesota 55401-2511

Dear Superintendent:

The local school district and the local middle school in response to the low performance of students with disabilities implemented inclusion through co-teaching practices in the content areas of reading and mathematics. However, no examination of the academic achievement data has been completed to view the effectiveness of these practices. I would like to conduct a quantitative, quasi-experimental research study. The purpose of this study will be to investigate the differences in the academic achievement of students with disabilities in Grade 8 from spring 2012-2014 (pre-inclusion) and spring 2015-2017 (post-inclusion) by examining the standardized assessment scale scores.

As a doctoral student at Walden University, I am writing to request your permission to conduct this study using data from this middle school. The research will involve archival data. Access and analysis of the data will allow me determine if these instructional practices has had an effect on the achievement of students with disabilities. At the conclusion of the study a report will be provided that to inform the school district and school administrators of the effectiveness of inclusion through co-teaching practices.

Your district's participation in this study would be appreciated. If you consent to your district participating in this research, please copy the attached letter onto your school's letterhead and addressed it to me at the given address. This letter gives your Information Technology department permission to provide quantitative archival data of students from the middle school. If you have any questions or need further explanation about the study, do not hesitate to contact me by calandra.holmes@waldenu.edu or by telephone at ( ).

Sincerely,

Calandra C. Holmes
Ed.D Candidate, Walden University

Appendix B: Letter of Approval from Superintendent

Dear Ms. Calandra Holmes,

I grant you permission to conduct your quantitative study entitled, "Effect of Co-teaching on the Achievement of Middle School Students with Disabilities" at our local middle school. I understand the purpose of this study will be to investigate the differences in the academic achievement gains in reading and mathematics of students with disabilities in Grade 8 from spring 2012-2014 (pre-inclusion) and spring 2015-2017 (post-inclusion) by examining the STAR scale scores.

I further understand, the research will involve the use of archival data. I confirm that I am authorized to approve research in this setting. I also understand that the data gathered will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University IRB.

Sincerely,

Appendix C: Sample Letter for Principal's Approval

Calandra C. Holmes
Ed.D Student,Walden University
Administrator Leadership for Teaching and Learning
155 5th Ave. S. Ste 100
Minneapolis, Minnesota 55401-2511

Dear Principal :

The local school in response to the low performance of students with disabilities implemented inclusion through co-teaching practices in the content areas of reading and mathematics. However, no examination of the academic achievement data has been completed to view the effectiveness of these practices. I would like to conduct a quantitative, quasi-experimental research study. The purpose of this study will be to investigate the differences in the academic achievement of students with disabilities in Grade 8 from spring 2012-2014 (pre-inclusion) and spring 2015-2017 (post-inclusion) by examining the standardized assessment scale score changes from one year to the next.

As a doctoral student at Walden University, I am writing to request your permission to conduct this study using data from the middle school. The research will involve archival data. Access and analysis of the data will allow me determine if these instructional practices has had an effect on the achievement of students with disabilities. At the conclusion of the study a report will be provided that to inform the school district and school administrators of the effectiveness of inclusion through co-teaching practices.

Your school's participation in this study would be appreciated. If you consent to your district participating in this research, please copy the attached letter onto your school's letterhead and addressed it to me at the given address. If you have any questions or need further explanation about the study, do not hesitate to contact me by calandra.holmes@waldenu.edu or by telephone at ( ).

Sincerely,

Calandra C. Holmes
Ed.D Candidate, Walden University

Appendix C: **Letter of Approval from Principal**

Dear Ms. Calandra Holmes,

I grant you permission to conduct your quantitative study entitled, "Effect of Co-teaching on the Achievement of Middle School Students with Disabilities" at the local middle school. I understand the purpose of this study will be to investigate the differences in the academic achievement gains in reading and mathematics of students with disabilities in Grade 8 from spring 2012-2014 (pre-inclusion) and spring 2015-2017 (post-inclusion) by examining the STAR scale scores.

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Sincerely,

Appendix D: Data Use Agreement

DATA USE AGREEMENT

This Data Use Agreement ("Agreement"), effective as of February 1, 2018 ("Effective Date"), is entered into by and between Calandra Holmes("Data Recipient") ("Data Provider"). The purpose of this Agreement is to provide Data Recipient with access to a Limited Data Set ("LDS") for use in research in accord with the HIPAA and FERPA Regulations.

Definitions. Unless otherwise specified in this Agreement, all capitalized terms used in this Agreement not otherwise defined have the meaning established for purposes of the "HIPAA Regulations" codified at Title 45 parts 160 through 164 of the United States Code of Federal Regulations, as amended from time to time.

Preparation of the LDS. Data Provider shall prepare and furnish to Data Recipient a LDS in accord with any applicable HIPAA or FERPA Regulations

Data Fields in the LDS. **No direct identifiers such as names may be included in the Limited Data Set (LDS).** The researcher will also not name the organization in the doctoral project report that is published in Proquest. In preparing the LDS, Data Provider or designee shall include the **data fields specified as follows**, which are the minimum necessary to accomplish the research: Scale scores.

Responsibilities of Data Recipient. Data Recipient agrees to:

Use or disclose the LDS only as permitted by this Agreement or as required by law;

Use appropriate safeguards to prevent use or disclosure of the LDS other than as permitted by this Agreement or required by law;

Report to Data Provider any use or disclosure of the LDS of which it becomes aware that is not permitted by this Agreement or required by law;

Require any of its subcontractors or agents that receive or have access to the LDS to agree to the same restrictions and conditions on the use and/or disclosure of the LDS that apply to Data Recipient under this Agreement; and

Not use the information in the LDS to identify or contact the individuals who are data subjects.

Permitted Uses and Disclosures of the LDS. Data Recipient may use and/or disclose the LDS for its research activities only.

Term and Termination.

Term. The term of this Agreement shall commence as of the Effective Date and shall continue for so long as Data Recipient retains the LDS, unless sooner terminated as set forth in this Agreement.

Termination by Data Recipient. Data Recipient may terminate this agreement at any time by notifying the Data Provider and returning or destroying the LDS.

Termination by Data Provider. Data Provider may terminate this agreement at any time by providing thirty (30) days prior written notice to Data Recipient.

For Breach. Data Provider shall provide written notice to Data Recipient within ten (10) days of any determination that Data Recipient has breached a material term of this Agreement. Data Provider shall afford Data Recipient an opportunity to cure said alleged material breach upon mutually agreeable terms. Failure to agree on mutually agreeable terms for cure within thirty (30) days shall be grounds for the immediate termination of this Agreement by Data Provider.

Effect of Termination. Sections 1, 4, 5, 6(e) and 7 of this Agreement shall survive any termination of this Agreement under subsections c or d.

Miscellaneous.

Change in Law. The parties agree to negotiate in good faith to amend this Agreement to comport with changes in federal law that materially alter either or both parties' obligations under this Agreement. Provided however, that if the parties are unable to agree to mutually acceptable amendment(s) by the compliance date of the change in applicable law or regulations, either Party may terminate this Agreement as provided in section 6.

Construction of Terms. The terms of this Agreement shall be construed to give effect to applicable federal interpretative guidance regarding the HIPAA Regulations.

No Third Party Beneficiaries. Nothing in this Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

Headings. The headings and other captions in this Agreement are for convenience and reference only and shall not be used in interpreting, construing or enforcing any of the provisions of this Agreement.

IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be duly executed in its name and on its behalf.

DATA PROVIDER **DATA RECIPIENT**

Signed: _____ Signed: _____

Print Name: _____ Print Name: _____

Print Title: _____ Print Title: _____