

**PLANNING AND IMPLEMENTING A CO-TEACHING MODEL OF INSTRUCTION IN A FOURTH GRADE
CLASSROOM**

**A Project Presented to
The Faculty of the School of Education
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**In (Partial) fulfillment
Of the Requirement for the Degree
Masters of Arts**

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Planning and Implementing a Co-Teaching Model of Instruction
Title of Item in a Fourth grade Classroom.

Co-teaching, inclusion, collaborative teaching
3 to 5 keywords or phrases to describe the item

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Abstract

The purpose of this study was to implement a co-teaching model of instruction in two fourth grade classrooms to evaluate the collaborative process among teachers and to study the affects of co-teaching on student achievement. This was a mixed methods design where a special education teacher and a general education teacher co-taught a unit of social studies over a period of six weeks in two fourth grade classrooms that had six students with disabilities integrated. The teachers met regularly, kept reflective journals, and assessed the students' progress throughout the study. Student achievement on unit tests were used to measure student progress using an ABA single subject design. The findings of this study showed that there was no clear pattern of improvement in student achievement during the intervention period. The teacher participants reported positive outcomes from the collaborative work.

Chapter 1

Introduction

Co-teaching is one of the instructional methods for working with students with special needs. This model allows for general education and special education teachers to work together in one classroom to teach all students. Co-teaching is considered to be a successful model for meeting the needs of the majority of students with disabilities that are fully included in a general education classroom (Friend, 2007; Kohler-Evans, 2006; Scruggs, Mastropieri, & McDuffie, 2007; Thousand, Villa, & Nevin, 2006). This model has shown to be better than programs where students are pulled out of general education classrooms and attend either a resource room or special day class (pull out programs), mainly because there has been poor coordination between general education and special education teachers (Pugach & Wesson, 1995).

When a special education teacher and a general education teacher collaborate and work together in one classroom, the students feel better about their learning and the teachers feel better about their teaching (Pugach & Wesson, 1995). Of course there must be a good relationship between the two teachers and time for planning to take place so that both teachers are prepared. The general education teacher brings his or her subject matter knowledge to the instruction while the special education teacher brings his or her expertise on how students with disabilities learn and how to modify the lessons for those students (Friend, 2007). There is limited research done on the efficacy of co-teaching for students with disabilities and their academic achievement, therefore no conclusion can be made about the impact of co-teaching on these students (Scruggs, Mastropieri, & McDuffie, 2007). In another study that looked at the affect of co-teaching on math

achievement, there were inconclusive results as to whether co-teaching is more effective than “solo teaching” (Almon & Fong, 2012). “Co-teaching research to date has paid only scant direct attention to outcomes for students with disabilities...”(Friend, M., Cook, L., Hurley-Chamberlain, D., & Shamberger, C, 2010).

As a fourth grade teacher, I practiced some form of co-teaching for much of my career. The method of co-teaching most often practiced at my school was called consultation (Thousand, Villa, & Nevin, 2006). Using consultation, the general education teacher consulted with the special education teachers and they worked together on modifications for the students with special needs. The special education teachers were very rarely seen in the general education classrooms since they were often working with their own students. They did work with students in the classroom as needed, especially if a paraeducator was not available.

When I first started reading about the co-teaching model, I thought that the general education teacher and the special education teacher were teaching collaboratively all day in all subjects. I pictured two teachers in the same classroom working with general education students and students with special needs. About two years ago, one of our parents who has a child with autism, approached our principal and special education teacher with an idea to implement some collaborative teaching in her child’s fourth grade classroom. I was also invited to the meeting because the subject area that they wanted to focus on was science and I was the science teacher for fourth grade. We met on a couple of occasions to talk about how we can implement this and what we would need. This then gave me the idea of visiting a school that was already practicing a co-teaching model of instruction. The school that I visited with our special education teacher was CHIME

Charter Elementary School in Woodland Hills, California. We spent a day observing different classrooms and I interviewed their principal. I learned about their model of co-teaching and the philosophy behind it. After observing at CHIME, the Special Education teacher and I had a long discussion about what co-teaching would look like at Maple Elementary School. We also talked about how we could approach our district in the future and how this model would save a lot of money for the district, as long as it is supported. In looking at how school budgets were being cut drastically and the need to continue supporting our special education population, this model of instruction would be a good solution. Utilizing a co-teaching model of instruction would improve the quality of education for all students and would reduce possible lawsuits against a school district.

A majority of students with special needs attending this school were mainstreamed or fully included in the general education classrooms for a portion of their day. Some students were only in the general education classroom for instruction in certain subjects while others received the majority of their instruction in the general education setting. Working with these students in my classroom over the years, I was more interested in learning how to better support them. In my experience with inclusive education, students with special needs were in the general education classrooms for portions of their day and pulled out to work with a special education teacher for other subjects. Students who were participating in inclusion usually attended my class for math and science, social studies only, or science only. The rest of the time they were in the special day class or resource classroom receiving instruction from special education teachers. My school had one resource room also known as our learning center and two special day classes- one for students who are in primary grades and the other for students

who are in upper grades. The special education teachers and the general education teachers met to discuss students and their areas of concern for each of them. The general education teachers received support in their classrooms from the special education teachers or paraeducators as needed.

Chapter 2

Review of the literature

Many studies have been done on the co-teaching model for instruction of students with disabilities (Friend, 2007; Kohler-Evans, 2006; Scruggs, Mastropieri, & McDuffie, 2007; Thousand, Villa, & Nevin, 2006). Most of these studies have focused on how the model works in the classroom (Friend, 2007; Stoddard, 1996) and how the teachers and students feel about co-teaching (Ripley, 1997; Klinger & Vaughn, 2002; Thousand, Villa, & Nevin, 2006; Gately, S.E. & Gately, F.J., 2001; Gerber & Popp, 1999).

This review of the literature focuses on 1.) the definition, 2.) models of co-teaching, 3.) factors that affect co-teaching 4.) planning for co-teaching, 5.) feelings of students and teachers experiencing co-teaching, 6.) benefits of co-teaching, 7.) challenges associated with co-teaching, and 8.) outcomes or affects of co-teaching on students' academic performance.

Definitions of Co-teaching

The definition of co-teaching most often used in the literature is "... an educational approach in which general and special educators work in coactive and coordinated fashion to jointly teach academically and behaviorally heterogeneous groups of students in educationally integrated settings" (Gerber & Popp, 2000, pp. 229-230). Other terms used to describe co-teaching are collaborative teaching, team teaching, and cooperative teaching. In several articles, co-teaching is referred to as a marriage, more specifically a professional or arranged marriage (Checkley, 2003). In this context, Kohler-Evans (2006) states that the co-teaching relationship, like a marriage, needs nurturing and time to make the co-teaching relationship work. She also discusses that this

particular model is looked upon negatively “co-teaching is regarded as a way to address the letter of the law rather than as a really fun, exciting, and valuable teaching technique to be used in conjunction with other inclusive strategies for the purpose of meeting the needs of all students in an inclusive school community” (Kohler-Evans, 2006, p.260).

