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Effective Strategies for Co-Teaching

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Effective Strategies for Co-Teaching

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Abstract

The purpose of this investigation was to determine how co-teaching training using the five models of co-teaching and the eight components of the co-teaching relationship impacts the relationship of co-teachers. Most teachers enter into a co-taught class setting with little to no experience as a co-teacher and this impacts the dynamics of the relationship. The participants in this study were faculty from one public elementary school in the Southeastern United States. The participants included 5 special education teachers and 5 general education teachers. The co-teaching pairs taught grades K-5. The effects of co-teaching were examined using a pre/posttest design as well as qualitative surveys to evaluate the teachers' perceptions of their experiences implementing the different co-teaching models throughout the duration of the study. Although there were no significant differences in the pre-test/ post-test results, the participants did report that they benefitted from the professional development related to co-teaching and that they felt that their co-teaching relationships and communication skills were stronger after the training.

Keywords: co-teaching, inclusion, professional development

Effective Strategies for Co-Teaching

In 1973, the Rehabilitation Act stated that students with disabilities could not be denied access to programs or activities that used federal funds (Rehabilitation Act, 1973). Initially students with disabilities regardless of whether they had a physical or intellectual disability were educated in classroom settings separate from students without disabilities (Rehabilitation Act of 1973 Pub. L. 93-112 87 Stat. 355). A few years later in 1975, Congress passed the Education for All Handicapped Children Act. This act mandated that free and appropriate public education (FAPE) must be provided for all children. This legislation was the beginning of students with disabilities being taught in an inclusion this setting. This movement was initially fueled by two court cases in particular which were the Pennsylvania Association for Retarded Children (PARC) v. Commonwealth of Pennsylvania, 343 Fed. Supp. 279, (1972) and Mills v. Board of Education of District of Columbia, 348 F. Supp. 866 (1972). In both the PARC and Mills cases the judges struck down local laws that excluded children with disabilities from schools. They established that children with disabilities have a right to a public education. The Individuals with Disabilities Education Act (IDEA, 2004) further defined how states would ensure that FAPE and services for students with disabilities would be provided. Additionally, FAPE as described in IDEA 2004 started the movement of students with disabilities from "self-contained" classes to co-taught classroom settings which are considered to be the least restrictive environment (LRE).

The 2001 No Child Left Behind (NCLB) legislation and the reauthorization of IDEA (2004) supported inclusive practices and high standards for both teachers and students. The popularity of inclusion has been growing since the 1990's as a way of meeting the needs of all students with or without disabilities (Austin, 2001). Just as special education has evolved through the years so has the role of the special education teacher. Early special education

teachers were isolated from their colleagues in "self-contained" classrooms and not really

included in programs and activities in the school setting (Austin, 2001). Today special education

teachers are included in more of the general education setting, especially in inclusion classrooms.

Inclusion means educating students with disabilities in a class with students without

disabilities (Austin, 2001). Inclusion provides students with disabilities the opportunity to have

access to the same curriculum and instruction that general education students have with the

support of a special education teacher. All of the changes in special education, especially with

inclusive classrooms, have made the role of the two teachers in the co-taught classroom setting

very ambiguous.

Types of Co-Teaching Models

Co-teaching continues to be difficult for both general and special education teachers

because most teachers do not understand their role in the co-taught classroom Austin (2001).

Therefore, there are five co-teaching models that outline roles and responsibilities for each

teacher in the co-teaching pair Friend, Cook, & Hurley-Chamberlin, & Shamberger (2010) . The

five co-teaching models outlined by Cook and Friend (1995) are: one teaching one assisting,

station teaching, parallel teaching, alternative teaching, and team teaching. Each model involves

different roles for each teacher in the teaching pair and requires a different comfort as well as

skill level for the teachers (Cook & Friend, 1995).

1. One teaching one assisting: This model occurs when one teacher takes the lead role
   instructing the class and the other teacher monitors students work and provides
   assistance to students when needed. This model is usually least favored because it can
   appear as if one teacher is the leader and the other is an assistant. This model should

be used sparingly or when a co-teaching pair is just starting to co-teach together

(Cook & Friend, 1995).

2. Station teaching: This model occurs when teachers divide the instructional content

   into two lessons and the students in the class are divided into two groups. Then the

   teachers are at stations within in the room and the student groups rotate through the

   stations. The teacher teaches his/her lesson to each group as the groups rotate through

   the stations thus teaching his/her lesson one time to each group of students throughout

   the class period. This is a stronger co-teaching model option than one teaching one

   assisting because both teachers are teaching parts of the lesson and students have a

   low teacher to pupil ratio. However, this model requires that both teachers are

   comfortable with the content as well as time and collaboration for planning to divide

   the content to ensure a fluid lesson for the student (Cook & Friend, 1995).

3. Parallel teaching: This model occurs when both teachers deliver the same lesson

   simultaneously to two equal and heterogeneous groups of students. In order for

   parallel teaching to be successful, the teachers must synchronize teaching so that

   students receive instruction the same way and in the same amount of time. Similar to

   station teaching there is a smaller student to teacher ratio, but instead of each teacher

   teaching a different part of the lesson, each teacher has to teach the entire lesson and

   the students do not rotate through stations, but stay with the same teacher for the

   entire lesson (Cook & Friend, 1995).

4. Alternative teaching: This model occurs when one teacher instructs a small group of

   students allowing for more intensive instruction while the other teacher instructs the

   remaining students which is a larger group. This model can be useful when there is a

small group of students in the class who have missed assignments or need

enrichment. With this model, there is a smaller student to teacher ratio, especially for

the small group and both teachers would need to be able to teach the content equally.

However, one concern with using this model of co-teaching is the possibility that

student with disabilities would be frequently placed in in the small group with the

special education teacher as the instructor and thus would not be truly co-teaching

and inclusion (Cook & Friend, 1995).

