

A Co-Teaching Program Evaluation in a School District in Missouri

by

Tanya Marie Deering

A Dissertation submitted to the Education Faculty of Lindenwood University

in partial fulfillment of the requirements for the

degree of

Doctor of Education

School of Education

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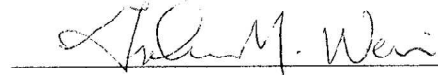
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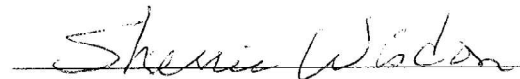
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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

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Abstract

This study was a program evaluation on the co-teaching model within the Smallville School District (a pseudonym) measuring its effectiveness defined by the perceptions of leaders in the field of special education. This study filled the gap of previous co-teaching studies by investigating a rural school district, across all buildings. The researcher selected the tools of classroom observations; convenience sample interviews; administrator, teacher, student, and parent surveys; and secondary data from High Quality Professional Development (HQPD) and the school budget.

The researcher collected data with surveys, observations, and interviews to determine the perceptions of all stakeholders involved in the co-teaching experiences in the Smallville School District. Results included four essential emerging themes compiled from all interviews and surveys noted by the researcher. These themes were a lack of professional development, lack of common plan time, lack of consistent collaboration, and lack of emphasis on co-teaching due to extensive curriculum writing, during the 2013-2014 school year. When taking the MAP data and applying it to a *t*-test by two unequal samples at each level, the researcher found significant differences in the general education and special education scores at the elementary Communication Arts 2013 data, secondary Mathematics 2013 data, and the secondary Communication Arts 2013 data. Special education students in the co-teaching setting showed an overall increase in tests scores than their counterparts in the special education setting. The general education students in a co-teaching classroom, maintained or their scores decreased on the MAP and EOC.

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Chapter One: Introduction to the Study

Background of the Study

The educational system, since 2008, has included a variety of techniques used to increase academic success for all students including inclusion (the act or practice of students with disabilities participating in general education) and co-teaching (general and special education teachers working together within a classroom). General education classrooms defined where instruction follows grade level expectations contain general education and special education students (students with an educational disability) where inclusion and co-teaching is concerned. Co-teaching has created mixed feelings from all parties involved—co-teaching is the best method for all involved, and others believe co-teaching is not the best method because it negatively affected one or all parties (Wilson, 2008a).

From the 1950s to present day, there have been numerous legal changes in the area of special education. During “the 1950s and 1960s [individuals] began to [experience] some assistance for students with disabilities with the help of some family associations and the federal government” (Duncan & Posny, 2011, p. 11). In 1975, the United States passed the Education for All Handicapped Children Act, otherwise known as Public Law-142 (PL94-142) and it eventually evolved into the Individuals with Disabilities Education Act (IDEA, 2004). The 1980s brought changes in the public sentiment towards children with disabilities that resulted in additional legislation for children from birth up to and including age 21 (Duncan & Posny, 2011). In 2004, the law was revised and renamed the Individuals with Disabilities Education Act of 2004. These laws allowed students with disabilities to attend public schools with their peers; students

who before 1970 were excluded (Duncan, Posny, & Musgrove, 2011) from the educational context.

Even though special education teachers supported students in the general education classroom setting as early as 2000, the general education and special education teacher lacked common plan times and lacked similar professional development opportunities to prepare for the co-teaching setting. Description of special education was a program that assisted students who required modifications or assistance due to social, physical, or mental disabilities (Esteves & Rao, 2008). General education curriculum and classroom settings located in the typical public school setting for all subject areas and academia were common (Partners Research Network in Texas, 2011).

Purpose of the Study

The purpose of this study was to investigate the process and outcomes of the co-teaching model within the Smallville School District (a pseudonym) utilizing the research methodology program evaluation (Cook, 2004; Esteves & Rao, 2008; Friend, 2008b; Hines, 2001; Kloo & Zigmond, 2008; Magiera & Zigmond, 2005; Friend, & Hurley-Chamberlain, 2008). Smallville School District provided a public education for approximately 6,200 students from early childhood to 12th grade—approximately 89% of the students were Caucasian (Missouri Department of Elementary and Secondary Education, 2013b). For the purpose of this study, co-teaching in the Smallville School District was defined as a general education and a special education teacher working within a general education classroom to plan, implement, and assess instruction for all students (Friend, 2008a). In addition to the Smallville School District definition of co-teaching, general education teaching was defined as a professional with extensive

knowledge in the general education curriculum (Bar-Lev, 2000), where special education teachers are defined as teachers who work with students that have a wide range of disabilities (Bureau of Labor and Statistics, 2012). This model differed from traditional teaching methods, where one teacher conducted class with a group of students. This study intended to close the gap within the current literature related to co-teaching within a rural setting, particularly budgetary issues not found in the existing research. The researcher measured evidence of collaboration and of High Quality Professional Development (HQPD) for the general and special education teachers, which was defined as meetings, trainings, and collaborations increasing educator qualifications. The perceptions of those who directly participated or were involved with the co-teaching model and a cost benefit analysis of the co-teaching model within the Smallville School District. The co-teaching model, as defined by the Smallville School District, was the act of a special educator teaching with a general education teacher in a general education classroom with a mixture of students that were general education students and special education students.

Problem Statement

A review of the current literature on the implementation of the co-teaching model resulted in studies that noted various adjustments for all stakeholders that lead to student underperformance on district and state assessments (Forbes & Billet, 2012). Previous implementation of the co-teaching model resulted in a spending increase leaving district leaders to question the cost-effectiveness of this instructional model (Brent, Sipple, Killeen, & Wischnowski, 2004) and found general and/or special education students underachieving in the co-teaching classroom (socially, academically, and personally)

(Tandon, Drame, & Owens, 2012). The researcher investigated the co-teaching model within the Smallville School District in Missouri (a pseudonym of the actual name of the district), by examining the districts common assessments, state achievement scores in Communication Arts and Mathematics, costs of the program in comparison to student success, or lack thereof, high quality professional development utilizing observations, surveys, and secondary data, and the perceptions of administrators, teachers, and students. The researcher predicted findings that general education students would have a decrease in Missouri state assessment scores (MAP). General education student achievement, at the time of this study, was unexamined due to the lack of findings within the co-teaching research literature (Cook, 2004; Esteves & Rao, 2008; Friend, 2008b; Hines, 2001; Kloo & Zigmond, 2008; Magiera & Zigmond 2005; Muller et al., 2009).

Significance of the Study

The researcher studied the co-teaching model within the Smallville School District due to the gap in the current literature concerning cost benefit analysis of co-teaching in the rural setting. Previous studies in the current literature focused on the effects of this model within the general education population, while this study focused on the special education population (Pitts Santoli, Sachs, Romey, & McClurg, 2008; Seay, Hilsmier, & Duncan, 2010). The researcher found numerous articles and recent studies that defined and described the implementation and success of co-teaching (Cook, 2004; Esteves & Rao, 2008; Friend, 2008a; Hines, 2001; Kloo & Zigmond, 2008; Magiera & Zigmond 2005; Muller et al., 2009), yet no program evaluation had been conducted within the Smallville School District in Missouri.

Friend (2008b) described co-teaching as one model of instruction that occurred within a classroom and an effective way of utilizing an inclusive setting for general, special, and gifted students. Bunch (2005) noted that all students in an inclusive setting learn the same curriculum; however, they learn it at different levels and lengths of time. Arguably, inclusion had utilization, in some instances as a social interaction, even though the academics were too difficult for the student with special needs (not including gifted students in this category) (Friend, 2008b).

In 1990, the Individuals with Disabilities Education Act (IDEA) was signed emphasizing the least restrictive environment of teaching students with special needs even though co-teaching lacked being perceived as the most adequate form of education for students with special needs (Esteves & Rao, 2008). Even though the federal guidelines of IDEA were in place, the state education agencies (SEAs) had their own ways of implementing IDEA (Muller et al., 2009). “Collaborative teaching, consultative content teaching, shared instructional responsibility, collaborative special education, instructional consultation, and team teaching” (Muller et al., 2009, p. 1) were alternative terms of co-teaching identified according to the research conducted by Muller et al. (2009). According to researchers (Cook, 2004; Friend, 2008a; Wilson, 2008a), co-teaching was successful in meeting the academic needs of students with and without an educational disability. These same authors noted that when co-teaching lacked correct support and implementation, it could be detrimental to the general and special education population in the classrooms.

Overview of Methodology

The researcher selected a program evaluation methodology to conduct this study of the co-teaching model in the Smallville School District utilizing both quantitative and qualitative data. Fraenkel, Wallen, and Hyun (2012) defined qualitative data as interviews and surveys gaining the opinions and perceptions that people have on a topic and quantitative research as numerical data related to a hypothesis. The quantitative data collected was the Missouri state achievement scores on students within a co-teaching environment in comparison to a like group of students in a non-co-teaching setting in the areas of Mathematics and Communication Arts. The researcher compared the data to determine whether general education and special education students achieved higher scores when receiving instruction in a co-teaching setting. Qualitative data collection occurred by obtaining information from students, parents/guardians of the students, teachers and administrators. The researcher, using a convenience sample, collected all data. Observations, surveys, and interviews provided the researcher data on teacher perceptions of collaboration time and Highly Qualified Professional Development regarding the co-teaching program.

Research Questions:

1. How do administrators, teachers, parents, and students perceive the co-teaching experience in Smallville School District?
2. How are the perceptions of the administration, parents, teachers, and students similar and or different related to the co-teaching model in Smallville School District?

3. How does the Smallville School District determine cost effectiveness of the co-teaching program?
4. How is the process of collaboration defined at the elementary and secondary teaching levels within the Smallville School District?
5. How do the Missouri Assessment Program test (MAP) and End of Course exam (EOC) scores of special education students in co-teaching classrooms compare with special education students not participating in a co-teaching classroom?
6. How do the MAP and EOC scores of general education students in co-teaching classrooms compare with general education students not participating in a co-teaching classroom?
7. How has the Highly Quality Professional Development (HQPD) affected the utilization and perceptions of co-teaching?

Null Hypothesis:

There is no difference in the percentage of change, measured by student MAP scores, between special education students and general education students who participated in a co-teaching model and those who were in a regular education model in the areas of Communication Arts, Mathematics, and Science.

Definitions

504 (Section 504) – Policy that grants students with disabilities or illnesses capabilities to participation in all general education activities to the fullest extent possible (National Center for Learning Disabilities, n.d.).

Accommodation - a change in instructional presentation for students who may have unique academic needs. Easily confused with a modification, accommodations would be, but not limited to, extended time to complete a test, how lessons are presented, and how a student would respond to a question (verbally, computer response and/or written response) (Assessing Special Education Students [ASES] and The Council of Chief State School Officer [CCSSO], 2012).

Co-Teaching - a general education teacher and special education personnel in a general education classroom that work together to plan, implement and assess instruction for general, special, and gifted students. (Friend, 2008b). For the purpose of this study, co-teaching is defined similar to above, excluding gifted students.

Collaboration - two or more people working together for the planning and implementing of co-teaching (Cook, 2004).

General Education - instruction that follows state grade- level expectations and state standards for all subject areas (Partners Research Network in Texas, 2011).

General Education Teacher - a professional with extensive knowledge in the general education curriculum. General education teachers have the expectation to assist special education teachers in understanding the intricacies of that curriculum (Bar-Lev, 2000).

Highly Qualified Professional Development (HQPD) - meetings, trainings, and collaborations that can increase the qualifications of educators to assist them in meeting high state guidelines (Rhode Island Board of Regents for Elementary and Secondary Education, 2010).

Individuals with Disabilities Education Act (IDEA) – A federal statute that grants free and appropriate public education for students with disabilities (National Center for Learning Disabilities, n.d.).

Individualized Educational Program (IEP) – documentation that is required when students meet the IDEA criteria (National Center for Learning Disabilities, n.d.).

Inclusion - the act or practice of students with disabilities participating in general education classes (Florida State University Center for Prevention & Early Intervention Policy, 2002).

Modification - “alterations made to instruction and/or assessment that change, lower, or reduce learning or assessment expectations” (Missouri Department of Elementary and Secondary Education, 2010, p. 1).

Pull-Out Teaching - a situation where students are included in the traditional classroom the majority of the time but receive special services once or twice a week according to his/her personal needs in a separate classroom outside of the general education setting (Kelly, 2012).

Special Education - specifically designed instruction depending on the needs of each student with a learning, mental, emotional, and/or physical disability (National Dissemination Center for Children with Disabilities, 2011).

Special Education Teacher – a teacher who works with students who have a wide range of disabilities that can include mental or learning and also teaches a variety of subjects ranging from academics to social skills (Bureau of Labor and Statistics, 2012).

Special Education Student – a student with an educational disability who receives special education instruction and related services specific to their needs (Council for Exceptional Children, n.d.).

Student – someone under the age of 18 can also be called a child or a schoolchild (Hall, 2013).

Team Teaching – two or more instructors working purposefully, regularly, and cooperatively to help a group of students of any age learn (Team Teaching Advantages, Disadvantages, 2012).

Limitations

One limitation of this study was the researcher's employment at the school district during data collection. The researcher was a special education teacher in the district and placed in a self-contained low functioning classroom as a teacher at the K-5, 5-6, and 6-8 grade levels, a co-teacher, and a transition special education teacher. The researcher participated in administration intern/observational hours, as a certified instructor for Crisis Prevention Intervention (CPI), led a Study Island after school program at the fifth-sixth grade level, coached the middle school dance team, and assisted in writing life skills curriculum over the summer in the middle 2000s. These contributed to the limitation due to the researcher's wealth of knowledge about the district and its students that could have created a bias before data collection began. The use of a mixed methodology contributed to the minimization of the researcher's possible preconceived assumptions leading to more valid and reliable results (Fraenkel et al., 2012).

Summary

The decision to conduct this program evaluation of the co-teaching model at the Smallville School District emerged from a lack of district data on the effectiveness regarding the implementation of this model. The researcher developed research questions and a null hypothesis based on a review of the current literature, developed a mixed-methods approach, collected data, and analyzed the data to answer the research questions and test the hypothesis.

The following chapter includes an in-depth review of the current literature, particularly on co-teaching within the United States, and the process of conducting a cost benefit analysis in a public school setting. Chapter Three outlines the methodology of the study including data collection and analysis. Chapter Four includes the results from the data collected and Chapter Five is a discussion on the findings and their alignment with the literature from Chapter Two.

Chapter Two: Literature Review

Within this chapter is a recent review of literature that further defines special education students in the general education classroom, commonly known as inclusion or co-teaching (a form of inclusion). At the time of this review of literature, the researcher found and reported from articles, websites, and studies that delved into special education, specifically the viewpoints of co-teaching. Information on co-teaching is always evolving and newer studies can be researched each day. At the time of this study, the most current literature that tied into the researchers study was incorporated in this literature review.

From the 1950s to present day, there have been numerous legal changes in the area of special education. During “the 1950s and 1960s [individuals] began to [experience] some assistance for students with disabilities with the help of some family associations and the federal government” (Duncan & Posny, 2011, p. 11). In 1975, the U.S. passed the Education for All Handicapped Children Act, otherwise known as Public Law-142 (PL94-142) and it eventually evolved into the Individuals with Disabilities Education Act (IDEA, 2004). The 1980s brought changes in the public sentiment towards children with disabilities that resulted in additional legislation for children from birth up to and including age 21 (Duncan & Posny, 2011). In 2004, the law was revised and renamed the Individuals with Disabilities Education Act of 2004. These laws allowed students with disabilities to attend public schools with their peers; students who were born before 1970 were excluded from the educational context (Duncan et al., 2011). The educational system, since 2008, has included a variety of techniques used to increase academic success for all students in which inclusion, the act or practice of students with

disabilities participating in general education classes (Florida State University Center for Prevention & Early Intervention Policy, 2002). Co-teaching, a model of instruction in the general education classroom utilizing inclusion for general education, special education, and gifted students (Friend, 2008b), were two of the numerous suggestions that school districts utilized (Duncan & Posny, 2010).

Inclusion

Inclusion and co-teaching are terms that have been interchanged; however, have two very different meanings (Friend, 2008a; Wilson, 2008b). The definition of inclusion varied from state to state and school to school and no law served to define the word “inclusion” (Hines, 2001). Inclusion was perceived that all students, with and without disabilities benefited by working together (Seay et al., 2010). In contrast to the perception of Seay et al. (2010), Friend (2008a) defined inclusion as the combination of special needs students and general education students in one placement in which all contributed different aspects to each lesson. A further definition of inclusion was all students were a part of the same classroom and academics (Seay et al., 2010). Forest and Pearpoint (n.d.) stated that inclusion covered a broader criterion than only a special education student being in a general education classroom, but meant to teach all involved how to handle diversity and difference. In an inclusion setting, the student with special needs received their special education services within the general education classroom while the general education and special education teachers worked together to ensure success (Seay et al., 2010).

According to Seay et al. (2010), many students in the inclusive classroom had a wide range of disabilities from mild, learning, and behavioral issues that affected how

each student completed schoolwork and was socially accepted. Due to IDEA and the No Child Left Behind Act (NCLB), many districts altered the placement of special education students from a self-contained special education classroom to a general education classroom (Murawski, 2009). Classrooms with two teachers (one general education and one teacher in another area of specialty) caused the co-teaching classrooms to have an overabundance of students and lacked focus on the implementation of the co-teaching program (Murawski, 2009).

Friend (2008b) described co-teaching as one form of teaching that took place within an inclusive setting and one of the most effective ways of utilizing an inclusion setting for general, special, and gifted students. Bunch (2005) commented that all students in the inclusive setting worked on and learned the same curriculum; however, at different levels and varied lengths of time. Arguably, utilization of inclusion as a social interaction was good practice, even though the academics may have been too difficult for the student with special needs to complete (Friend, 2008a). Teachers, administrators, students, parents, and stakeholders needed to realize that inclusive classroom settings provided special education students an opportunity to experience and achieve similar to general education students and that the separation of special education students caused a lack in equal education to their peers (Murawski, 2009).

Even though there are positives of inclusion as noted in the previous paragraph, inclusion, or mainstreaming could be unsuccessful, mostly due to the lack of professional development and lack of preparedness (Pitts Santoli et al., 2008). Seay et al. (2010) agreed with Pitts Santoli et al. (2008) by discovering that general education teachers required increased professional development concerning special education needs and the

procedures on paperwork completion, compared to the special education teachers who required more training on topics related to the needs of general education students. Hines (2001) reported that general education teachers believed that there was a lack of professional development to make inclusive settings successful, which followed the findings of Pitts Santoli et al. (2008) and Seay et al. (2010). Special education teachers could have a difficult time working within an inclusive setting if they lacked the content knowledge needed in the classroom (Hines, 2001). Hines' (2001) findings was added to by Seay et al. (2010) whom reported that some general education teachers had the perception that special education teachers lacked being "experts" in education, which created challenges of teaching methods and perspectives. Bunch (2005) found that regular education teachers benefited from having a special education teacher in the classroom that assisted with the various students' needs, which agreed with the findings of other researchers (Hines, 2001; Pitts Santoli et al., 2008; Seay et al., 2010). In order for teachers to be successful in an inclusive setting, there needed to be administrative support, professional development, and collaboration (Seay et al., 2010).

Price, Mayfield, McFadden, and Marsh (2000-2001) affirmed that general and special education teachers should be able to look at the curriculum and find ways to make it suitable for each student taught. Collaboration and planning between the general education and special education teachers was vital in a successful inclusion setting (Friend, 2008b). Teachers perceived the least amount of assistance was within the area of time management to ensure that students, general and special education, were successful (Pitts Santoli et al., 2008). Bunch (2005) and Pitts Santoli et al. (2008) agreed collaboration played a huge role in the success of inclusion. Murawski (2009)

emphasized that a variety of programs were developed, implemented, and disappeared from education only to cycle back, making educators and administrators unaccepting of change, which added to the research conducted by Bunch (2005), and Pitts Santoli et al. (2008).

Many teachers were willing to make changes in teaching approaches to assist with special needs students in the inclusive setting, and approximately the same number of teachers failed to relate that an inclusive model was an appropriate and successful way to teach (Pitts Santoli et al., 2008). Forest and Pearpoint (n.d.) noted that inclusion involved both the students and their teachers along with the parents and the community that were actively involved. Pitts Santoli et al. (2008) added to Forest and Pearpoint's (n.d.) research and found that over 90% of teachers made needed changes to assist special education students in the classroom, although over 75% of the same teachers indicated that general education/inclusion stopped being the best setting for special needs students (p. 1).

Administrators were important in maintaining successful inclusive settings and support for the general and special education teachers (Friend, 2008a). Pitts Santoli et al. (2008) stated that support of administration could affect the perceptions of successful inclusion by the teachers. Friend (2008a) stated that administrators could create a positive or negative inclusion setting by the support or lack of support the administrators provided. Seay et al. (2010) found when the school administration adequately supported inclusion; it also affected the support of the teachers, parents, and the community.

Pearpoint (n.d.) believed inclusion encompassed the many "talents" that special education students lacked in a different placement. According to Staub (n.d.), inclusion

was a benefit to the general education students by building relationships with special education students. When the combination of general education and special education students are created, new ideas and implementations are discovered and put into place (Pearpoint, n.d.).

Hines (2001) found in the research that social skills improved in the inclusion setting along with an increased feeling of self-accomplishment. Seay et al. (2010) added to Hines' (2001) findings that special education students placed in the general education classroom showed no affects in the learning of the general education students. Inclusion assisted the general education students by incorporating a variety of teaching practices within the classroom (Hines, 2001) and Seay et al. (2010) found that special educators felt mixed opinions on how co-teaching classrooms worked, which detailed Hines' (2001) findings. Hines (2001) found mixed reviews regarding the success of inclusion and Seay et al. (2010) reported that inclusion students made gains in reading while the researchers witnessed an increase of behavior concerns and lower self-esteem and special needs students, not in the inclusion placement, experienced Mathematics gains and an increase in peer acceptance. Hines (2001) stated that the inclusive setting helped the general education students gain the acceptance of students with special needs while Seay et al. (2010) found that pullout classrooms lacked satisfactory progress for students with special needs. Some studies revealed academic success while others expressed that special education students were isolated and became easily frustrated in the inclusive setting (Hines, 2001) yet some special education classes could be a reason for lowered expectations for students with mild disabilities (Seay et al., 2010).

In regards to the behavior concerns of special education students, fewer incidences occurred in the inclusive classroom in comparison to the exclusive special education classroom (Hines, 2001). Modifications and accommodations were a necessary part of effective inclusion (Price et al., 2000-2001). According to the Individuals with Disabilities Act of 1997, all special education students were to be in contact with general education curriculum, in addition to the special education students, showing progress made each year (Pitts Santoli et al., 2008). Even with IDEAs pressure on school districts for Least Restrictive Environment (LRE), regarding special education students, inclusive classrooms and co-teaching classrooms were inadequate for all students with special needs (Murawski, 2010). At the national level, there were at least 50% of students in upper elementary and middle schools in general education classrooms (Staub, n.d., p. 1). Even though special education students were unable to follow along with their grade level peers in the inclusive classes, courts ruled that the inclusive setting was, still beneficial based off the social aspect (Price et al., 2000-2001).

Inclusion, as determined by researchers above, is the act of special education students learning general education curriculum in the general education setting (Florida State University Center for Prevention & Early Intervention Policy, 2002). Many districts utilize inclusion as a part of Response to Intervention (RTI), which are intervention strategies to assist students when struggling with instruction (Stanard, Ringlaben, & Griffith, 2013). Friend (2008b) defined co-teaching as a method utilized in an inclusion setting.

Co-Teaching

As stated previously, co-teaching was one form of teaching that took place within an inclusive setting (Friend, 2008b). Rea and Connell (2005) defined co-teaching as “a general and special educator [who] worked together to teach a group of predominately nondisabled students along with disabled ones” (p. 29). Nichols, Dowdy, and Nichols (2010) defined co-teaching as “collaboration between a general education teacher and a special education teacher” (p. 647).

Beninghof (2012) compared co-teaching to a “kaleidoscope” in the sense that co-teaching was viewed differently by each person and frequently changed. “Inclusion was not co-teaching and co-teaching was not inclusion” (Fitzell, 2010, p. 1) which was easily confused by many teachers and administrators. Murawski (2009) defended that co-teaching and inclusion lacked a similar definition; co-teaching was defined as two teachers in a classroom with students of a variety of needs and inclusion was defined as a classroom of students with many needs.

Proper co-teaching was defined as the special education teacher and general education teacher maintaining equal roles in the classroom; however, this was inconsistent through a variety of educational settings (Nichols et al., 2010). Friend (2008a) stated that co-teaching was one of the most effective ways of utilizing an inclusive setting for general, special and gifted students. “The greatest promise of co-teaching was the teachers’ ability to provide academic and behavioral support for all students” (Sileo & van Garderen, 2010, p. 15). Co-teaching focused on grade level curriculum with modifications and accommodations as needed, providing special education students’ time in the general education classroom setting to learn the grade

level academics with more success (Wilson & Michaels, 2006). Co-teaching classrooms could have a varying array of educational professionals from specialists and teachers in any content and grade level (Murawski, 2010). “Learning to co-teach was a developmental process” (Graziano & Navarrete, 2012, p. 120).

Dieker and Murawksi (2003) found that “because the effectiveness of co-teaching appeared to rely heavily on the relationship between teachers, researchers have been hesitant when they attempted to measure outcomes” (p. 10). Co-teaching effectiveness for educating students with special needs was lacking (Esteves & Rao, 2008). Each state had its own wording for co-teaching: “collaborative teaching, consultative content teaching, shared instructional responsibility, collaborative special education, instructional consultation, and team teaching” (Muller et al., 2009, p. 2). The terms collaboration and inclusion were utilized in the definition of co-teaching, however were not used as synonyms to the term co-teaching (Friend, 2008a). Table 1 lists the breakdown of Friend’s (2008a) definitions of the varieties of co-teaching models. A public education department in New Mexico stated that co-teaching, collaboration, team teaching, and inclusion lacked the same meaning (Cook, 2004) which resulted in a difference of opinion of a few researchers.

Table 1.

Definitions of Co-Teaching Types

Term	Definition
One Teach, One Observe	Recommended occasionally in the co-teaching classroom and was when one teacher was primarily involved in the instruction, which was usually the general education teacher, and the other teacher was observing and collecting data, which was usually the special education teacher.
Station Teaching	Recommended often in the co-teaching setting. This was when the general education and special education teacher split the classroom in a least two sections that was completing different tasks and would rotate between all of the sections or stations where the general education and special education teacher would receive time with each of the students in smaller settings within the whole class.
Parallel Teaching	Recommended often in the co-teaching setting. This was when the general education and special education teachers were teaching the same material in two different groups. This method assisted the teachers in addressing the variety of learning styles and levels of the students in the class.
Alternative Teaching	Recommended occasionally in the co-teaching setting. All of the students would receive the whole class instruction from one or both of the teachers and then any students that may require enrichment or more assistance on the topic the general education or special education teacher could take the smaller group to work for a short period. The smaller group did not leave the classroom.
Teaming	Recommended occasionally in the co-teaching setting. Both teachers were teaching the whole class at the same time, interjecting as information needed further explanation or information. This technique gave both teachers the same responsibility and both present during instruction. This was usually a technique used when the general education teacher and special teacher have co-taught together for some time and felt comfortable with each other.
One Teach, One Assist	Rarely used in the co-teaching setting.

Note. Table developed based on information found within “Co-Teach”, written by Friend (2008a).