Co-teachers have shared ownership of the instruction and the success of their students (Checkley, 2006). The expertise of each teacher must blend well together in a co-teaching partnership. Most often the general education teacher is the content specialist and the special education teacher is the expert in the learning process (Friend, 2007). Ripley suggests that both the general education and special education teacher should work as equal partners and that they are “involved in all aspects of planning, teaching, assessment, evaluation, classroom management, and behavior” (page 2). Critics of co-teaching state that the students in co-taught classes do not receive special education instructional strategies that they may receive in a pull-out program (Gerber & Popp, 2000).

Models of Co-teaching

Co-teaching can occur in many different ways. Models of co-teaching include supportive teaching (one teaches and one assists), parallel teaching (splitting the class), complementary teaching (small groups or workshops), and team-teaching (where teachers share instruction for the whole class) (Bouck, 2007; Lawton, 1999; Scruggs, Mastropieri, & McDuffie, 2007; Thousand, Villa, & Nevin, 2006). Scruggs, Mastropieri, and McDuffie’s (2007) research shows that the model most often used by co-teachers is that of one teaching and one assisting; with the general education teacher teaching the lesson and the special education teacher walking around the room and helping where needed.

Thousand, Villa, & Nevin (2006) discuss the fact that none of the models of co-teaching were better than any of the others and that supportive and parallel models might be better for beginning co-teachers. The other two models are better for co-teachers with more experience who have stronger skills and relationships (Thousand, Villa, & Niven, 2006). Lawton (1999) states that any of the different co-teaching models can occur throughout the day.

Factors that affect co-teaching

The success of co-teaching depends on several factors, including knowing with whom you will be collaborating and building a good relationship with that person, establishing the goals of the collaboration, practicing good communication skills, recognizing and respecting the differences in the motivation of the co-teachers, participating in ongoing training and staff development for co-teaching, and planning together (Thousand, Villa, & Nevin, 2006). The study done by Scruggs, Mastropieri, and McDuffie (2007) lists the needs of co-teachers as being administrative support, a voluntary choice (indicating that the co-teachers needed to volunteer to co-teach, not have it assigned to them), planning time, training, and compatibility. They also state that for collaboration to be successful, the partners need to be equal and must focus on curriculum needs, innovative practice, and appropriate individualization (Scruggs, Mastropieri, & McDuffie, 2007). Walther-Thomas (1996) states that administrative support is essential for successful co-teaching since this leads to securing resources and preparing the staff for their new roles and responsibilities. S. Gatley, and F. Gatley, (2001) discuss the three stages that co-teachers experience when they implement the collaborative process: the beginning stage, the compromise stage, and the collaborative

stage. To help co-teachers improve, S. Gately and F. Gately (2001) developed a Coteaching Rating Scale, or CtRS, for the general education teacher and the special education teacher.

Planning for Co-teaching

Planning for co-teaching takes a strong commitment by the teachers and administrators. Structured planning time is indicated as one of the most important components that makes co-teaching successful (Bouck, 2007; Friend, 2007; S. Gately & F. Gately, 2001; Gerber & Popp, 2000; Kohler-Evans, 2006; Mastropieri, et al., 2005; Scruggs, Mastropieri, & McDuffie, 2007; Thousand, Villa, & Nevin, 2006; and Walther-Thomas, 1996). The administrator must support the planning. Walther-Thomas (1996) describes specific planning schedules for co-teaching as well as who should be involved in the planning. His research also indicates that not enough studies have been done on “co-planning” (Walther-Thomas, 1996). Walther-Thomas (1996) discusses the importance of the teachers spending time planning together before the school year starts as well as making sure that there is weekly co-planning time. Kohler-Evans (2006) emphasizes the importance of co-planning to make co-teaching work. She says that if the co-teaching partnership does not have time to plan together, that co-teaching should not happen (Kohler-Evans, 2006).

Benefits of Co-teaching

Many qualitative studies have been done on co-teaching that include case studies, observation records, interviews, and surveys (S. Gately & F. Gately, 2001; Gerber & Popp, 1999; Pugach & Wesson, 1995; Scruggs, Mastropieri, & McDuffie, 2007;

Stoddard, 1996; Thousand, Villa, & Nevin, 2006). Generally these studies find that teachers and students both benefit from a collaborative form of teaching.

Gerber and Popp (1999) interviewed 123 students and their parents from seven different school districts that had implemented collaborative teaching for at least two years. These participants were students with and without disabilities. About 85 percent of the students with disabilities were classified as having a learning disability (Gerber & Popp, 1999). They found that the majority of the students felt that they benefitted from the collaborative teaching model. The students without learning disabilities thought that this method had positive effects on their grades and their self-esteem (Gerber & Popp, 1999). The student participants that had learning disabilities also had improved grades and received more help in the classroom (Gerber & Popp, 1999). The few complaints about the collaborative model from all of the students were that there was a bigger chance of getting in trouble more often (Gerber & Popp, 1999).

The parents also found that co-teaching had positive effects on their students. Many of them either did not know that their child was being taught in a collaborative setting or did not know very much about this teaching model (Gerber & Popp, 1999). The parents of students with learning disabilities had a better understanding of the collaborative teaching model than the parents of students without learning disabilities, mainly because they had more communication with the teachers (Gerber & Popp, 1999)

One study done by Pugach and Wesson (1995) looked at a fifth grade group of students who had three teachers. At the end of the study, a selected sample of students was interviewed. The majority of them had positive feedback about the experience (Pugach & Wesson, 1995). They felt like they had more help with instruction and that the

social climate of the classroom improved (Pugach & Wesson, 1995). Only two of the students they interviewed chose not to participate in a collaborative setting again, one of them was a general education student who preferred having one teacher and the other student was a student with learning disabilities and emotional difficulties that affected her school year (Pugach & Wesson, 1995).