5. Team teaching: This model occurs when both teachers take turns teaching the same

    lesson to the whole class at the same time. This allows for teachers to take turns

    teaching the lesson and demonstrating concepts. This model requires a great level of

    trust and communication between the two co-teachers and ensures that students with

    disabilities are fully included in the class (Cook & Friend, 1995).

Ideally, co-teaching pairs are comfortable and effective using all of the above 5 models of

co-teaching and they decide which model to use based on the lesson and needs of the students.

Sileo and van Garderen (2010) found that the use combinations of the 5 co-teaching models

along with selected research-based mathematics instructional practices is an effective

intervention for students struggling students with math. Unfortunately, not all co-teaching pairs

are able to use all 5 co-teaching models due to lack of comfort and skill. Therefore it is

recommended that co-teacher pairs try one model at a time to ensure success and proper

implementation (Sileo & van Garderen, 2010).

Co-teaching Roles

Within each of the 5 models of co-teaching, each teacher has a different role and

responsibility. As co-teaching pairs identify the most effective models of co-teaching for their

setting the role and responsibilities for each teacher are more clearly defined. Therefore, Kloo

and Zigmond (2008) developed the acronyms **TEACH** and **SUPPORT** to help identify the roles

and responsibilities within a co-teaching model especially for the special education teacher**.**

According to them, the special education teacher should not just assist but should **TEACH**:

Target the skills and strategies that a particular student needs to learn, **E**xpress enthusiasm and

optimism, **A**dapt the instructional environment, **C**reate opportunities for small-group or

individual direct, intensive instruction, and **H**elp student apply learned skills. The second

acronym they explain is **SUPPORT: S**tudy the content, **U**nderstand the big ideas, **P**rioritize

course objectives**, P**lan with the general education teacher, **O**bserve the students in the class as

they listen to instruction, **R**ephrase, repeat, and redirect (Kloo & Zigmomd, 2008). According to

Kloo and Zigmond (2008) the utilization of **TEACH** and **SUPPORT** during any of the co-

teaching models should increase students opportunity to respond and be engaged in the learning

process. Thus when a special education teacher uses the **TEACH** and **SUPPORT** acronyms to

guide their interactions within the classroom, they will be able to ensure the students with

disabilities still receive specially designed individualized instruction within the inclusion setting.

Partnership

The development of the craft of co-teaching is not simply using one of the models of co-

teaching or defining the roles and responsibilities of each co-teacher but it is also about

developing a positive relationship between co-teacher pairs. Co-teaching is defined as the

partnership between the general and special education teacher for the teaching of all students

(Gately & Gately, 2001; Kloo & Zigmond, 2008). Thousand, Villa, and Nevin (2004) stated that

co-teaching is the modality for bringing together people from different disciplines to share

knowledge and talents to facilitate learning. However, developing co-teaching relationships takes

time and the effort of both teachers. Gately and Gately (2001) indicated that there are three

stages to the development of co-teaching relationships; the beginning stage, compromising stage,

and the collaboration stage. In the beginning stage of co-teaching relationships there is usually

no or limited trust between the partners and an effective working relationship has not been

established and often the general education teacher may feel like that their space is being

intruded upon by the special education teacher (Gately & Gately, 2001). During the second phase

of relationship development, the compromising stage, the two educators have a satisfactory work

relationship and have developed an open line of communication (Gately & Gately, 2001).

Finally, during the collaboration stage both teachers communicate more openly and the teachers

balance each other to teach fluently and effectively as a team (Gately & Gately, 2001). When co-

teaching teams are aware of the stages of co-teaching relationship development it allows for a

more harmonious relationship because the co-teaching team can work on their relationship and

move through the stages easier. However, any benefits from a co-teaching relationship depends

on the partners being compatible (Scruggs, Mastropieri, & McDuffie, 2007). Therefore, knowing

the stages of the co-teaching relationship through professional development may equip co-

teaching teams to foster more promising relationship and allow them to work together to make a

stronger team.

        Along with the three stages of relationship development between co-teachers Gately and

Gately (2001) identified eight components necessary for a successful co-teaching relationship.

These eight components describe what the interactions between the two teachers on a co-

teaching team should look like. The implementation of the eight components ensures success in a

co-taught classroom which in turn is beneficial in the strengthening the delivery of service to

both the general and special education students. There is fluidity within the three stages

(beginning, compromising, and collaborating of the co-teaching relationship and within the eight

components. The eight components of co-teaching are as follows: (a) Interpersonal

communication which involves how the two teachers use communication to interact with each

other; (b) physical arrangement which includes how students are seated and how teachers share

the work space together; (c) familiarity with the curriculum especially related to the special

education teacher acquiring knowledge of the general education curriculum if he/she is

unfamiliar with the content area; (d) setting curriculum goals and modifications which should

involve both teachers discussing and agreeing about educational goal and expectations for all

students; (e) instructional planning which occurs when the two teachers plan the development

and delivery of instruction; (f) instructional presentation is when both teachers are actively

involved in the instruction or facilitation of lessons within the classroom; (g) classroom

management requires the two teachers to decide how the responsibilities managing the students

and behavior will be divided or shared; and (h) finally the assessment component of a co-

teaching relationship involves the two teachers deciding on the appropriate assessments to

measure student learning and progress. The test for students who receive special education

services may need to be different or modified compared to the assessments used for the students

without disabilities. During this component, the teachers need to agree on who or if both teachers

will maintain a record of the students' grades. The assessment stage can occur at any stage of the

relationship. Given these 8 components and the complexities involved in developing a strong co-

teaching relationship, co-teaching teams should stay intact for as long as possible to improve the

development of the working relationship.

