

6-1-2015

Measurements of Student and Teacher Perceptions of Co-teaching Models

Randa G. Keeley

New Mexico State University

Follow this and additional works at: <http://scholarworks.lib.csusb.edu/josea>



Part of the [Special Education and Teaching Commons](#)

Recommended Citation

Keeley, Randa G. (2015) "Measurements of Student and Teacher Perceptions of Co-teaching Models," *The Journal of Special Education Apprenticeship*: Vol. 4: No. 1, Article 4.

Available at: <http://scholarworks.lib.csusb.edu/josea/vol4/iss1/4>

This Article is brought to you for free and open access by CSUSB ScholarWorks. It has been accepted for inclusion in The Journal of Special Education Apprenticeship by an authorized administrator of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.

Measurements of Student and Teacher Perceptions of Co-teaching Models

Randa G. Keeley, Ph.D.

New Mexico State University

Co-teaching is an accepted teaching model for inclusive classrooms. This study measured the perceptions of both students and teachers regarding the five most commonly used co-teaching models (i.e., One Teach/One Assist, Station Teaching, Alternative Teaching, Parallel Teaching, and Team Teaching). Additionally, this study compared student responses to teacher responses to ascertain the presence of both main effects and interactions. It was found that while main effects existed regarding student and teacher perceptions, an interaction did not exist in any category. This study suggests that students perceive positive benefits when teachers implement certain co-teaching models (i.e., Station Teaching, Alternative Teaching, Parallel Teaching, and Team Teaching).

Keywords: Co-teaching models, effectiveness, secondary education, inclusion, teaching methodology, perceptions

Established by *The Education for All Handicapped Children ACT (EAHCA)*, a least restrictive environment (LRE) is guaranteed to all students with disabilities (EAHCA, 1975). LRE continues to be upheld by subsequent legislation [i.e. Individuals with Disabilities Education Act (IDEA)] (IDEA, 2004). This legislation requires that students with disabilities are educated in a classroom with similar age peers. Placement of students with disabilities is based on the severity of their disability and adheres to the continuum of services provided by special education. One way in which this accommodation is made for students with disabilities is the establishment of inclusive classrooms (i.e., a classroom of students with and without disabilities).

Inclusion is a well-accepted method of maintaining a LRE for students with disabilities and there have been many methods of managing a class of students that could be potentially demanding for teachers including: (1) general education teacher supplied with IEPs, (2) content mastery classrooms as a supplement to the general education classroom, and (3) educational assistant in the general education classroom. However, the only option that provides students with disabilities continuous access to the general education content as well as the support of a special educator is co-teaching (Kloo & Zigmond, 2008). Co-teaching is defined as “two or more professionals jointly deliver substantive instruction to diverse, or

blended, groups of students in a single physical space” (Cook & Friend, 1995; Volonino & Zigmond; 2007). Typically, in terms of an inclusive classroom, both professionals are certified teachers; one is certified in the content area and the other is certified in special education. The benefits for both students (e.g., availability of two licensed teachers in the classroom, smaller student-teacher ratio, ability to monitor behaviors more closely, etc.) and teachers (e.g., professional satisfaction, enhanced instruction, immediate lesson feedback, avoidance of student conflicts, etc.) are evident in many areas (Conderman, 2011; Fenty & McDuffie-Landrum, 2011; Keefe & Moore, 2004; Magiera & Zigmond, 2005; Murawski, 2008; Nichols, Dowdy, & Nichols, 2010; Rice, Drame, Owens, & Frattura, 2007; Walther-Thomas, 1997).

Co-Teaching Models

Presently, there are six co-teaching models implemented in co-taught classrooms. They include: (1) One Teach/One Observe, (2) One Teach/ One Assist, (3) Station Teaching, (4) Parallel Teaching, (5) Alternative Teaching, and (6) Team Teaching. These models have been discussed and studied (Cook & Friend, 1995; Fenty & McDuffie-Landrum, 2011; Forbes & Billet, 2012; Hepner & Newman, 2010; Nichols, Dowdy, & Nichols, 2010; Sileo, 2011) over the years. However, for the purpose of this study and described herein only five models will be examined; therefore, this study considered (1) One Teach/One Assist, (2) Station Teaching, (3) Alternative Teaching, (4) Parallel Teaching, and (5) Team Teaching. The One Teach/One Observe model was discarded for this study because it requires no interaction from the observing teacher. Friend and Cook (1993) described the five models using these terms (1) when one teach/one assist is being used typically the general education teacher