A few studies showed that effective co-teaching lead to improved student achievement and better social interactions for both general education and special education students (Scruggs, Mastropieri, & McDuffie, 2007). There is little quantitative data in regards to student achievement reported in the literature. The students and teachers felt that there was improvement based on interviews and feedback that was given after the studies. This metasynthesis of several qualitative studies of co-teaching, also describes students as being better social models for one another. Many students with disabilities also felt that they were receiving more attention in these co-taught classrooms (Scruggs, Mastropieri, & McDuffie, 2007). In a study conducted by Stoddard (1996) using three data collection methods: daily charting of students with emotional disturbances, journal writing by all of the student participants, and sociograms that were completed by all of the students; positive outcomes were found for all of the students. Teachers also benefit from the co-teaching partnership. Many of them indicate that they have grown professionally, they have better personal support, and there is a better sense of community within the general education classroom (Thousand, Villa, & Nevin, 2006). “Teachers involved in collaborative partnerships often report increased feelings of worth, renewal, partnership, and creativity.” (S. Gately & F. Gately, 2001, p.40). The co-teaching relationship is usually more positive when the teachers volunteer to teach

together as well as when they are compatible (Mastropieri, Scruggs, Graetz, Norland, Gardizi, & McDuffie, 2005).

Challenges of Co-teaching

Of course, in contrast to the benefits of co-teaching, there have been detriments as well. One study states that some special education teachers felt that the general education teachers had more control since the instruction was occurring in his or her classroom; this was also called “turf issues” (Scruggs, Mastropieri, & McDuffie, 2007). Oftentimes the special education teacher feels subordinate or less knowledgeable than the general education teacher, mostly because the general education teacher knows the content area better (Scruggs, Mastropieri, & McDuffie, 2007; Mastropieri, et al., 2005).

Outcomes/Affects of co-teaching on student achievement

There is limited research on the affects of co-teaching on the achievement of disabled and non-disabled students. In a metasynthesis Scruggs, Mastropieri, & McDuffie (2007), looked at 32 qualitative studies of co-teaching. Within these investigations, only a small number study student achievement outcomes. It was mentioned that “teachers report positive attitudes toward various forms of co-teaching; however, there was a limited knowledge about student outcomes, and a lack of empirical evidence supporting co-teaching” (Scruggs, Mastropieri, & McDuffie, 2007, page 3). Another article describes a meta-analysis that found only six studies that described quantitative data (Murawski & Swanson, 2001). The authors also noted that none of the studies included students that had moderate or severe disabilities and recommended that additional studies should be done to determine the effect of co-teaching (Murawski & Swanson, 2001). Their meta-analysis of the six articles that looked at student achievement did show

improvement mostly in reading and language arts. “These results indicate that there is a potential for positive results in the area of achievement using co-teaching as a service delivery option for students with special needs in a general education setting.” (Murawski & Swanson, 2001, p. 265).

The research findings on co-teaching explain many aspects related to this model of instruction. These include: the definition, different models of co-teaching, the factors that affect co-teaching, planning, the feelings of students and teachers about co-teaching, the benefits, the challenges, and the outcomes on academic performance of the students participating in a co-taught classroom. The following study looks at what happens when teachers implement a collaborative model of teaching (co-teaching) and the impact on the achievement of the students in two fourth grade classrooms in social studies.

Research Questions

Given my experiences with co-teaching and the scholarship describing its effects, this research focuses on the following questions:

1. What are the planning processes and challenges when general education and special education teachers collaborate?
2. What is the impact on student achievement of collaborative teaching on fourth grade students in social studies based on a co-teaching method of instruction?

Chapter 3

Method

Setting

The study was conducted at a small K-5 school in a suburban area of Southern California. There were 356 students attending this school with eighteen percent of these students with Individualized Education Plans (IEPs) or 504 plans. Of the eighteen percent of students with an IEP or 504 plan, approximately one half were eligible for special education services under autism and about 30 percent were identified as students with a specific learning disability (SDL). The majority of these students were placed in general education settings for all or part of the day, while others were only mainstreamed with the general education population during specialist times such as computers, library, physical education, music, or art. The implementation of the co-teaching model occurred in two fourth grade classrooms during social studies instruction. The instruction was for three to four hours per week for twelve weeks.

Participants

The participants in this research project were two fourth grade teachers, two special education teachers, 66 fourth grade students, with six of these students being in special education.

Student participants

The participants' parents were given consent forms to inform them of the research being done, as well as asking for permission for the student to participate in the study. While all 66 students received the co-teaching instruction, 48 students had permission to participate in the entire study. The school and school district were also informed of the

study being conducted. The students with disabilities who participated in the study included three students with autism, two students with attention deficit disorder and one with a disability of other health impaired (OHI). Four of these students were in Class A and two of the students were in Class B.

Students A and B were students with autism and from Class B. Student A was high functioning, but had more difficulties with academics and spent most of her day in the Special Day Class, and Student B had a lower level of functioning and also spent most of her day in the Special Day Class. The assessments they were given were modified for all of the units. Students C, D, E, and F were from Class A. Student C was diagnosed with Attention Deficit Disorder and received services in the Learning Center (Resource) for Reading. The assessments he was given for tests 1 through 4 and 7 were all modified by having fewer questions. For Tests 5 and 6, he was given the same assessments as the rest of the students. Student D was also diagnosed with attention deficit disorder and was in the Learning Center for Reading. He was given the same assessments as Student C. Student E was a student with a learning disability and attended the Learning Center for Math and Reading. Student F was also a student with autism who was higher functioning and attended the Learning Center for Reading. Student F took all of the same tests as the general education students.

Teacher participants

One of the fourth grade teachers had over ten years of teaching experience in fourth grade and had also taught third and sixth grades. The other fourth grade teacher had six years of teaching experience in fourth grade. One of the special education teachers was in her second year of teaching and mainly taught students with learning

disabilities and the other special education teacher was in her first year of teaching and mainly taught students with autism.

Instruments

Several instruments were utilized in this study. First, a questionnaire was developed to determine the readiness of the co-teachers. The teachers maintained a reflective journal throughout the study. The researcher, referred to in this study as the lead teacher, created agendas and maintained minutes for each meeting that was held by the collaborative team. Finally, the students took summative unit assessments after the social studies lessons were taught.

The questionnaire that was given to the teachers at the beginning of the study was derived from the article “Planning for Effective Co-Teaching”, by Chriss Walther-Thomas. These questions were answered in the reflective journals and discussed at the first meeting and were used as the starting point of the reflective process.

The teachers maintained detailed journals and notes during the co-teaching process. The journals were reflective in nature as in the journals that are used in an action research project. Teachers wrote in their journals after each lesson focusing their entries on the successes and challenges of these lessons. They were also encouraged to write about how they felt about the process and to write any questions and concerns they had during the project and to write about the students’ reactions and behavior during the lessons.

The agendas and minutes were provided and recorded at each meeting held between the collaborative teachers. The lead teacher prepared the agendas and recorded the minutes for each of the meetings. Each meeting focused on discussing the co-taught

lessons and what the teachers were recording in their reflective journals. They also addressed any concerns or problems that came up during the process and worked on solutions for them.