Collaboration, inclusion, and co-teaching were interchangeable in some studies; however, each term had a slightly varied meaning and not interchangeable (Friend, Cook, Hurley-

Chamberlain, & Shamberger, 2010). Sileo and van Gerderen (2010) disagreed with Friend et al. (2010) and identified team teaching, alternative teaching, parallel teaching, station teaching, and one teach, one assist as types of co-teaching. Beninghof (2012) recognized Bruce Tuckman, a psychologist, who developed four levels of co-teaching: “Forming, Storming, Norming, and Performing” which are comparable to Murawski (2009) who compared the stages of co-teaching to a relationship; dubbing the terms dating, engagement, wedding, and divorce, which are further defined in Table 2.

Table 2.

Stages of Co-Teaching Classroom Development

Stage	Definition
Dating	General and Special Education Teacher meet and work together in the classroom with generic plans and ideas mostly given to the teachers.
Engagement	Showed the commitment between the general and special educator and that sharing of thoughts and techniques would take place.
Wedding	Co-teaching was becoming more successful with the general and special educator working through all situations.
Marriage	Co-teaching was working with automatic changes made by the general educator or special educator.
Divorce	When co-teaching setting shows no benefit even with many techniques used and administrator assistance.

Note. Developed from Murawski (2009).

Co-teaching was the shared responsibility of the general education and special education teachers to ensure that all students in the class were learning the curriculum and achieving the same goals not defined as special education and general education students learning in one large group (Luckner, 1999). According to Murawski (2009), a special education teacher in the classroom was not consistently defined as when the general education teacher and special education teacher shared all of the responsibilities.

“Co-Teaching abandoned the definition of instructional strategy or technique; it was a method by which educators could work collaboratively to deliver quality instruction” (Murawski & Hughes, 2009, p. 270). Parity between the general education and special education teachers required planning, teaching, grading for students to be successful (Conderman, Bresnahan, & Pederson, 2009; Murawski, 2010). The co-teaching model was implemented differently depending on whether it was in an elementary, middle school, or secondary level, by the number of special education students that were in the classes and how the special education teachers were placed in a co-teaching setting (Friend, 2007). Teachers and administrators needed to be cognizant that co-teaching was a technique not established in the 1990s and 2000s, yet a technique used to include special education students that was developed using the team teaching strategies that began in the 1960s (Luckner, 1999; Villa, Thousand, & Nevin, 2008). In 1975, when the Individuals with Disabilities Education Act (IDEA) was signed into law, least restrictive avenues of teaching students with special needs were examined more closely (Esteves & Rao, 2008).

Since 1975, public schools have moved from a position recognizing that students with disabilities were entitled to a free and appropriate education with adequate support services to one in which the placement of such students superseded the concerns about the quality and type of service provided. (Austin, 2001, para. 3)

Even though the federal guidelines of IDEA were in place, the state education agencies (SEAs) had their own ways of implementing IDEA (Muller et al., 2009). What first appeared as an opportunity for special education students to be in the general education classroom had become a “legal right” as stated within the Individuals with

Disabilities Education Act (IDEA) and No Child Left Behind (NCLB) (Esteves & Rao, 2008). In the 1970s, co-teaching was implemented in a variety of populations in the general education classroom setting due to the legislated schools guidelines (Villa et al., 2008). According to Villa et al. (2008), it was in the 1990s when research findings on the successfulness of co-teaching began to be published. Due to IDEA 2004 and standardized testing, special education students were now required to learn the curriculum that their general education peers completed (Dieker & Murawski, 2003). The interest and implementation of co-teaching had increased in the past 10 years (Friend et al., 2010).

Before co-teaching implementation, all stakeholders needed to have the basic knowledge, goals, and expectations of co-teaching classrooms (Wassell & LaVan, 2008a). Parents, teachers, and administrators had the misconceptions that since there were special education students in the classroom that the rigor of the teaching lacked the strength found in a general education classroom (Beninghof, 2012). Murawski (2010) and Beninghof (2012) agreed that parents need communication from administration and teachers regarding the students' being placed in a co-teaching classroom so the absence of misconceptions of how a classroom was ran would be evident. Determining the number of students in the co-teaching classroom needed careful planning by all stakeholders involved in scheduling and teaching in the classrooms; co-teaching classrooms were the best locations to place a large number of students with varying needs creating a struggle for those working within co-teaching classrooms (Beninghof, 2012). McDuffie, Mastropieri, and Scruggs (2009) found that co-teaching classrooms needed to be more than a set of diverse teaching strategies, textbook lessons, and the general

education teacher controlling the classrooms with the special education teacher focused on behaviors. “Co-teaching was more in depth than one person teaching one subject followed by another who taught a different subject” (Villa et al., 2008, p. 4). In order for co-teaching and collaboration success, all stakeholders needed to have a shared vision, goals and commonality in what the outcome of the program would be (Madigan & Schroth-Cavataio, 2011).

Co-teaching was a beneficial technique of teaching that administrators needed to incorporate into their districts with the realization that not all students would benefit from co-teaching; and smaller groups were best in some situations, depending on each individual need of students with special needs (Friend, 2007). Co-teaching was used for the benefit of general and special education students, not for the comfort of administrators and teachers (Little & Dieker, 2009). Dieker (2001) determined that elementary co-teaching was easier to implement due to the ease of content delivery. Dieker and Murawski (2003) added to Dieker’s (2001) previous research and added that elementary and secondary co-teaching scenarios lacked the capability of comparisons from one co-teaching scenario to another due to the knowledge of content at each area being widely varied. Magiera and Zigmond (2005) researched co-teaching in which all of the co-teaching assignments were new to the program or had only participated for a short amount of time, which influenced the ability of the teachers and the success of the students by not offering the proper teacher training. Wilson (2008b) emphasized that even though co-teaching was a successful way of educating special education students; there was a correct way that ensured student success or a wrong way of instructional delivery in which the educators and the students both suffered. Kohler-Evans (2006)

believed that co-teaching was a good method, however, not implemented across the board for all students. An increase of incorporating co-teaching with general education was taking place in the observed classrooms (Muller et al., 2009).

Districts in Florida were utilizing co-teaching classrooms not only as a way for special education students to be in the general education classroom, but also as a strategy to lessen the teacher to student ratio (Sutton, Jones, & White, 2008). There were differencing opinions between general education and special education teachers on how special education students learned and the special education students' placement in the general education classroom co-teaching setting (Sileo & van Gerderen, 2010). In order to follow the federal laws, many schools were utilizing co-teaching as a form of inclusion of the special education students (Embury & Kroeger, 2012). Florida school districts at one time used co-teaching classrooms as a method to lessen the student to teacher ratio, which the Florida state education school board has since discouraged districts from doing (Sutton et al., 2008). Special education students who had significant disabilities or delays lacked consideration of placement in co-teaching placements (Wischnowski, Salmon, & Eaton, 2004). Response to Intervention (RTI), defined as a pyramid of intervention strategies to assist students when struggling with instruction (Stanard et al., 2013), was utilizing co-teaching as a strategy within the tiers of assistance when encountered with students who had academic difficulties (Murawski & Hughes, 2009). A shortage of special education staff could make implementing co-teaching difficult at the elementary level due to the number of classes and the likelihood that special education students were in the general education classroom throughout the day (Fitzell, 2010).

Co-teaching could be an all-day implementation in elementary school, partial day in the general education classroom or an entire class period at the secondary or elementary level (Friend et al., 2010). Co-teaching faced a variety of complications depending on implementation at the elementary or the secondary level (Fitzell, 2010). Special educators needed certification in special education as well as in a content area to teach within the co-teaching classroom; however, this was difficult to obtain at the secondary level due to the larger spectrum of areas of teaching in comparison to the elementary level (Dieker, 2001). In addition to added certification needs for special education teachers (Dieker, 2001), Friend (2007) suggested that secondary co-teaching classrooms should have less than half of the students that were special education and less than a third in the elementary classroom. The secondary classrooms settings showed a trend of increased implementation of co-teaching, however not as much as in the elementary setting (Graziano & Navarrete, 2012).

Co-teaching experiences and education were prevalent at the college level for educators continuing their education (Bacharach, Heck, & Dahlberg, 2008). Acknowledgement of the study of co-teaching at the college levels have been taking place equipping new educators with the knowledge of how to run a co-teaching classroom (Brinkmann & Twiford, 2012). Participation in co-teaching during student teaching made student teachers more comfortable and confident in co-teaching classrooms, collaborative planning times, teaching time, and discussing positive and negative occurrences and building from all experiences professionally (Wassell & LaVan, 2008b). Dieker and Murawski (2003) envisioned that the implementation of co-teaching education in universities in addition to co-teaching in-services were valuable

ways to have all educators prepared to implement co-teaching effectively. Due to the comfortableness in the co-teaching setting during student teaching, these teachers were less likely to attempt risks and contained less self-confidence when teaching independently (Wassell & LaVan, 2008b). Co-teaching practice for student teachers was becoming more prevalent in universities and student teachers' shared ideas and assisted in proper co-teaching program models (Murphy, Carlisle, & Beggs, 2008). McDuffie et al. (2009) found in their observations that the majority of co-teaching classrooms utilized the team teaching and one lead, one-assist methods that co-teaching expert Friend had defined in many studies. The opportunity for special education teachers and general education teachers to visit school districts with successful collaboration and co-teaching programs in place assisted the teachers to obtain a better understanding of how successful implementation could benefit all stakeholders (Madigan & Schroth-Cavataio, 2011).

Teachers, at various times, lacked the choice to co-teach, but rather were instructed to participate in this type of instructional model by the administration of their district (Kohler-Evans, 2006). Co-teaching could be stressful and difficult at the beginning of the relationship between a general education teacher and special education teacher, however this became less noticeable by all stakeholders the longer the co-teaching experience occurred (Benninghof, 2012). Viewpoints of teachers involved in co-teaching model varied depending on if they had a voice in deciding on placement in a co-teaching class (Nichols et al., 2010). "A co-teaching classroom should have given each teacher the equal amount of work space and enough room for adaptive equipment and space for students and teachers to move around" (Rea & Connell, 2005, p. 33). Co-teaching staff assignments were "willing to be a participant in the program, not selected

by administrators or other educators, and often resulted in an increase of academic success” (Walther-Thomas, Bryant, & Land, 1996). General education and special education teachers, when beginning a co-teaching setting, had positive and negative outlooks on the effectiveness of the program (Tandon et al., 2012). Co-teachers needed to feel confident about utilizing assessment to determine whether the co-teaching classroom were beneficial and compared to the assessments of students not in co-teaching classrooms (Dieker & Murawski, 2003). Co-teaching provided teachers the opportunity to share ideas and philosophies as well as discussions that could have improved or assisted in the learning of students in the classroom (Wassell & LaVan, 2008a). Teachers going into the co-teaching environment could often have misperceptions of the co-teaching knowledge and education that each person brought into the environment (Noonan, McCormick, & Heck, 2003). The general education and special education teachers in a co-teaching setting needed to maintain the assignments in the co-teaching classroom without much, if any, altering of assignments due to being a part of whole group instruction in the general education co-teaching setting (Fattig & Taylor, 2008).

According to Villa et al. (2008), paraprofessionals, therapists, or any other professional that serviced specific special needs in the general education classroom were examples of co-teaching. Fitzell (2010) retorted other studies that co-teaching needed to contain two certified teachers who assisted with instruction in the general education classroom. Conderman et al. (2009) agreed that co-teaching could take place with numerous varieties of certified professionals that could minimize the amount of time the special education student was out of the general education classroom and assist the general education student population. Even though paraprofessionals in a co-teaching

classroom could be considered co-teaching, the reader must keep in mind that many of the techniques and ideas that the paraprofessionals used were obtained by a special education teacher or specialist (Villa et al., 2008). Murawski (2009) debated that paraprofessionals were good additions to a general education classroom; however, it was difficult to consider a co-teaching setting due to the paraprofessional not having the educator certification and training. Conderman et al. (2009) and Wilson and Blednick (2011) argued with many researchers that co-teaching lacked being included in the definition of a paraprofessional or anyone else who lacked certification in a general education classroom with varied needs. Fennick (2001) stated that if a paraprofessional was in the co-teaching setting, they must have their own area, be knowledgeable of the lesson plans and curriculum, and have consistent communication with the general education teacher and play an active role in the co-teaching environment following the teachers' lead. Beginning teachers could learn techniques in a co-teaching setting, even though awkward at first, to assist in building their teaching abilities when they were independently instructing a classroom (Wassell & LaVan, 2008a).

Teachers had a difference in opinion when the topics of students with behavior concerns were in the co-teaching classroom (Brinkmann & Twiford, 2012). In a study conducted by Bouck (2007), teachers believed that co-teachers needed to be "flexible and compatible in terms of philosophies and even teaching styles" (p. 46). General education teachers and special education teachers needed to be able to give each other support, criticism, and directives to make the co-teaching marriage work (Forbes & Billet, 2012). Often the general educator became the lead teacher and the special educator became an assistant teacher in co-teaching settings (Nichols et al., 2010). Bouck (2007) found that

with the increasing numbers of special education students in the general education classrooms, co-teachers had more pressure to be able to work together effectively. Some general education teachers even wondered why the special education teacher was in the general education classroom (Nichols et al., 2010). In a study conducted by Austin (2001), less than half of the teachers had offered to take a co-teaching position. Muller et al. (2009) were unable to verify that co-teaching was consistent from district to district and state to state. When co-teaching was effective, teachers and students were successful; when ineffective, the teachers and the students suffered (Wilson, 2008b).

Special education classrooms with a smaller number of students with special needs were more prevalent at the secondary level due to the level of content taught in the general education class and the fact that more assistance was needed for some students to learn (Wilson & Blednick, 2011). All special education students had the right to have the opportunity in public school classes and clubs that met the needs of each individual and were readily assessable (Esteves & Rao, 2008). With there being more than one teacher, the number of students to teachers was reduced and could assist the special education students exhibiting frustration in the general education setting (Magiera & Zigmond, 2005). Embury and Kroeger (2012) recognized that co-teaching was a method that assisted in addressing the academic needs of all students in the general education classroom. Co-teaching gave special education students the opportunity to acquire general education academics while they could still receive accommodations and modifications in order to be successful (Friend et al., 2010). Although co-teaching deemed a successful technique in instructing special education students (Magiera & Zigmond, 2005; Wilson, 2008a), there were numerous factors that made success of

students not as significant. Student participation was a vital part of success in the inclusive co-teaching classroom (Friend, 2008b).

Administrators played an integral role in co-teaching and most had the knowledge of how co-teaching should have been integrated (Rea & Connell, 2005a). Special education students were now to be in the general education setting, receiving grade level instruction, and were required to show evidence of success (Wischnowski et al., 2004). Instruction tailored to the needs of each student were embedded in a co-teaching setting (Magiera & Zigmond, 2005) while not all special education students needed to be in all co-teaching classrooms (Fitzell, 2010). Student assessments and standardized testing scores were two ways that co-teaching benefits could be measured; however, administrators could examine results of co-teaching by surveys completed by the staff and students, discipline referrals, and attendance rates (Friend, 2007).

Professional Development/Training/Collaboration

Teachers mistake collaboration as a way to minimize the difficulty for the special education students when collaboration was to establish goals and find ways for special education students to have learned grade level curriculum (Murawski, 2010). Once a district had researched and decided to implement a co-teaching program, the building level administrators and teachers needed to have time to learn about co-teaching through professional development and possible observations of successful co-teaching scenarios (Walther-Thomas et al., 1996). Murawski (2009) observed districts that had utilized small learning communities; school within a school; that exhibited benefits in the relationships between the general education and special education teachers as well as a better knowledge of the needs of all students, making planning, suggestions, and

conferences a positive experience for all involved. School administrators played a key role in co-teaching, as they were the primary source of scheduling, problem-solving, and professional development preparation (Friend et al., 2010). Magiera and Zigmond (2005) found that there was difficulty with assessing success when there was limited or inconsistent professional development of co-teachers.

Co-teachers had a difficult time finding adequate time to conduct collaborative planning sessions to make co-teaching more successful (Forbes & Billet, 2012). Having time for collaboration was a concern for the general education and special education teacher in the co-teaching setting (Dieker, 2001). Without the proper joined plan time of the co-teachers and the lack of training, student learning was effected (Magiera & Zigmond, 2005). The largest difficulties were lack of professional development involving co-teaching, common planning times, and the lack of buy-in from the administrators or co-teachers (Piechure-Couture, Tichenor, Touchton, Macisaac, & Heins, 2006). Planning for highly qualified professional development at the district level was vital for successful co-teaching programs (Walther-Thomas et al., 1996) and administrative support to ensure that co-teachers had time to plan and discuss students in need in the classroom was essential (Forbes & Billet, 2012). A lack of planning time for co-teachers was one of many barriers that school districts faced when implementing a co-teaching program (Tandon et al., 2012). Professional development, common planning times, and trainings were beneficial to change how teaching took place, without this, the teaching lacked variation when only one teacher was in the classroom (Magiera & Zigmond, 2005). According to a survey involving a couple of dozen schools randomly selected by location and size by Nichols et al. (2010), the majority of the schools denied

offering professional development before the implementation of co-teaching made co-teaching difficult to be successful.

Co-teachers required professional development to acquire techniques for successful co-teaching that administrators arranged (Brinkmann & Twiford, 2012). Tobin (2005) found that more collaborative planning time and support from administration did benefit co-teaching programs. Co-teachers needed the support of their administrators in providing collaboration time with other co-teaching teams to share strategies that helped with the increase in student achievement (Brinkmann & Twiford, 2012; Styron & Nyman, 2008). Some administrators did not realize the need for extra planning and professional development time, both necessary for successful co-teaching programs, which resulted in a lower success rate (Villa et al., 2008).

In order for co-teaching to be effective, the two teachers needed to be able to have the time to plan collaboratively, teach together, and assist with the assessing and grading of all of the students in the classroom (Fitzell, 2010). Even though a co-teaching program placement occurred, if the general and special education teacher lacked high quality professional development, collaborative planning time, and observations of proper co-teaching methods, the program would have faults and be unsuccessful (Mastropieri et al., 2005). Adequate time for planning and devising lessons in the co-teaching classroom was a difficult task for school districts (Villa et al., 2008). Professional development is a necessity for anyone involved in any aspect of co-teaching; should begin before co-teaching is originated in a district, and should be ongoing throughout the co-teaching program (Murawski, 2010; Perez, 2012).

“When co-teachers attended professional development and met collaboratively, they had more ownership and felt better prepared to utilize the co-teaching classroom setting” (Indrisano, Birmingham, Garnick, & Maresco, 1999, p. 84). Without the necessary professional development, teachers lacked utilization of all of the tools in order to make a co-teaching setting successful (Tobin, 2005). Co-teachers experiences increase benefits with an increase in time spent on collaboration (Wischnowski et al., 2004). Co-teachers were more comfortable when they had the opportunities to talk to other co-teachers and were active participants in professional development pertaining to co-teaching (Magiera & Simmons, 2005). More planning time was beneficial for the teachers as well as the students learning in the co-teaching setting (Wischnowski et al., 2004). General and special education teachers envisioned co-teaching as a successful form of educating students; however, if they did not receive the proper time to plan or professional development, the teachers’ visions were unobtainable (Austin, 2001). “Planning, instruction, and evaluation” of co-teaching classrooms by the general education and special education teachers were necessary for a successful setting (Villa et al., 2008, p. 5). Special education teachers observed that Highly Qualified Professional Development (HQPD) was important before co-teaching was to occur, however the general education teachers did not see benefit or need to participate in HQPD (Austin, 2001). Simmons and Magiera (2007) suggested the following, to increase success in co-teaching classroom settings: (a) offer trainings in which both teachers of the co-teaching team can participate; (b) provide time during the week for teachers to discuss how the co-teaching classroom can function; (c) complete observations of other co-teaching settings

within the district; and (d) special education staff having the ability to participate in subject area meetings.

Advantages of Co-Teaching

Schools at all levels, including colleges utilized co-teaching due to the success that co-teaching exhibited at all grade and subject levels in public school (Bacharach et al., 2008). In order to begin an effective co-teaching situation there needed to be a well thought out plan in place as well as the co-teaching classes determined before other scheduling occurred so that the teachers had more time to collaborate and devise plans and techniques to make the co-teaching classes run smoothly and result in student success (Dieker & Murawski, 2003). A meeting in preparation for co-teaching scenarios gave both the general education and special education teachers an improvement in success and commonality (Duchardt, Marlow, Inman, Christensen, & Reeves, 1999).

Districts should refrain from making all classrooms co-teaching environments; a combination of co-teaching and non-co-teaching classrooms exhibited the most success for students and teachers (Wassell & LaVan, 2008a). Kamen's (2007) research noted success for students and teachers when a co-student teaching situation was arranged during student teaching. Benefits to co-teaching, during student teaching, were with two professionals in the classroom to gain a better collection of student successes, assist with student needs, and increase discussions to assist the students and ensure that academic and social gains were higher (Villa et al., 2008). Classroom management and design (open areas for movement, two teacher work areas, available space for needed accommodations) are just as important as providing a common plan time for the teachers to have a sense of belonging and for an effective learning environment (Rea & Connell,

2005b). Not only does common plan time and consistent collaboration need to take place for effective co-teaching, restructuring the curriculum by the general and special education teachers in all classrooms needs to take place (Fennick, 2001).

Luckner (1999) found that observations of successful co-teaching classrooms occur without the visitor or observer realizing which teacher was the special or general education teacher. A study conducted by Austin (2001) discovered that special education teachers and general education teachers felt that co-teaching increased the quality of their teaching practices. Upon analysis of surveys given to teachers “77% stated that co-teaching influenced student achievement” (Kohler-Evans, 2006, p. 261). All 77% of the teachers commented that co-teaching was a good idea and resulted in student success (Kohler-Evans, 2006). A case study completed by Simmons and Magiera (2007) indicated that co-teaching implementation differed from classroom to classroom. In addition, each of the observed techniques seemed successful based on the particular observation checklist utilized, which, “decreased referrals to intensive special education services, increased overall achievement, fewer discipline problems, less paperwork, increased number of students qualified for gifted and talented education, and decreased referrals for behavioral problems” (Villa et al., 2008, p. 14). These areas have seen success with co-teaching implementation

It is helpful when administrators play an active role in co-teaching environments by conducting observations, meeting with the teachers to discuss student success and what needs to be improved, as well as offering feedback and recognition for the efforts placed into successful co-teaching classrooms (Luckner, 1999). Madigan and Schroth-Cavataio (2011) placed emphasis on administrator involvement in establishing common

goals and plans for co-teaching classrooms in addition to supporting the staff and offering learning experiences and common meeting times to establish a successful co-teaching setting in which the general and special education teachers feel comfortable and confident. Active communication between administration and the co-teachers is vital for a successful program (Villa et al., 2008). Rea and Connell (2005a) stated successful co-teaching includes administrator buy-in of the program and common plan time and goals.

The study conducted by Austin (2001) found that special education teachers and general education teachers perceived that even with academic gains of students in the co-teaching classroom, the co-teaching placement was a way to increase social acceptability. Successful co-teaching pairings of teachers were professionals who were supportive of each other, had basic knowledge content, the same goals and teaching ideals, and not forced to be in a co-teaching environment (Wassell & LaVan, 2008a). Effective co-teaching settings required that the special educator and general educator have similar ideologies in teaching (Tandon et al., 2012). “Gracious professionalism referred to the blending of determination, respect, high quality work, and valuing of others. Teachers embodied the characteristics of gracious professionalism would be most successful at co-teaching” (Benninghof, 2012, pp. 525-526).

Friend (2007) implied that elementary special education teachers, to be successful in co-teaching, needed to be limited to one or two grade levels, however lack of special education staffing could hinder this option. General and special education teachers in the co-teaching setting needed to be able to have a positive relationship for co-teaching to have had the best outcome for student achievement (Mastropieri et al., 2005). Wassell and LaVan (2008b) found that general education teachers appreciate the support of

special education teachers in the classroom with them as another adult who observes the special education students and assists with any difficulties the special education students has with the subject matter. The more time the co-teachers can invest in the co-teaching program, the more success for the students (Magiera & Simmons, 2005).

The co-teachers need to have clear and concise goals and objectives from both the general education and special education standpoint so that all parties involved know the expectations and what are desired to be achieved in the classroom in order to ensure success (Dieker, 2001). For co-teaching to be successful, the general education and special education teacher needs to work together and build off the strengths of one another to increase the learning of all of the students in the co-teaching classroom (Dieker & Murawski, 2003). In order to have a successful co-teaching experience, the special educator and general education teacher needed to know about each other's teaching strategies, classroom goals, and expectations of the co-teaching setting (Fattig & Taylor, 2008). General education teachers have seen a benefit of co-teaching as the special education students remain in the co-teaching classroom instead of being pulled out of the general education classroom for therapies and services that were made to aide in special needs students' education. (Luckner, 1999). Two teachers in the classroom provided both educators more time to work individually or in small groups, so all students acquire the content more effectively (Wassell & LaVan, 2008a). Special education teachers assist with the strengthening of life skills in the general education classrooms for special education students where the primary focus for general education teachers is to focus on the content, making the use of common collaboration time a necessity in order for co-teaching to be successful (Dieker & Murawski, 2003).

The general education and special education teachers need to be willing to participate in the co-teaching setting as well as become a vital part of all planning, collaboration, curriculum design, and discipline (Fennick, 2001). Two teachers in a class can increase the student success and classroom management when effective collaboration is taking place (Dieker & Murawski, 2003). Luckner (1999) emphasized that even though co-teaching has significant benefits, the teachers involved need to recognize that co-teaching requires more time, planning, communication, and assessment to maintain success. Teachers see that the professional development and working closely with another professional as beneficial due to the co-teaching program (McDuffie et al., 2009).

Teachers realize that co-teaching has numerous benefits such as students received multiple techniques to increase their learning, more time for the teachers to work with the students, and students are able to follow grade level curriculum with needed modifications and accommodations (Indrisano et al., 1999). Co-teachers enhance their success when they take part in trainings, joined planning times, and times to meet with other co-teachers to discuss strengths and weaknesses (Magiera & Simmons, 2005). Co-teachers benefit from observations and discussions with fellow co-teachers in order to determine what successful co-teaching classrooms are and where improvement is needed (Bennett & Fisch, 2013).

In a study conducted by Dieker (2001), a majority of student surveys revealed the benefits in being in a classroom with more than one teacher. Students in a co-teaching class perceived they received more assistance, improved acceptance of others that resulted in an increase of student academic understanding (Friend et al., 2010). “Co-Teaching in its most effective form can promote equitable learning opportunities for all

students” (Graziano & Navarrete, 2012, p. 109). Co-teaching classrooms not only benefit the special education students academically and socially, but the general education students (Styron & Nyman, 2008). Co-teaching has increased academic success with special education students, but also has increased self-perceptions and social skills (Walther-Thomas et al., 1996). Students benefit from co-teaching by seeing a successful pair of teachers working together and achieving the same goal as well as show all students how to socially and professionally work with peers to match how the teachers are working together (Luckner, 1999). Special education students in the co-teaching classroom are capable of learning the grade level curriculum, however, need accommodations or modifications to the class in order to be successful (Fitzell, 2010). According to the student input received by Dieker (2001), co-teaching is received as positive by the majority of the students at the middle school and high school level, students perceived they are learning more and receiving increased assistance in class with assignments.