Common Planning Time

A common theme of the 8 components as well as the three stages of developing a co-teaching relationship involves communication and working together to plan and prepare for instruction. To identify what factors help co-teachers be successful, Kohler-Evans (2006) surveyed secondary teachers from 15 urban and suburban districts in the Seattle, Washington. They used a structured interview format where they asked both general and special education teachers "what is the most important feature in a co-teaching relationship?" The consensus among the polled teachers was that the most important factors associated with successful co-teaching relationships was common planning time and having a positive working relationship. Additionally Murray (2004) conducted a multiyear project with 40 general educators and special education co-teachers in three urban high schools from 1999 to 2002. The teachers were asked what would be on their dream list in relationship to co-teaching collaborative roles. The teachers said time for common planning at least once a week with their co-teacher would be beneficial for effective co-teaching. The findings from these two studies highlight the importance of planning in a co-teaching relationship. Problems can occur when co-teachers do not have proper planning time. It is hard enough for co-teaching pairs to find time to plan together when they work together all day every day, but it is even harder when one special education teacher is required to work with multiple general education teachers a day. According to Nichols, Dowdy, and Nichols (2003) when special education teachers are paired with multiple general education teachers to co-teach multiple classes daily with different teachers the teachers' planning periods often do not coincide and present difficulty for teachers to plan together and when one special education teacher is trying to plan with multiple general education teachers is there is not enough time to plan adequately with each teaching partner. Teachers usually have to schedule planning before

and or after school which is often difficult due to other obligations and responsibilities. Mageria et al. (2005) stated that co-teachers have little success when they do not have proper planning time to meet and discuss curriculum and instruction needs.

Choice

Although common planning time is imperative for successful co-teaching relationships, unfortunately scheduling planning time during the school day/week is often not something that the teachers themselves can control. In addition to common planning time another way to improve co-teaching relationships is to give teachers choice in regard to their co-teaching partner. Isherwood and Barger-Anderson (2008) stated that giving teachers a voice about the teacher they will co-teach with and being familiar with the content are good first steps in improving co-teaching relationships. Having an opinion in the process empowers the teachers and creates a sense of buy-in concerning the relationship. Friend, Cook, Hurley-Chamberlain, and Shamberger (2010) indicated that teachers said that co-teaching should be voluntary; teachers who are not interested in co-teaching should not be required to co-teach. Forcing the co-teaching model can cause conflict instead of compromise among teaching teams. Kohler-Evans (2006) stated that it is most important for administrators and teachers to support one another in their efforts in co-teaching practices by asking for volunteers, place value on the co-teaching experience, training, and find time for mutual planning for co-teaching teams.

Professional Development

Although researchers have found that co-teachers believe they would have better relationships and be more effective if they had more time to plan together Austin (2001) or that the teachers are able to choose their co-teaching partner Austin (2001) , these are not always options due to schedule constraints and administrative decisions. Therefore, there is definitely a

need to explore other ways of improving co-teaching relationships and effectiveness. One way to improve co-teaching relationships and effectiveness may be through pre-service training or professional development related to co-teaching models and relationship development. Along this theory that pre-service training or professional development would be beneficial in the development of co-teaching relationships, Austin (2001) conducted a study that focused on the factors that affect co-teaching, such as strategies that are used, teacher preparation, and school based supports. A total of 139 teachers from nine school districts in Northern New Jersey who taught Kindergarten through 12[th]grade were randomly selected and surveyed in a semi structured interview, 92 represented intact co-teaching teams. The survey results yielded a large percentage of special education co-teachers (65.2%) said that they believed that pre-service training for general education co-teachers would be ideal in helping foster stronger co-teaching relationships. A much lower percentage of general education teachers (37.8%) indicating that they thought pre-service training would help make co-teaching relationships better. The significance of these percentages is the idea of the need for a particular teacher preparation in theory versus their appreciation of it in practice Austin (2001).

Similar to Austin (2001), Dickens-Smith (1995) evaluated teachers' perceptions on the impact of professional development on co-teaching relationships. However, unlike Austin (2001) who evaluated the perceptions of pre-service training, Dickens-Smith evaluated the perceptions of the effects of in-service training (training received by teachers). Three to one research studies on co-teaching support the idea that staff development is important. McCormick, Noonan, Ogata, and Heck (2001) noted that partnerships that were not successful were characterized by adult conflict and dissatisfaction. In a study done by Dickens- Smith (1995) 200 teachers who worked for the Chicago Public School System were surveyed. Of the 200 participants, 100 were special

education teachers and 100 were regular education teachers. Thirty special education teachers who participated (in the in-service training were randomly selected for the sample. A pre/post questionnaire containing twelve questions was distributed to 100 special education teachers and 100 general education teachers as they arrived at an in-service training session. The results of this study showed that after training teachers had a positive attitude change concerning inclusion Dickens-Smith (1995). Both the special education and general education was found to be statistically significant at 0.5 level of confidence. The posttest yielded the same results.

A lack of data concerning the co-teaching relationship undoubtedly has to do with difficulty quantifying relationship variables according to Noonan, McCormick, and Heck (2003). One possible way to address the difficulties with building effective co-teaching relationships is professional development. The roles of the general education teacher and the special education teacher can be taught as well as strategies the pair of co-teachers can implement for effective co-teaching. Many teachers report little to no professional preparation and have had only teaching experiences in a classroom unaccompanied and these experiences have not prepared them for co-teaching, it then becomes the responsibility of local school districts to train teachers (Villa, Thousand, & Nevin, 2004).

Research Questions

Due to the limited research related to the effect of professional development on co-teaching relationships and effectiveness the purpose of this study was to determine what effect professional development related to co-teaching has on co-teaching relationships as well as roles and responsibilities in the classroom. Therefore the research questions are:

1. What effect does professional development in evidence-based practices related to co-teaching have on teachers' opinions about their co-teaching relationships?