Finally, assessments were given to the students that were written by the teachers. These assessments were based on the end of unit tests developed by the publisher of the social studies curriculum, Scott Foresman. Since the unit tests were based on five lessons or more, the fourth grade teachers decided to re-write them so that they were based on two to four lessons. These results were analyzed and compared to the student unit test results from before and after the study.

Procedure

This action research project was a cyclical process of implementing the model of co-teaching, assessing the outcomes of the implementation, reflecting on the process and making any changes as needed. Before the teacher participants began the co-teaching investigation, they were given a set of reflective questions from the lead teacher to answer in their journals. They met to discuss the project and any questions or concerns they had. An agenda was written by the lead teacher for this meeting and she also took notes.

A baseline was established using traditional teaching methods and unit assessments. During the intervention phase it was decided by all of the teachers that the two general education teachers would teach the first lesson in the social studies unit, the special education teachers would teach the second lesson, and so on. The social studies unit taught was called “Early History to Statehood” and included five lessons (White, W.E., 2006). Each lesson was presented over two or three days with each lasting from

one hour to one and a half hours. Both the general education teachers and the special education teachers participated in the teaching of the lessons. The co-teaching model that they used most often in their instruction was the supportive teaching model. This model involved one of the teachers teaching the lesson and the other teacher assisting with the lesson by walking around and helping students, contributing to the lesson with input, modifying parts of the lesson for students who were struggling, and making sure that the students were on task.

The teachers held a short debriefing meeting after each lesson to discuss any concerns or successes. These lasted for about 15 minutes and any notes that were taken became part of the data. After each lesson, the teachers wrote a reflection in their journals focusing on the successes of the lessons, the challenges of the lessons, and how the students reacted to the lesson. Weekly planning meetings were held to plan lessons, decide on what each teacher will be doing for the lessons, look at assessment data of the students, and discuss any modifications that any of the students may need for the lessons. The teachers involved in the co-teaching project wrote the assessments that were given to the students.

There were two assessments during the intervention: one that was given after the first two lessons from the unit and the other that was given after lessons three through five were taught. Study guides for each of the tests were also written for the students. After the teachers graded the assessments they gave each of them a percent score based on the number of questions that the students answered correctly. These data were kept in the grade books of the two fourth grade general education teachers. Formative assessment was also utilized by the four teachers. These came in the form of vocabulary review at the

beginning of a lesson, the use of whiteboards, and the playing of a “Jeopardy” game to review for the tests.

Chapter 4

Results

The focus of this study was on the co-teaching of a social studies unit to fourth grade students. It examined the work of the teachers throughout the instruction and the results of assessing the students on multi-lesson tests. During this project, four teachers in two fourth grade classrooms participated in the study. There were 48 students who participated in the study with 25 in one classroom and 23 in the other classroom. Six of these students were students with Individualized Education Plans or IEPs.

Before the instruction began, the four teachers met to discuss the structure of the project and answered some questions about co-teaching. These questions were from the article: “Planning for Effective Co-Teaching”, by Chriss Walther-Thomas (1996). During this initial meeting, there was also a discussion about how often the four teachers should meet and instructions were given on what to write in the reflective journals. An agenda and minutes were also written for this meeting. The four teachers- two general education teachers and two special education teachers, taught a unit of social studies to the students in two fourth grade classrooms. Two teachers worked with Class A and the other two teachers taught Class B. After each lesson, the two teachers de-briefed and discussed the lesson and then wrote in their reflective journals. In the first meeting of the co-teaching team before conducting the study, the discussion focused on the curriculum, the schedule for teaching, and somewhat on how the lessons would be taught. (J.N. Mutch, personal communication, 2008). In discussing how the lessons would be taught, the teachers decided that they would teach the lessons as they thought would be appropriate and mainly used the social studies curriculum as a guide.

Themes Derived from Teacher's Reflective Journals and Meetings

After reviewing the reflective journals that were kept by the teachers and the agendas and minutes, there were several themes that emerged during the study.

The first one had to do with time and the limitations that were placed on the participants because of the limited time given for planning, collaborating and teaching the lessons. One of the teachers wrote in her journal, "I am concerned about finding the time for meetings to communicate as needed- our schedules are full already!" (C. Babcock, personal communication, February 1, 2008). The challenge related to time for planning was evidenced by the change that occurred in the regularity of meetings. During the first couple of weeks of the study, the four teachers met every week to discuss the successes and challenges of the co-teaching process. The lead teacher took notes during each of these meetings. The meetings occurred less frequently as the study continued mainly because the four teachers had difficulty finding the time to meet.

A second theme that was discovered was about the balance between the roles of the general education and special education teachers. This theme focused on the philosophy of teaching for each of the teachers and their teaching methods. The minutes from two of the collaborative meetings included notes about "teaching differently" and having a balance between the general education and special education perspectives. (J.N. Mutch, personal communications, January 31, 2008 & February 28, 2008). An example that was given was that the general education teachers have to work at a certain pace to be able to have grades for report cards. The special education teachers want to have lots of review and repetition so that the students can be more successful. (J.N. Mutch, personal communication, February 28, 2008).

A third theme focused on student achievement and whether the students would show improvement during the study. One teacher wrote in her journal “Will student achievement improve?” (C. Babcock, personal communication, February 1, 2008). As the study progressed, the teachers reflected on the fact that the students seemed more engaged in the lessons and were excited about them. They also liked the fact that a lot of students were getting more attention and were having less behavior issues since there were two adults in the room instead of one. (J.N. Mutch, personal communication, February 28, 2008).

Student Assessment Results

Seven written assessments were used to collect data from the students. Four assessments were given prior to the intervention period, two were given during the intervention period and one was given after this period. The two assessments and study guides for the tests given during the intervention period were written by the four teachers prior to the beginning of the intervention. The first assessment was given after the first two lessons were taught. The second assessment was given after lessons three, four, and five were taught. These scores were percentages based on the number of problems given on each test and were collected and recorded by the general education teachers.

Class A’s and Class B’s test scores were recorded and averaged for all of the tests given before and after the study as well as the two tests (5 and 6) that were given during the study. The mean, standard deviation and ranges were recorded for each test for Class A (Table 1) and the same test scores and statistics were also recorded for Class B (Table 2).