Studies showed that co-teaching is a beneficial way to have special education students in the general education classroom appease the NCLB guidelines as well as a solution to the larger class sizes that many school districts encounter due to the cut backs of finances from the government at the state and federal levels (Dieker, 2001; Hillsman Johnson & Brumback, 2013; Noonan et al., 2003; Piechure-Couture et al., 2006). Based on the study completed by Wilson and Michaels (2006) the majority of students reported that they perceive more support in the co-teaching classroom and are adequate learning academics. According to research completed by Gillespie and Israetel (2008), students found, they have more success and confidence in a co-teaching classroom in comparison

to the more secluded classroom settings. Special education students benefit more from the teacher interactions whereas the general education students' interactions and participation show no variance in a co-teaching or a non-co-teaching classroom (McDuffie et al., 2009). Murawski (2010) observed that students in the co-teaching classroom have better achievement when given the opportunity to express how they wanted to learn due to the feeling of having a voice and assistance in how the classroom is conducted. The students in a co-teaching classroom all learn differently and have their own needs, which needs to be considered when lessons are being developed and possible groupings occur in the co-teaching classroom (Perez, 2012). Saloviita and Takala (2010) found that more than one teacher in the classroom increased the success of students due to the increase of assistance from teachers.

Co-teaching settings seem to assist in the increase of academic success of the general education and special education students; however, the amount of teacher interaction with the students exhibit no change whether the students are in a co-teaching or a non-co-teaching classroom (McDuffie et al., 2009). McDuffie et al.'s (2009) findings contrast previous research from Fontana (2005), which found increased Mathematics and Communication Arts scores for general and special education students when they received their lessons in a co-taught classroom. McDuffie et al. (2009) determined that usually students in a co-teaching classroom obtain higher scores in subject level and state level tests. Graziano and Navarrete (2012) added on to McDuffie et al.'s (2009) finding of state level tests by examining the course evaluations from their co-teaching classes and resulted in positive thoughts on the learning experience from the students at the college level. Co-teaching can be beneficial for all teachers and students

involved, however vary depending on the type of class that co-teaching is taking place (Sileo & van Gerderen, 2010). Co-teachers need to research experts in co-teaching like Friend (2008a; 2008b) in order to ensure the success and benefit of the co-teaching program.

Most parents of general education and special education students believe that co-teaching is a positive way to be academically successful (Tichenor, Heins, & Piechura-Couture, 2000). Wischnowski et al. (2004) surveyed the parents of the general education and special education students in regards to the co-teaching program, in which there is overall praise on the program and the parents of secondary students perceive that the co-teaching program is still working towards full implementation and success, which agree with the findings of Tichneor et al. (2000). In addition to academic gains in the co-taught classrooms, parents notice increased social skills and self-esteem in their children placed in co-teaching classrooms (Tichenor et al., 2000). Even though the parents of general education students are concerned with academics being limited in the co-teaching classroom, Wilson and Blednick (2011) confirmed that all students in a co-teaching classroom see benefits when the proper co-planning, collaboration, professional development, and teamwork of the co-teachers take place. Perez (2012) found that co-teaching was the most successful technique of learning for special education students, when done correctly in its entirety.

Negatives of Co-Teaching

Special education students placed in the general education classrooms to keep up with the guidelines of NCLB instead of looking at the best placement for the student lack successful implementation, according to Austin (2001). Scheduling conflicts make co-

teaching classrooms difficult to staff at the secondary level due to the new highly qualified teacher qualifications (Fitzell, 2010). Co-teaching rosters need to be hand scheduled to make sure that there is a lack of overabundance of behavior concerns, special education, medical concerns, or gifted students within one classroom or the success rate can decrease (Walther-Thomas et al., 1996). General and special education teachers recognize that co-teaching can be beneficial for general and special education students; however, the teachers see negative pieces of co-teaching program implementation (Tandon et al., 2012). If a school has the consideration of high risk, it can be difficult to hire and maintain highly qualified teachers for the desired positions (Cullen, Levitt, Robertson, & Sadoff, 2013).

In addition, when the increase in standardized testing is used as a gauge in student learning and teacher educating capabilities, this makes co-teaching difficult due to the amount of content that the teachers must have to teach in a short period of time (Dieker & Murawski, 2003). Dieker and Murawski (2003) were opposed to teaching at a more relaxed pace to ensure that all students were obtained the information and gained a beneficial learning experience. Wischnowski et al. (2004) found that students with multiple discipline referrals have a placement in a setting other than co-teaching and that over half of the referrals of the students are from special education students in the co-teaching classroom.

Dieker and Murawski (2003) determined that co-teaching lacks the consistent view as a positive experience for general or special education teachers due to the limited support and professional development during the preparation and implementation of co-teaching. Even though Fontana (2005) documented increases in Mathematics and

Communication Arts scores for all students in co-teaching classrooms, the increases of the special education students lack significance in order to have consideration of a beneficial increase. Co-teaching at the secondary level is more difficult with the general education teacher and special education teacher making sure that the lessons and activities are appropriate for the grade level even with special education students in the classroom (Wilson & Michaels, 2006). Some subjects in the study perceived that the general education teacher is at fault, making the special education teacher feel uninvolved, when other subjects saw the special education teachers exhibit the same extent of participation in the co-teaching classroom as the general education teacher (Bennett & Fisch, 2013).

Co-teaching practices for student teachers at the university level can cause a disadvantage for the student teachers since they are required to share everything with another teacher making them feel uncomfortable and unsure of themselves when having to complete independent instruction (Murphy et al., 2008). Due to the lack of special education courses offered during undergraduate and graduate classes, administrators and general education teachers lack the opportunity to gain experience in special education, which makes it difficult to learn the variety of teaching strategies and methods for students with special needs and special education laws (Murawski, 2009).

According to a study by Bennett and Fisch (2013), teachers who observed co-teaching environments often rate the co-teaching experience high on the effectiveness scale, however, the narratives that coincided with the scale are more negative in the interpersonal relationships between the general and special education teacher. A barrier in successful implementation of co-teaching is the lack of special education staff to

exhibit adequate placement in a general education classroom (Dieker & Murawski, 2003). The difficulty of two teachers working together, having no common plan time to discuss lesson planning, and the special education teacher having no feeling of belonging in the general education co-teaching setting are all barriers of the co-teaching classroom (Fontana, 2005). “Barriers” that were noticed in the co-teaching setting included but were not limited to; students feeling that their disability was publicized in the classroom, conflict in teacher techniques in the classroom, students receiving better treatment than others, and fighting for control of the classroom (Tandon et al., 2012). Wilson and Blednick (2011) defended that a general education classroom with more than 30% of the class consisting of special education students was challenging.

Fontana (2005) witnessed a difficulty in co-teaching due to the lack of involvement and assistance from the central office and administrators in the district where Fontana’s study took place. Administrators are often hesitant to incorporate co-teaching due to the complaints of general education and special education teachers especially in regards to common collaboration times and the lack of professional development (Friend, 2007). Without the support of administrators and lack of knowledge by the administration, co-teaching is a difficult platform in education to implement due to the lack of support the teachers feel as well as the lack of assistance in making co-teaching successful (Murawski, 2009).

Administrators need to realize that just because there are classrooms with a general and special educator, the classroom lack full evidence that effective collaboration and co-teaching occur (Murawski & Hughes, 2009). Murawski (2009) expressed disappointment with how easily administrators pull teachers out of a co-teaching

classroom for meetings, paperwork, etc. Perceptions that the removal of one teacher is allowed and acceptable, breaks down the co-teaching classroom since one of the certified educators is out of the classroom, (Murawski & Hughes, 2009).

Duchardt et al. (1999) found that teachers are concerned with the implementation of co-teaching due to the wide ranges of student abilities in the classroom as well and finding collaborative time as a team. Little and Dieker (2009) analyzed that general and special education teachers are more stressed with co-teaching and exhibited signs of insecurity and fear of failure in the co-teaching classrooms even with professional development offered to them. Miscommunication, misinformation, or lack of knowledge of co-teaching makes it difficult for the general and special educators in the co-teaching classroom (Hillsman Johnson & Brumback, 2013).

McDuffie et al. (2009) found that conflicts in the personalities of the teachers working together and the lack of a common plan time make co-teaching difficult. Some general education teachers have a difficult time accepting that the special education students in the co-teaching classroom should have modifications and accommodations especially during tests (Wischnowski et al., 2004). Beninghof (2012) found that co-teaching teams without a good relationship lack exhibition of higher order thinking skills. Conflicting personalities can cause difficulties in a co-teaching setting (Forbes & Billet, 2012).

Some co-teachers are worried, even though co-teaching can assist in the academics and behaviors of the special education students, that the general education students noticed the negative behaviors (Austin, 2001). Elementary teachers see special education teachers as being inexperienced and incapable of assisting in a co-teaching

classroom and special education teachers have the fear of not being heard in a co-teaching setting (Duchardt et al., 1999). Secondary education have exhibited more difficulty with incorporating co-teaching due to special education students' exclusion from the general education classroom as a common practice (Dieker & Murawski, 2003). Co-teachers who place blame on each other, if there were faults in their co-teaching classroom, showed a breaking down of the co-teaching program and should use these faults for dialogue to develop new techniques that can work for the students (Wassell & LaVan, 2008a). Wischnowski et al. (2004) found differences in grades or success when comparing special education students in the co-teaching setting and in the more inclusive setting.

Embury and Kroeger (2012) noticed a lack of student perceptions on the success of co-teaching and theorized that if the schools would obtain student perceptions, then the co-teaching method can take place. If there is clutter in the classroom and there is a lack of space for the number of students and the teacher, the special education students may have felt out of place (Rea & Connell, 2005a). Magiera and Simmons (2005) found that a school district showed special education students have success when given the opportunity to participate in the general education classroom, in comparison to no success shown when special needs students are only in special education classrooms. Students said that the drawbacks of co-teaching are (a) an increase in accountability for completion of the assignments in class; (b) and cheating is more difficult, which is viewed as a positive by parents, teachers, and administrators, but not the students. (Friend et al., 2010).

According to Friend et al. (2010), students not in co-teaching classrooms are more successful, received more teacher assistance, and interacted more with their teachers than in the co-teaching classrooms, which differs in comparison to the above findings.

McDuffie et al. (2009) debated that non co-teaching classrooms could be more successful due to the ease of cheating in comparison to their co-teaching counterparts. Wilson and Michaels (2006) agreed with findings by Friend et al. (2010) and McDuffie et al. (2009) that students perceive as though they have an extra eye on them; frequently making cheating difficult in a class with two teachers. Students with behavioral concerns can take the necessary teaching time from the other students and the teachers in the classroom, making that particular co-teaching setting unsuccessful (Wischnowski et al., 2004).

Special education students who left the co-teaching classroom for secluded learning lack the feeling of belonging, seeing differing treatment from one student to the next, and the special education student no longer receive grade level general education curriculum, which creates negative effects (Murawski, 2010). Even though the students stated drawbacks, the students also viewed co-teaching as a positive learning environment due to the increase of teachers in the classroom and the increase of teachers in the classroom that assisted with the clarification of curriculum (Friend et al., 2010).

Cost-Effectiveness Analysis

Cost-analysis utilization is used to determine further information on a successful program, but as a partial not complete evaluation program (Segwell & Marczak, n.d.). Cost-benefit analysis is defined as the student and data collection of varieties of programs and determining which program would give the most profit for the least amount of cost

(Entrepreneur, 2014). Ulrich, Huselid, and Becker (2001) described two types of cost-benefit analysis: operational that increases the way that a program that is already implemented benefits, and strategic that examines how to increase the employee involvement and performance. There are three types of cost analysis specifically related to a program evaluation. Cost allocation consists of establishing budgets and systems, so the financial director can determine the cost per program. Cost-effectiveness analysis assumes that programs can have a benefit and usually finds the most effective program that is the cheapest. And, cost-benefit analysis determines whether the benefits of the program “outweigh” the costs of the program (Segwell & Marczak, n.d.).

Cost-effectiveness and cost-benefit are useful tools for school districts to utilize and determine whether new programs are increasing the success of students in the classrooms (Levin, 2001). Brent et al. (2004) lacked finding sufficient research of cost-effectiveness analysis in the school setting. There are no prevalent cost-benefit analyses in education; however, examination of cost-benefit analysis is beginning due to new laws that were implemented in the United States a few years prior to the study (Viadero, 2008).

Cost-benefit analysis has been available since the 1900s and usage of cost-benefit analysis became more prevalent in the 1950s with education incorporating the most usage beginning in the 1980s; however, educators lack experience with the process (Hough, 1993). Levin (2001) found no cost-effectiveness analyses taking place in education in the 1970s, however; cost-effectiveness analysis is used more now to determine the benefits of specific educational programs. Hough (1993) discovered in the early 1990s that the use of cost-benefit analysis is prevalent in education; however, professionals in education

are still uncomfortable with the use of cost-benefit analysis due to the lack of knowledge and training.

In order to find a good program, school districts need to weigh the costs and the benefits of each program (Brent et al., 2004). School districts need to examine departments and programs and determine what is the most cost-effective instead of purchasing the cheapest, first located resources that may end up not being used and wasting district funds (Viadero, 2008). Kamens (2007) detailed one example that Viadero (2008) defined as the cost-benefit of a general education and special education teacher working together. Viadero stated that many district officials do not use co-teaching all day, due to the costs of two educators for one classroom. Brent et al. (2004) also noted special education students in the general education setting could save money within a school district. School district officials understand the meaning of cost-effectiveness however, the school district officials show no knowledge or implementation of how cost-effectiveness can be beneficial and utilized correctly (Brent et al., 2004). Some districts that claim to complete cost-benefit or cost-effectiveness analysis on programs are actually looking at the validity of the research but lack paying particular attention to the reliability of the data, which is an ineffective way to complete and utilize cost-benefit and cost-effectiveness analyses (Levin, 2001).

Beginning stages of development for a cost benefit analysis require having a clear goal that the district wants to obtain (Becker, Huselid, & Ulrich, 2006). In order to effectively implement a cost-effectiveness, or cost-benefit analysis, the data collector needs to: (a) identify the various programs the district could implement; (b) place a monetary value on each of the programs by determining the costs for employees,

professional development, and other needed supplies for the program; (c) examine the finalized expenses of the programs desired; and (d) determine which program will show the most benefit or effectiveness according to the cost (Levin, 2001). When analyzing the cost of a program, the researcher needs to examine and define the fixed costs (costs that the district has to have) and the variable costs (costs that change depending on the needs and progression of the program) for the program (Ulrich et al., 2001).

Educators will implement programs without determining whether the benefit or effectiveness was worth the costs; instead, the programs were implemented to follow what other districts are implementing or what is suggested to implement by the state (Levin, 2001). School districts need to realize that just because the program is the cheapest, the program can lack cost effectiveness (Brent et al., 2004). Individuals with the school district(s) who determine to implement or alter programs need to research and review the cost-effectiveness of the program before making final decisions on the program (Levin, 2001).

Lack of training in the educational setting to utilize the cost-benefit and cost-effectiveness analysis evaluations are the leading difficulty for ineffectiveness in school districts (Levin, 2001). Educators have a tendency to think about what will be the most beneficial for students or the costs, but rarely join the two thoughts together to grasp cost benefit of a program according to Levin (2001). School districts need to be able to have successful programs and have the ability to show they can do so without spending an overabundance of funds (Brent et al., 2004). Cost benefit analysis in education is daunting due to the expectation to analyze the cost of the employees in addition to the success rate of student in the classroom setting (Hough, 1993).

While the advantages to utilizing cost analysis are large, like determining unanticipated costs and giving a wider knowledge base of how a program operates, there are disadvantages to cost analysis in evaluation (Segwell & Marczak, n.d.). “The emergence of accountability systems in a time of fiscal stress poses, a considerable challenge for rural educators” (Brent et al., 2004, p. 238). Some administrators in school districts lack supporters of cost-benefit and cost-effectiveness analysis due to the unwanted results that may contradict what was of “common sense, popular appeal, or supporting particular constituencies” (Levin, 2001, p. 64). Cost-benefit analysis will continue in education, however, educational facilities find that alterations to develop cost-benefit into an appropriate fit for education need to take place (Hough, 1993).

Summary

The researcher originally focused on the effectiveness of inclusion as a possible research and dissertation topic, however, considering the broad category of inclusion, the researcher honed in and decided to study a one component of inclusion, co-teaching. According to the numerous articles published by Cook (2004), Friend (2008b), and Wilson (2008) co-teaching could be successful when developed and conducted in what they termed as “correct ways”. Cook (2004), Friend (2008b), and Wilson (2008b) also stated that when co-teaching lacked support and was implemented in an incorrect manner, it could be widely detrimental to the general education and special education population in the classrooms. In Chapter Three the researcher details the methodology and procedures of this study.

Chapter Three: Methodology

Rea and Connell (2005a) defined co-teaching as “a general and special educator [who] worked together to teach a group of predominately nondisabled students along with disabled ones” (p. 29). Nichols et al. (2010) defined co-teaching as “collaboration between a general education teacher and a special education teacher” (p. 647). A review of the current literature on the implementation of the co-teaching model resulted in studies that noted various adjustments for all stakeholders that lead to student underperformance on district and state assessments (Forbes & Billet, 2012). Previous implementation of the co-teaching model resulted in a spending increase leaving district leaders to question the cost-effectiveness of this instructional model (Brent et al., 2004) and found general and/or special education students underachieving in the co-teaching classroom (socially, academically, and personally) (Tandon et al., 2012).

The purpose of this study was to investigate the process and outcomes of the co-teaching model within the Smallville School District utilizing the research methodology of program evaluation (Cook, 2004; Esteves & Rao, 2008; Friend, 2008b; Hines, 2001; Kloo & Zigmond, 2008; Magiera & Zigmond, 2005; Muller et al., 2009). Smallville School District, at the time of the study, included an early childhood building, seven elementary buildings, one middle school (6-8) one alternative high school, a ninth grade center and one high school (Missouri Department of Elementary and Secondary Education, 2013b). Smallville School District provided a public education for approximately 6,200 students from early childhood to 12th grade in which approximately 89% of the students were Caucasian (Missouri Department of Elementary and Secondary Education, 2013b). For the purpose of this study, co-teaching in the Smallville School

District was defined as a general education and special education teacher working within a general education classroom to plan, implement, and assess instruction for all students (Friend, 2008a). The term general education teachers was defined as a professional with extensive knowledge in the general education curriculum, (Bar-Lev, 2000), where special education teachers are defined are teachers who work with students that have a wide range of disabilities (Bureau of Labor and Statistics, 2012). This model differed from traditional teaching methods, where one teacher conducted class with a group of students. This study intended to close the gap within the current literature related to co-teaching through the program evaluation of the co-teaching model within a rural setting, particularly by including research questions related to budgetary issues not found in the current research. The researcher measured evidence of collaboration and of High Quality Professional Development (HQPD) for the general and special education teachers which was defined as meetings, trainings, and collaborations increasing educator qualifications, (Rhode Island Board of Regents for Elementary and Secondary Education, 2010), the perceptions of those who directly participated or were involved with the co-teaching model, and a cost benefit analysis of the co-teaching model within the Smallville School District. The co-teaching model, as defined by the Smallville School District was the act of a special education teacher with a general education teacher in a general education classroom with a mixture of students that were general education students and special education students, which agrees with Friend (2008a).

Research Questions/Hypothesis:

Upon developing the study researched, the researcher determined seven research questions and one hypothesis examined throughout the data collection.

Research Question:

1. How do administrators, teachers, parents, and students perceive the co-teaching experience in the Smallville School District?
2. How are the perceptions of the administration, parents, teachers and students similar and/or different related to the co-teaching model in the Smallville School District?
3. How does the Smallville School District determine cost effectiveness of the co-teaching program?
4. How is the process of collaboration defined at the elementary and secondary teaching levels within the Smallville School District?
5. How do the MAP and EOC scores of special education students in co-teaching classrooms compare with special education students who are not participating in a co-teaching classroom?
6. How do the MAP and EOC scores of general education students in co-teaching classrooms compare with general education students who are not participating in a co-teaching classroom?
7. How has the Highly Quality Professional Development (HQPD) affected the utilization and perceptions of co-teaching?

Null Hypothesis:

There is no difference in the percentage of change, measured by student MAP scores, between special education students and general education students who participated in a co-teaching model and those who were in a regular education model in the areas of Communication Arts and Mathematics.

Alternate Hypothesis:

There is a significant difference in the percentage of change, measured by student MAP scores, between special education students and general education students who participated in a co-teaching model and those who were in a regular education model in the areas of Communication Arts and Mathematics.

Participants

The researcher investigated success of general and special education students in the co-teaching setting through classroom observation, completed surveys by the students and parents, and common assessment data at two different times of the year.

Observations in eight classrooms took place: Two classrooms at the high school level, one Communication Arts and one Mathematics, two classrooms at the middle school, one Communication Arts and one Mathematics, and four at elementary schools, two Communication Arts and two Mathematics classes. Through randomization, the researcher selected two elementary schools in the district for student and parent surveys and observations. For the purpose of confidentiality, the researcher renamed all of the schools 1 Elementary, 2 Elementary, etc. as a form of generic categorization.

The selection of participants was based on consent forms returned and they were placed into two groups; elementary (first through fifth grade) and secondary (sixth through 12th grade). The researcher then randomly selected teachers to observe in the

classroom. A total of 41 teachers and 8 administrators signed and returned the consent form. Of those, 34 teachers and 5 administrators completed an online survey. The researcher contacted administrators and teachers in the Smallville School District four times before securing an adequate number of responses.

Gathering further information consisted of conducting interviews with administrators and teachers, chosen by a convenience sample. A total of three elementary teachers, five secondary teachers, one elementary building administrator, and one secondary administrator were interviewed by one of two outside interviewers, both not affiliated with the school district in which the study took place, however, had experience in the field of education and selected by the researcher. The researcher also interviewed the Assistant Superintendent of Curriculum and Instruction and the Chief Financial Officer of the Smallville School District to obtain information about budgeting and MAP and EOC scoring results.

In the classrooms selected for observations, parent contacts took place on numerous occasions (by mail, email, and observer distributing the student survey) in order to return the consent form and the option to fill out a parent survey. Twenty-three parents agreed to complete the survey and of those, six were the parents of a child on a 504 or IEP. Thirty-two students (16 elementary and 16 secondary) completed the student surveys.

The Research Site

Smallville School District is a rural district in Missouri that contains an early childhood education building, seven elementary schools, a sixth through eighth grade middle school, a ninth grade building, a 10th through 12th grade high school, and an

alternative high school; with an approximated attendance of 6,200 at the time of the study. Approximately 89% of the students were Caucasian (Missouri Department of Elementary and Secondary Education, 2013b). Co-teaching classrooms were prevalent at the elementary and secondary high school level. Elementary classrooms had co-teaching options for social studies, Science, Mathematics, and Communication Arts. The secondary classrooms exhibited differentiation depending on the building at Smallville School District. The middle school only utilized co-teaching in a handful of Mathematics and Communication Arts classes. The alternative high school had no co-teaching classes, and the ninth grade and high school building had co-teaching classes in some social studies, Science, Mathematics, and Communication Arts classes. The Smallville School District placed the special education students in the general education classroom as much as possible with secluded classes being difficult to come across. The middle school building had more of these types of classrooms than the other buildings in the district.

Instrumentation

In order to complete classroom observations, the researcher utilized the co-teaching classroom observation tool from *The Co-Teaching Manual* by Basso and McCoy (2010). The observation tool is split into four sections; planning and preparation, climate for learning, instructional practices, and ongoing assessment strategies. Each of the questions or statements had a 0, 1, 2 ranking which was classified as not evident, somewhat evident, or clearly evident (see Appendix N for classroom observations).

The researcher utilized surveys with a Likert scale rating for all stakeholders (parents, students, administrators, and teachers) to answer some questions with additional space for further clarification on ranking and additional comments. The researcher

obtained permission from Susan Gately, a researcher who developed a rating scale for co-teachers and supervisors, by email to utilize her rating scale. All of the questions/statements on the rating scale obtained by Gately gave the option of answering 0, 1, 2, which equated into never, sometimes, or usually. The researcher also incorporated open-ended questions for the administrators and teachers to answer (see Appendix A, B, C, & D for co-teaching rating scale for elementary teachers, secondary teachers, supervisors, and added questions).

Parent surveys were created by the researcher following the Likert scale rating by parents answering “strongly disagree”, “disagree”, “agree”, or “strongly agree” on six of the eight questions. The first question asked if their child was on a 504 or IEP and the eighth question requested input on parents’ perceptions of advantages and disadvantages to co-teaching. Parents also had the option of adding additional comments under each of the questions (see Appendix E for parent surveys).

Students surveys were split into the elementary and secondary level with questions that required a “yes”, “maybe”, or “no” response. Both surveys contained opportunities for the students to add comments, however the secondary students could add comments after each question, when the elementary students could add comments at the end of the survey, due to varying reading levels at the elementary and secondary level. The verbiage of the questions also varied slightly in order to reflect the reading level difference at the elementary and secondary levels (see Appendix F for secondary student surveys and Appendix G for elementary student surveys).

Highly Qualified Professional Development guidelines and checklist were obtained from the Missouri Department of Elementary and Secondary Education (2006)

website. The researcher utilized these tools when observing professional development days in the Smallville School District (see Appendix H for HQPD tools). The researcher also added collaboration and HQPD questions to the teacher and administrator surveys. The researcher created a collaboration checklist to be completed when observing team meetings at the elementary and secondary level (see Appendix L for collaboration checklist).

Interview questions developed by the researcher were utilized when interviewing the administrators and teachers. The researcher developed the questions for each interviewee to align with the research questions. Interview questions for the Assistant Superintendent of Curriculum and Instruction, Chief Financial Officer, building administrators, and teachers were also developed and utilized (see Appendix J for Assistant Superintendent questions, Appendix K for CFO interview questions, and Appendix M for administrative and teacher interviews).

Data Collection Procedures

Once the researcher received university IRB approval, the researcher requested permission of the superintendent of the district to send surveys electronically to parents, administrators, and all teachers who participated in co-teaching within the Smallville School District (elementary, middle and high school). Students completed a paper survey, once the researcher obtained parental consent. Distribution of surveys within the classroom setting was adjusted for each level to accommodate for student comprehension of the questions asked (see Appendix F for secondary student surveys and Appendix G for elementary student surveys). The classroom teacher handed out the surveys and collected them from the students, in sealed envelopes, to send back to the researcher.

Once the surveys were returned anonymously to the researcher, and teachers had consented to observations and interviews, the researcher selected 12 participants (six elementary and six secondary) using a randomizer to observe and a convenience sample of administrators and teachers to interview. The researcher varied the subjects and levels of the teachers interviewed to gain a broad perspective of those whom worked within a co-teaching model. After the teachers agreed to the observations, interviews, and surveys, the researcher sent a consent form home to the parents for those students within the co-teaching classroom. The interviews and surveys of the students measured their perceptions of success and frustration in the co-teaching classroom and possible ideas for changes to the current process. The interviews and surveys by the parents included questions on their child's participation in a co-teaching classroom. Submissions of surveys were completed electronically by administrators and teachers within schools that utilized the co-teaching model and by paper to the parents of the students and the students in the co-teaching classroom. The survey measured the perceptions of the co-teaching program in the Smallville School District; each household completed one 10-15 minute survey.

The researcher randomly selected 12 classrooms (six elementary and six secondary) for observation purposes, 60 minutes each semester (two observations). The researcher had no supervisory role over the participants. A classroom observation tool obtained from *The Co-Teaching Manual* (Basso & McCoy, 2010) was used during these observations to evaluate planning, climate, instruction, and assessment strategies (see Appendix N for classroom observations). The researcher conducted the classroom observations. If parents/guardians rejected the involvement of their child in the surveys

or observations, the researcher created an alternate activity for those students during the survey portion of the study. The researcher attended one collaborative co-teaching planning meeting a month to collect data on how these collaborative meetings was being conducted and the level of collaboration witnessed during the meetings (see Appendix L for collaboration observation tool/team planning).