2. What effect does professional development in evidence-based practices related to co-teaching have on teachers' understanding of how each teacher in the co-teaching pair should be actively engaged in a shared classroom?

Methods

Setting

The setting for this study was a large urban school district in the southeastern region of the United States, which consisted of 26 elementary schools, 7 middle schools, and 8 high schools with approximately 24,212 students (Georgia Department of Education, 2014). The demographics of the students in the school system were 73% African American, 21% Caucasian, 3% Hispanic, 2% Asian, 2% Multiracial, and 0% Native American. Of the total student population in the county 10% received special education services, 2% were considered English Language Learners, and 77% of the students received free and reduced lunch (Georgia Department of Education, 2014).

For the purposes of this study, one elementary school within the county was used. The participating school was chosen because of administrative support. The experimental school had 581 students, which included an ethnic makeup of 98% African American, 1% Caucasian, 0% Asian, and 0% Hispanic. Of the 581 students 13% of the students received special education services, 0% was considered English Language Learners, and 99% of the students received free and reduced lunch (Georgia Department of Education, 2014). This school used the co-teaching model and the self-contained model for students with disabilities. Prior to this study, district level training related to co-teaching had been offered but only to special education teachers, not to the general education teachers. However, no training was offered during the school year of this study.

 Participants

      Teachers. The participants in this study totaled 10 teachers with 5 general education and 5 special education teachers grades K through 5 with 1 general education and 1 special education teacher per grade level. The breakdown of the gender included 2 males and 8 females. Participants indicated varying levels of teaching experiences with 4 of the participants with 0 to 4 years teaching experience and 6 participants had 5 to 10 years of teaching experience. The examination of the educational levels revealed 6 of the participants held bachelor's degrees and 4 participants held master's degrees. The participants were recruited based on co-teaching training interest and all participants signed consent forms (see Appendix A).

      Researcher. The researcher for this study served as both the researcher and interventionists. The researcher was a graduate student who completed this study to meet the graduation requirements of an education specialist degree program. She held a Masters level (T-5) certification in special education. The researcher was on staff at the experimental school as a special education lead teacher and co-teacher in the general education setting. She had six years of public school teaching experience and in special education as a co-teacher. She held a Masters of Education in Counseling and Psychology and 5years experience as a counselor with the Georgia Department of Corrections and as a Clinical Coordinator for a private foster care agency prior to becoming a teacher in 2009.

Research Design

      A pre-experimental one-group pretest-posttest design was used to measure participants' opinions about his/her co-teaching relationship before and after the participants received professional development (Gay, 1996). The participants completed the Co-Teaching Rating Scale (CRS; see Appendix B) as the pretest and posttest. Although this design is not a strong

experimental design it does allow for the researcher to determine if there is a difference between

pre and posttest results. This design is appropriate because none of the participants had received

professional development or training related to co-teaching prior to this study and therefore, the

professional development that they were given was the biggest variable (besides just time and

working together, which several of the pairs had worked together in the past) that would affect

changes in their perceived co-teaching relationships (Gay, 1996). Along with the pretest-posttest

design, qualitative monthly probes were completed by the co-teaching pairs about what co-

teaching styles they implemented and how they felt about the implementation of the different co-

teaching styles after receiving training. The co-teaching pairs completed the co-teaching styles

questionnaire (see Appendix C) as the monthly probe. This information was more anecdotal and

was used to help the researcher guide the professional development sessions and to determine if

the co-teaching pairs were implementing the co-teaching styles they learned about during the

professional development sessions.

Independent Variables

The independent variable for this study was the implementation of four 1 hour co-

teaching training sessions. The four training sessions for the K-5 co-teaching teams was

implemented monthly on the eight components of the co-teaching relationship along with

training the co-teaching teams on how to use the five different co-teaching models. The co-

teaching teams were required to attend the four one hour training sessions. Session 1 consisted

of teachers completing (pre)The Co-teaching Rating Scale created by Susan Gately before

beginning the training. Once the pre-assessment was completed the session continued with the

researcher defining co-teaching, outlining the components of co-teaching, describing the three

stages of co-teaching, showing the teachers a video of teachers modeling co-teaching, and finally

two of the models of co-teaching were introduced; one teach one assist and station teaching via power point (see Appendix D). The researcher gave the co-teaching teams each a co-teaching styles questionnaire (see Appendix C) to complete after they implemented one of the co-teaching models they learned and to submit at the beginning of the next session. Session 2 consisted of the teams turning in the co-teaching styles questionnaire and a discussion of the 2 co-teaching models that were covered in the previous sessions followed by a presentation of the next two co-teaching styles; team teaching and alternative teaching via power point (see Appendix D). Sessions 3 was structured the same as session 2 with the introduction of the last co-teaching style, parallel teaching via a power point (see Appendix D). The final session, session 4 started the same way as sessions 2 and 3 with the co-teaching teams submitting their completed co-teaching styles questionnaires and then the researcher had the teachers complete the post assessment (the same assessment as the pre-assessment) the co-teaching rating scale and then led the teachers in a debriefing discussion about what they learned in the sessions and how they can continue to build their co-teaching relationships.

Dependent Variable

The dependent variable for this study was the teachers' opinions about their co-teaching relationships and responsibilities. Their opinions were assessed using CRS (see Appendix B) and the Co-teaching styles questionnaire (see Appendix C). The CRS assessed the co-teachers viewpoint of their relationship and the Co-teaching Styles Questionnaire assessed how the trainings and using the co-styles impacted their working relationships.

Data Collection and Measures

The CRS developed by Gately and Gately was used as the pre/post assessment to assess the co-teaching teams (see Appendix B). Along with the CRS, a researcher developed co-

teaching styles questionnaire was completed by the teachers (see Appendix C). The teachers

completed the CRS individually, whereas the co-teaching styles questionnaire was answered by

the co-teaching team pairs to give feedback on the implementation of the each of the co-teaching

models and how the teachers felt about sharing the teaching responsibilities when implementing

each co-teaching model.