Table 1

Student Assessment Results for Class A

Test Number:	Baseline Unit Tests			Intervention Unit Tests			Post Intervention Test
	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7
Mean	86.625	89.375	71.08	77.04167	86.30435	76.26087	86.72
Standard Deviation	10.83397	9.449235	14.31468	14.74856	8.047782	13.73521	18.96822
Range	68-100	70-100	49-100	47-100	68-100	53-97	25-100

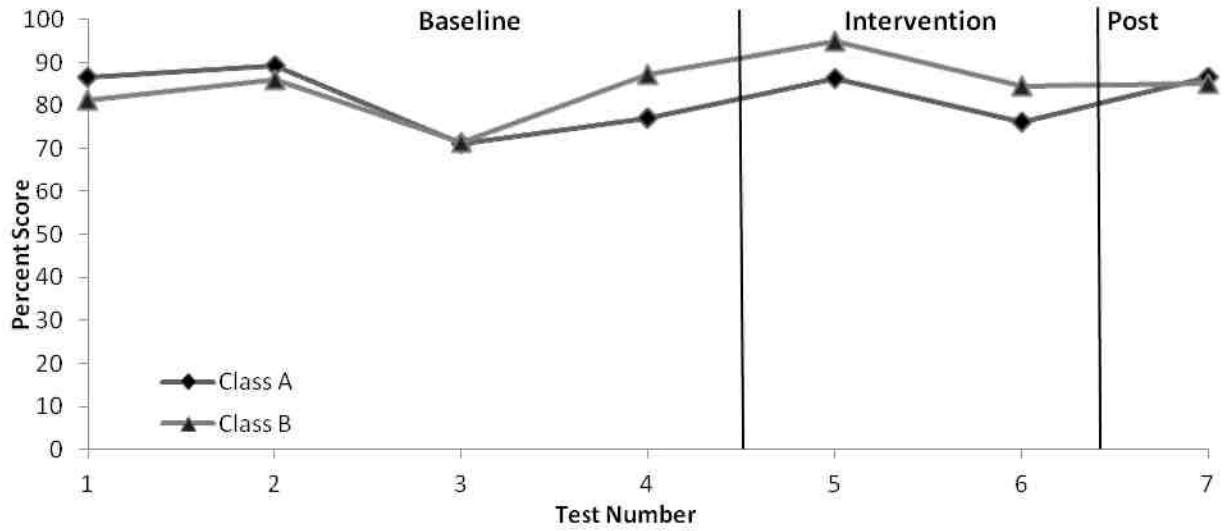
Table 2

Student Assessment Data for Class B

Test Number:	Baseline Unit Tests			Intervention Unit Tests			Post Intervention Test
	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7
Mean	81.3913	86.08696	71.52174	87.21739	94.91304	84.6087	85
Standard Deviation	17.82169	14.13221	14.7336	9.302769	6.542956	10.64185	16.5749
Range	42-100	42-97	29-89	70-100	84-100	64-100	40-100

These means for both classes were recorded on a graph (Figure 1). In comparing the assessment results from the seven tests given in social studies in both classrooms (Figure 1), the class averages were shown to slightly increase during Test 5 but not in test 6. In the baseline unit tests, scores also dropped with Test 3.

Figure 1- Unit Test Mean for Classes A and B



Test results were also recorded and analyzed for the students with Individualized Education Plans. The unit scores for each of these students were recorded (Table 3) and then graphed (Figures 2, 3, 4, 5, 6 and 7).

Table 3

Test Scores for Student with IEPs

	Baseline Unit Tests			Intervention Tests		Post Intervention Test	
	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7
Student A	100	94	83	82	95	84	88
Student B	84	91	83	99	84	88	83
Student C	79	100	63	83	95	62	25
Student D	74	100	76	79	87	76	80
Student E	74	70	51	83	76	53	40
Student F	100	89	66	80	82	75	100