provides content instruction while the special educator “drifts” through the classroom assisting students that need additional help; (2) station teaching requires that the content be divided into three parts and each teacher is responsible for delivering a portion of content while a group of students work independently (students rotate until they have received all content); (3) parallel teaching requires that the class be separated into two groups while each teacher delivers the same content to their group; (4) alternative teacher requires that one teacher work with a small group to re-teach, supplement, or pre-teach while the other teacher presents content to the large group; and (5) team teaching requires both teachers take turns presenting content information to the large group. All of the models have their pros and cons, but the One Teach/One Assist model is the one most often implemented in the inclusion classroom (Harbort et al., 2007; Volonino & Zigmond, 2007; Zigmond and Matta, 2004).

Overview of Research Plan

A large junior high school in the southeastern United States currently implements co-teaching as an accommodation for students with disabilities. Through collaboration with the junior high school’s principal, a co-teaching pair (one special educator, one general education English teacher) was selected in an attempt to answer questions regarding students’ perceptions of the different co-teaching models as compared to the perceptions of the teachers.

A small sample of students ($N= 37$) and teachers ($N= 2$) were involved in this study. The co-teaching expectation in this school was non-structured. The special educator in this study co-taught with one other teacher and did not have planning time with either co-teaching partner.

This co-teaching pair was extraordinary in that both teachers were certified English teachers; therefore, providing them both with excellent content knowledge. This removed a common issue with co-teaching in that the special education teacher often feels uncomfortable with the content they are asked to teach (Murawski, 2009). Below is a list of the research questions used to guide this research study.

Research Questions

This study posed some very basic questions about the co-teaching models:

1. Are there perceived differences (among students) between the five co-teaching models (e.g., One Teach/One Assist, Station Teaching, Alternative Teaching, Parallel Teaching, or Team Teaching)? If so, what?
2. Are there perceived differences (among teachers) between the five co-teaching models (e.g., One Teach/One Assist, Station Teaching, Alternative Teaching, Parallel Teaching, or Team Teaching)? If so, what?
3. Are there perceived differences between student and teacher perceptions with regard to the five co-teaching models (e.g., One Teach/One Assist, Station Teaching, Alternative Teaching, Parallel Teaching, or Team Teaching)? If so, what are they?

Method

This data set was analyzed using an Analysis of Variance (ANOVA) with repeated measures—to determine whether student responses reflected a difference in perception depending on the category (i.e., Teaching Model, Teacher Authority, Student Confidence, Learning, and Classroom Management) across the co-teaching

models (i.e., One Teach/One Assist, Station Teaching, Alternative Teaching, Parallel Teaching, and Team Teaching). Similarly, an ANOVA with repeated measures was used to test for differences between the five co-teaching models (i.e., One Teach/One Assist, Station Teaching, Alternative Teaching, Parallel Teaching, and Team Teaching) and the rubric descriptors (i.e., Classroom Management, Teaching Model, Learning, Implementation, Behavior, Student Confidence, and Teacher Authority). The predetermined level of significance for the ANOVA with repeated measures was set at $\alpha \leq 0.05$.

Participants

The student subjects in this study ($N=37$) were a subsample of a large, urban school district in the southeastern United States. All of the student participants in this study received instruction in a co-taught English Language Arts classroom. Student participants were either classified as general education or special education with Individualized Education Plans (IEP) as appropriate. The disabilities in the classroom were mild to moderate and included specific learning disabilities in reading and writing, Attention Deficit and Hyperactivity Disorder, and Autism Spectrum Disorder. Fifteen of the 37 student participants were identified as having a disability. The students (grades 8 and 9) ranged in age from 13 to 16 years of age. Please note that that overall number of participants in this study was reduced to ($N=24$) due to the statistical measure, ANOVA with repeated measures. This method of statistical analysis only calculated data for students that had a complete data set; therefore, only students that were present for each day of the study are reflected in the results.

The co-teaching team was selected through collaboration with the selected

junior high school's principal. The teacher subjects in this study ($N= 2$) accurately represented the teacher demographic of the participating school. Each teacher boasted 8-10 years of teaching experience. The general education teacher holds a masters degree while the special educator was pursuing a masters degree. The participating classroom was for English Language Arts instruction and both teachers were certified in the content area of instruction. At the time of the project, the special educator had one year of co-teaching experience (while currently seeking certification in Special Education grades 4-12) and the general educator had co-taught for eight years. At the time of the study, the pair were in their second year as co-teaching partners. Prior to the commencement of the study the co-teaching partners participated in an individualized consultation meeting with the researcher describing all of the co-teaching models and their characteristics.