 Implementation Procedures

Teachers that were currently in a co-taught setting were asked to participate in the

research study. The consent forms (see Appendix A)were distributed and collected by the

researcher at the experimental school during the teacher's grade level planning times The

collected consent forms were placed under lock and key in an file cabinet in the researcher's

office to maintain confidentiality. The first training session was presented to teachers the day

following obtaining consents after school. This was around the third month of the school year.

One training session was presented a month for 4 consecutive months.

Session 1 (1 hour). Session 1 of the co-teaching training provided teachers with an

overview of co-teaching by definition, the eight components of co-teaching, the three stages of

developing a co-teaching relationship, and a general description of all five of the co-teaching

styles with detailed emphasis on how to implement two of co-teaching styles;- one teach one

assist and station teaching (see Appendix D). Resources from The National Dissemination

Center for Children with Disabilities (NICHY) were incorporated in this session by use of video

clips of teachers modeling co-teaching. Participants were provided with links to resources via

email and teachers were given co-teaching styles questionnaire to be completed by next session.

  Session 2 (1 hour). Session 2 was provided to further inform teachers on the skill necessary to

implement co-teaching models. Two activities were done during this session (a) review of the

previously introduced co-teaching styles, (b) introduction of the next two co-teaching style team teaching and alternative teaching, (c) discussion of the stages and 8 components of co-teaching (see Appendix D). Teachers were provided with co-teaching styles questionnaire to document their experiences implementing the newly introduced co-teaching styles.

Session 3 (1 hour). Session 3 focused on providing more instruction on the co-teaching models and emphasized the importance of communication. The activities completed in this session were (a) impact of intentionally implementing the co-teaching models, (b) progression of co-teaching relationship, (c) planning for co-teaching (see Appendix D). Teachers were provided with co-teaching questionnaire.

Session 4 (1 hour). Session 4 focused on the importance of practicing the five models of co-teaching and using the 8 components of co-teaching to build positive relationships. The activities completed during this session were (a) review of five co-teaching approaches, (b) review of the 8 components of co-teaching along with the 3 stages (see Appendix D), and (c) completion of the CRS posttest (see Appendix B). Teachers were asked to continue to practice the five models of co-teaching, build on each other's strengths, and keep communication at its highest levels for positive results.

Data Analysis

A pretest/posttest design was used to evaluate the effects of professional development on co-teaching relationships. The CRS (see Appendix B) was used as the pre/post assessment. The participant survey responses were recorded using the three point Likert-scale. Participant responses regarding their opinions for each question were documented by the participant choosing one of the 3 following responses: 1: least like me, 2: somewhat like me, 3: most like me. The responses of the participants on the pre assessment were compared to the responses on

the post survey to determine if there was a change in participant opinions from pre-test to

posttest by group (i.e., general education teachers and special education teachers). Additional

feedback about the training sessions was collected in the form of the co-teaching styles

questionnaire (see Appendix C). Monthly the co-teaching teams completed the co-teaching styles

questionnaire as a pair after implementing each of the co-teaching styles and brought the

completed questionnaires to the next training session. The co-teaching styles questionnaire was

used to gather anecdotal information that helped the researcher guide the discussions at the

beginning of the next training session and to determine if there were qualitative changes in

functioning of the co-teaching pairs.

Results

The general and special education teachers for each co-teaching team for grades K-5

completed the CRS (see Appendix B) independently before and after being trained on the five

different types of co-teaching, the eight components of a co-teaching relationship, and the 3

developmental stages of co-teaching relationships through a series of four co-teaching trainings.

The teams were asked to implement the different types of co-teaching styles in their classrooms

between each of the 4 training sessions and give feedback as a pair on a co-teaching styles

questionnaire (see Appendix C)   The pre/posttest survey results are displayed in Table 1. The

results of the post-survey were very similar to the results of the pre-survey for each group of

teachers with the biggest change between pre and post assessment for the special education

teachers on question 1, that the teacher can easily read the non-verbal cues of his/her partner

where two special education teachers responded "somewhat like me" during pre-survey and all

five reported it was "most like me" on the post survey. Both general education and special

education teachers reported lower numbers of teachers who thought they had adequate planning

time with their co-teacher during both the pre and post assessment with one of each (general and special education) teacher reporting that time allotted for planning was "least like me," two general education teachers and one special education teacher reporting that it was "somewhat like me" and two of each (general and special education teachers) reporting it was "most like me" on both the pre and post surveys.

The co-teaching styles questionnaire (see Appendix C) teachers reported using all five models of co-teaching in the classroom. The teaching pairs reported using the models in all content areas including; reading, math, language arts, social studies, and science. The most frequently content areas where the teachers used the co-teaching styles were math, reading, and language arts. All teams reported that the one-teach one assist model was limiting and could hinder the growth of the co-teaching relationship if used too frequently. One team reported that one teach one assist can be useful if planned for appropriately because the model was used for the purpose of formatively assessing the students and for the collection of behavior data on students. Station teaching was reported having a feeling of being "equal;" because both teachers were actively engaged with student groups. Teachers from one team reported that during station teaching rearranging of the classroom was something that they did not like or that was difficult for them as a team. No other disadvantages were reported on the co-teaching styles questionnaires. Based on the responses on the co-teaching styles questionnaires team teaching was used most in the social science content areas it was reported that teachers had to be "on one accord" and be familiar with the standards. Four of the co-teaching teams reported that team teaching could be uncomfortable if one of the teachers is not familiar with the standards. Participants stated that alternative teaching was used for "re-teaching and enrichment." All teams noted that alternative teaching worked well with all content areas. One of the teams stated that

alternative teaching helped them work together to plan the lessons for the week by guiding them

to, talk more about how lessons would be broken down. Some of the sample statements teams

wrote related to alternative teaching were; "we had to establish what our roles would be," "this is

similar to station teaching," and "the students loved switching groups." Some of the responses

related to parallel teaching were that it "required more detailed planning," "it was really noisy

with both teachers talking and students asking questions," "we had to everything from the

beginning to the end, "and "both teachers need to know the content to use this model."