A convenience sample of administrators and teachers was devised to select administrations and teachers who completed one 30-minute interview to gather information on their perceptions, HQPD, and collaboration concerning the implementation of co-teaching (see Appendix M for administrative and teacher interviews). An individual in the education profession not affiliated by the Smallville School District conducted the interviews. The researcher interviewed the CFO and Assistant Superintendent of Curriculum and Instruction to gain budgetary information on costs of the co-teaching model and their perceptions of the costs of co-teaching in relationship to the effectiveness of the model. Secondary data provided by the Finance Office collected verified the budget items noted in the interviews that supported the figures discussed. Collection and data analysis of professional development evaluations was completed by faculty to gain perceptions of the quality of professional development offered for co-teaching in the district. The Assistant Superintendent of Curriculum and Instruction provided the professional development evaluations for the researcher.

Two HQPD experiences were observed (professional development, co-teaching trainings in the district) and charted using an HQPD sheet obtained from the Missouri Department of Elementary and Secondary Education (2006a) (see Appendix H for No Child Left Behind federal definition of High Quality Professional Development and

Appendix I for survey of teachers High-Quality Professional Development). Two teachers (T1 and T2) completed interviews conducted during the data collection phase of this study. After the collection of the data, the researcher reviewed and coded each piece of data to determine the information that fell under HQPD, administrator and teacher perceptions of the aspects of co-teaching, student perceptions in different areas, parent perceptions in co-teaching, the financial obligation of co-teaching, and the overall successes or pitfalls of co-teaching.

Amendments to the original research design were necessary during the data collection process due to the lack of response from the parents for students to complete surveys on the co-teaching program. The researcher originally planned to survey 30 parents and students at each level, elementary and secondary. However, there were only 30 total student responses combined between elementary and secondary levels and 23 parents total responded to the survey. This was with the researcher distributing the information four times throughout the beginning of the data collection period.

Amendments to the number of classrooms observed also took place. The researcher planned to observe co-teaching classrooms in the areas of Science, Mathematics, and Communication Arts; however, there were no co-teaching Science classrooms at the middle school level. This encompassed the part of the research conducted at the secondary level (grades 6-12) and it would result in the study favoring high school co-teaching classes in the program instead of observing all of the secondary levels (sixth grade through 12th grade).

Data Analysis

Fraenkel et al. (2012) defined qualitative data as interviews and surveys gaining the opinions and perceptions that people have on a topic related to research questions and quantitative data as numerical related to a hypothesis. The researcher utilized open coding to determine emerging themes accumulated from all qualitative data. The quantitative data were the Missouri state student achievement scores within a co-teaching environment in comparison to student achievement scores in a non-co-teaching environment in the areas of Mathematics and Communication Arts, which coincides with Fraenkel et al. (2012). The researcher compared the data to determine whether general education and special education students achieved higher scores when receiving instruction in a co-teaching setting. The researcher conducted *t*-tests to analyze the MAP and EOC data.

Data of MAP and EOC were obtained from the Missouri Department of Elementary and Secondary Education (2013a) website as well as detailed data from the Smallville School District to determine if there was alignment of testing scores between the general education setting, special education setting, and co-teaching program. The MAP and EOC data were compiled into a spreadsheet with testing scores broken down by grade level, general education, special education, and building level over a three-year time frame. The data were compared to determine whether there was a positive change, negative change, or no change in scores over the course of the three-year period. Each area was analyzed to see how each grade level, general education versus special education, and building level compared to each other. Once the data were collected, the researcher conducted numerous *t*-tests to determine the mean of the population and

determine if the data were in agreement with the researchers' hypothesis of no significant change in testing scores based on the student placement. A comparison and analysis of the district average pay of educators in the state of Missouri was compared to that of the Smallville School District to determine the hourly wages of the educators within the district to determine if the cost-benefit for the co-teaching program was beneficial in relation to the test scores. The salary data were obtained from the Missouri Department of Elementary and Secondary Education website.

Summary

The researcher analyzed the qualitative and quantitative data to determine the outcome of co-teaching for the general education and special education students. If there were discrepancies of outcomes for either of the groups, the researcher used the primary data along with the literature reviewed in Chapter Two and determined suggestions of best practices assisted in the increase of success in the co-teaching setting. Even if successful observations took place across the board, the researcher offered research-based suggestions that made co-teaching in the district/building successful. Throughout the information gathering, the researcher wanted to be seen as an outside source that could, without bias, gather information about a classroom setting, compile and code data, and report back to the district the findings and how, if needed, to increase the success of co-teaching for the general education and special education population.

Chapter Four: Results

This chapter presents the detailed findings of the research. The qualitative results of the observations, HQPD, collaboration, surveys, and interviews will be presented as summaries. The quantitative MAP and EOC, and the Cost Benefit Analysis data is illustrated in tables in the designated sections.

Classroom Observations

The researcher completed two rounds of observations, one in the fall semester of 2013 and one in the spring semester in 2014 in the Smallville School District. The observed classrooms consisted of two elementary English/Communication Arts classes, two elementary Mathematics classes, two secondary English/Communication Arts classes, and two secondary Mathematics classes. The observation form was obtained from *The Co-Teaching Manual*, by Basso and McCoy, (2010) with granted permissions. There were four areas observed and scored on the rating scale: planning/preparation, climate for learning, instructional practices, and ongoing assessment strategies. Within these areas, the observable areas were scored as follows: 0 – not observed, 1 – somewhat evident, and 2 – clearly evident. The purpose of the classroom observations was to observe how the teachers implemented the co-teaching program. The researcher refrained from observing the students within the co-teaching classroom. The results that follow addressed the research question related to how co-teaching was perceived in the Smallville School District as well as how HQPD and Collaboration was assisting co-teaching classrooms by giving the teachers co-teaching trainings and time for co-teaching collaboration.

In the English/Communication Arts co-teaching classrooms the elementary classrooms scored not observed (0) in the areas of classroom parity. At the secondary level, the classrooms had a desk for the special educator, yet no other aspect of the parity (both names on board and material sent home, on the door, etc.). This scored secondary at the somewhat evident level (1). According to the co-teachers, copies of IEP accommodations and modifications were available when requested ranking all of the Communication Arts co-teaching classrooms at the evident level (2). The researcher was unable to find the modifications or accommodations without the assistance of the co-teacher retrieving the information either in the classroom or by a district computer program.

In the area of a co-taught lesson plan, all Communication Arts teachers had what was being taught via lesson plan book on the desk, which the lesson plans showed no change from a general education classroom lesson to a co-teaching lesson revealing that no collaboration or adjustments for the co-teaching class were made. This placed the co-taught lessons at the somewhat evident level (1) due to lessons being available without specifics of a modified co-taught lesson. At the secondary Communication Arts classrooms, there were no evidence of planning for varied instructional strategies, scoring the secondary Communication Arts teachers at the not observed level (0). The following areas scored at the clearly evident level:

- appropriate academic standards and objectives for lessons were consistent with states curriculum guidelines
- used more than one way of co-teaching, evidence that both teachers would be actively involved with instruction

- evidence of adaptations for individual student's needs, evidence of accommodations/modifications
- appropriate and clear assessment of student learning with adaptations
- classroom rules and procedures resulted in effective use of instructional
- effective management of classroom behavior
- promoted and modeled respectful interaction among the students and teachers
- communicated high expectations for all students through support and encouragement
- ensured that all students were engaged in meaningful work throughout the class time
- both teachers worked with all students
- moved about the classroom
- assisted students with and without disabilities
- adapted instruction to a variety of learning styles
- knew the content of the lesson
- was comfortable with the presentation of the content
- grouped students with disabilities with non-disabled peers
- demonstrated appropriate pacing of instruction
- provided accommodations/modifications for students as needed
- asked a variety of questions using higher order thinking skills
- co-teaching used a variety of ongoing assessment strategies to fairly and accurately evaluate the real learning of the students.

The entire co-teaching Communication Arts classrooms scored at the not observed level (0) in the area of used “we” and “us” instead of “I” and “my”. Instructional strategies noted during fall observations in Communication Arts were individualized instruction, grouping strategies, manipulatives/technology, projects, peer teaching, and direct instruction. Not all strategies were in all Communication Arts classrooms, instead they were scattered in no particular pattern or reason throughout the elementary and secondary classrooms. In the area of assessment, Communication Arts co-teachers utilized intervention activities to re-teach objectives, group or individualized questioning, and written/oral assignments. One of the observed Communication Arts classrooms utilized teacher-made and standardized tests with appropriate adaptations and accommodations as well as the use of a project.

The fall observations in the elementary and secondary Mathematics classrooms showed many of the same results as the Communication Arts classrooms. The glaring difference was the lack of copies of co-taught lesson plans provided to the researcher, scoring the Mathematics co-teachers at the not observed level (0) in comparison to the somewhat evident level (1) that Communication Arts teachers scored. A not observed level was noted (0) in all of the Mathematics co-teaching classrooms in the area of using “we” and “us” instead of “I” or “my”. Three of the Mathematics co-teaching classes scored at the not observed level (0) in the areas of; showing evidence of parity and co-teachers having a copy of the lesson plans. Two of the Mathematics classrooms scored at the not observed level (0) in the area of planning for varied instruction. One of the four Mathematics classes scored at the not observed level (0) in the areas of providing guided practice, providing adapted materials to meet the individualized needs of the student,

using a variety of instructional strategies to promote the success of all students, evidence of adaptation of student needs, and evidence of modifications/accommodations. The Mathematics class scoring at the not observed level (0) varied from class to class, meaning that the same classroom did not score not observed (0) in all areas listed above. The Mathematics classrooms also exhibited the usage of the same instructional and assessment strategies as the Communication Arts classroom observed.

During the spring observations, there were less not observed (0) areas with not observed areas being centralized in the areas of co-teachers showing evidence of the following: parity, co-teachers providing a copy of IEP accommodations/modifications, co-taught lesson plans being provided, and using “we” and “us” instead of “I” and “my”. Two Communication Arts co-teaching classrooms, one elementary, and one secondary scored at the not observed level (0) for evidence that both teachers would be actively involved with instruction. Furthermore, the same secondary Communication Arts co-teaching classroom scored at the not observed level (0) for demonstrating appropriate pacing of instruction and being actively involved in the instruction of all students with communication and instruction flowing freely between the co-teachers.

All areas of observed co-teaching in the Smallville School District (elementary, secondary, Mathematics, and Communication Arts) scored at the clearly evident level (2) for the following categories: (a) appropriate academic standards and objectives for lessons consistent with states curriculum guidelines, (b) knowing the content of the lesson, (c) re-teaching students who needed the extra help, (d) providing accommodations/modifications for students as needed, and (e) asking a variety of questions using higher order thinking skills. The following categories scored with a

majority (six out of eight or seven out of eight) of classrooms at the clearly evident level

(2):

- used more than one way of co-teaching
- planned for varied instructional strategies
- evidence of adaptations for individual student needs
- evidence of accommodations/modifications
- appropriate and clear assessment of student learning with adaptations
- classroom rules and procedures resulted in effective use of instructional time
- effective management of classroom behavior
- promoting and modeling respectful interaction among the students
- promoted and modeled respectful interaction between teachers and students and between co-teachers
- were comfortable with the presentation of the content
- grouped students with disabilities with their non-disabled peers
- provided materials that were adapted to meet individual student needs
- provided accommodations/modifications for students as needed.

Instructional practices witnessed during spring observations were individualized instruction, grouping strategies, manipulatives/technology, projects, and direct instruction. Ongoing assessment strategies observed were intervention activities to re-teach objectives, group or individual questioning, students working on the board, written/oral assignments, and teacher-made standardized testing with appropriate adaptations and accommodations. Raw data from the fall and spring observations is found in Appendices O and P.

General Education Teacher Surveys

Nineteen general education teachers in the Smallville School District completed an online survey that consisted of 27 questions in regards to their co-teaching experiences within the district. The survey questions was obtained from *Understanding Co-teaching Components* by Gately and Gately (2001) with email permission obtained. Table 3 illustrates the responses for each survey question completed by the general education teachers.

Table 3.

General Education Teacher Survey Responses

	Rarely	Sometimes	Usually
I can easily read the nonverbal cues of my co-teaching partner	0	6	13
Both teachers move freely about the space in the co-taught classroom	1	3	15
My co-teacher understands the curriculum standards with respect to the content area in the co-taught classroom	0	5	14
Both teachers in the co-taught classroom agree on the goals of the classroom	1	1	17
Planning can be spontaneous, with changes occurring during the instructional lesson	3	7	9
My co-teaching partner often presents lessons in the co-taught class	9	5	5
Classroom rules and routines have been jointly developed	5	7	7
Many measures are used for grading students	1	9	9
Humor is often used in the classroom	0	3	16
All materials are shared in the classroom	1	2	15

The special education teacher is familiar with the methods and materials with respect to this content area	0	4	15
Modifications of goals for students with special needs are incorporated into this class	0	1	18
Planning for classes is the shared responsibility of both teachers	8	5	6
The "chalk" passes freely between the two teachers	4	6	9
A variety of classroom management techniques is used to enhance learning of all students	1	4	14
Test modifications are common place	1	2	16
Communication is open and honest	0	4	15
There is fluid positioning of teachers in the classrooms	1	3	15
I feel confident in my knowledge of the curriculum content	1	4	14
Student-centered objectives are incorporated into the curriculum	1	4	14
Time is allotted (or found) for common planning.	11	3	5
Students accept both teachers as equal partners in the learning process	2	4	13
Behavior management is the shared responsibility of both teachers	1	1	17
Goals and objectives in IEPs are considered as part of the grading for students with special needs	2	0	17
Do you receive annual HQPD (Highly Qualified Professional Development) from the district	2	7	10

Are you able to vocalize your opinion of the professional development that is offered and suggest additional PD options	2	5	12
Does the PD that you receive in the district correlate with the co-teaching program within the school	7	9	3

Note. From the General Education Surveys.

Of these 27 questions, 21 of them had the answer of “usually” as the majority, which showed that the general education teachers perceived themselves as “secure” with the co-teaching program in the Smallville School District (see Table 3). There were only three areas that were classified as rarely seen were the following: (a) the co-teaching partner presented lessons in the co-teaching class, (b) planning for classes was the shared responsibility of both teachers, and (c) that time was allotted for common planning time. There was a split percentage of sometimes and usually seen in the areas of classroom rules and routines jointly developed (36.8% for sometimes and 36.8% for usually seen), and many measures used for grading students (47.4% for sometimes and 47.4% for usually seen). The general education teachers perceived that sometimes the professional development the district offered correlated with co-teaching programs. Of the 27 questions, none of the question responses were 100%. The surveys completed by the general education teachers answered the research questions on how teachers perceived the co-teaching program in the Smallville School District along with how the perceptions of the general education teachers varied to those of the administrators, special education teachers, parents, and students.

Special Education Teacher Surveys

Fifteen special education teachers in the Smallville School District completed an online survey that consisted of 27 questions in regards to co-teaching scenarios they have

experience within the district. The survey questions were obtained from *Understanding Co-teaching Components* by Gately and Gately (2001) with email permission. Table 4 illustrates the responses in number form obtained by the researcher from the surveys given electronically to the special education teachers.

Table 4.

Special Education Teacher Survey

	Rarely	Sometimes	Usually
I can easily read the nonverbal cues of my co-teaching partner	0	2	13
I feel comfortable moving freely about the space in the co-taught classroom	1	4	10
I understand the curriculum standards with respect to the content area in the co-taught classroom	0	2	13
Both teachers in the co-taught classroom agree on the goals of the classroom	0	4	11
Planning can be spontaneous, with changes occurring during the instructional lesson	1	7	7
I often present lessons in the co-taught class	6	4	5
Classroom rules and routines have been jointly developed	5	6	4
Many measures are used for grading students	0	9	6
Humor is often used in the classroom	0	3	12
All materials are shared in the classroom	0	3	12

I am familiar with the methods and materials with respect to this content area	0	3	12
Modifications of goals for students with special needs are incorporated into this class	1	1	13
Planning for classes is the shared responsibility of both teachers	4	9	2
The "chalk" passes freely between the two teachers	1	5	9
A variety of classroom management techniques is used to enhance learning of all students	0	3	12
Test modifications are common place	0	2	13
Communication is open and honest	0	3	12
There is fluid positioning of teachers in the classrooms	0	2	13
I feel confident in my knowledge of the curriculum content	0	4	11
Student-centered objectives are incorporated into the curriculum	0	2	13
Time is allotted (or found) for common planning	8	4	3
Students accept both teachers as equal partners in the learning process	1	3	11
Behavior management is the shared responsibility of both teachers	1	3	11
Goals and objectives in IEPs are considered as part of the grading for students with special needs	1	2	12

Do you receive annual HQPD (Highly Qualified Professional Development) from the district	4	3	8
Are you able to vocalize your opinion of the professional development that is offered and suggest additional PD options	3	5	7
Does the PD that you receive in the district correlate with the co-teaching program within the school	7	6	2

Note. From the Special Education Teacher survey.

Much like the results of the general education teacher surveys, the special education teachers lacked ranking any of the 27 questions with 100% agreement. The special education teachers answered three of the questions: special education teacher presenting lessons in the co-teaching classroom, time allotted for common planning, and the professional development correlating with the co-teaching program, not observed. Three of the questions were scored at the sometimes level and one question was of equal percentage at the sometimes/usually level in that order as follows: (a) planning being spontaneous with changes occurring during the lesson, (b) classroom rules and routines being jointly developed, (c) many measures being used for grading students, and (d) planning for classes being the shared responsibility of both teachers. This means that 20 of the 27 questions were ranked at the usually level (see Table 4).

Administrator Surveys

Five administrators in the Smallville School District completed an online survey that consisted of 28 questions in regards to co-teaching scenarios they had been in contact with in the district. The survey questions were obtained from *Understanding Co-*

teaching Components by Gately and Gately (2001) with email permission obtained.

Table 5 illustrates the responses to survey questions completed by the administrators.

Table 5.

Administrator Responses to Survey

	Rarely	Sometimes	Usually
Nonverbal communication is observed	0	4	1
Both teachers move freely throughout the classroom	0	1	4
Teachers appear competent with the curriculum and standards	0	4	1
Spontaneous planning occurs throughout the lesson	0	5	0
Both teachers take stage and present during the lesson	1	2	2
Classroom rules and routines have been jointly developed	2	3	0
Many measures are used for grading students	0	2	3
Humor is often used in the classroom	0	2	3
Materials are shared in the classroom	0	1	4
Both teachers appear familiar with the methods and materials with respect to the content area	0	1	4
Modifications and goals for students with special needs are incorporated into the class	0	0	5

Planning for classes appears to be the shared responsibility for both teachers	1	2	2
The "chalk" passes freely	1	2	1
A variety of classroom management techniques is used to enhance learning	0	2	3
Test modifications are common place	0	0	5
Communication is open and honest	0	3	2
There is fluid positioning of teachers in the classrooms	0	3	2
Both teachers appear to feel confident in knowledge of the curriculum content	0	2	3
Student-centered objectives are incorporated into the curriculum	1	0	3
Time is allotted (or found) for common planning	1	3	0
Students accept both teachers as equal partners in the learning process	0	2	2
Behavior management is the shared responsibility of both teachers	0	1	4
Goals and objectives in IEPs are considered as part of the grading for students with special needs	0	1	4
Do you receive annual HQPD (Highly Qualified Professional Development) from the district	1	1	3

Are you able to vocalize your opinion of the professional development that is offered and suggest additional PD options	0	4	1
Does the PD that you receive in the district correlate with the co-teaching program within the school	4	1	0

Note. From the Administrator survey.

When asked if nonverbal communication observations had taken place, 80% of the administrators answered “sometimes” and 20% answered “usually”. Eighty percent of administrators also “sometimes” viewed that the teachers agreed on the goals of the co-taught classroom and perceived the ability to vocalize their opinion of the professional development offered and suggested additional professional development options. Eighty percent of the administrators responded that they “usually” saw both teachers moving freely throughout the space, teachers appeared competent with the curriculum and standards, materials were shared in the classroom, both teachers appeared familiar with the methods and materials with respect to the content area, behavior management was the shared responsibility of both teachers, and goals and objectives in the IEP’s were considered as part of the grading for students with special needs.

All of the administrators who completed the survey perceived that modifications of goals for students with special needs were incorporated into the classroom and that test modifications were commonplace. All five administrators perceived that sometimes spontaneous planning occurred throughout the lesson. Eighty percent of the administrators reported that the professional development in the district rarely correlated with the co-teaching program in the district. Based on the responses from the

administrator surveys (see Table 5), administrators in the Smallville School District perceived that the co-teaching classrooms in their buildings and the program in general were effective. This answered the research question investigated by the researcher in regards to the perceptions of administrators about the co-teaching experience and how the viewpoints of the administrators compared to that of the teachers, parents, and students involved in the co-teaching program.

Parent Surveys

Twenty-three parents agreed to fill out the survey in regards to co-teaching in the Smallville School District. The researcher handed out the packets in each classroom, where the number of students were between 23-30 students. Two hundred and three consent forms were sent home to the co-teaching classroom parents to determine whether their child could participate in the classroom teacher observations and surveys. Ten of the parents declined from filling out the survey, however agreed to let their child fill out the survey. One parent did contact the researcher wanting further clarification on regarding the study purpose. The survey consisted of nine questions that began with defining if their student was on a 504, IEP, or neither and the selected responses were strongly disagree, disagree, agree, and strongly agree along with a comment section for the remaining six of the seven questions. Of the 23 parents, six of the parents had students on either a 504 or IEP. Table 6 illustrates the parent responses to survey questions that were sent home for completion.

Table 6.

Parent Responses to Survey Questions

	Strongly Disagree	Disagree	Agree	Stongly Agree
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I received information about co-teaching before my child entered a co-teaching classroom	3	11	5	2
I considered both the general education teacher and special education teacher as my child's teacher	3	5	9	5
I found the co-teaching classroom beneficial for my child's academic development	1	1	13	3
I found the co-teaching classroom beneficial for my child's social development	1	1	15	2
I would like my child to be in the co-teaching classroom again	2	1	14	2
I would like to know more about co-teaching	1	4	14	3

Note. From the Parent survey.

Parents provided input in the areas of advantages and disadvantages of co-teaching. One parent commented, “When the general education teacher is out, which is a lot, the special education teacher can take over.” Other advantages noted by parents were: a lower teacher to student ratio, more one on one time, two different teaching styles offered, more individual time to help the students, gave extra help in the classroom, more relaxed setting, more teachers to assist, and more accommodations can be made. Disadvantages noted by parents included: too many teachers can cause confusion, two different sets of expectations, differences in teaching styles, the co-teacher could confuse

the children, and co-teachers could make the student feel embarrassed. A couple of the parents commented that more information needed to answer about advantages and disadvantages of the co-teaching program and another parent stated that she knew no information about co-teaching and that her student had no participation in the program. All parents that received the information had a child in the co-teaching classroom. The Table 6 data addressed research questions one and two about how parents in the Smallville School District perceived the co-teaching program and how their viewpoints may be similar and/or differed from that of the teachers, administrators, and students.

Student Surveys

Thirty-two students took the surveys, 16 students in the elementary classrooms, and 16 students in the secondary (middle school and high school) classes. None of the high school students or their parents participated in the survey portion of the data collection. All of the 16 elementary students who completed the surveys were from the fourth grade co-teaching classrooms, none of the fifth grade co-teaching classroom parents returned the surveys or consented to their child completing a survey. Ten of the parents declined filling out the survey, however agreed to let their child fill out the survey. The researcher handed out the packets in each classroom, where there was anywhere from 23-30 students. Two hundred and three consent forms were sent home to the co-teaching classroom parents to determine whether their child could participate in the classroom teacher observations and surveys. There was an elementary and secondary survey with similar questions restating the wording to match the grade level of the survey. Each survey consisted of nine questions that students could answer yes, sometimes, no. The secondary students had the option to add comments for each question, where the

elementary students had a comment section at the end of the survey. Table 7 illustrates the students responses to the questions completed in the surveys.

Table 7.

Student Responses to Survey Questions

	Elementary			Secondary		
	Yes	No	Sometimes	Yes	No	Sometimes
I like having two teachers in class	8	1	7	5	3	8
All of the students are treated the same	6	4	6	5	6	5
I like all the activities we did in class	8	4	4	2	2	12
I think I lean more with two teachers	10	1	5	11	3	2
The students in class are more behaved with two teachers	8	2	6	8	5	3
I get help from both of my teachers with difficult assignment, questions, etc.	11	0	5	8	3	5
I want two teachers in my other classes	5	5	6	2	5	9

Note. From the Student survey.

The student surveys completed addressed research questions one and two. The students seemed to have a mixture between a positive and indifferent attitude to the co-teaching setting without any knowledge, based from the survey of overwhelming negative response for participation, only 32 of 203, or 16%, of consent forms returned granting permission for the students to complete the survey. The researcher is unsure why there was such a lack in the return of parent surveys and the consent of students

participating in the surveys, especially at the fifth grade co-teaching classes and in the secondary classrooms.

Elementary Education Teacher Interviews

T1, an individual who worked at a neighboring school district, interviewed three elementary education teachers. The researcher collected and open coded the findings of the responses from T1's interviews. One of the three elementary teachers interviewed was a special education teacher, whereas the other two were general education teachers. All three elementary education teachers witnessed and experienced co-teaching in one general education classroom in their grade level as well as co-teaching in the Title I classrooms. One teacher commented "Title I co-teaching seemed to incorporate more of a team teaching approach where in the co-teaching general education classroom it was more the one teach, one assist model." The two remaining elementary education teachers also saw that the most widely used form of co-teaching in classrooms was the one teach, one assist model.

In the area of collaboration, all three elementary teachers commented that collaboration took place on a weekly basis from 30 to 60 minutes. All three teachers also agreed that more collaboration is needed so that all co-teachers were on the same page, had a part in the planning and teaching of the co-teaching classroom, and an opportunity to discuss any strategies that needed to be improved as well as specific students that may need more assistance. All three elementary teachers also confirmed that collaboration was necessary for the betterment of co-teaching classrooms and that more collaboration needed to take place in the Smallville School District. One of the elementary education teachers remarked that Common Core State Standards and curriculum writing hindered

collaboration time. All three elementary educators experienced different collaboration experiences. The amount of time spent was the same, however, one utilized the common plan time that the teacher and co-teacher shared, the special education teacher utilized before school meetings with the co-teachers, and the second elementary teacher utilized after school meetings with the co-teachers.

“Professional development in the area of co-teaching was provided when I first began co-teaching a few years ago,” commented one of the teachers, however, professional development that focused on co-teaching was located out of the district instead of in-district. “There was professional development out of the district that I could attend, but I had other needs especially with curriculum writing this past year which caused co-teaching to take a back seat,” commented the same teacher. Only one of the three elementary teachers had professional development that consisted of co-teaching in past years. All three teachers had some information about co-teaching in the district, however, utilized most of their experiences and knowledge of co-teaching to implement in their current situations. One of the general education teachers remarked, “Ideas of practical ways to implement in the classroom and new ideas would be a beneficial professional development opportunity.” The special education teacher and the other general education teacher both believed that co-teaching professional development should be required for all educators. The second general education teacher added, “Professional development with examples and models of successful co-teaching would be the best; and ,including paraprofessionals in this training would be a good idea since many paraprofessionals assist in the general education classrooms.”

The types of success witnessed by the three elementary teachers included the following: the ability to reach multiple needs of students more efficiently and effectively, the ability to adjust teaching “on the fly” with two educators in the classroom, the special education teacher’s ability to chime in and assist with educating the students in the co-teaching classroom, sharing ideas with another teacher, and having another teacher to discuss the lesson and how it was successful and unsuccessful. One teacher commented, “I had a good relationship with my co-teacher making the experience that much more beneficial.” A second elementary teacher commented, “I liked how we could talk openly to each other and offered suggestions with the students of higher needs.” Another success expressed by the elementary teachers interviewed were the modifications made to the general education students’ coursework who were struggling instead of primarily focusing on the needs of the special education students.