Figure 2. Unit Scores for Student A

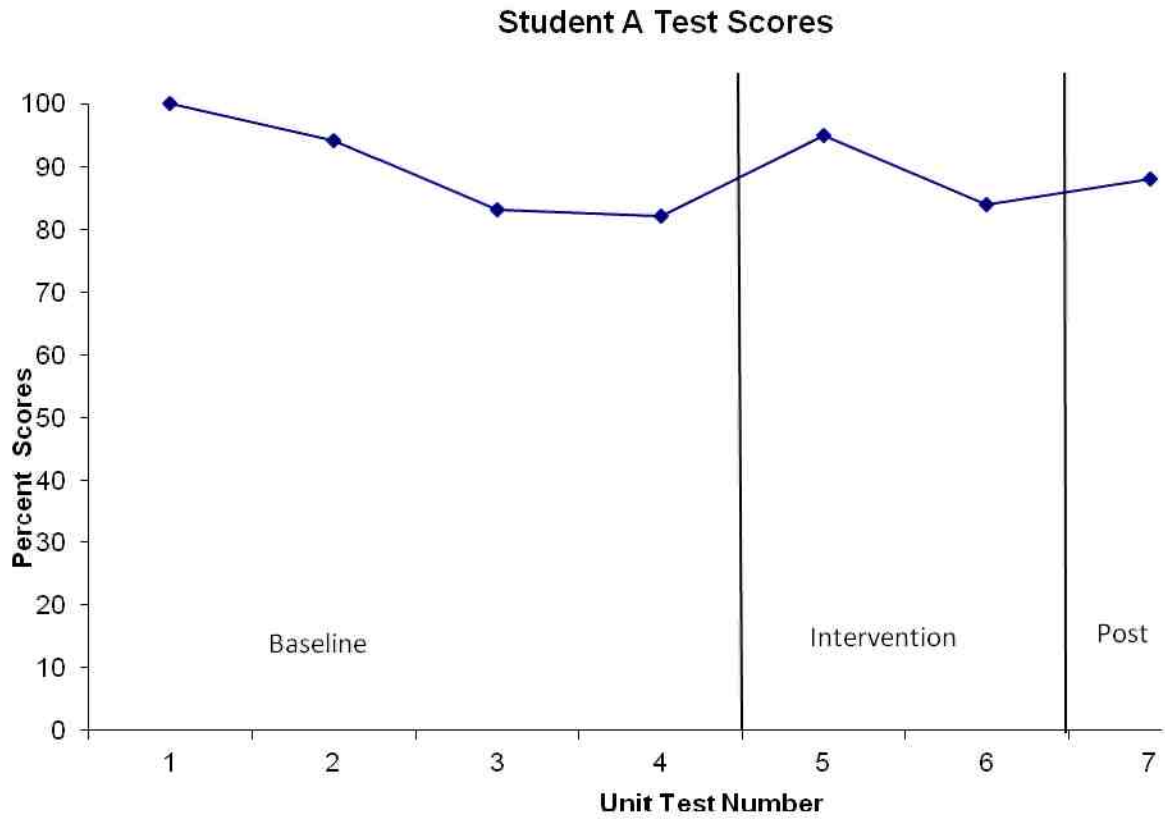


Figure 3. Unit Scores for Student B

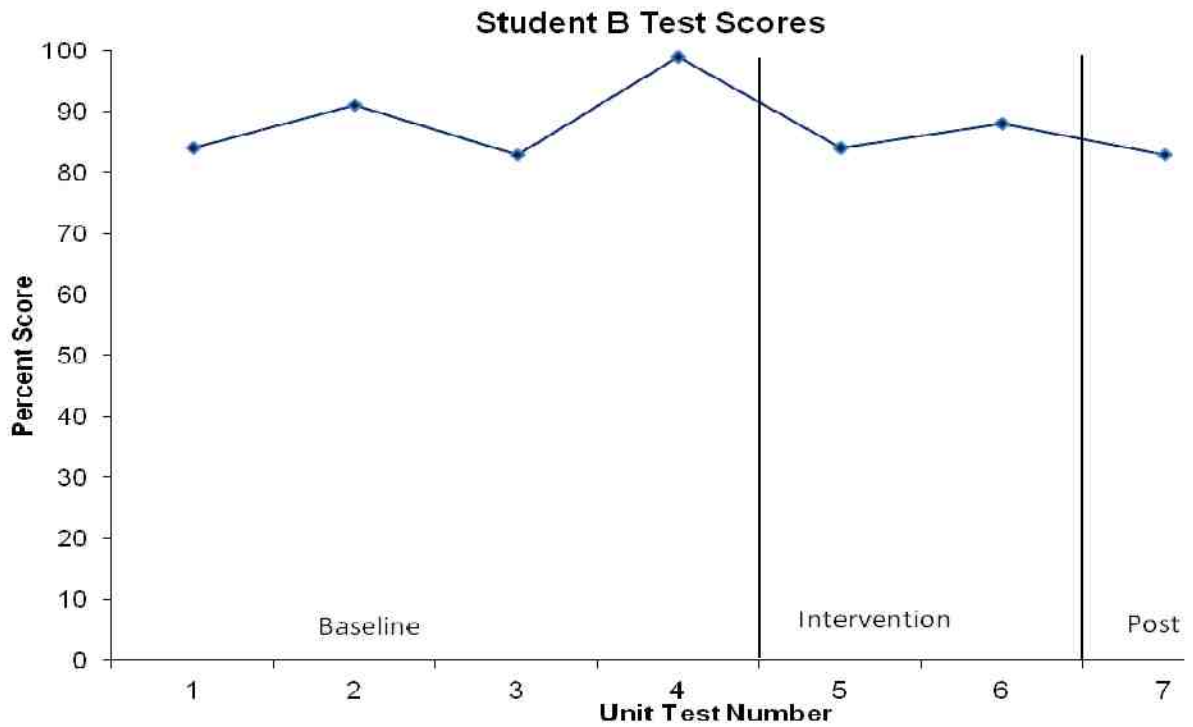


Figure 4. Unit Scores for Student C

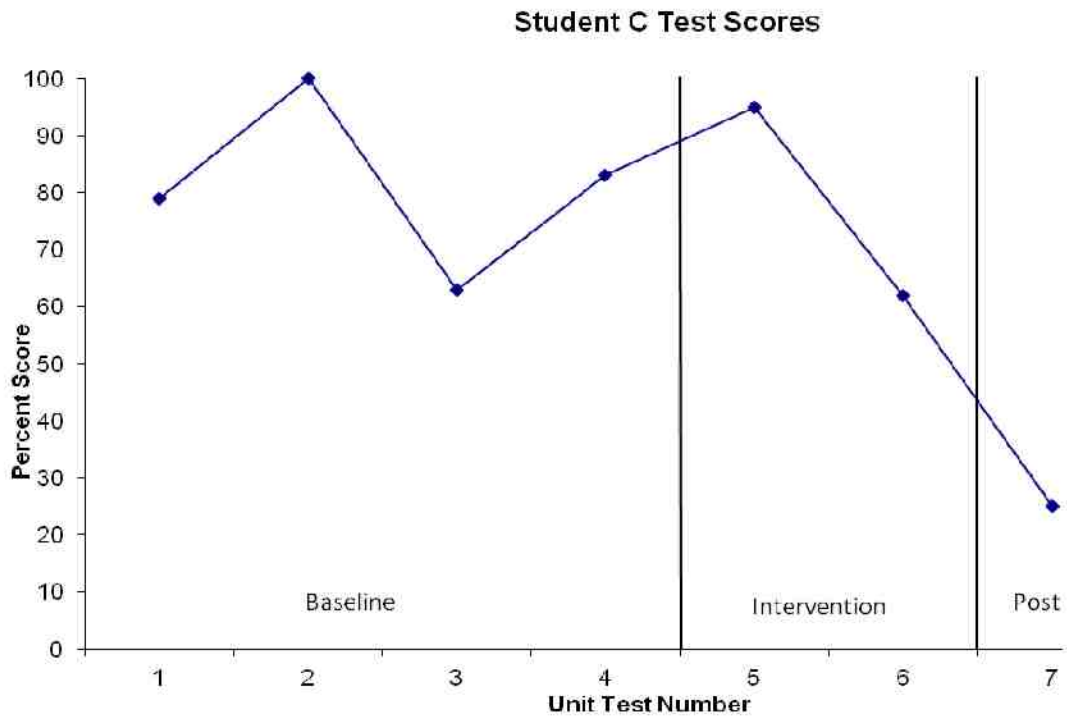


Figure 5- Unit Scores for Student D

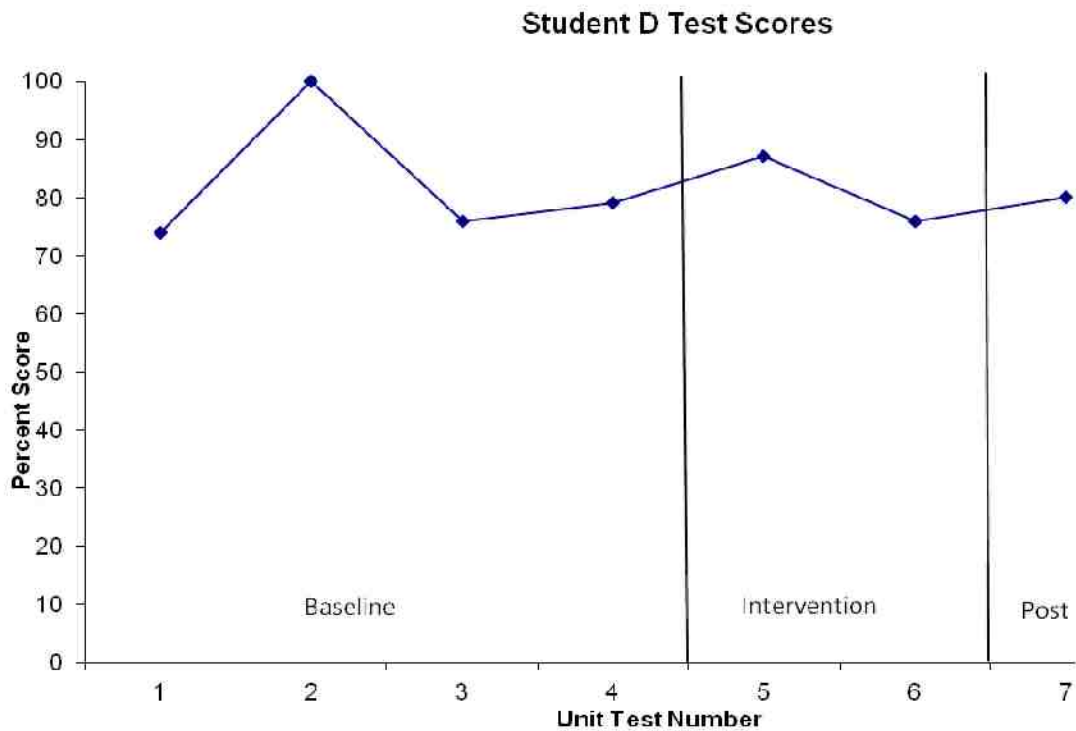


Figure 6: Unit Scores for Student E

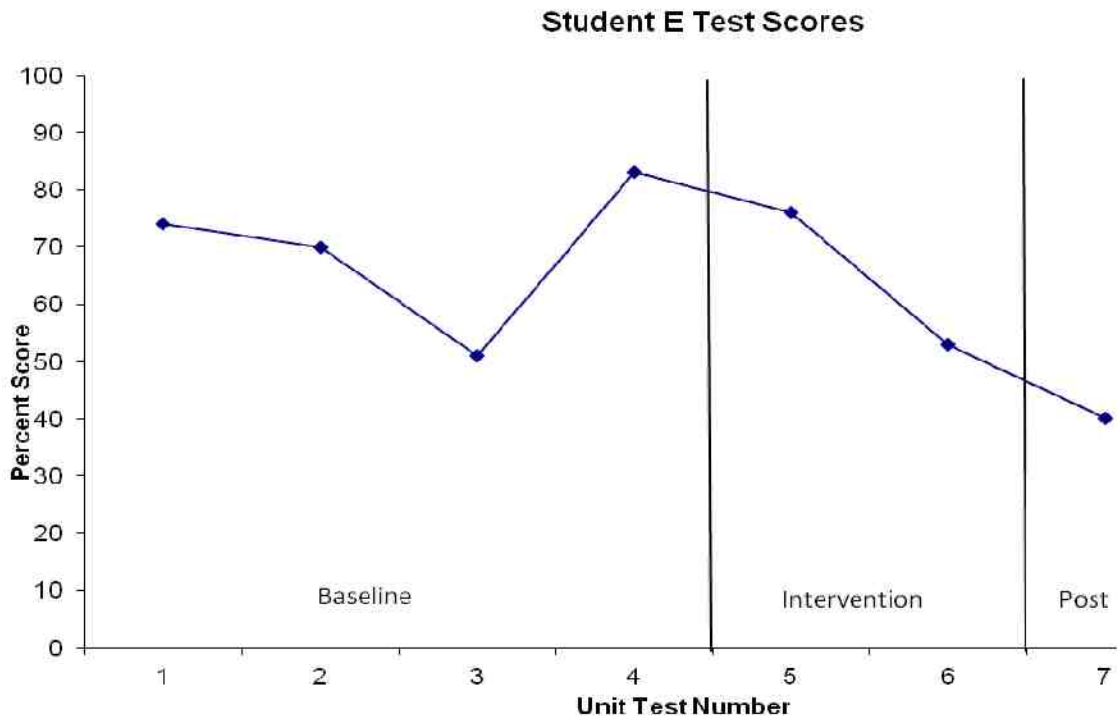
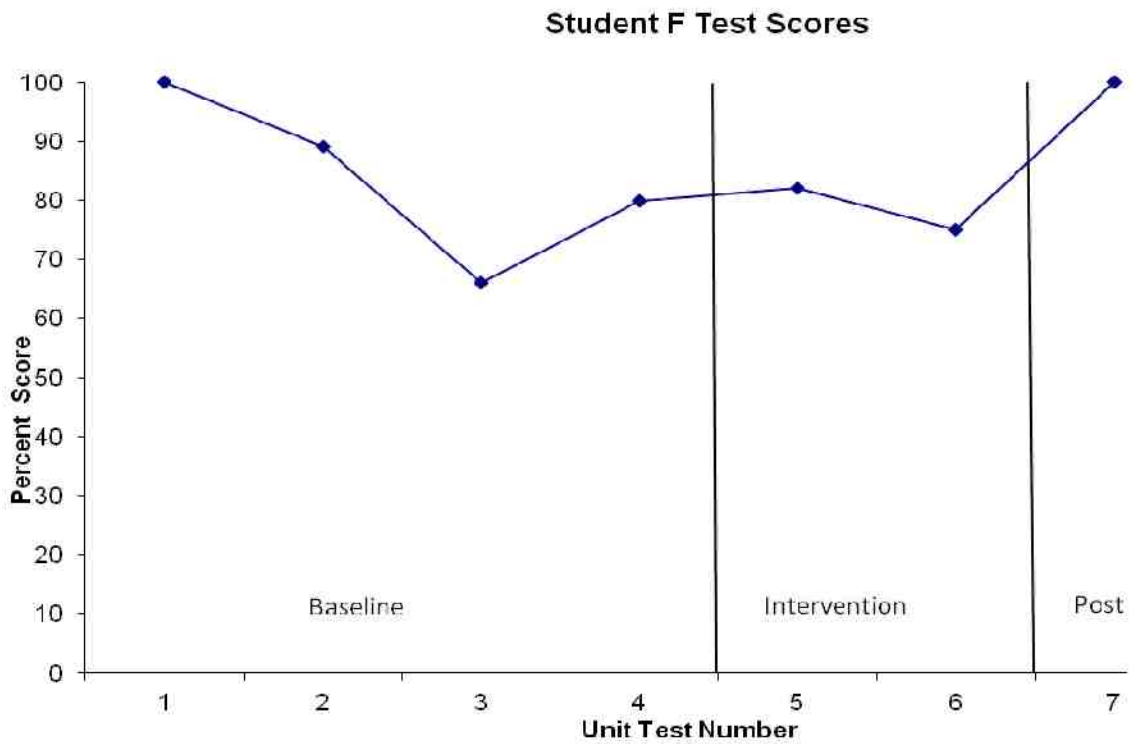


Figure 7: Unit Scores for Student F



It is interesting to note that a few of the students with IEPs had improved scores with Test 5, but their scores went down with Test 6. Students A, D, and F had similar results as the general education students by having improved test scores with Test 5 and decreased test scores with Test 6. Students B, C, and E had inconsistent scores with all of the assessments given before the interventions and after.