Discussion

The pretest survey for both the special education and general education indicated that

most of the teaching teams had positive interactions with each other prior to the start of the

study. Only eight responses were reported by both the special education and general education

teachers reported "least like me" on all 24 questions of the pre-assessment. The posttest results

improved in the area of being able to read their partners' nonverbal cues. The pretest data

reported (see Table 1) that two teachers could somewhat read nonverbal cues at the posttest all

only one general education teacher reported "somewhat like me" and five special education

teachers reported "most like me." Based on the results of the pre/post survey the co-teaching

teams seemed to have positive view points on their working relationship. There were no

significant differences in the pre/posttest results on the survey. Training the teachers on the five

models of co-teaching and 8 components of co-teaching did make them more aware of nonverbal

communication with each other.

During the debriefing in training session 4 the teams discussed how implementing the co-

teaching models allowed for them to be more intentional with their planning for lessons. All of

the co-teaching teams felt that they were already using some of the co-teaching models without

knowing all of the details of the five models. Most teachers reported during the debriefing that learning about eight components of co-teaching was a new concept to them. The eight components of co-teaching did make them more mindful of how to interact and communicate more effectively with each other. Based on the post-survey results nonverbal communication between partners increased after receiving the training. This indicates that training did impact teacher's awareness of each other. After the implementation of the co-teaching training the teachers agreed that they would make more of an effort to implement the different co-teaching styles and the teams agreed to share the responsibility of developing classroom rules at the start of the next school year. One of the special education teachers stated that "our school has unique dynamics because of the fact that there are special education teachers on every grade level and so there is more time to implement the co-teaching styles and develop relationships with co-teachers." Co-teaching teams were able to reflect on the strengths and weakness of their relationship by focusing on the specific components of the co-teaching relationship that impacted their relationship the most. The utilization of the co-teaching models reinforced communication via planning for lessons with co-teachers.

Based on an analysis of the debriefing the teachers felt that the co-teaching training was a success and that they were more informed on the dynamics of the co-teaching relationships. Most teaching teams had a positive relationship prior to training and felt that their relationships only improved after receiving training. The teams were more aware of their partner's nonverbal cues after training. None of the co-teaching teams reported having concerns sharing classroom space or materials.

Limitations

There were several limitations to the study that limit the findings. The pre/post surveys were not coded to match specific participants once survey was completed. Therefore, the researcher could not compare pre/post responses for specific participants to determine if individual participants had changes in answers. The second limitation was that the participants for this research were not randomly selected and there were a small number of participants in the research study. The third limitation was limited research found on professional development for co-teachers prior to teachers being placed in a co-taught setting. Finally, because the researcher had worked on the faculty of the experimental school within the last five years the participants many have wanted to be supporting of their colleagues conducting a study therefore exhibiting the Hawthorne effect.

Implications for Practice

The results of this study indicated that the four 1 hour training sessions on the five co-teaching models and the eight components of the co-teaching relationship can impact the dynamics of how co-teaching teams work together. According to Dickens-Smith (1995) the co-teaching model should be used only after significant planning and training has taken place. Co-teaching has become a common practice in most school districts the need for professional development in the area of co-teaching is important for both the special education teacher and general education teacher. The topics for the professional training were found in research literature and in descriptive articles related to theoretical practices on co-teaching models. School districts pre service training for co-teachers should be on going and relevant.

Future Research

There is an abundance of research describing co-teaching models and how to implement these practices effectively. However, there is a limited research related to the impact that training has on the co-teaching relationship. Therefore, the need for training in this area is important to the success of this current trend in education. Dickens-Smith (1995) reported that three to one staff development is key to promoting acceptance of students with disabilities in the general education setting. Limited studies were found on the effectiveness of professional development on the co-teaching relationship. The five models of co-teaching and how to make co-teaching more effective through, the use of strategies has been researched. However, any other strategies or issues that could impact attitudes may be explored as well. Further research in the area of how co-teaching impacts student achievement. No studies were found that have addressed the impact of co-teaching on achievement. Research that would further prove the effectiveness of co-teaching is how co-teaching impacts students without disabilities. Therefore, this study its positive results has begun a foundation for future research on this topic.

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Table 1. Results of Pre/Post Survey.

Questions	Pre-Test							Post-Test					
	Gen Ed Teacher Responses			Special education Teacher Responses				Gen Ed Teacher Responses			Special Education Teacher Responses		
	Least Like Me	Somewhat like me	Most like me	Least like me	Somewhat like me	Most like me		Least Like Me	Somewhat like me	Most like me	Least like me	Somewhat like me	Most like me
1.Easily read the nonverbal cues of partner	0	1	4	0	2	3		0	1	4	0	0	5
2.Both teachers move freely co-teaching classroom	0	1	4	0	1	4		0	1	4	0	1	4
3.Co-teachers understands curriculum	0	0	5	0	0	5		0	0	5	0	0	5
4.Teachers agree on classroom goals	0	1	4	0	0	4		0	1	4	0	1	4
5.Planning can be spontaneous occurring during instruction	0	1	4	0	2	3		0	1	4	0	2	3
6.I often present lessons in co-taught classroom	0	0	5	1	1	3		0	0	5	0	2	3
7.Rules and routines have been jointly developed	1	1	3	0	2	3		1	1	3	0	2	3