All three teachers found disadvantages to the co-teaching program in the Smallville School District. One elementary teacher remarked, “I had nine special education students in one co-teaching class, making it difficult to address the needs of all of the students.” The other two teachers made similar comments about the number of special education students in the elementary co-teaching classes and how this affected the class size as well, having upwards of 30 students in the co-teaching classroom at a time. One of the three teachers commented, “It was difficult to communicate with the special education teacher because they were paired with multiple teachers and usually multiple grade levels.” An elementary special educator remarked,

With meetings and working with so many teachers and students, there was no time available to be involved in the planning or teaching, I, at times, felt more like an assistant as to a teacher, unable to be as involved as I would have liked.

The general education elementary teachers made similar remarks that scheduling special educators in many locations made special educators unable to put true co-teaching focus on the classes with both general education and special education students.

The questions for the elementary teacher interviews answered the research questions one, two, four, and seven. These four research questions focused on the perceptions of teachers about the co-teaching program, comparisons of teachers' perceptions of the co-teaching program, and how the process of defining collaboration at the elementary level. Conferencing with the interviewer and coding, the researcher determined that elementary teachers have a positive outlook of the co-teaching program; however, tweaking of the program could take place in order to make the program more successful. The interview questions are found in Appendix M.

Secondary Education Teacher Interviews

T2, an individual with no ties to the Smallville School District, interviewed five secondary education teachers. The researcher collected and open coded the responses received from T2's interviews. All five of the secondary teachers interviewed were general education teachers, none of the special education teachers agreed to participate in the interview. Two of the five secondary teachers were middle school teachers and the other three were located at the ninth grade center and/or high school in the Smallville School District.

Of the five secondary teachers, none of them was aware of how the implementation process of the co-teaching model took place. All of the teachers remarked that they usually found out over the summer or at the beginning of the year if they were co-teaching and who would be their co-teaching partner. Even though general education teachers had no awareness of the pairings of co-teachers, they collectively had good experiences with special education teachers whom they worked well with. High school teacher 1 commented, "I think they should pair up co-teaching according to preference and need, not only need." A middle school teacher made a similar comment that there has been co-teaching placements with special educators that lacked a strong knowledge base of the subject and the curriculum. These five teachers made assumptions, as they had no awareness of how the implementation of co-teaching took place in the district as a whole, only in their building and, respectfully, their classroom.

All five of the educators noted both advantages and disadvantages. High school teacher 3 commented,

The special educator and I seemed to have a mutual agreement to what was taught and how it was taught, however I did not see all of the students that had needs being met by the co-teacher in the classroom.

High school teacher 2 stated, "I handled all of the lesson plans and the co-teacher would jump in and assist as needed throughout the lesson." Both middle school teachers noted that an additional teacher in the classroom assisted with on task behaviors of the students and helped those that were in need. High school teacher 2 commented, "The opportunity for small groups when needed and further clarification of the subject matter was a plus." The same high school teacher also commented how co-teaching classrooms could focus

on the struggling general education students, not only the special education students.

Middle school teacher 1 stated, “My co-teaching classroom lacked feeling like a shared class, I felt like I was the sole teacher and I had an assistant.” Middle school teacher 2 noted that the lack of collaboration time between the co-teachers was a strong disadvantage. High school teacher 2 agreed stating, “Communication was a huge disadvantage as the lack of time in the day to talk over plans or assistance for the students.”

Collaborative time and plan time was a commodity that the secondary teachers lacked and elementary co-teachers commonly experienced. All of the secondary teachers found ways to incorporate collaboration with their co-teachers, even if brief (15-30 minutes) by collaborating while walking to another class, briefly before or after school, before class begins, or directly after class ended. The secondary teachers had differing opinions to having common plan time. High school teacher 3 reported that common plan time was necessary as she led the class and the co-teacher assisted. High school teacher 2 believed they needed some collaboration and planning, however not necessary to utilize an entire professional development time or plan time due to the variety of other classes that were the teachers’ responsibility. The remaining secondary teachers commented that common plan time and collaboration were necessary for co-teaching to work at its best. That way “both teachers could be teaching, which was the way co-teaching is supposed to be!” remarked by high school teacher 1. Middle school teacher 1 commented, “An ideal collaboration would consist of examining a lesson and splitting it into sections so both co-teachers had input and were teaching parts of the lesson together.” The high

school teachers noticed difficulty with common plan times due to the split scheduling from day to day (10, 90-minute classes, split into a rotation of five classes per day).

In the area of professional development, none of the five secondary teachers had experienced co-teaching Highly Qualified Professional Development (HQPDP) in the past year. One of the middle school teachers remarked that there was a couple of in-district professional development opportunities concerning co-teaching; once when it was first implemented in the district and a second time with co-teaching came back into the district. According to middle school teacher two, co-teaching had been implemented in the Smallville School District, and then the program lacked utilization for a few years before making its return. That middle school teacher was the only one of the five secondary teachers interviewed that received in district professional development that covered co-teaching. All of the secondary teachers commented that the primary focus on professional development in the Smallville District centered on district goals, which this past year was curriculum writing due to the implementation of Common Core State Standards. All of the secondary teachers interviewed noted that some sort of professional development or summer in-service would be beneficial for the co-teachers to have an understanding of the program and what the district would like to see take place in the co-teaching setting. Middle school teacher 1 and high school teacher 3 were aware of out of district professional development, however preferred to take professional development in regards to their content area since content was something they related to all day instead of during one class period.

The secondary teacher interview questions answered research questions one, two, four, and seven. All of the secondary teachers had a positive viewpoint of the co-

teaching setting even with the lack of collaboration, professional development, and few disadvantages. Four of the five secondary teachers interviewed had a positive outlook on ways that co-teaching improvement could occur within the district and their buildings by increasing the collaboration, common plan time, and offering professional development. One of the secondary teachers had the outlook that co-teaching was having a special education teacher come in to assist the special needs students, not assist in the academic teaching and planning. The interview questions are found in Appendix M.

Building Administrator Interviews

One elementary administrator and one secondary administrator participated in an interview completed by T1, an individual with no ties in the Smallville School District. T1 asked each administrator 15 questions in regards to the co-teaching program in the Smallville School District. Both administrators responded that co-teaching is taking place in the buildings and the general education and special education teachers' work together and plan together in order to instruct the students. Even though the offering of collaborations took place each week (approximately 30 to 60 minutes each week) to develop lessons, both administrators perceived a need for more collaboration time to assist those involved in co-teaching classrooms. The elementary administrator commented, "Co-teachers referenced the co-teaching model that was set out by the district". The same administrator also shared the district references the text, *Co-Teach!*, by Marilyn Friend, for co-teaching implementation. Both the elementary and secondary administrator commented that there was no current professional development in the district to assist the co-teachers; however, there were out of district professional development options that were up to the co-teachers if they were interested in attending.

Professional development for co-teaching was optional. Within the researched school district, professional development for co-teaching took place with initial implementation of the co-teaching program in the Smallville School District. The secondary administrator stated, “even though professional development was adequate for learning appropriate co-teaching, sometimes coaching within peers could be more beneficial.” The secondary administrator continued to elaborate on professional development by expressing the interest to see pairing and personality matching, examination of certification/area of expertise for each co-teacher, increase common planning time/collaboration, and an in-district individual that could observe the co-teaching classrooms and coach the general education and special education teachers in the setting in order to have shown benefit for all stakeholders.

The elementary administrator noticed that motivation of students and student progress increased in a successful co-teaching classroom. Co-teaching also gave the general and special education teacher each other to exchange ideas as well as more individualized attention for the students who needed it. The secondary principal observed that the students were getting more assistance with two teachers in the classroom as well as the students’ attitudes towards a co-teaching classroom seemed positive. Both administrators have observed highly qualified staff teaching, shared responsibilities of the co-teachers, collaboration of the staff, and more special education students as participants in the regular education classroom.

The glaring disadvantage that both administrators observed in the past year was the lack of special education staff to support all of the needs of all special education students in the co-teaching classrooms. The quantity of co-teaching classes was limited

at all levels, with limitations highest at the middle school level due to the number of staff in comparison to the number of students. Buildings throughout the Smallville School District were attempting to incorporate as many co-teaching classes as staff numbers and time would allow, however, resource classes and applied classes were options utilized to ensure that all special education students were receiving their needs in academics.

Another disadvantage for the co-teaching participants was the re-writing of curriculum to meet Common Core State Standards; this had taken a front seat during collaboration and planning time for the bulk, during the 2013-2014 school year. Due to curriculum writing during the collaboration time, the focus on co-teaching planning and focus on students who were struggling (general and special education) had taken a back seat to collaboration and professional development time. The administrators were already looking into ways to make this vital in both buildings and suggested that district wide; co-teaching was beginning to be re-examined to make the implementation more beneficial for all stakeholders.

The interview questions and responses answered the research questions one, two, four, and seven. The administrators believed that the co-teaching program was a successful, when completion of implementation was correct and supported the needs for the administrators, teachers, and students. Overall, the administrators had a positive outlook on the co-teaching classrooms in their buildings; however, they saw there were ways the co-teaching classrooms could be improved for the staff and students. The administrator interview questions are found in Appendix M.

CFO Interview

The researcher interviewed the CFO of the Smallville School District to examine information about the budgeting for the co-teaching program. Prior to the CFO interview, the researcher examined the school finance report on the Missouri Department of Elementary and Secondary Education (2013) website, which was available for the public to access. The assessed value of the Smallville School District was \$414,254,502.00 in 2013 with 49.13% of revenue in operating funds from local, 44.96% from state, and 5.91% in federal (Missouri Department of Elementary and Secondary Education, 2013a). The Smallville School District used a smaller percentage in comparison to the entire state of Missouri in local and federal revenues of operating funds and a higher percentage in the area of state revenue of operating funds. The total expenditures in 2013 were \$68,397,425.00. The researcher wanted to know how much of these expenditures were for educational programs in the Smallville School District, the co-teaching program in particular.

The CFO of Smallville School District commented during the interview that the district “showed no current budgeting at the central office level basic on program specifics.” It was up to each building within the district if the building administrator decided to budget some of their monies for the program. Of the administrators interviewed, none of them stated they had money set aside for the co-teaching program. The CFO responded that the building budgets do “fluctuate” from year to year depending of the needs of the students in each building and the student enrollment at each building. When determining the need of co-teaching in each building, the CFO commented, “It was up to building principals and the special education director looking over student

achievement and other related data when recommending the use of the co-teaching program.” The remainder of the questions asked to the CFO consisted of the determination of cost-benefit of a program within the district, the CFO’s perceptions of the cost of co-teaching in comparison to the MAP and EOC scores, aspects of allocating funds for a program, and developing a program budget. The questions were all answered by the CFO’s repeated response that programs are determined and funding takes place from building to building.

The interview with the CFO was designed to address the research question concerning the cost-benefit analysis of the co-teaching program; however, research and interviews in the Smallville School District lacked incorporating program funds within the budget of the district and left funding decisions to each building administrator to decide if the program warranted funding. According to the administrators interviewed, co-teaching was a practice implemented within the building, but not funded. As far as the costs of the teachers in the classrooms, the special educators had placements amongst many classes instead of within one classroom for majority of the day causing difficulty for the researcher to consider a cost specifically geared towards co-teaching. The special educator may be in a classroom for one class period (40-60 minutes) and transition to another co-teaching class period or teach a special education specific class. Due to there being no documentation of cost-benefit analysis from the CFO, the researcher looked up teacher salaries and created a personalized cost-benefit analysis for this study. The CFO interview questions are found in Appendix K.

Assistant Superintendent of Curriculum and Instruction Interview

The researcher interviewed the Assistant Superintendent of Curriculum and Instruction in the Smallville School District during March 2013. The researcher asked five questions to the Assistant Superintendent of Curriculum and Instruction regarding the co-teaching program. The Assistant Superintendent indicated the Smallville School District followed the National Professional Development Guidelines to determine the professional development offered in the district. The Smallville School District consisted of building level professional development teams with budgets that looked over building requests and approved or rejected professional development requests. The building professional development teams met with the district professional development committee as a check-in system for the use of funds and what professional development utilization was at the building level. The district committee also discussed what they perceived the needs of professional development in the district was for the current and upcoming years and began the setup of said professional development. In the area of development of HQPD for co-teaching, there has been none the past few years. The assistant superintendent commented,

Co-teaching professional development was implement the first few years co-teaching was being conducted in the Smallville School District, however, lately, the professional development committee had perceived the need of professional development to cover other areas.

When asked about the co-teaching model and the key factors of designing a co-teaching model, the Assistant Superintendent of Curriculum stated that “teachers needed to be matched correctly by their personality and teaching ability, they both needed to be

active stakeholders and take responsibility for all aspects of the co-teaching classroom.” Based on conversations conducted between the Assistant Superintendent and co-teachers, there was increased MAP and EOC scores in the co-teaching classrooms for the special education and general education students. Examination of MAP and EOC data should be one of the many ways that supported co-teaching success by data. The assistant superintendent also stated that analyzing the cost-benefit of co-teaching was also vital, and that the assistant superintendent remarked that cost-benefit of co-teaching would be in favor of the success of the program.

The Assistant Superintendent also discussed the staffing needs of co-teachers. The interviewee commented that he also participated in a committee that discussed and determined what needed addressing each year in the area of hiring new staff. Even though co-teaching was understaffed, there were other areas in the same predicament within the district and determination of which area required the most assistance took place. The Assistant Superintendent commented that special education had seen lots of new hiring in the past two or three years and that the previous year showed other areas that required assistance more so than co-teaching. Even though an increase of special educators would be beneficial, there was a large number of special education staff within the Smallville School District. The Smallville School District had experienced a large amount of growing in the past decade and even though located in a rural area, the Assistant Superintendent discussed that the Smallville School District was an ideal school to examine all of the changes that were occurring so fast due to the growth of the district.

The interview with the Assistant Superintendent of Curriculum and Instruction addressed the research questions one, two, five, six, and seven. The perception of the

Assistant Superintendent was that the Smallville School District had a well-defined Highly Qualified Professional Development guideline in place; co-teaching had received a heavy dose of district provided professional development the first three years of implementation, co-teaching classes had some improvement of MAP and EOC scores. Even with the shortage of special education teachers to supply what some could think are the adequate number of co-teaching classrooms, co-teaching classrooms was implemented. The special education departments had experienced increased numbers of new hires over the past few years. According to research, the information collected from the teachers, administrators, and Assistant Superintendent of Curriculum and Instruction, majority of stakeholders from the school standpoint seemed to stand in support of the co-teaching program and noticed success stories of the co-teaching program. The Assistant Superintendent of Curriculum and Instruction interview questions are located in Appendix J.

HQPD Findings

The researcher collected data from the Survey of Teachers – High-Quality Professional Development and the No Child Left Behind Federal Definition of High quality Professional Development obtained from Missouri Department of Elementary and Secondary Education (2006b) during the Smallville School District Professional Development day at the beginning of the school year and in January completed by the teachers interviewed. The definition of HQPD tied in with the data collected by the researcher of the HQPD surveys completed by the same teachers that were interviewed. The key points of the definition were split into the three sections in the survey. The survey was a checklist that was broken down into three sections: High-Quality

Professional Development (HQPD), types of activities that may be considered HQPD if they meet the above requirements and topics for HQPD. The full days of professional development in Smallville School District met all of the requirements in part 1 of the survey, content area collaboration and work and grade-level collaboration and work in part 2, and content knowledge related to standards and classroom instruction in part 3. Part 3 remained incomplete as it contained a list of possible topics but limited the amount of the topics. The researcher determined these results based off observations of the professional development and the teacher responses by completing the HQPD surveys.

In addition to daylong professional development at the beginning of the year and in January, each building had an hour and a half long “collaboration” or “professional development.” The primary focus of professional development in Smallville School District, during the 2013-2014 school year, was rewriting curriculum and correlating the curriculum to Common Core State Standards, according to the teachers, administrators, and Assistant Superintendent of Curriculum and Instruction interviews. The majority of the Wednesday professional development time met the requirements and fell under the same categories as the all-day professional development contained.

None of the professional development days, during the 2013-2014 school year, were geared towards the co-teaching program in the district. With the curriculum writing and correlating the grade levels in the content areas, the teachers incorporated modifications and accommodations utilized in the classroom, but not discussed in detail. There was an offering of co-teaching professional development in the past; however, no consistent offering of professional development concerning co-teaching was evident. Administrators and teachers received information about co-teaching professional

development outside of the school district, yet there was no requirement to register or attend. The researcher attended two co-teaching professional development sessions outside of the Smallville School District, offered through Bureau of Education and Research (BER) and Heart of Missouri Regional Professional Development Center (RPDC). Suggestions to attend these professional developments were offered and were available if any teacher expressed interest to attend, however it was not mandatory. Interviews with administrators indicated that when the co-teaching program implementation took place five years prior, some co-teachers attended professional development trainings content specific in co-teaching. Since then co-teachers have changed, left the district, or experienced position changes causing the co-teachers not all being current with their professional development. One administrator commented that HQPD was one way to train co-teachers, however, setting up a “coach” that worked with the co-teachers to determine techniques in co-teaching that worked the best for each pair and to observe to make sure that co-teaching was taking place successfully and correctly with assistance and continual support. This information obtained, answered the research question regarding how the Highly Qualified Professional Development (HQPD) affected the utilization and perceptions of co-teaching. Due to the lack of HQPD in the Smallville School District that focused on co-teaching, the researcher determined that HQPD had no impact on the co-teaching program. The Survey of Teacher – High Quality Professional Development form is located in Appendix I.

Collaboration Findings

The researcher sat in six collaboration meetings, three elementary and three secondary. The information found in Table 8 is the guidelines marked during the collaboration process and charted by the researcher.

Table 8.

Collaboration Observation Checklist Responses

	Elementary YES	Secondary YES	Elementary NO	Secondary NO
Teachers meet and discuss ways to modify and accommodate for all students in the classroom	2	3	0	1
Teachers discuss how each co-teacher will be utilized in the classroom	2	0	0	4
The co-teachers met independently from the rest of the team	2	0	0	4
Administrator was present during the collaboration time	2	3	0	1
The collaboration time was utilized to its fullest in determining lessons and needs of all students	2	3	0	1
Special Education teacher was present	2	3	0	1
Special Education teacher was included in planning	2	3	0	1
Professionalism was maintained throughout the collaborative meeting	2	3	0	1

Discussions to determine ways to ensure student success were taking place	2	3	0	1
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Note: Information obtained from collaboration log created and utilized by researcher.

During the collaboration meetings the researcher marked “yes” or “no” to answers nine criteria (see Table 8)—results were overwhelming in the “yes” category in six of the nine criteria (see Table 8). There were struggles in the different content areas when teachers discussed how co-teacher utilization was in the classroom and if co-teachers met independently. A secondary teacher commented that co-teaching usage in the classroom was, “figured out day by day” and that co-teachers met independently from the rest of the team occurred, “sometimes, not usually.” In the area of teachers holding meetings to discuss and determine ways to ensure student success, the meetings occurred during collaboration between the teachers with similar thoughts at the elementary and secondary level. An elementary teacher commented, “When we met and discussed students struggling, involvement with outside organization to assist students with needs that extended past academics was possible”, and a secondary teacher stated, “We all discussed student needs to ensure success between classes when there was extra time.” Based on the collaboration observations and discussions, and answering the research question “How is the process of collaboration defined at the elementary and secondary level in the Smallville School District?”, collaboration was viewed and completed with the same organization at both elementary and secondary levels. The teachers met as a subject department once a week for 40 to 60 minutes to discuss plans for the week as well as important projects for the months coming. If the teachers were witnessing academic or behavioral difficulties with students, they occasionally would discuss ways to assist the student, only with further information during discussions after the collaboration meeting.

If there were difficulties with students, discussions about modifications and/or accommodations would take place during a team meeting. A team meeting would consist of grade level teachers or by groups of teachers that cover all academic content areas that see majority of the same students. The special education teachers, when in the meetings, often lacked voice and no planning of co-teaching lessons took place during the observation. According to teachers, how co-teaching collaboration took place, if it did occur, was usually between passing time or a few minutes before/after school or before the class begins. There were no indications that there were differing plans in a co-teaching setting than observed in a general education classroom setting.

MAP Data

The researcher obtained MAP testing information from the district demographics and information on the Missouri Department of Elementary and Secondary Education website (2013a; 2013b). The researcher retrieved the MAP data in the area of Communication Arts and Mathematics over the past three years and analyzed the data by grade level and content level district wide as well as per building in the district. Separation from each section (i.e., all third grade general education scores are further broken down into each elementary school instead of district as a whole) showed further break down of information into general education and special education students. For the security of the district, all of the schools for the purpose of this research are identified as Smallville Elementary School #1, Smallville Elementary School #2, etc.

The researched school district experienced an increase in MAP scores over the past three years (2011, 2012, and 2013) in the general education areas of fifth grade Communication Arts, English 2, sixth grade Mathematics, seventh grade Mathematics,

and geometry. During those same three years, the Smallville School District experienced an increase in scores in the special education area of sixth grade Mathematics and special education English 6-8 as a whole. The following areas have noticed an increase from one year to the next, however not evident over all three years; general education third grade Communication Arts, sixth grade Communication Arts, seventh grade Communication Arts, eighth grade Communication Arts, English 1, third grade Mathematics, fourth grade Mathematics, fifth grade Mathematics, Algebra 1, and Algebra 2. The special education areas that noted an increase during one or two of the past three years, but not over all three years, were fifth grade Communication Arts, sixth grade Communication Arts, seventh grade Communication Arts, eighth grade Communication Arts, fourth grade Mathematics, fifth grade Mathematics, seventh grade Mathematics, and eighth grade Mathematics. In that grouping, five of the 10 general education areas decreased with the 2013 scores and the special education groupings; eight out of nine showed a decrease in MAP scores from 2012 to 2013. Two areas (fourth grade Communication Arts and eighth grade Mathematics) of general education showed a steady decrease of scores from 2011 to 2013. In the special education groupings, two areas showed consistent decreasing MAP scores, which were the areas of third grade Communication Arts and third grade Mathematics. Table 9 illustrates a breakdown in the district MAP scores by grade level and subject.

Table 9.

District MAP Scores by Grade Level and Subject

Grade Level	Subject	2011	2012	2013	Difference
Third	CA	37.2	36.7	37.7	0.50
Fourth	CA	51.3	51.3	44.7	-6.60
Fifth	CA	52.2	54.7	54.7	2.50
Sixth	CA	52.9	45.2	56	3.10
Seventh	CA	48.7	52.6	52	3.30
Eighth	CA	49.9	41.3	44.9	-5.00
High School	English 1 (CA)	60.8	62.4	55.2	-5.60
High School	English 2 (CA)	68.3	75	75.2	6.90
Third	MA	43.6	48	44.3	0.70
Fourth	MA	55.6	57.4	45.5	-10.10
Fifth	MA	48.4	55.9	51.8	3.40
Sixth	MA	53.1	59.1	64.2	11.10
Seventh	MA	54	63.1	66.6	12.60
Eighth	MA	44.6	42.9	26.1	-18.50
High School	Algebra 1 (MA)	54.9	39.2	55.9	1.00
High School	Algebra 2 (MA)	20.1	34.1	25.9	5.80
High School	Geometry (MA)	36.2	64.4	71.1	34.90

Note. Information obtained from Missouri Department of Elementary and Secondary Education website (2013a). CA = Communication Arts and MA = Mathematics.

Tables 9 and 10 illustrate a breakdown of the MAP scores in the past three years in the Smallville School District. The numbers below were the percentages of students

by grade level in the district as a whole that scored in the proficient and advanced areas. The last column showed the difference of the scores from all three years. Numbers in parentheses show a decrease of overall Proficient and Advanced MAP scores over the three testing years in the difference column. Numbers in parentheses exhibit a negative shift of numbers overall from 2011 to 2013. All scores are broken down by grade level and subject for each level as a whole district; CA stands for Communication Arts. Table 10 illustrates the special education data by grade level and subject for the Smallville School District.

Table 10.

District Special Education Data by Grade and Subject

Grade Level	Subject	2011	2012	2013	Difference
Third	CA	28.8	18.5	7.5	-21.30
Fourth	CA	27.5	26.6	26.9	-0.60
Fifth	CA	12.5	26.7	18.8	6.30
Sixth	CA	10.4	4.3	19.4	9.00
Seventh	CA	12.5	15.6	6.1	-6.40
Eighth	CA	8.3	19.4	8.5	0.20
High School	CA	12.5	15.6	10.9	-1.60
Third-Fifth	CA	24	24	16.8	-7.20
Sixth-Eighth	CA	10.5	12.5	12.5	2.00
ALL	CA	17.9	19.2	14.2	-3.70
Third	MA	37.5	33.8	14.9	-22.60
Fourth	MA	26.1	37.5	30.8	4.70
Fifth	MA	10.4	28	22.9	12.50
Sixth	MA	10.4	12.8	29.2	18.80
Seventh	MA	20	24.4	10.2	-9.80
Eighth	MA	8.3	16.7	14.9	6.60
High School	MA	20	5.6	10.9	-9.10
Third - Fifth	MA	26	32.8	22.2	-3.80
Sixth-Eighth	MA	12.9	18	19.6	6.70
ALL	MA	20.6	24.1	19.5	-1.10

Note. Information obtained on Missouri Department of Elementary and Secondary Education website (2013a). CA = Communication Arts and MA = Mathematics.

MAP data broken down into specific grade levels per building showed increases and decreases in the areas of Communication Arts and Mathematics in both the general education and special education groupings. In the area of Mathematics, general education showed consistent increases over the past three years in the following: Smallville Elementary School #2 in the areas of fifth grade, Smallville Middle School sixth and seventh grade, and Smallville High School Geometry. Five areas fell under the category of consistent decrease in scores over the past three years: Smallville Elementary School # 6 in the area of third grade, Smallville Elementary School # 1 in fourth grade, Smallville Elementary School # 4 in fifth grade, Smallville Middle School in eighth grade, and Smallville Middle School in Algebra 1. The remainder of the grade levels and building showed increase of MAP scores during two of the years. In those 18 areas, 12 experienced a decrease in MAP scores during the 2013 year or 67%. Table 11 illustrates the breakdown of the building and grade level general education Mathematics percentages of proficient and advanced students. The numbers under each year column was the percentage of students in the proficient and advanced area of MAP test scores. The difference column shows whether there was an increase in percentage or a decrease in percentage over the past three testing years. Numbers in parentheses showed a negative movement of scores from 2011 to 2013. MA was an abbreviation for Mathematics. For example, 1 Elementary is the Smallville School District Elementary School #1. Areas left blank are due to scores being unavailable for that year and area. An example of this would be no students in area tested, a building that was not built at the time, or classes not offered at the year of the test. Elementary #3 is a new building to

the Smallville School District during the 2013-2014 school year, meaning no data is available.

Table 11.