All students were more attentive and participated more often during the social studies lessons presented by the teachers. The meeting minutes, journal entries and agendas kept during the study indicated these improvements as did the debriefing discussion held between the teacher participants.

Chapter 5

Discussion

The research on co-teaching conducted at Maple Elementary School was consistent with three of the themes that emerged from the review of the literature. One theme was based on time limitations for planning; another was about the roles of special education teachers and general education teachers; the third theme focused on student achievement results.

Time Limitations and its Effects on Co-teaching

The literature emphasizes that teachers participating in a co-teaching model must have structured and scheduled planning time. Walther-Thomas (1996) states that weekly planning time must be set aside and that co-teachers should meet and plan before the school year starts. Teacher participants in this study met before beginning the implementation of the co-taught lessons, completed a questionnaire, and discussed their expectations and concerns regarding the research. The lead teacher and the teacher participants created a plan of when the lessons would be taught and who would teach them. They also made plans to meet on a regular basis to talk about the progress of the lessons. The team planned to meet every week to debrief about the lessons and how the students were responding. As the study moved forward, it was difficult for the co-teaching team to meet this often because of other teaching obligations. Although the administrator was very supportive of the study, the teachers' schedules were very full. The participants continued to write in their journals after each lesson and to de-brief with their teaching partners. This frustration of limited time was expressed by one of the participants in the beginning of the study. On one of the agendas, the lead teacher wrote

about how time is always a challenge and that the team was trying to make the best of it (J.N. Mutch, personal communication, February 28, 2008). It is important to note that the general education teachers had planning time included in their schedules and were available to meet on a weekly basis. The special education teachers had more time constraints mainly due to one or both of them needing to help with a student, attend an IEP meeting, or handle other issues that came up. Any school that is planning to use this model needs to plan in specific time for the co-teaching team. It should be a weekly meeting that cannot be interrupted.

Balance between special education and general education teachers

The co-teaching study conducted in the two fourth grade classrooms involved one fourth grade teacher in each classroom and one special education teacher in each classroom. One of the teachers was the content specialist (the general education teacher) and the other teacher was an expert on the learning process (the special education teacher) (Friend, 2007). Of the four teacher participants in the study, one had no experience with the fourth grade social studies curriculum, another had limited experience (she had been in classroom while it was being taught, but had never taught the curriculum), and the other two had several years of experience with teaching the social studies (one had nine years of teaching fourth grade social studies and the other teacher had seven years of experience with the curriculum). An example of this was in one of the classrooms when the special education teacher was presenting the lesson on how people came to California and described that they traveled around Cape Cod. The general education teacher interjected and explained that it was Cape Horn and both teachers used

a map to show where this was. (J.N. Mutch, personal communication, February 20, 2008).

Models of Co-teaching

Both classrooms followed the supportive model of co-teaching where one teacher taught the lesson and the other teacher assisted by walking around the classroom, writing notes on the board or overhead projector, or working with a student or students that need help. There were times when both teachers were involved with team teaching by co-instructing the lesson. All four teachers were more comfortable with the supportive model mainly due to the lack of experience with co-teaching. When the general education teachers have had other adults in their classrooms, they were there in a supportive role. The general education teachers and special education teachers alternated the instruction during the study. The co-teaching team decided that the general education teacher would teach the first lesson, the special education teacher would teach the second, and so on. The reason for this was that the general education teachers were more comfortable with the content and felt that modeling the first lesson would be helpful for the special education teachers. The implication here is that teachers relied on what they knew and were comfortable with and this would be important to focus on with implementing a co-teaching model. It would be helpful to discuss each teacher's strengths and weaknesses to better define what model of co-teaching should be used.

Factors that affect Co-teaching

Many factors affect the success of co-teaching, including knowing with whom you will be collaborating and building a good relationship with that person, establishing the goals of the collaboration, practicing good communication skills, recognizing and

respecting the differences in the motivation of the co-teachers, participating in ongoing training and staff development for co-teaching, and planning together for each of the lessons that are being taught (Thousand, Villa, & Nevin, 2006). Most of these factors were part of the co-teaching study. The teachers involved in the study already had established relationships; the goals were discussed the first meeting; communication was done through weekly meetings and de-briefings after each lesson; each teacher was very respectful of the differences and motivation; the planning was done with the weekly meetings or in the classroom as part of the debriefing. The only aspect that was not part of the study was ongoing training and staff development. None of the teachers had any training or background in co-teaching other than the lead teacher who was organizing the research.

Outcomes/Affects on Student Achievement

The assessment data indicated an improvement in some of the students' test scores during the intervention period of the study. It's important to note that the positive outcomes from the study also could be attributed by the fact that the teacher-participants were very excited about the work they were doing and that their enthusiasm created a more positive classroom climate.

The data also showed that the class averages were shown to slightly increase during Test 5 but not in test. This may have been possibly due to the number of lessons assessed on each of those tests or the difficulty of the test questions.. Only two lessons were assessed on Test 5 and three lessons were assessed on Test 6. The students with disabilities also showed increased scores with Test 5 but lower scores with Test 6.

Limitations of the Study

It would be difficult to replicate this study due to many limitations. The short timeline for the study and the small sample size did not allow for a clear picture of student achievement as a result of co-teaching. The assessments were created by the teacher participants and the existing curriculum was modified to meet the needs of the students. Without having direct access to the curriculum or these assessments, researchers would have challenges with designing a similar study. Other factors that created limitations were the different instructional styles and learning styles of the participants and the different components of the social studies lessons such as vocabulary instruction, reading comprehension, and geography. Every teacher has a different instructional style and every student learns differently and these components could lead to inconsistencies with a repeated study.

Implications

In looking back at the literature and the research that was conducted at the elementary school, several important aspects of co-teaching as a model of inclusion were highlighted. To make co-teaching successful takes a lot of time and effort on the part of the teachers to plan, communicate, train for, and implement this model. Further research should be done to look at quantitative affects that co-teaching has on students with and without disabilities and across subject areas. Because of the small sample size, the data results may not be indicative of the general population.

Before deciding to implement this method of teaching, it is important to understand the expectations of the co-teaching colleagues. It is also imperative that the co-teaching partners communicate when it comes to planning, classroom management,

assessment, instruction, and any other aspect of co-teaching that would affect its success.

The administrators also need to be very supportive and allow for scheduled time for the co-teaching team to plan and debrief about the lessons and students. Since the special education and general education teachers may have different administrators, it is important that all administrative leaders of the teachers agree on the planning time.

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