8.Many measures are used for grading students	0	0	5	0	2	3		0	0	5	0	2	3
9.Humor is used in classroom	0	1	4	0	1	4		0	1	4	0	1	4
10.Materials are shared in the classroom	0	0	5	0	0	5		0	0	5	0	0	5
11.Familiar with methods	0	0	5	0	0	5		0	0	5	0	0	5
12.Modifications of goals for special needs students	0	1	4	0	0	5		0	1	4	0	0	5
13.Planning for class is shared	0	1	4	0	0	5		0	1	4	0	0	5
14.Chalk passes freely	0	0	5	0	1	4		0	0	5	0	1	4
15.Use a variety of management techniques	0	2	3	0	1	4		0	2	3	0	1	4
16.Test modifications are common	0	1	4	0	0	5		0	1	4	0	0	5
17.Communication is open and honest	0	1	4	0	2	3		0	1	4	0	2	3
18.There is fluid positioning of teachers in classroom	0	0	5	0	1	4		0	0	5	0	1	4
19.Confident in knowledge of curriculum	0	0	5	0	1	4		0	0	5	0	1	4

20. Student-centered objectives incorporated in curriculum	1	2	2	0	1	4	1	2	2	0	1	4
21. Time is allotted for common planning	1	2	2	2	1	2	1	2	2	2	1	2
22. Students accept both teachers as equals	0	1	4	0	2	3	0	1	4	0	2	3
23. Behavior management is a shared responsibility	0	0	5	1	0	4	0	0	5	1	0	4
24. Goals and objectives in IEP are considered as part of grading	0	1	4	1	0	4	0	1	4	1	0	4

Appendix A

IRB Consent Form

I, _____, agree to participate in the
research Effective Co-teaching Strategies which is being conducted by Felicia Batts, who
can be reached at 229-343-1314. I understand that my participation is voluntary; I can
withdraw my consent at any time. If I withdraw my consent, my data will not be used as
part of the study and will be destroyed.
The following points have been explained to me:

1.   The purpose of this study is to determine the effects of training teachers in the use of
       evidence- based practices related to co-teaching will have on the relationship between co-
       teachers.
2.   The procedures are as follow: as co- teachers you will be asked to participate in a pre/post
       co-teaching rating scale survey and also complete a co-teaching styles questionnaire that
       will document how effective the different co-teaching styles were when they
       implemented them in your classroom at the end of the study.
3.   You will not list your name on the data sheets. Therefore, the information gathered will
       be confidential.
4.   You will be asked to sign two identical consent forms. You must return one form to the
       investigator before the study begins, and you may keep the other consent form for your
       records.
5.   You may find that some questions are invasive or personal. If you become uncomfortable
       answering any questions, you may cease participation at that time.
6.   You are not likely to experience physical, psychological, social, or legal risks beyond
       those ordinarily encountered in daily life or during the performance of routine
       examinations or tests by participating in this study.
7.   Your individual responses will be confidential and will not be release in any individually
       identifiable form without your prior consent unless required by law.
8.   The investigator will answer any further questions about the research (see above
       telephone number).
9.   In addition to the above, further information, including a full explanation of the purpose
       of this research, will be provided at the completion of the research project on request

Signature of Investigator   Date

Signature of Participant   Date

Signature of Parent or Guardian   Date (If participant is less than 18 years of age)
Research at Georgia College & State University involving human participants is carried out
       under the oversight of the Institutional Review Board. Address questions or problems
       regarding these activities to Mr. Marc Cardinalli, Director of Legal Affairs, CBX 041,
       GCSU, (478) 445-2037

Appendix B
The Co-teaching Rating Scale
Regular Education Teacher Format

Respond to each question below by circling the number that best describes your viewpoint:
1: Least like me   2: Somewhat like me   3. Most like me

1. I can easily read the nonverbal cues of my co-teaching partner.	1	2	3
2. Both teachers moving freely about the space in the co-taught classroom.	1	2	3
3. My co-teacher understands the curriculum standards with respect to the content area in the co-taught classroom.	1	2	3
4. Both teachers in the co-taught classroom agree on the goals of the co-taught 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 co-taught 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

From: Gately and Gately (2001) Understanding Co-teaching Components

Appendix C

Co-Teaching Styles Questionnaire

1. What co-teaching style did you use?

2. What content areas were you teaching when you used the above co-teaching style?

3. What did you like about this co-teaching style?

4. What did you dislike about this co-teaching style? If there is something that you disliked about the style what could you do to make this style work better in the future?

5. Did using this co-teaching style help to build a better working relationship with your co-teacher through collaboration and implementation of this co-teaching style?

6. What do you think you would need in the future to further build your co-teaching relationship?
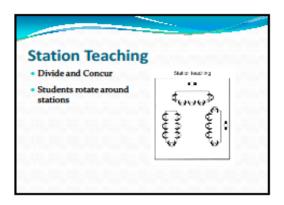
Appendix D

Co-Teaching PowerPoint Presentation Used for Trainings

4/20/2014

Effective Strategies for Co-Teaching

What is Co-Teaching
- Two (or more) educators or other certified staff
- Contract to share instructional responsibility
- For a single group of students
- Primarily in a single classroom or workspace
- For specific content (objectives)
- With mutual ownership, pooled resources, and joint accountability

Why Co-Teach
- Co-teaching is one way to deliver services to students with disabilities or other special needs as part of a philosophy of inclusive practices. As a result, it shares many benefits with other inclusion strategies, including a reduction in stigma for students with special needs, an increased understanding and respect for students with special needs on the part of other students, and the development of a sense of heterogeneously-based classroom community.