General Education Mathematics MAP Data by Building and Grade Level

Building	Grade	2011	2012	2013	Difference
1 Elementary	3	51.6	56.1	55.2	3.60
2 Elementary	3	31.8	36	34.3	2.50
3 Elementary	3				
4 Elementary	3	42.1	46.2	28.6	-13.50
5 Elementary	3	40.9	72.2	61	20.10
6 Elementary	3	40.8	34.3	36.5	-4.30
7 Elementary	3	55.1	51.2	47.8	-7.30
1 Elementary	4	55.7	47.3	44.4	-11.30
2 Elementary	4	44.1	54.9	47.3	3.20
3 Elementary	4				
4 Elementary	4	61.2	41.2	47.1	-14.10
5 Elementary	4	55	55	52.7	-2.30
6 Elementary	4	57.8	57.9	31.4	-26.40
7 Elementary	4	65.8	70.5	50.6	-15.20
1 Elementary	5	60	52.9	56.4	-3.60
2 Elementary	5	36.9	49.4	50	13.10
3 Elementary	5				
4 Elementary	5	40.9	35.2	35.3	-5.60
5 Elementary	5	62	58.9	52.9	-9.10

6 Elementary	5	40.9	49.5	47.1	6.20
7 Elementary	5	50.6	74.7	56.4	5.80
Middle School	6	53.1	59.1	64.2	11.10
Middle School	7	54	63.1	66.6	12.60
Middle School	8	44.6	42.9	26.1	-18.50
Middle School Algebra 1	6-8	90.8	90.3	86.6	-4.20
Ninth Algebra 1 Class 1	9	59.6	38.4	58.8	-0.80
Ninth Algebra 1 Class 2	9	49.5	80	74.3	24.80
Ninth Geometry	9		100		
High School Algebra 1	10-12	17.2	11.3	13.4	-3.80
High School Algebra 2	10-12	11.1	19.8	11.9	0.80
High School Geometry	10-12	36.2	64.2	71.1	34.90

Note. Information obtained on Missouri Department of Elementary and Secondary Education website (2013a).

In the area of special education Mathematics, the following areas have seen an increase every year from 2011-2013; Smallville Elementary School # 4 grade four, Smallville Elementary School # 5 grade four, Smallville Elementary School # 1 grade five, Smallville Elementary School # 6 grade five, Smallville Middle School sixth grade, and Smallville High School Algebra 2. Thirteen areas out of 31 experienced an increase between two of the three years or 42%. Nine of those saw a decrease from the 2012 to 2013 MAP data. There were four areas in special education Mathematics that noticed a decrease each of the testing years from 2011-2013; Smallville Elementary School # 2 third grade, Smallville Elementary School # 6 third grade, Smallville Elementary School # 1 fourth grade, and 10th grade Mathematics.

Table 12 illustrates the Special Education Mathematics MAP data by building level and grade over the past three testing years. The numbers under each year column was the percentage of students in the proficient and advanced MAP test scores. The “difference” column showed whether there was an increase in percentage or a decrease in percentage over the past three testing years. Data is lacking in some areas due to no students in special education for that grade and given year, or in the instance that a new school has opened and no data was available.

Table 12.

Special Education Mathematics MAP Data by Building and Grade Level

Building/Math Class	Grade	2011	2012	2013	Difference
1 Elementary	3	30	11.1	20	-10.00
2 Elementary	3	50	35.3	20	-30.00
3 Elementary	3				
4 Elementary	3		0	0	0.00
5 Elementary	3	41.2	66.6	0	-41.20
6 Elementary	3	26.4	35.7	21.1	-5.30
7 Elementary	3	50	28.6	11.1	-38.90
1 Elementary	4	27.3	22.2	0	-27.30
2 Elementary	4	10	40	38.9	28.90
3 Elementary	4				
4 Elementary	4			0	0.00
5 Elementary	4	20	25	50	30.00
6 Elementary	4	25	33.3	42.9	17.90

7 Elementary	4	46.2	62.5	20	-26.20
1 Elementary	5	0	27.3	28.6	28.60
2 Elementary	5	20	20	12.5	-7.50
3 Elementary	5				
4 Elementary	5				
5 Elementary	5	0	35.2	15.4	15.40
6 Elementary	5	8.3	25.1	15.4	7.10
7 Elementary	5	9.1	31.3	57.2	48.10
Middle School	6	10.4	12.8	29.2	18.80
Middle School	7	20	24.4	10.2	-9.80
Middle School	8	8.4	16.7	14.9	6.50
Middle School Algebra 1	6-8			0	
Ninth Algebra 1	9	66.6	0	80	13.40
High School	10	100	50	33.3	-66.70
High School Algebra 1	10-12	8.8	2	2.2	-6.60
High School Algebra 2	10-12	0	0	10	10.00
High School Geometry	10-12	0	50	33.3	33.30

Note. Information obtained on Missouri Department of Elementary and Secondary Education website (2013a).

In the area of Communication Arts of the general education population, five areas noticed an increase of MAP scores from 2011 – 2013. The areas were Smallville Elementary School # 1 third grade, Smallville Elementary School # 2 fourth grade,

Smallville Elementary School # 3 third grade, and Smallville High School English 1 and English 2. Sixteen areas had an increase during two of the data years. Eight of these areas dropped during the 2013 MAP testing. Those eight areas were Smallville Elementary School # 1 fourth grade, Smallville Elementary School # 3 fifth grade, Smallville Elementary School # 4 fifth grade, Smallville Elementary School # 5 fourth grade, Smallville Elementary School # 6 fourth grade and fifth grade, Smallville Middle School seventh grade and eighth grade, and Smallville ninth grade English 1. Three areas saw a decrease every year from 2011-2013, which were: Smallville Elementary School # 2 third grade, Smallville Elementary School # 1 fifth grade, and Smallville Elementary School # 5 third grade. Table 13 illustrates the general education MAP data by building and grade level for Communication arts. Each elementary school is numbered to maintain anonymity, for example; 1 Elementary is Smallville Elementary #1. For the specific Communication Arts classes are listed along with the building. For example, High School English 1 is the Communication Arts data for the Smallville High School English 1 class.

Table 13.

General Education Communication Arts MAP Data by Building and Grade Level

Building/Class	Grade	2011	2012	2013	Difference
1 Elementary	3	34.4	40.4	41.8	7.40
2 Elementary	3	33.6	32.5	21.6	-12.00
3 Elementary	3				
4 Elementary	3	21.1	46.2	52.3	31.20
5 Elementary	3	40.9	37	46.1	5.20
6 Elementary	3	43.5	32.8	31.1	-12.40

7 Elementary	3	39.6	35.4	50	10.40
1 Elementary	4	50	59.5	55.5	5.50
2 Elementary	4	38.5	42.3	46.3	7.80
3 Elementary	4				
4 Elementary	4	66.7	23.5	41.1	-25.60
5 Elementary	5	65	51.6	54.4	-10.60
6 Elementary	4	42.3	47.2	34.4	-7.90
7 Elementary	4	55.7	61.9	45.8	-9.90
1 Elementary	5	68.5	62.8	56.3	-12.20
2 Elementary	5	44.2	42.5	45.7	1.50
3 Elementary	5				
4 Elementary	5	45.4	58.8	35.3	-10.10
5 Elementary	5	59.1	71.4	54.4	-4.70
6 Elementary	5	50.6	41.9	64.1	13.50
7 Elementary	5	46.6	62.6	60.6	14.00
Middle School	6	52.9	45.2	56	3.10
Middle School	7	48.7	52.6	52	3.30
Middle School	8	49.9	41.3	44.9	-5.00
Ninth English 1	9	60.8	63.5	55.4	-5.40
High School Eng. 1	10-12		12.5	25	
High School Eng. 2	10-12	68.3	75	75.2	6.90

Note. Information obtained on Missouri Department of Elementary and Secondary Education website (2013a).

In the area of special education Communication Arts, two areas indicated increase in knowledge of the curriculum—Smallville Elementary School # 5 in fifth grade and

Smallville Elementary School # 6 in fifth grade. Of the 25 areas, 16 of them, or 64%, experienced an increase at one time over the 2011-2013 MAP testing years. Of those 16, nine decreased during the 2013 school year. Those nine areas were Smallville Elementary School # 1 fourth grade, Smallville Elementary School # 2 third grade and fifth grade, Smallville Elementary School # 4 third grade and fifth grade, Smallville Elementary School # 6 fourth grade, Smallville Middle School seventh and eighth grade, and 11th grade Communication Arts. Two special education areas of Communication Arts showed a decrease in scores for all three years examined— Smallville Elementary School # 1 third grade and Smallville Elementary School # 5 third grade. Table 14 illustrates the same categorization as Table 12, however it illustrates the special education scores of Communication Arts by building level and grade level. The number in parentheses showed a negative movement from the 2011-2013 years as a whole.

Table 14.

Special Education Communication Arts MAP Data by Building and Grade Level

Building/Class	Grade	2011	2012	2013	Difference
1 Elementary	3	20	11.1	10	-10.00
2 Elementary	3	18.2	23.5	13.4	-4.80
3 Elementary	3				
4 Elementary	3		0	0	0.00
5 Elementary	3	22.3	44.4	0	-22.30
6 Elementary	3	36.8	21.4	10.5	-26.30
7 Elementary	3	50	0	0	-50.00
1 Elementary	4	18.2	22.2	0	-18.20
2 Elementary	4	20	13.4	33.3	13.30

3 Elementary	4				
4 Elementary	4			100	100.00
5 Elementary	4	40	35	37.5	-2.50
6 Elementary	4	20	16.7	42.9	22.90
7 Elementary	4	38.5	50	10	-28.50
1 Elementary	5	50	27.3	28.6	-21.40
2 Elementary	5	13.3	33.3	0	-13.30
3 Elementary	5				
4 Elementary	5				
5 Elementary	5	12.5	35.3	15.4	2.90
6 Elementary	5	8.3	12.6	15.4	7.10
7 Elementary	5	9.1	25	43.9	34.80
Middle School	6	10.5	4.2	19.4	8.90
Middle School	7	12.5	15.5	6.1	-6.40
Middle School	8	8.4	19.4	8.5	0.10
Ninth English 1	9	11.1	8.5	10.5	-0.60
High School	11		100	50	
High School Eng. 1	10-12			0	
High School Eng. 2	10-12	12.5	6.9	7.2	-5.30

Note. From Missouri Department of Elementary and Secondary Education website (2013a).

Some subject or age levels were unable to be analyzed due to lack of testing data during one or more of the three years reviewed. For example, a new elementary school opened during the 2013-2014 school year; therefore, no data from the past three years was available. In addition, there were some secondary classes that lacked inclusion of

special education students during all three years, making assessing the data insufficient. Another example would be the number of students at one of the elementary schools in the Smallville School District had a lack of students in particular grade levels during all three years researched. This data assisted gave a breakdown of grade levels, building levels and separation of general education and special education as base data to further research randomly selected co-teaching and none co-teaching classes MAP and EOC scores to determine if in fact there is a variance of scores for special education and general education students when in co-teaching classrooms compared to not placed in a co-teaching classroom.

The researcher obtained more detailed test scores for classes randomly selected that were co-teaching, special education, and general education classes. The researcher was unable to obtain information from special education teachers in the elementary setting due to the students all having a general education homeroom, in which the tests scores was combined with no separation from general education, special education, and co-teaching classrooms. The researcher was able to acquire a handful of co-teaching and general education teacher MAP classroom data at the elementary and secondary level. For example, end of course exams (EOC) which replaced MAP testing for most secondary classes, listed all of the students in that class for the teacher in alphabetical order instead of the classes split into each teaching hour as the MAP scores are displayed. This made determination how special education and general education students testing difficult to compare in the format that the researcher was planning. Tables 15, 16, 17, and 18 illustrate breakdowns of the Communication Arts and Mathematics scores at the elementary and secondary levels.

Table 15.

Elementary Communication Arts MAP Scores by Randomly Selected Classrooms

Scoring Range	4th	5th	5th	4th	Co-Teach 4th	Co-Teach 4th	Co-Teach 3rd	Co-Teach 5th
Advanced	4	2	4	8	5	2	3	3
Proficient	7	10	7	10	6	1	1	5
Basic	11	13	9	10	11	17	13	6
Below Basic	1	0	0	0	2	6	6	4

Note. From Smallville School District.

As indicated in Table 15, majority of the elementary Communication Arts scores are in the areas of Proficient and Basic. There are small percentages in the Advanced and Below Basic areas. According to the information acquired from Table 17, in the elementary Communication Arts general education classroom without special education students, 52 students out of 96 students, or 54 percent scored in the proficient and advanced, where as in the co-teaching classroom 26 students out of 91 students, or 29 percent scored in the proficient and advanced range.

Table 16.

Elementary Mathematics MAP Scores by Randomly Selected Classrooms

Scoring Range	4th	5th	5th	4th	Co-Teach 4th	Co-Teach 4th	Co-Teach 3rd	Co-Teach 5th
Advanced	0	2	3	3	3	0	0	0
Proficient	10	7	7	20	6	3	2	8
Basic	13	16	9	5	15	19	19	7
Below Basic	0	0	1	0	1	5	2	3

Note. From Smallville School District.

Table 16 illustrates percentages similar to Table 15, with the majority of students’ general education and special education combined scoring in the Proficient and Basic categories, with smaller percentages in the Advanced and Below Basic categories. According to the information acquired from Table 18, in the elementary Mathematics general education classroom without special education students, 52 students out of 96 students, or 54% scored in the proficient and advanced, where as in the co-teaching classroom 22 students out of 93 students, or 24% scored in the proficient and advanced range.

Table 17.

Communication Arts MAP Scores at Secondary Level by Classroom Random Sampling

	Sped		Sped						CT	
	7th	7th	8th	8th	7th	7th	7th	7th	7th	7th
Advanced	0	0	0	0	0	0	5	6	3	16
Proficient	0	0	0	0	9	0	8	7	9	10
Basic	2	2	3	4	14	1	11	12	14	7
Below										
Basic	6	4	2	2	2	0	2	1	0	1

Note. From Smallville School District. CT stands for Co-teaching classrooms.

Co-teaching Classrooms were identified as “CT” in Table 17 and in Table 18. Table 17 illustrated that 47% of the students, both general education students and special education students, scored in the areas of basic and below basic. Seventy-three students out of 138, or 53% of students also scored in the area of Proficient or Advanced on MAP scores with one seventh-grade classroom that showed high percentages in the category of

Advanced. Further breakdown of the data indicated that 0 of the 25 students, or 0% of the special education students in a special education class scored proficient and advanced, 35 out of 78 general education students, or 45%, not in a co-teaching setting scored in the proficient and advanced range, and 28 out of 50 students, or 56% of all students in a co-teaching setting scored in the proficient and advanced range of MAP and EOC data.

Table 18.

Mathematics MAP and EOC Scores at Secondary Level by Classroom Random Sampling

	Sped 7th	Sped 7th	Sped 8th	Sped 8th	Sped 8th	Alg 1 Sped	8th	8th	CT 8th	CT 8th	8th EO C	CT HS EOC
Adv.	0	0	0	0	0	0	0	0	1	0	9	0
Prof.	1	0	0	0	0	1	8	9	3	3	14	6
Basic	2	2	1	1	1	4	17	16	9	15	4	43
Below Basic	6	4	4	6	0	9	4	5	4	11	0	38

Note: From the Smallville School District. Sped stands for Special Education, CT stands for Co-teaching, EOC stands for End of Course Exam, and HS stands for High School.

Table 18 illustrates that 206 out of 261 students in secondary Mathematics classes, or 79%, scored in the area of Basic and Below Basic. According to the EOC scores at the eighth grade level, the largest percentages of students scored in the Proficient and Advanced areas, where according to the high school Mathematics EOC data, the majority of the students scored in the Basic and Below Basic areas. Further breakdown of the data indicated that 2 of the 42 students, or 5% of the special education students in a special education class scored proficient and advanced, 40 out of 86 general education students, or 47%, not in a co-teaching setting scored in the proficient and advanced range, and 13

out of 133 students, or 10% of all students in a co-teaching setting scored in the proficient and advanced range of MAP and EOC data. EOC data is skewed due to EOC data consisting of all students throughout the particular grade level enrolled in the class testing with an EOC, making the number of general education and special education students quite large.

The hypothesis stated there will be no difference in the percentage of change, measured by student MAP scores, between special education students and general education students who participated in a co-teaching model and those who were in a regular education model in the areas of Communication Arts and Mathematics. The researcher conducted seven *t*-tests with the MAP data in different arrays to test the hypothesis in each variety. Application of a *t*-test for two samples of unequal variances was implemented for MAP data for the Smallville School District listed by district grade level and subject (Communication Arts and Mathematics) in the areas of general education and special education. The researcher found no significant difference in the 2011-2013 MAP scores between the general education students ($M = 2.35$, $SD = 11.378$) and special education students ($M = -0.95$, $SD = 11.995$) $t(27.25) = 0.78$, $p < 0.05$, $d = 0.62$. According to the Communication Arts *t*-test covering each building and each building grade revealed no significant difference between the general education student scores ($M = -0.26$, $SD = 12.162$) and special education scores ($M = -0.89$, $SD = 29.031$) between 2011-2013, $t(27.89) = 0.09$, $p < 0.05$, $d = 16.87$. The researcher found that in the Mathematics area for the 2011-2013 MAP scores segregated by building and grade level, showed that general education student scores ($M = -0.05$, $SD = 13.599$) and were not significantly different than the special education student scores ($M = -0.46$, $SD =$

27.056) $t(34.78) = 0.07$, $p < 0.05$, $d = 13.36$. In the area of Mathematics in the secondary (middle, ninth grade building, and high school) level, the researcher found a significant difference between the general education scores in 2013 ($M = 0.1666$, $SD = 0.382$) and the special education scores in 2013 ($M = 4.6$, $SD = 4.858$) $t(9.10) = -2.8783$, $p > 0.05$, $d = 4.476$. The researcher found no significant difference between the elementary Mathematics general education scores in 2013 ($M = 6.5$, $SD = 6.3471$) and elementary Mathematics special education scores in 2013 ($M = 2.75$, $SD = 2.9640$) $t(9.91) = 1.51$, $p < 0.05$, $d = 3.38$. The researcher found a significant difference between the secondary Communication Arts general education scores in 2013 ($M = 0.167$, $SD = 0.389$) and secondary Communication Arts special education scores in 2013 ($M = 4.6$, $SD = 4.858$) $t(11) = -4.36$, $p > 0.05$, $d = 4.47$. The researcher found a significant difference between the elementary Communication Arts general education scores in 2013 ($M = 6.5$, $SD = 2.9277$) and the special education scores in 2013 ($M = 3.25$, $SD = 1.9086$) $t(12) = 2.63$, $p > 0.05$, $d = 1.02$. The researcher accepted the hypothesis at the district, building and grade level when averaging the changes in scores from the 2011 to the 2013 school years at the Smallville School District, however had to reject the hypothesis in the areas of elementary Communication Arts, secondary Communication Arts, and secondary Mathematics, when examining a smaller sample based on the 2013 school year. The researcher originally at initial development of the student had one broad hypothesis, with the researcher anticipating the results being the same at the district, building, grade, and subject levels. The researcher had to break down the hypothesis into smaller parts when reporting data findings.

Cost-Benefit Analysis Findings

Difficulty in determining the cost-benefit analysis took place in the Smallville School District. According to the CFO interview previously stated, the district had no allocation funds for specific programs, and the funding was determined from building to building and based off the needs of the administrators. Further complications occurred since co-teachers were in the classrooms during one class period at the secondary level instead of the same two teachers co-teaching throughout the day, which is more prevalent at the elementary level. General educators and Special Educators may only participate in co-teaching 40-60 minutes a day, making consistencies and comparisons of student and teacher benefit in relation to the costs difficult as observed in the researcher. In order to determine the costs of the teachers in the Smallville School District, the researcher obtained the salary information from the Missouri Department of Elementary and Secondary Education website (2013b) under the district demographic. Table 19 illustrates the breakdown of average teacher salaries statewide, district wide, and per each elementary and secondary school (minus the alternative high school in the district) over the past three years. Due to the confidentiality of the school district, for the purpose of this study, the researcher renamed all of the schools in the district. This was utilized prior in the Chapter Four when discussing the MAP data findings. The researcher determined this information would give an adequate base data and estimation of how much money expenditures are for the co-teaching program. Table 19 illustrates data by each building within the Smallville School District. For the anonymity of the district, the schools names changed to generic names (Elementary School 1 or 1 Elementary).

Table 19.

Yearly Average Teacher Salary per Building in the Smallville School District

Building	2011	2012	2013
Smallville Elementary School # 1	42,468.00	43,033.00	43,988.00
Smallville Elementary School # 2	37,655.00	39,790.00	40,644.00
Smallville Elementary School # 3	N/A	N/A	N/A
Smallville Elementary School # 4	44,610.00	49,323.00	50,214.00
Smallville Elementary School # 5	45,415.00	43,266.00	43,357.00
Smallville Elementary School # 6	43,029.00	43,721.00	45,146.00
Smallville Elementary School # 7	41,302.00	43,348.00	43,875.00
Smallville Middle School	42,940.00	44,306.00	45,163.00
Smallville Ninth Grade	41,503.00	44,629.00	45,550.00
Smallville High School	41,919.00	43,174.00	43,457.00

Note. From Missouri Department of Elementary and Secondary Education website (2013b).

For example, the number of co-teaching hours at Smallville Middle School dropped significantly from 2012 to 2013. Smallville Middle School had four co-teaching classes offered, two English and two Mathematics classes. It is unclear why Smallville Middle School dropped the usage of co-teaching classrooms in comparison to the elementary and high school classes whom maintained, and possibly increased the usage of co-teaching. In the Smallville School District, the elementary schools seemed to

follow the same trends of allocating one grade level teacher to be the co-teacher for said grade level and one or two specific special educators and/or paraprofessionals were the partners in the co-teaching setting. The ninth grade building indicated eight class periods in which co-teaching took place broken down into the following: two English classes, two Mathematics classes, two social studies, and two Science classes. The high school indicated 15 class periods in which co-teaching took place broken down into the following: four English classes, four Mathematics classes, four social studies classes, and three Science classes.

The researcher analyzed the information listed from Table 19 from the Missouri Department of Elementary and Secondary Education (2013b) and divided the average yearly salary by the number of contracted days in the Smallville School District, which were 180. Once the researcher divided 180 from the yearly salaries, the researcher divided those numbers with the number of contracted hours each day, which were eight hours. In Table 20 illustrates the breakdown of the hourly wages of the teachers in the Smallville School District as well as each building in the Smallville School District. Smallville Elementary School # 4 shows no wages because it opened during the 2013-2014 school year, therefore no salary information from the past three years would be available. The Table 19 information is compared the Missouri state and Smallville School District averages over the 2011, 2012, and 2013 school years. Missouri average for 2011 was \$45,309.00, 2012 average was \$ 45,709.00, and 2013 average was \$46,213.00. The Smallville School District average for 2011 was \$41,909.00, \$43,210.00 in 2012, and \$43,946.00 in 2013. Table 20 illustrates the average hourly pay for teachers in the 2011, 2012, and 2013 school years.

Table 20.

Hourly Teacher Salary per Building in the Smallville School District

Building	2011	2012	2013
Smallville Elementary School # 1	29.49	29.88	30.55
Smallville Elementary School # 2	26.15	27.63	28.23
Smallville Elementary School # 3			
Smallville Elementary School # 4	30.98	34.25	34.87
Smallville Elementary School # 5	31.54	30.05	30.11
Smallville Elementary School # 6	29.88	30.36	31.35
Smallville Elementary School # 7	28.68	30.10	30.47
Smallville Middle School	29.82	30.77	31.36
Smallville Ninth Grade	28.82	30.99	31.63
Smallville High School	29.11	29.98	30.18

Note. From the Missouri Department of Elementary and Secondary Education website (2013b) on yearly estimated salary to determine hourly salary.

By taking the average hourly salary from each building, the researcher added each salary and divided by the number of building with the resulting average salary \$30.52, which is \$1.57 different from the Missouri state average. The average for the state of Missouri was \$31.46 in 2011, \$31.74 in 2012, and \$32.09 in 2013. The Smallville School District average hourly salary was \$29.10 in 2011, \$30.01 in 2012, and \$30.52 in 2013. The average salary for the Smallville School District has increased every year in the past three years. The co-teaching program utilized two certified teachers in the classroom instead of the traditional one teacher per classroom. This costs the school district \$61.04 per hour, per co-teaching classroom in comparison to \$30.52 in

classrooms with one teacher. These findings combined with the MAP and EOC Data shows that there are no significant differences in test scores from 2011-2013 in all buildings and grade levels in the areas of Communication Arts and Mathematics if there is one or two teachers in the general education setting—meaning that it costs more for co-teaching classes with similar results of MAP and EOC scores.

Emerging Themes

During the fall observation, in the 32 areas that was observed in the classroom, emerging concerns were noted; showing parity, planning for varied strategies, and using “we” and “us” instead of “I” and “my.” The remaining 29 questions were in the sometimes and usually category, exhibiting the overall theme that observations noted positive perceptions of the co-teaching program in the Smallville School District. During the spring observations, in the 32 areas that were observed in the classroom, emerging concerns were noted; using “we” and “us” instead of “I” and “my”, showing evidence of parity, copies of the IEP modifications and accommodations, and copy of the co-taught lesson plans. Two of these were also concerns during the fall observations. The remaining 28 questions were in the sometimes and usually category, showing an overall theme of positive experiences in the co-teaching setting.

Emerging concerns based off the surveys completed by the Administrators noted that there are overall positive perceptions of the co-teaching program with the only major concern being in the area of co-teaching professional development not being implemented. In the 27 questions that were given in the teacher surveys, majority general education teachers answered “rarely” in three areas, “sometimes” in one area, and “usually” in the remaining 23 questions showing an overall positive perceptions of the

co-teaching program. This shows the emerging concerns that general education teachers have, according to surveys, are; shared planning, common plan time, and co-teachers both taking the time to teach the curriculum in the general education classroom. In the 27 questions that were given in the teacher surveys, the majority of special education teachers answered “rarely” in three areas, “sometimes” in four areas, and “usually” in the remaining 20 questions showing an overall positive perception of the co-teaching program. This shows the emerging concerns the special education teachers have are; getting time to teach in a co-taught class, common planning time, and lack of professional development that covers co-teaching. Two of these concerns are the same as the general education teachers.

Over 50% of the parents surveys showed positive perceptions of the co-teaching Program in the Smallville School District, with one area, receiving information prior to of their child being in a co teaching classroom, being the only area of disagreement. This exhibits an overall positive perception from the parents in regards to the co-teaching program in the Smallville School District. Over 50% of the students, both elementary and secondary answered “yes” or “sometimes” on survey questions in regards to co-teaching. Showing an overall positive perception of the co-teaching program in the Smallville School District.

Emerging concerns based of the of the administrator interviews were that the special education teachers lacked being able to support a special needs in the general education classroom, lack of professional development, especially due to Common Core curriculum writing during the 2013-2014 school year, and that co-teaching is implemented district wide. The administrators believed that the co-teaching program is a

successful, when completion of implementation was correct and supported the needs for the administrators, teachers, and students. These emerging concerns coincided with the interview of the Assistant Superintendent of Curriculum and Instruction interview. The emerging concern from the CFO was that there is an unclear data representing the cost benefit analysis of the co-teaching program in the Smallville School District.

In the area of Collaboration data, out of the nine areas, all of the elementary and secondary collaborations answered “yes” with the only concern being with secondary education in the area of co-teachers meeting independently other than only during collaboration and the discussion of the utilization of all teachers in the co-teaching setting being conducted. This showed the overall success of collaboration in 7 out of 9 areas. Title I co-teaching seemed to incorporate more of a team teaching approach where in the co-teaching general education classroom it was more the one teach, one assist model. More collaboration needs to take place in order for co-teaching to be more beneficial. In the area of HQPD, the emerging theme was that all professional development in the Smallville School District is high quality; however, none of the professional development in the Smallville School district supported the co-teaching program.

During the teacher interviews, all elementary teachers, except one commented that professional development in the areas of co-teaching is lacking and would be a great addition to the co-teaching program at the Smallville School District. The following are positive feedback from the co-teaching program: the ability to reach multiple needs of students more efficiently and effectively, the ability to adjust teaching “on the fly” with two educators in the classroom, the special education teacher’s ability to chime in and assist with educating the students in the co-teaching classroom, sharing ideas with

another teacher, and having another teacher to discuss the lesson and how it was successful and unsuccessful. Emerging concerns at the secondary teacher interview level are the lack of common planning times, the lack of understanding how the implementation of co-teaching classes take place, and the lack of professional development. All teachers, both elementary and secondary both commented that they felt the co-teaching program is a good method that should be continued, it just needs to be updated so that there is commonality district wide and incorporating common planning time and professional development. Four essential emerging themes compiled from all interviews and surveys were noted by the researcher. These themes are lack of professional development, lack of common plan time, lack of consistent collaboration, and lack of emphasis on co-teaching due to extensive curriculum writing, during the 2013-2014 school year.

Summary

The researcher collected a large quantity of information to evaluate the co-teaching program model [in the Smallville School District. The observations in the classrooms provided the researcher information on how co-teachers prepare and present lessons in a co-teaching setting. The teachers, general and special education, administrators, parents, and students providing the researcher with differing viewpoints of the co-teaching model in the Smallville School District completed surveys. The researcher also collected information from interviews of teachers and administrators to decipher further information about perspectives of the co-teaching model in the Smallville School District. The data combined with MAP and EOC data, district demographics, and the cost-benefit data were analyzed to determine how the co-teaching

program was implemented in the Smallville School District. The researcher found overwhelming positives of the co-teaching program model and increased MAP and EOC scores in most areas, although no direct cause and effect can be concluded. There were a few areas of concern even though scores had increased in many areas. The discussion and suggestions will be further discussed in Chapter Five.

Chapter Five: Discussion and Reflection

The researcher conducted a program evaluation of the co-teaching program in the Smallville School District. The co-teaching program implementation had taken place for the past few years in the Smallville School District after a considerable amount of time with a limited number of co-teaching classrooms. This study intended to close the gap within the current literature related to co-teaching through the program evaluation of the co-teaching model within a rural setting, particularly the budgetary information not found in the current research. All co-teaching classrooms within the Smallville School District were in an inclusion classroom.

The researcher originally planned to evaluate inclusion; however, the research focused on co-teaching since co-teaching was the most used technique in the Smallville School District at the time of the study. According to the numerous articles published by Cook (2004), Friend (2008a), and Wilson (2008a), co-teaching is successful when developed and implemented with fidelity. Cook (2004), Friend (2008a), and Wilson (2008b) stated that when the co-teaching model was unsupported during implementation, the result could be detrimental to the general education and special education population in the classrooms. Thorough research of co-teaching programs has taken place over the past few decades, ranging from defining co-teaching, to evaluating the perceptions of co-teaching. There was a lack of information, however, in a program evaluation, particularly a cost-benefit analysis of co-teaching classrooms in relation to state testing scores in a rural setting. The literature showed varying opinions and beliefs of co-teaching, even though the majority of literature leaned to the positive aspects of co-teaching, especially with the fidelity of program implementation.

The researcher utilized qualitative and quantitative research to conduct a program evaluation on the co-teaching program model in the Smallville School District. The researcher examined the districts HQPD, MAP, and EOC scores from a random sample of classes (co-teaching and general education). The researcher also acquired perceptions of all stakeholders involved in co-teaching and collaboration times, through surveys and interviews. Fidelity of implementation was measure by observations.

Addressing the Research Questions

The researcher compiled all of the above data to answer each of the research questions and hypothesis in the study. Research question one was addressed by the surveys completed by the administrators, general education teachers, special education teachers, parents, and students as well as the interviews completed by the administrators and teachers. Based on the collected data from these sources, the co-teaching program had an overall positive reception by 83 out of 104 or 80% of the stakeholders. This was determined by figuring the averages of the scores during surveys of the parents, students, teachers, and administrators and interviews of the teachers and administrators described in Chapter Four. There were opinions that the co-teaching program was helpful to the special education students, however, the professional development opportunities lacked ready availability in the district. Each participant, varying from its success to not having enough information on the program, viewed co-teaching differently.

Research question two addressed how the perceptions of the administration, parents, teachers, and students were similar and different from each other in relation to the co-teaching program in the Smallville School District. Research question responses were gathered by the completion of surveys by the administrators, teachers, students, and

parents, as well as the interviews of the administrators and teachers. A majority of the stakeholders had the same perceptions that co-teaching was a good program for the general education and special education students to participate. The differences in opinion occurred with what they believed about the programs academic gains and the training offerings for the co-teaching program. Some parents also perceived that they lacked education or information of the co-teaching program.

Research question three addressed how the Smallville School District calculated the cost effectiveness of the co-teaching program. Based on the information from the administrators and the CFO of the district, the Smallville School District lacked determination of cost effectiveness of a program or allocate funds for each program. Instead, each building principal made the determination of the funds allocated for a program. Co-teaching lacked stakeholder viewpoints as a “program” in the buildings, but more an implementation process that funds showed lack of consideration. The researcher examined the average teacher salary as a district and as a building; however, the teachers lacked placement within the same co-teaching classrooms throughout the entire day. In order to determine the cost of the co-teaching program, the researcher would have had to examine each teacher in the district who was co-teaching and break down what their pay was by the hour due to the fact that most special education teachers, in the secondary level especially, worked 40 to 180 minutes a week or bi-weekly. This was not possible to obtain due to the lack of interest of some teachers and administrators of participation in the study.

Research question four examined how the process of collaboration in the elementary and secondary levels within the Small School District compared by definition.

The researcher investigated this by observing six collaborations at the elementary and secondary level utilizing a self-created checklist of noting what was evident and lacking during the collaboration. The researcher found that collaborations were similar at the elementary and secondary level by meeting once a week and that the special education and general education teachers were present. Administration showed a lack of consistency in attending these teacher collaborations and most collaboration meeting conversations consisted of a discussion on generic lesson plans instead of incorporating and planning a separate lesson plan for co-teaching. The researcher observed that the collaborations lacked incorporating co-teaching classroom planning or discussion. The bulk of the collaborations were discussing and re writing curriculum to blend curriculum with Common Core State Standards.

Research question five addressed how the MAP and EOC scores of special education students in co-teaching classrooms compared with the special education students who were placed in classrooms other than co-teaching. There was no definitive pattern noticed of significant and constant increase or decrease in MAP and EOC scores during the 2011, 2012, 2013 school years. Information on this only consisted of co-teaching classrooms at the elementary level, since all students had a general education teacher, which they had placement in the general education teachers "homeroom."

Research question six addressed how the MAP and EOC scores of the general education students in the co-teaching classrooms compared with general education students who were in a general education class not classified as co-teaching. The researcher examined district wide MAP scores as well as building and grade level general education and special education scores. There was no definitive pattern noticed of

significant and constant increase or decrease in MAP scores during the 2011, 2012, and 2013 school years researched. According to the findings from the randomly selected classrooms to be compared for MAP and EOC data showed a decrease in proficient and advanced scores in the co-teaching classrooms compared to the general education only classroom, however increased in MAP and EOC scores from the special education classroom to the co-teaching classroom. This data determined that co-teaching is more beneficial for special education students than for general education students.

Research question seven addressed how the Highly Qualified Professional Development (HQPD) affected the utilization and perceptions of co-teaching. The researcher completed HQPD checklists during the professional development days offered in the Smallville School District, which were held at the beginning of the school year, before return of winter break, and every Wednesday for an hour and half. The professional development offered within the Smallville School District met the Highly Qualified Professional Development checklist; however, the Smallville School District lacked specific HQPD opportunities related to the area of co-teaching. The researcher attended some HQPD out of district, which was an optional professional development shared with the employees of the Smallville School District, however none of the out of district professional development opportunities were required. The majority of the professional development opportunities during the 2013-2014 year in the Smallville School District consisted of curriculum writing.

Addressing the Hypothesis

The hypothesis developed by the researcher stated there was no difference in the percentage of change, measured by student MAP scores, between special education

students and general education students who participated in a co-teaching model and those who were in a regular education model in the areas of Communication Arts, Mathematics, and Science. The district-wide results as well as building level results over the past three data years, showed no consistent amount of growth or decrease. Many variables came into play with viewing the results. One example of this is that the scores were a different group of students from year to year; therefore, prior knowledge and teaching strategies could differ causing a change in school scores. In addition, changes in the MAP tests had also taken place over the last three years, which could cause and result in a shift in the scores. Teachers in the district confronted the researcher about the study taking place and commented that they had observed increases in general education and special education MAP scores when a successful co-teaching classroom was in place however, this was verbal confirmation, not data from the teachers or the district. The researcher also acquired information from; Assistant Superintendent of Curriculum and Instruction at Smallville School District, MAP data at the elementary level for Communication Arts and Mathematics, MAP or EOC data for six secondary Communication Arts middle school general education and co-teaching classes, MAP or EOC data for five secondary Mathematics middle school general education and co-teaching classes, and MAP or EOC data from secondary special education classes in Communication Arts and Mathematics.

When taking the MAP data and applying it to a *t*-test by two unequal samples at each level, the researcher found significant differences in the general education and special education scores at the elementary Communication Arts 2013 data, secondary Mathematics 2013 data, and the secondary Communication Arts 2013 data. The above

data was expected due to the assumptions that special education students would score lower in areas than their general education student counterparts due to special education students having disabilities that hinder academics. The researcher further broke down the data comparing general education students in general education classrooms with general education students in a co-teaching setting as well as special education students in a co-teaching setting in comparison to special education students in a special education setting. Comparing the special education student data in co-teaching with special education students out of co-teaching showed that special education students in the co-teaching setting showed an overall increase in tests scores than their counterparts in the special education setting. The general education students in a co-teaching classroom maintained and decreased their MAP and EOC scores in comparison to the general education students not in a co-teaching setting. The intent of the researcher was to compare both general education students and special education students that are in co-teaching classrooms and not in co-teaching classrooms. The data from the Missouri Department of Elementary and Secondary Education (2013a) served as a baseline that the researcher utilized in the randomly selected co-teaching and non-co-teaching classrooms. Specifically in those three areas: elementary Communication Arts 2013 data, secondary Mathematics 2013 data, and the secondary Communication Arts 2013 data. The researcher had to reject the hypothesis and found no significant differences in MAP scores between the general education and special education students.

Discussion of Results

Reviewing all data collected, the researcher determined that all stakeholders perceived the co-teaching program positively in the Smallville School District. There

was an overall support for a co-teaching model by the students, parents, teachers, and administrators. All stakeholders reported that co-teaching was important for the general education and special education students at an academic and social aspect; however, some perceived co-teaching lacked key components defined by Gately and Gately (2001) and Friend (2008a). Many of the co-teachers had a lack of training in co-teaching methods, which could hinder the results that students within both general education and special education could obtain in the co-teaching setting.

Observations conducted by the researcher revealed a variety of implementation models throughout the district. A majority of the classes utilized the one teach, one assist method and minimized the use of other co-teaching methods. Teachers reported they understood the one teach, one assist as a way of co-teaching that lacked the most benefit, however when the co-teachers shared only one hour together and were limited on collaboration and planning time, the implementation of a successful co-teaching method was difficult to execute. The researcher did observe one elementary co-teaching classroom, where the teachers had worked in a co-teaching setting for three to five years, and there was evidence of a positive co-teaching relationship. This was also true for the middle school Mathematics co-teaching classroom where the pair of teachers had worked together for four years. The researcher noted that co-teaching could exhibit a higher level of success if the same teachers were utilized from year to year and if they had a positive working relationship. Positive co-teaching pairings can show further success by completing personality and teaching style inventories so co-teacher placements could be accurately matched.

Parents expressed a split in knowledge of the co-teaching program, however a low number of parents responded with the need for more information. The researcher found that parents, even though not requesting more knowledge, would benefit from a better understanding of the program, as well as how it benefits general and special education students. All students reported having two teachers in the classroom to assist with assignments was beneficial. The students lacked an understanding as why some of their classes had two teachers and some contained only one teacher; however, this was one of the goals of co-teaching, to have the integration of general education and special education students within one class and the students not having the ability to segregate the special needs students.

Administrators and teachers in the Smallville School District expressed the lack of training in the co-teaching model and instead focused on curriculum writing and correlating objectives to the Common Core State Standards during the 2013-2014 school year. All administrators and teachers perceived that some type of training or mentoring program would be valuable to ensure the proper implementation of co-teaching and to increase the success of the program. Administrators and teachers in the Smallville School District perceived the benefits and success of the co-teaching program model within the school district, however, all had varying viewpoints of utilization from building to building.

The interview from the CFO clarified there was no district budget for the co-teaching program and that it was up to the administrators at each building to allocate professional development funding. The researcher found this difficult for maintaining consistency of implementation in the co-teaching program. The researcher suggested that

administrators district-wide should discuss the co-teaching program and determine set budgets from building to building for trainings and supplies to assist in the co-teaching program success.

The Assistant Superintendent of Curriculum reported an increase in student success for those students placed in a co-teaching classroom specifically noting MAP and EOC data as well as shared success stories from co-teachers. The Assistant Superintendent of Curriculum perceived that the co-teaching model was worth the additional budgetary costs of training and the additional staffing. These perceptions were after the Assistance Superintendent commented that co-teaching professional development has not been offered recently.

In the area of Highly Qualified Professional Development (HQPD), the Smallville School District met the criteria defined by the Department of Elementary and Secondary Education in Missouri for HQPD; however, there was a lack of district-wide co-teaching training. Previous notifications of HQPD out of district were reported; however, the teachers perceived minimal encouragement of the benefits to attend such trainings. Teachers and administrators confirmed that recently co-teaching HQPD was not a high priority in the Smallville School District.

Collaboration occurred throughout the Smallville School District, but it varied from building to building. There was evidence of weekly collaboration; however, the primary focus during those collaboration and professional development times, during the 2013-2014 school year, was curriculum writing and aligning the curriculum with the Common Core State Standards. There was some communication for lessons and

assistance for targeted students struggling in the classes even though the time was minimal.

Overall, the MAP and EOC tests showed that special education students in the co-teaching classrooms were improving their tests scores and that the general education students' scores had maintained or improved. A longitudinal study was conducted by consistently checking student scores from year to year to determine if each individual student was academically improving. The researcher analyzed the scores by grade levels for each year included in this study. An example of this would be to follow a group of students in co-teaching environments as they move up from grades to grade (third grade class 2012, fourth grade class 2013, fifth grade class 2014, etc.). This data could be correlated with the average costs for teachers in the co-teaching classrooms. With increases in MAP and EOC scores for those special education and general education students in the co-teaching classroom, the cost of two teachers in the classroom were explainable and beneficial.

Recommendations for Research

The researcher determined four recommendations for related research in the areas of co-teaching and co-teaching program models. One recommendation is further defining co-teaching programs that currently vary from state to state. Further research of co-teaching in other countries in comparison to the United States would be beneficial. Analysis of perceptions of students and parents affected by the co-teaching program and analysis of perceptions of teachers and administrators affected by the co-teaching program are two more recommendations for further research.

Recommendations for School Districts

The researcher suggests six recommendations for all school districts, including the researched school district, who selected to incorporate the co-teaching model: (a) mentor program for co-teachers to include ongoing observations and suggestions to ensure the program is ongoing and increasing in success, (b) offerings of in-district trainings for co-teachers, (c) allocation of co-teaching funds at the building and district level for materials and training specifically to co-teaching, (d) information sent home to parents explaining the co-teaching program, (e) informational meet and greet for parents and students concerning the co-teaching program, and (f) the incorporation of the same guidelines of co-teaching program district-wide instead of varying co-teaching utilization from building to building and teacher to teacher.

Recommendations for Improving the Study

The researcher suggests eight ideas that could improve the study of co-teaching program models. The following are recommendations for improving this study and for further research:

- (a) further breakdown of MAP and EOC scores over time to determine the growth of students as they move from grade to grade instead of comparing the third grade students each year so that increases and decreases of student scores could be examined from year to year;
- (b) interview special education site coordinators to gain more special education supervisor and administration input on the co-teaching program and have discussions with parents and students so a more detailed opinion of the co-teaching model could be gathered;

- (c) create multiple ways for parents and students to participate in the survey by paper, online surveys, and emails instead of limiting to one type of survey completion and communication;
- (d) interview parents and students for further information on the perceptions of the co-teaching program;
- (e) researchers should observe special education classes, general education classes, and co-teaching classes for a comparison at all three levels instead of the focus on primarily co-teaching;
- (f) observe all co-teaching classrooms in a district over at least a two-year period to obtain a comparison of co-teaching strategies; and
- (g) compare co-teaching programs in numerous districts to determine the effectiveness of co-teaching and to the degree of collaboration. These eight recommendations are just a few ideas that school districts could look into.

How Emerging Themes Correlate with Literature

During the fall semester observations were conducted in 32 categories that was observed in the classroom, and the following concerns were noted: showing parity, planning for varied strategies, and using “we” and “us” instead of “I” and “my.” The remaining 29 categories were in the sometimes and usually classification, exhibiting overall that observations noted positive perceptions of the co-teaching program in the Smallville School District. During the spring semester, observations were conducted in 32 categories that was observed in the classroom, and the following concerns were noted: using “we” and “us” instead of “I” and “my”, showing evidence of parity, copies of the IEP modifications and accommodations, and copy of the co-taught lesson plans. Two of

these were also concerns during the fall observations. The remaining 28 categories were in the sometimes and usually, showing positive experiences in the co-teaching setting. The lack of parity noted in the observations align with the research conducted by Conderman et al. (2009) and Murawski (2010), who reported that parity between the general education and special education teachers is required for co-teaching success. The observations completed by the researcher were in keeping with McDuffie et al. (2009) who argued that majority of co-teaching classroom utilized the “one teach, one assist” method defined by Friend (2008a).

Emerging concerns based on the surveys completed by the Administrators noted that there were overall positive perceptions of the co-teaching program with the only major concern being in the area of co-teaching professional development not being implemented. In the 27 categories that were given in the teacher surveys, majority general education teachers answered “rarely” in three categories, “sometimes” in one categories, and “usually” in the remaining 23 categories showing an overall positive perceptions of the co-teaching program. This shows the emerging concerns that general education teachers have, according to surveys, are the following: shared planning, common plan time, and co-teachers both taking the time to teach the curriculum in the general education classroom, which aligns with the findings of Dieker (2001) and Tandon et al. (2012). In the 27 categories in the teacher surveys, the majority of special education teachers answered “rarely” in three categories, “sometimes” in four categories, and “usually” in the remaining 20 categories showing an overall positive perception of the co-teaching program. This shows the only concerns the special education teachers have are getting time to teach in a co-taught class, common planning time, and lack of

professional development that covers co-teaching. Two of these concerns are the same as the general education teachers.

Over 50% of the parents surveys showed positive perceptions of the co-teaching Program in the Smallville School District, with one area, receiving information prior to of their child being in a co-teaching classroom, being the only area of where majority of the parents did not agree. This exhibits an overall positive perception from the parents in regards to the co-teaching program in the Smallville School District. This theme agrees with the literature findings of Wischnowski et al.; (2004) and Tichenor et al. (2010) that parents of general education and special education students have overall praise of co-teaching programs. Over 50% of the students, both elementary and secondary answered “yes” or “sometimes” on survey questions in regards to co-teaching, showing a mixed perception of the co-teaching program in the Smallville School District. The researcher found lots of positive experiences and perceptions in the Smallville School District, yet the percentages indicate that the Smallville School District can improve the perceptions in their co-teaching program. Wilson and Blednick (2011) confirmed the researcher’s findings that all students see benefits when in a properly implemented co-teaching classroom.

Concerns based of the of the administrator interviews were that the special education teachers lacked being able to support a special needs in the general education classroom, lack of professional development, especially due to Common Core curriculum writing during the 2013-2014 school year, and that co-teaching is implemented district wide. The administrators believed that the co-teaching program is a successful, when completion of implementation was correct and supported the needs for the administrators,

teachers, and students. These emerging themes coincided with the interview of the Assistant Superintendent of Curriculum and Instruction interview. The emerging theme from the CFO was that there is an unclear data representing the cost benefit analysis of the co-teaching program in the Smallville School District. This information found by the researcher aligns with Friend (2007), who found that administrators and teachers find difficulties with co-teaching when there is a lack of professional development.

In the area of Collaboration data, out of the nine areas, all of the elementary and secondary collaborations answered “yes” with the only concern being with secondary education in the area of co-teachers meeting independently other than only during collaboration and the discussion of the utilization of all teachers in the co-teaching setting being conducted. This showed the overall success of collaboration in 7 out of 9 areas. Title I co-teaching seemed to incorporate more of a team teaching approach where in the co-teaching general education classroom it was more the one teach, one assist model. More collaboration needs to take place in order for co-teaching to be more beneficial. In the area of HQPD, the emerging theme was that all professional development in the Smallville School District is high quality; however, none of the professional development in the Smallville School district supported the co-teaching program. Walther-Thomas et al. (1996) and Murawski (2009) stated that collaboration and professional development is necessary for a positive experience with a co-teaching program, which the Smallville School District did not incorporate.

During the teacher interviews, all elementary teachers, except one commented that professional development in the areas of co-teaching is lacking and would be a great addition to the co-teaching program at the Smallville School District. The following are

positive feedback from the co-teaching program: the ability to reach multiple needs of students more efficiently and effectively, the ability to adjust teaching “on the fly” with two educators in the classroom, the special education teacher’s ability to chime in and assist with educating the students in the co-teaching classroom, sharing ideas with another teacher, and having another teacher to discuss the lesson and how it was successful and unsuccessful. Concerns at the secondary teacher interview level are the lack of common planning times, the lack of understanding how the implementation of co-teaching classes take place, and the lack of professional development. All teachers, both elementary and secondary both commented that they felt the co-teaching program is a good method that should be continued, just needs to be updated so that there is commonality district wide and incorporating common planning time and professional development. Forbes and Billet (2012) coincided with the results of this study by finding that co-teachers have a difficult time finding common plan times to make co-teaching success even though co-teaching can have successes with inconsistent collaboration times. Four essential emerging themes compiled from all interviews and surveys were noted by the researcher. These themes are lack of professional development, lack of common plan time, lack of consistent collaboration, and lack of emphasis on co-teaching due to extensive curriculum writing, during the 2013-2014 school year. These themes correlate with the literature presented in Chapter Two and were tied together throughout this section.

How Quantitative Data Correlates with Literature

In the areas of MAP and EOC data, the researcher found that over the 2011-2013 period, there is no significant differences between the general education students and the

special education student test scores based on building level, subject level, and grade level. There was, however, a significant difference in scores in 2013 in the areas of secondary Mathematics, secondary Communication Arts, and elementary Communication Arts. The findings of the researcher varied in comparison to the literature, which also exhibited inconsistent information. McDuffie et al. (2009) found that students in a co-teaching classroom have increased scores in all the subject levels, when Fontana (2005) lacked finding increased scores in co-teaching settings. Tying in the cost of two teachers in the classroom in comparison to the MAP and EOC data, indicates students' scores showing no significant difference whether placed in the general education, special education, or co-teaching classroom or if there are one or two teachers in the classroom. The lacks of cost benefit information able to be obtained from the Smallville School District adds to the lack of literature concerning cost-benefit in education. Brent et al. (2004) were researchers that agreed with the findings of the researcher that there are lacks of sufficient research in regards to cost-benefit analysis in education. Viadero (2008) found that many districts do not consider co-teaching as an all-day implementation option due to the costs of two teachers in one classroom at a time, which raises the question if this is why the Smallville School District has decreased the co-teaching classes at the middle school building, however was not researched further by the researcher.

Conclusion

The perspectives of co-teaching by all stakeholders and the researcher observations revealed mixed results of the co-teaching program in the Smallville School District. There are many positive perceptions of the co-teaching program in the

Smallville School District; however, findings lend to suggestions to improve the co-teaching program in the Smallville School District. Even though the program resulted in academic success measured by the MAP and EOC assessment percentages retrieved from the Missouri Department of Elementary and Secondary Education (2013a), the researcher suggests the Smallville School District continues its efforts in developing co-teaching models consistent with the current literature.

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Appendix A: The Co-Teaching Rating Scale General Education Teacher

The Coteaching Rating Scale
General Education Teacher Format

Respond to each question below by circling the number that best describes your viewpoint:

	1: Rarely	2: Sometimes	3: Usually
1. I can easily read the nonverbal cues of my coteaching partner.	1	2	3
2. Both teachers move freely about the space in the cotaught classroom.	1	2	3
3. My coteacher understands the curriculum standards with respect to the content area in the cotaught classroom.	1	2	3
4. Both teachers in the cotaught classroom agree on the goals of the classroom.	1	2	3
5. Planning can be spontaneous, with changes occurring during the instructional lesson.	1	2	3
6. My coteaching partner often presents lessons in the cotaught class.	1	2	3
7. Classroom rules and routines have been jointly developed.	1	2	3
8. Many measures are used for grading students.	1	2	3
9. Humor is often used in the classroom.	1	2	3
10. All materials are shared in the classroom.	1	2	3
11. The special education teacher is familiar with the methods and materials with respect to this content area.	1	2	3
12. Modifications of goals for students with special needs are incorporated into this class.	1	2	3
13. Planning for classes is the shared responsibility of both teachers.	1	2	3
14. The "chalk" passes freely between the two teachers.	1	2	3
15. A variety of classroom management techniques is used to enhance learning of all students.	1	2	3
16. Test modifications are commonplace.	1	2	3
17. Communication is open and honest.	1	2	3
18. There is fluid positioning of teachers in the classroom.	1	2	3
19. I am confident of the special education teacher's knowledge of the curriculum content.	1	2	3
20. Student-centered objectives are incorporated into the curriculum.	1	2	3
21. Time is allotted (or found) for common planning.	1	2	3
22. Students accept both teachers as equal partners in the learning process.	1	2	3
23. Behavior management is the shared responsibility of both teachers.	1	2	3
24. Goals and objectives in IEPs are considered as part of the grading for students with special needs.	1	2	3

S3c

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Appendix B: The Co-Teaching Rating Scale Special Education Teacher

The Coteaching Rating Scale Special Education Teacher Format

<i>Respond to each question below by circling the number that best describes your viewpoint:</i>			
1: Rarely	2: Sometimes	3: Usually	
1. I can easily read the nonverbal cues of my coteaching partner.	1	2	3
2. I feel comfortable moving freely about the space in the cotaught classroom.	1	2	3
3. I understand the curriculum standards with respect to the content area in the cotaught classroom.	1	2	3
4. Both teachers in the cotaught classroom agree on the goals of the classroom.	1	2	3
5. Planning can be spontaneous, with changes occurring during the instructional lesson.	1	2	3
6. I often present lessons in the cotaught class.	1	2	3
7. Classroom rules and routines have been jointly developed.	1	2	3
8. Many measures are used for grading students.	1	2	3
9. Humor is often used in the classroom.	1	2	3
10. All materials are shared in the classroom.	1	2	3
11. I am familiar with the methods and materials with respect to this content area.	1	2	3
12. Modifications of goals for students with special needs are incorporated into this class.	1	2	3
13. Planning for classes is the shared responsibility of both teachers.	1	2	3
14. The "chalk" passes freely between the two teachers.	1	2	3
15. A variety of classroom management techniques is used to enhance learning of all students.	1	2	3
16. Test modifications are commonplace.	1	2	3
17. Communication is open and honest.	1	2	3
18. There is fluid positioning of teachers in the classroom.	1	2	3
19. I feel confident in my knowledge of the curriculum content.	1	2	3
20. Student-centered objectives are incorporated into the curriculum.	1	2	3
21. Time is allotted (or found) for common planning.	1	2	3
22. Students accept both teachers as equal partners in the learning process.	1	2	3
23. Behavior management is the shared responsibility of both teachers.	1	2	3
24. Goals and objectives in IEPs are considered as part of the grading for students with special needs.	1	2	3

S3b

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Appendix C: Co-Teaching Rating Scale for Supervisors

Surveys

Co-Teaching Rating Scale for Supervisors

RATING: 1=rarely; 2=sometimes; 3=usually				Comments:
	1	2	3	
1. Nonverbal communication is observed	1	2	3	
2. Both teachers move freely throughout the space	1	2	3	
3. Teachers appear competent with the curriculum and standards	1	2	3	
4. Teachers agree on the goals of the co-taught classroom	1	2	3	
5. Spontaneous planning occurs throughout the lesson	1	2	3	
6. Both teachers take stage and present during the lesson	1	2	3	
7. Classroom rules and routines have been jointly developed	1	2	3	
8. Many measures are used for grading students	1	2	3	
9. Humor is often used in the classroom	1	2	3	
10. Materials are shared in the classroom	1	2	3	
11. Both teachers appear familiar with the methods and materials with respect to the content area	1	2	3	
12. Modifications of goals for students with special needs are incorporated into the class	1	2	3	
13. Planning for classes appears to be the shared responsibility of both teachers	1	2	3	
14. The "chalk" passes freely	1	2	3	
15. A variety of classroom management techniques is used to enhance learning	1	2	3	
16. Test modifications are commonplace	1	2	3	
17. Communication is open and honest	1	2	3	
18. There is fluid positioning of teachers in the classroom	1	2	3	
19. Both teachers appear to feel confident in the content	1	2	3	
20. Student-centered objectives are incorporated into the classroom curriculum	1	2	3	
21. Time is allocated (or found) for common planning	1	2	3	
22. Students appear to accept and seek out both teachers' help in the learning process	1	2	3	
23. Behavior management is the shared responsibility of both teachers	1	2	3	
24. Goals and objectives in IEPs are considered as part of the grading for students with special needs	1	2	3	

S3a

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Appendix D: Administrative and Teacher Survey

Administrative and Teacher Survey:

In addition to utilizing the Co-Teaching Rating Scales for Supervisors, Special Education, and General Education Teachers created by Susan E. Gately (2005) the researcher will also add the following questions at the end of the survey using the same 1-3 scale:

- Do you receive annual HQPD (Highly Qualified Professional Development) from the district?
- Are you able to vocalize your opinion of the professional development that is offered and suggest additional PD options?
- Does the PD that you receive in the district correlate with the co-teaching program within the school?