Station Teaching
- Divide and Concur
- Students rotate around stations

Advantages

- Separate responsibilities
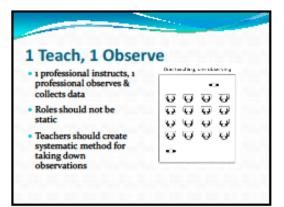- Both teachers are active and equal
- Low student-teacher ratio

Disadvantages

- Noise level
- Lots of movement
- Does the order matter?
- Pacing

Parallel Teaching

- Joint planning
- Slip the class into two heterogeneous groups
- Diversity in both groups

Advantages

- Lower student-teacher ratio
- Teach in two groups and bring together for discussions
- Joint planning

4/20/2014

Disadvantages

- Joint planning
- Cannot be used for initial instruction
- Noise level
- Lots of movement
- Pacing

1 Teach, 1 Observe

- 1 professional instructs, 1 professional observes & collects data
- Roles should not be static
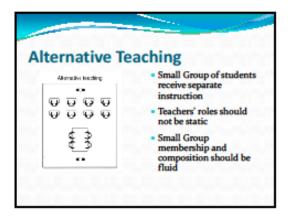- Teachers should create systematic method for taking down observations
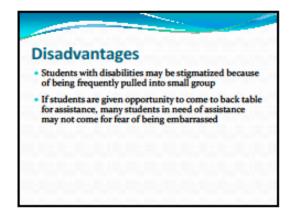
Advantages

- Requires little Joint Planning Time
- Allows both teachers to focus attention, rather than spreading selves to thin
- Separate Responsibilities, less conflict with teaching style

Disadvantages

- If used exclusively, can lead to one teacher being seen as the "assistant"

4/20/2014

Alternative Teaching

- Small Group of students receive separate instruction
- Teachers' roles should not be static
- Small Group membership and composition should be fluid

Advantages

- Students can receive highly intensive instruction within general education classroom
- Students have opportunity for more small group/1:1 interaction with teachers
- Allows for peer modeling – having positive class models work alongside of students with behavior disorders

Disadvantages

- Students with disabilities may be stigmatized because of being frequently pulled into small group
- If students are given opportunity to come to back table for assistance, many students in need of assistance may not come for fear of being embarrassed

Teaming

- Both teachers are responsible for planning and share in the instruction of all students.

4/20/2014

Advantages

- Both educators have equal status.
- Teachers can play off of each other (role play, trade ideas during instruction, one can speak while the other models.)
- Results in a synergy that enhances students participation (and also invigorates professionals)

Disadvantages

- Requires a great level of trust and commitment
- Requires a lot of planning
- Teaching styles must mesh (if teachers differ in their use of humor, pacing or instructional format the "flow" of the lesson in often unsuccessful.)

One Teaching, One Assisting

- One teacher teaches while the other supports in instructional process

Advantages

- Requires little joint planning
- Gives a role to special services provider if they do not feel competent in the subject area
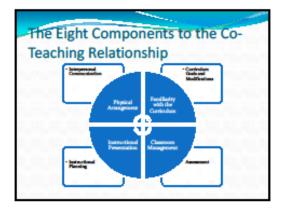
4/20/2014

Disadvantages

- Sometimes becomes the sole or primary co-teaching approach when planning time is scarce.
- Teacher probably takes the lead role and the special services provider becomes the assistant (special services- denied an active teaching role, undermines credibility)
- Assisting teacher can become a distraction (both visually- walking around and auditory- whispering)
- Risk of students becoming dependent learners

Co-Teaching Advantages

- Lower teacher – student ratio
- Classroom of diverse learners
- Teachers can respond effectively to varied needs of students
- Another professional can provide different viewpoints and more ideas for instruction.
- Teachers can be motivational for one another.
- Co-teaching can positively affect the general educator's instructional behavior.

Barriers/Disadvantages to Success

- Lack of administrative support
- Lack of shared planning time
- Need for in-service training
- Personality matches – the relationship between co-teachers is critical to success.
- Misguided perceptions and / or lack of communication
- Poorly defined roles / unclear expectations
- Dividing the class based on SPED and non-SPED students

The Eight Components to the Co-Teaching Relationship

4/20/2014

The Eight Components of the Co-Teaching Relationship

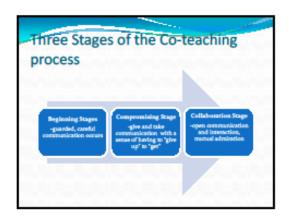|	
Interpersonal Communication	• The use of verbal, nonverbal, and social skills.
Physical Arrangement	• The placement and arrangement of materials, students, and teachers.
Familiarity with the curriculum	• Being competent of the general education curriculum
Curriculum Goals and Modification	• Planning of specific goals and objectives for each student.
Instructional Planning	• Involves regular planning of coursework among the co-teachers.
Instructional Presentation	• Involves how lessons are structured and presented.

The Eight Components of the Co-Teaching Relationship

Classroom Management	• Involves two major components structure and relationship. • Structure entails rules and routines. Relationship involves building community within the classroom.
Assesment	• The development of systems for evaluating individual students, adjusting the standards and expectations for performance to meet individual needs.

Three Stages of the Co-teaching process

Beginning Stages	Compromising Stage	Collaboration Stage
-guarded, careful communication occurs	-give and take communication with a sense of having to "give up" to "get"	-open communication and interaction, mutual admiration

Co-Teaching Process

- Co-teaching is a development process
- Developmental processes has stages through which co-teachers proceed.
- Identifying the developmental stage for each component may help teachers set goals that will let them move more quickly from one stage to the next.

7

4/20/2014

Additional Resources

- Coltrane, B. (2002, Spring)
  - Team Teaching: Meeting the needs of English language learners through collaboration. Center for Applied Linguistics Newsletter, 25(2), 1-5.
- Dieker, L., & Murawski, W. (2003)
  - Co-teaching at the secondary level: †Unique issues, current trends, and suggestions for success. High School Journal, 86(4), 1-13.
  - Gately, S. E. & Gately F. J. (2001) Understanding Co-teaching Components. Teaching Exceptional Children, 33(4), 40-47.