The following will be added as a yes or no question to have as an option for observations or interviews

- Will you be willing to allow someone to observe in your co-teaching classroom twice over the 2012-2013 school year?

Will you be willing to participate in an interview related to co-teaching PD, collaboration, and perceptions?

Appendix E: Parent Survey

Parent Survey(To be compiled on an online survey as a secondary option if the paper format is ineffective)

1. My child is?

Recognized with an IEP Identified with a 504

None of the above

2. I received information about co-teaching before my child entered a co-teaching classroom.

Strongly Disagree

Disagree

Agree

Strongly Agree

3. I considered both the general education and special education teacher as my child's teachers.

Strongly Disagree

Disagree

Agree

Strongly Agree

Comments:

4. I found the co-teaching classroom beneficial for my child's academic development.

Strongly Disagree

Disagree

Agree

Strongly Agree

Comments:

5. I found the co-teaching classroom beneficial for my child's social development.

Strongly Disagree

Disagree

Agree

Strongly Agree

Comments:

6. I would like my child to be in a co-teaching classroom again.

Strongly Disagree

Disagree

Agree

Strongly Agree

Comments:

7. I would like to know more about co-teaching.

Strongly Disagree

Disagree

Agree

Strongly Agree

Comments:

8. What do you see as advantages and disadvantages of co-teaching?

Advantages:

Disadvantages:

Thank you for your time in completing this survey!

Appendix F: Secondary Student Survey

Secondary Student Survey (To be completed in paper in co-teaching classroom)

1. I am in the following grade:

6 7 8 9 10 11 12

2. I like having two teachers in class.

YES SOMETIMES NO

Comments:

3. All of the students are treated the same.

YES SOMETIMES NO

Comments:

4. I like the variety of activities we do in class.

YES SOMETIMES NO

Comments:

5. I think I learn more with two teachers.

YES SOMETIMES NO

Comments:

6. The student in class follow directions and complete classrooms tasks better with two teachers.

YES SOMETIMES NO

Comments:

7. I receive more assistance with my classroom of two teachers.

YES SOMETIMES NO

Comments:

8. I would like to have the opportunity to have two teachers in more of my classes.

YES SOMETIMES NO

Comments:

Additional Comments?

YES SOMETIMES NO

8. I want two teachers in my other classes.

YES SOMETIMES NO

9. Comments?

Appendix H: No Child Left Behind Federal Definition of High Quality Professional**Development**

No Child Left Behind Federal Definition of High Quality Professional Development
Improve and increase teachers' knowledge of the academic subjects the teachers teach, and enable teachers to become highly qualified
Improve classroom management skills
Support the recruiting, hiring, and training of highly qualified teachers, including teachers who became highly qualified through State and local alternative routes to certification
Are designed to give teachers of limited English proficient children, and other teachers and instructional staff, the knowledge and skills to provide instruction and appropriate language and academic support services to those children, including the appropriate use of curricula and assessments.
Provide instruction in methods of teaching children with special needs
To the extent appropriate, provide training for teachers and principals in the use of technology so that technology and technology applications are effectively used in the classroom to improve teaching and learning in the curricula and core academic subjects in which the teachers teach
Include instruction in the use of data and assessment to inform and instruct classroom practice
Include instruction in ways that teachers, principals, pupil services personnel, and school administrators may work more effectively with parents
May include activities that create programs to enable paraprofessionals (assisting teachers employed by a local educational agency receiving assistance under part A of title I) to obtain the education necessary for those paraprofessionals to become certified and licensed teachers
May include activities that involve the forming of partnerships with institutions of higher education to establish school-based teacher training programs that provide prospective teachers and beginning teachers with an opportunity to work under the guidance of experience teachers and college faculty
Advance teacher understanding of effective instructional strategies that are based on scientifically based research (except that this sub-clause shall not apply to activities carried out under part D of title II)
Advance teacher understanding of effective instructional strategies that are strategies for improving student academic achievement or substantially increasing the knowledge and teaching skills of teachers
Give teachers, principals and administrators the knowledge and skills to provide students with the opportunity to meet challenging State academic content standards and student academic achievement standards
Are aligned and directly related to State academic content standards, student academic achievement standards, and assessments
Are aligned and directly related to the curricula and programs tied to the standards described in the above except that this sub-clause shall not apply to activities described in clauses (ii) and (iii) of section 21123(3)(B)
Are integral part of broad schoolwide and districtwide educational improvement plans
Are high quality, sustained, intensive, and classroom-focused in order to have a positive and lasting impact on classroom instruction and the teacher's performance in the classroom
Are not 1-day or short-term workshops or conferences

Are developed with extensive participation of teachers, principals, parents, and administrators of schools to be served under this Act
Provide follow-up training to teachers who have participated in activities that are designed to ensure that the knowledge and skills learned by the teachers are implemented in the classroom.
As a whole, are regularly evaluated for their impact on increased teacher effectiveness and improved student academic achievement, with the findings of the evaluations used to improve the quality of professional development

Note: From the Missouri Department of Elementary and Secondary Education Website.

Appendix I: Survey of Teachers – High-Quality Professional Development

Date ____-____-____

Survey of Teachers - High-Quality Professional Development

To be considered high-quality professional development, the fully-implemented **combined, ongoing activities** in the district, building, and/or individual professional development plan(s) must meet all of the criteria in Part I and at least one criterion in Part II and one in Part III. Unless one-day workshops and short-term conferences or workshops are part of a fully-implemented professional development plan, they are not considered high-quality professional development. All completed activities in the plan must be aligned to a goal of the district or building CSIP.

Instructions: Reflect on your professional development experiences for the past school year. Check each criterion met. Forward your completed survey to the appropriate person in your building or district.

Part I: High-quality professional development:

- actively engages teachers in planning, skills, and implementation over time.
- is directly linked to improved student learning so that all children may meet the Show-Me Standards at the proficient level.
- is directly linked to district and building school improvement plans.
- is developed with extensive participation of teachers, parents, principals, and other administrators.
* Parent participation may be at the CSIP level.
- provides time and other resources for learning, practice, and follow-up.
- is supported by district and building leadership.
- provides teachers with the opportunity to give the district feedback on the effectiveness of participation in this professional development activity.

Part II: Types of activities that may be considered high-quality professional development if they meet the above requirements are:

- study groups.*
- grade-level collaboration and work.
- content-area collaboration and work.
- specialization-area collaboration and work.
- action research and sharing of findings.*
- modeling.*
- peer coaching.*
- vertical teaming.*
- other _____

*see definitions on page 5

Part III: Topics for high-quality professional development may include:

- content knowledge related to standards and classroom instruction.
- instructional strategies related to content being taught in the classroom.
- improving classroom management skills.
- a combination of content knowledge and content-specific teaching skills.
- the integration of academic and career education.
- research-based instructional strategies.
- strategies to assist teachers in providing instruction to children with limited English proficiency to improve their language and academic skills.
- strategies to assist teachers in creating and using classroom assessments.
- instruction in the use of data to inform classroom practice.
- instruction in methods of teaching children with special needs.
- instruction in linking secondary and post-secondary education.
- involving families and other stakeholders in improving the learning of all students.
- strategies for integrating technology into instruction.
- research and strategies for the education and care of preschool children.
- research and strategies for closing achievement gaps between diverse groups of students.
- other _____

Note: From Missouri Department of Elementary and Secondary Education

Appendix J: Assistant Superintendent of Curriculum and Instruction Interview

Assistant Superintendent of Curriculum Interview

1. Please describe the professional development model implemented within the Lincoln County School District R-III.
2. How does the school district determine the HQPD for the teachers in relationship to co-teaching?
3. What do you consider to be the key factors of designing a successful co-teaching model?
4. How would you measure and describe the effectiveness of co-teaching in the Smallville School District?
5. What other financial aspects, besides HQPD do you consider each year related to the co-teaching model? (ex: more or less teachers, books, etc.)

Appendix K: CFO Interview

CFO Interview Questions

1. What are the cost allocations for co-teaching with-in the Smallville School District?
2. How do you develop the budgeting for co-teaching programs in the school district?
3. Does the budget for co-teaching maintain the same from year to year or has the district seen an increase or decrease in funds for this program? What variables have led to the increase or decrease of funding?
4. What other aspects need to be reviewed when allocating funds to a specific program like co-teaching?
5. What are your perceptions of the cost of co-teaching in comparison to the effects of the MAP and EOC scores for special education and general education students in the co-teaching classrooms?
6. How do you figure the cost-benefit for programs within the district?

Appendix L: Collaboration Observation Tool – Team Planning Meeting

Collaboration Observation Tool – Team Planning Meeting

Date:	Team:		Subject:
Observation Key	YES	NO	Comments
Teachers meet and discuss ways to modify and accommodate for all students in the classroom			
Teachers discuss how each co-teacher will be utilized in the classroom.			
The co-teachers met independently from the rest of the team.			
Administrator was present during the collaboration time			
The collaboration time was utilized to its fullest in determining lessons and needs of all students.			
Special Education teacher was present.			
Special Education teacher was included in planning.			
Professionalism was maintained throughout the collaborative meeting			
Discussions to determine ways to ensure student success were taking place.			

Appendix M: Administrative and Teacher Interviews

Administrative and Teacher Interviews

1. Describe the implementation process for the co-teaching model?
2. How would you describe the co-teaching model within the Smallville School District?
3. Please describe the implementation of the co-teaching model within the Smallville School District
4. What has worked successfully in regards to implementation of the co-teaching model?
5. What has not worked successfully in regards to implementation of the co-teaching model?
6. What specific components of the co-teaching model do you observe being implemented within the co-teaching classroom?
7. Do co-teachers receive a common plan time? If so how often and for how long?
8. Is collaboration important for the successful implementation of co-teaching? Please explain.
9. Describe the ideal collaborative time that co-teachers could utilize to make co-teaching most successful.
10. Does your ideal collaboration take place? If not what changes could be made to come close to your perceived ideal? Do different teachers/teams/buildings have a different method of collaboration compared to your model? Please give me more detail.

11. Do you have the option of different types of professional development within the district? Please explain the types of professional development offered in your building related to the co-teaching model.
12. In your perception what are the components of a HQPD related to the co-teaching model?
13. Was HQPD offered for before the co-teaching model was implemented? If not, why?
14. What types of professional development do you believe would be beneficial to support the co-teaching program?
15. What professional development have you attended outside of the district that has added value to the current co-teaching program within your district ?

Appendix N: Classroom Observations

CO-TEACHING OBSERVATION FORM/FORMAL

Co-Teacher _____ Co-Teacher _____

Subject _____ Grade _____

Observer _____

Date and Time of Observation _____ Date and Time of Follow-up Conference _____

It is recommended that both co-teachers receive a copy of this form in a pre-observation conference. At that time, the observer should inform the teachers on how this form will be used. Note: Every element listed may not be observed during one lesson. A co-teaching relationship develops gradually and is based on mutual trust and respect. Co-teachers continually develop their skills as they work with each other.

0 - not observed 1 - somewhat evident 2 - clearly evident

I. PLANNING/PREPARATION

A. Co-teachers show evidence of parity. (a desk or place for each teacher to keep materials, both names on materials sent home, on class rosters, syllabi, newsletters, on the door, etc.)	0 1 2
B. Co-teachers can provide a copy of IEP accommodations/modifications for students in their class.	0 1 2
C. A copy of the co-taught lesson plan is provided.	0 1 2

CO-TEACHING OBSERVATION FORM con't.

0 - not observed 1 - somewhat evident 2 - clearly evident

I. PLANNING/PREPARATION, con't

The lesson plan includes:

D. Appropriate academic standards and objectives for lessons consistent with the state's curriculum guidelines	0	1	2
E. Use of more than one way of co-teaching (refer to Ways to Co-Teach Quick Reference, page 79)	0	1	2
F. Planning for varied instructional strategies	0	1	2
G. Evidence that both teachers will be actively involved with instruction	0	1	2
H. Evidence of adaptations for individual student's needs (both enrichment and remediation)	0	1	2
I. Evidence of accommodations/modifications	0	1	2
J. Appropriate and clear assessments of student learning with adaptations, as needed	0	1	2

II. CLIMATE FOR LEARNING

Both teachers' performance demonstrates a shared responsibility for:

A. Classroom rules and procedures resulting in effective use of instructional time	0	1	2
B. Effective management of classroom behavior	0	1	2
C. Promoting and modeling respectful interaction among the students, between teachers and students and between the co-teachers	0	1	2
D. Communicating high expectations for all students through support and encouragement	0	1	2
E. Ensuring that all students are engaged in meaningful work throughout the class time	0	1	2
F. Both teachers work with all students: the classroom environment would make it difficult to identify students with disabilities from their non-disabled peers.	0	1	2

CO-TEACHING OBSERVATION FORM con't.

0 - not observed

1 - somewhat evident

2 - clearly evident

III. INSTRUCTIONAL PRACTICES

During instruction, both teachers:

A. Use "we" and "us" instead of "I" and "my"	0	1	2
B. Are actively involved in the instruction of all students with communication and instruction flowing freely between the co-teachers	0	1	2
C. Use a variety of instructional strategies to promote the success of all students <input type="checkbox"/> individualized instruction <input type="checkbox"/> grouping strategies (refer to Ways to Co-Teach Quick Reference listed below) <input type="checkbox"/> manipulatives/technology <input type="checkbox"/> projects <input type="checkbox"/> peer teaching <input type="checkbox"/> direct instruction <input type="checkbox"/> other _____	0	1	2

WAYS TO CO-TEACH QUICK REFERENCE

One Instructs, One Circulates (I,C)

Teacher A manages the overall classroom and oversees instruction. Teacher B circulates answering questions, getting the attention of students back on lesson, helping an individual, etc.

One Instructs, One Observes (I,O)

One teacher manages the overall classroom and oversees instruction. The other teacher plays a passive role, but is observing one student, a group of students or even the whole class for a specific purpose of gaining information and for a specific amount of time. This information will be analyzed together.

Rotation (R)

Students rotate through stations. Teacher A works at one station presenting information or an activity. Teacher B works at another station presenting different information or activity. One station is for independent work.

Parallel (P)

Co-teachers are both teaching the same information, but they divide the class.

Large Group, Small Group (L,S)

The class is divided. Teacher A instructs a large group in a planned lesson and Teacher B leads a small group in another lesson or the same lesson taught at a different level or for a different purpose.

Team (T)

Both teachers are active instructors. They work together to instruct the entire class. Conversation and presentation of the lesson flow seamlessly between the teachers.

CO-TEACHING OBSERVATION FORM con't.

0 - not observed 1 - somewhat evident 2 - clearly evident

III. INSTRUCTIONAL PRACTICES

During instruction, both teachers:

D. Provide guided practice (i.e. modeling note-taking during instruction)	0	1	2
E. Move about the classroom	0	1	2
F. Assist students with and without disabilities	0	1	2
G. Adapt the instruction to a variety of learning styles (visual, auditory, kinesthetic, tactile)	0	1	2
H. Know the content of the lesson	0	1	2
I. Are comfortable with their presentation of the content	0	1	2
J. Group students with disabilities with their non-disabled peers	0	1	2
K. Re-teach students who need extra help	0	1	2
L. Provide materials that are adapted to meet individual student needs	0	1	2
M. Demonstrate appropriate pacing of instruction	0	1	2
N. Provide accommodations/modifications for students as needed	0	1	2
O. Ask a variety of questions using higher order thinking skills	0	1	2

IV. ONGOING ASSESSMENT STRATEGIES

<p>The co-teachers use a variety of ongoing assessment strategies to fairly and accurately evaluate the real learning of the students. These may include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> intervention activities to re-teach objectives <input type="checkbox"/> group or individual questioning <input type="checkbox"/> teacher-made and standardized quizzes/tests with appropriate adaptations and accommodations <input type="checkbox"/> students working at the board <input type="checkbox"/> written or oral assignments <input type="checkbox"/> projects <input type="checkbox"/> labs <input type="checkbox"/> other _____ 	0	1	2
---	---	---	---

Follow Up Conference and Signatures

Teacher's Signature and Date

Teacher's Signature and Date

Observer's Signature and Date

Note. From The Co-Teaching Manual (Basso & McCoy, 2010). *Note:* Obtained from The Co-Teaching Manual (Basso & McCoy, 2010).

Appendix O: Fall Semester Observation Data

Observation Category	Elementary Math			Elementary Communication Arts			Secondary Math			Secondary Communication Arts		
	Rarely	Sometimes	Usually	Rarely	Some- times	Usually	Rarely	Some- times	Usually	Rarely	Some- times	Usually
PLANNING AND PREPARATION												
A. Co-Teachers show evidence of parity	2	0	0	2	0	0	1	1	0	0	2	0
B. Co-teachers can provide a copy of IEP accommodations modifications	0	2	0	0	2	0	0	1	1	0	2	0
C. Copy of co-taught lesson plan is provided	2	0	0	0	2	0	1	1	0	0	2	0
D. Appropriate academic standards and objectives for lessons consistent with states curriculum guidelines	0	0	2	0	0	2	0	0	2	0	0	2
E. Use of more than one way of co-teaching	0	0	2	0	0	2	0	0	2	0	0	2

CO-TEACHING PROGRAM EVALUATION

F. Planning for varied instructional strategies	0	0	2	0	0	2	2	0	0	2	0	0
G. Evidence that both teachers will be actively involved with instruction	0	0	2	0	0	2	0	1	1	0	0	2
H. Evidence of adaptations for individual student's needs	0	0	2	0	0	2	1	1	0	0	0	2
I. Evidence accommodations/modification	0	0	2	0	0	2	1	0	1	0	0	2
J. Appropriate and clear assessment of student learning with adaptations	0	0	2	0	0	2	0	1	1	0	0	2

CLIMATE OF LEARNING

A. Classroom rules and procedures resulting in effective use of instructional time.	0	0	2	0	0	2	0	1	1	0	0	2
---	---	---	---	---	---	---	---	---	---	---	---	---

CO-TEACHING PROGRAM EVALUATION

B. Effective management of classroom behavior	0	0	2	0	0	2	0	0	2	0	0	2
C. Promoting and modeling respectful interaction among the student, between teachers and students and between co-teachers	0	0	2	0	0	2	0	0	2	0	0	2
D. Communicating high expectations for all students through support and Encouragement	0	0	2	0	0	2	0	0	2	0	0	2
E. Ensuring that all students are engaged in meaning wok throughout the class time	0	0	2	0	0	2	0	0	2	0	0	2
F. Both teachers work with all students: the classroom environment would make it difficult to identify students with disabilities from their non-disabled peers.	0	0	2	0	0	2	0	0	2	0	0	2

INSTRUCTIONAL
PRACTICES

A. Use "we" and "us" instead of "I" and "my"	2	0	0	2	0	0	2	0	0	2	0	0
B. Are actively involved in the instruction of all students with communication and instruction flowing freely between the co-teachers	0	0	2	0	0	2	0	0	2	0	1	1
C. Use a variety of instructional strategies to promote the success of all students	0	0	2	0	0	2	1	0	1	0	0	2
D. Provide guided practice	1	0	1	1	0	1	0	0	2	0	0	2
E. Move about the classroom.	0	0	2	0	0	2	0	0	2	0	0	2
F. Assist students with and without disabilities	0	0	2	0	0	2	0	0	2	0	0	2
G. Adapt the instruction to a variety of learning styles	0	0	2	0	0	2	0	0	2	0	0	2

CO-TEACHING PROGRAM EVALUATION

H. Know the content of the lesson	0	0	2	0	0	2	0	0	2	0	0	2
I. Are comfortable with the presentation of the content	0	0	2	0	0	2	0	0	2	0	0	2
J. Group students with disabilities with their non-disabled peers	0	0	2	0	0	2	0	0	2	0	0	2
K. Re-teach students who need extra help	0	0	2	1	0	1	0	1	1	0	0	2
L. Provide materials that are adapted to meet individual student needs	0	0	2	0	0	2	1	0	1	0	1	1
M. Demonstrate appropriate pacing of instruction	0	0	2	0	0	2	0	0	2	0	0	2
N. Provide Accommodations/modifications for students as needed	0	0	2	0	0	2	0	0	2	0	0	2
O. Ask a variety of questions using higher order thinking skills	0	0	2	0	0	2	0	0	2	0	0	2

Co-teachers use a variety of ongoing assessment strategies to fairly and accurately evaluate the real learning of the students.	0	1	1	0	0	2	0	1	1	0	0	2
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Note. From classroom observation data collection.

Appendix P: Spring Semester Observation Data

Observation Category	Elementary Math			Elementary Communication Arts			Secondary Math			Secondary Communication Arts		
	Rarely	Some-times	Usually	Rarely	Some-times	Usually	Rarely	Some-times	Usually	Rarely	Some-times	Usually
PLANNING AND PREPARATION												
A. Co-Teachers show evidence of parity	2	0	0	2	0	0	1	0	1	0	1	1
B. Co-teachers can provide a copy of IEP accommodations modifications	2	0	0	1	0	1	1	0	1	1	0	1
C. Copy of co-taught lesson plan is provided	2	0	0	2	0	0	2	0	0	2	0	0
D. Appropriate academic standards and objectives for lessons consistent with states curriculum guidelines	0	0	2	0	0	2	0	0	2	0	0	2
E. Use of more than one way of co-teaching	0	0	2	0	0	2	0	0	2	1	1	1
F. Planning for varied instructional strategies	0	0	2	0	0	2	0	1	1	0	1	1

CO-TEACHING PROGRAM EVALUATION

G. Evidence that both teachers will be actively involved with instruction	0	0	2	1	0	1	0	1	1	1	0	1
H. Evidence of adaptations for individual student's needs	0	0	2	0	0	2	0	0	2	0	1	1
I. Evidence accommodations/modification	0	0	2	0	0	2	0	0	2	0	1	1
J. Appropriate and clear assessment of student learning with adaptations	0	0	2	0	0	2	0	0	2	0	1	1
CLIMATE OF LEARNING												
A. Classroom rules and procedures resulting in effective use of instructional time.	0	0	2	0	0	2	0	0	2	0	1	1
B. Effective management of classroom behavior	0	0	2	0	1	1	0	1	1	0	0	2
C. Promoting and modeling respectful interaction among the student, between teachers and students and between co-teachers	0	0	2	0	0	2	0	1	1	0	1	1

CO-TEACHING PROGRAM EVALUATION

D. Communicating high expectations for all students through support and Encouragement	0	0	2	0	0	2	0	1	1	0	0	2
E. Ensuring that all students are engaged in meaning wok throughout the class time	0	0	2	0	0	2	0	1	1	0	0	2
F. Both teachers work with all students: the classroom environment would make it difficult to identify students with disabilities from their non-disabled peers.	0	0	2	0	0	2	0	0	2	0	0	2

INSTUCTIONAL PRACTICES

A. Use "we" and "us" instead of "I" and "my"	1	0	1	2	0	0	0	0	2	2	0	0
B. Are actively involved in the instruction of all students with communication and instruction flowing freely between the co-teachers	0	2	0	0	1	1	0	0	2	1	0	1

CO-TEACHING PROGRAM EVALUATION

C. Use a variety of instructional strategies to promote the success of all students	0	2	0	0	0	2	0	0	2	0	1	1
D. Provide guided practice	0	0	2	0	0	2	0	0	2	0	0	2
E. Move about the classroom.	0	0	2	0	0	2	0	1	1	0	0	2
F. Assist students with and without disabilities	0	0	2	0	0	2	0	0	2	0	0	2
G. Adapt the instruction to a variety of learning styles	0	0	2	0	0	2	0	0	2	0	0	2
H. Know the content of the lesson	0	0	2	0	0	2	0	0	2	0	0	2
I. Are comfortable with the presentation of the content	0	0	2	0	0	2	0	0	2	0	1	1
J. Group students with disabilities with their non-disabled peers	0	0	2	0	0	2	0	0	2	0	1	1
K. Re-teach students who need extra help	0	0	2	0	0	2	0	0	2	0	0	2

CO-TEACHING PROGRAM EVALUATION

L. Provide materials that are adapted to meet individual student needs	0	0	2	0	0	2	0	0	2	0	1	1
M. Demonstrate appropriate pacing of instruction	0	0	2	0	0	2	0	0	2	1	0	1
N. Provide Accommodations/modifications for students as needed	0	0	2	0	0	2	0	0	2	0	0	2
O. Ask a variety of questions using higher order thinking skills	0	0	2	0	0	2	0	0	2	0	0	2
Co-teachers use a variety of ongoing assessment strategies to fairly and accurately evaluate the real learning of the students.	0	0	2	0	0	2	0	1	1	0	0	2

Note. From classroom observation data collection.

Vitae

Tanya Marie (Entwistle) Deering is a graduate from Lindenwood University with her BA in Elementary and Special Education in 2003, a MA in Education in 2005, a MA in Administration in 2006, and working towards her EdD in Administrative Leadership in 2014. Prior to college, she was a graduate of the Lincoln County R-III School District in Troy, Missouri. At the time of this paper, she was entering her 12th year as a special education teacher, 11th year as a dance coach, and a certified CPI instructor for the district. Tanya Deering currently resides in Winfield, MO with her husband, Mark and her six-year-old son, Ashton.