Materials

Data were collected through the use of a rubric that employed a Likert scale of one through five. Five was the optimal choice for each category and one was the less preferred choice. There was no randomization of the scale throughout all of the categories. The categories chosen for the student rubrics (See Table 3) (i.e., classroom management, teaching model, teacher confidence, engagement, learning, motivation, behavior, differentiated instruction, work requirements, student confidence, and teacher authority) were selected from current co-teaching literature expressing common misconceptions and/or expectations of this method of instruction for students in co-taught classes (Keefe & Moore, 2004; Kohler-Evans, 2006; Mastropieri et al., 2005; Murawski, 2009; Murphy, Beggs, Carlisle, & Greenwood, 2004; Patel & Kramer, 2013; Walther-

Thomas, 1997). The teacher rubric (See Table 2) categories (i.e., classroom management, teaching model, teacher confidence, engagement, learning, implementation, behavior, differentiated instruction, student work production, student confidence, teacher authority, teacher impact, and learning accommodations and strategies) often echoed the student rubric in order to examine the data for main effects and interactions. Additionally, the teacher rubrics contained other categories to measure how well the teachers reflected on their co-teaching partnership and working to improve. Similarly, the teacher reflection survey provided insight with regard to how both teachers perceived their role within the co-taught classroom.

Procedure

The research design consisted of the following: the co-teaching team would teach their respective classroom of students for two consecutive days using each co-teaching model in order to create a controlled environment. Although it limited the teaching flexibility for the teachers, it provided the researchers with a deliberate instructional approach to co-teaching. The study lasted ten days. The teachers began with One Teach/One Assist (Monday-Tuesday, Week 1); Station Teaching (Wednesday-Thursday, Week 1); Alternative Teaching (Friday-Monday, Week 1-2); Parallel Teaching (Tuesday-Wednesday, Week 2); Team Teaching (Thursday-Friday, Week 2). Student and teacher perceptions were measured using a rubric. See Tables 1 and 2 for samples of the rubrics. Teachers and students received a separate rubric that they completed following the second day of teaching for each co-teaching model. In all, students and teachers completed a total of five rubrics.

Table 1.
Student Rubric

	Classroom Management	"X" One
5	The teachers presented themselves as equal partners with regard to discipline and answering student questions.	
4	The teachers mostly presented themselves as equal partners with regard to discipline and answering student questions.	
3	Some of the time one teacher would answer student questions and manage discipline while the other teacher would teach the class.	
2	Most of the time one teacher was in charge of answering student questions and managing discipline while the other teacher taught the class.	
1	One teacher answered student questions and disciplined students while the other teacher taught the class.	
	Teaching Model	"X" One
5	Both teachers presented new material to the class.	
4	For the most part, both teachers presented new material to the class.	
3	Some new information was provided by one of my teachers, but most new information came from the other teacher.	
2	Very little new information was presented by one of my teachers.	
1	New material was presented to the class by one teacher.	
	Teacher Confidence	"X" One
5	I can ask both of my teachers about what we are learning and I know they will both be able to help me.	
4	I am fairly certain both of my teachers can answer any question I may have about the material we are learning.	
3	I am not sure both of my teachers can answer any question I may have about the material we are learning.	
2	I am fairly certain I cannot ask one of my teachers a question about the material we are learning.	
1	I know that one of my teachers cannot answer a question I may have about the material we are learning.	
	Learning	"X" One
5	This style of teaching helped me to understand 90-100% of the lessons.	
4	This style of teaching helped me to understand 80-89% of the lessons.	
3	This style of teaching helped me to understand 70-79% of the lessons.	
2	This style of teaching helped me to understand 60-69% of the lessons.	
1	This style of teaching helped me to understand less than half of the lessons.	
	Student Confidence	"X" One
5	After the last two lessons and teaching style I feel confident that I could answer any question about the material.	
4	After the last two lessons and teaching style I feel mostly confident that I could answer any question about the material.	
3	After the last two lessons and teaching style I feel somewhat confident that I could answer any question about the material.	

2	After the last two lessons and teaching style I do not feel very confident about answering questions about the material.	
1	I don't feel like I learned much over the last two days and I hope my teacher does not ask me a question about the material.	
	Teacher Authority	"X" One
5	Over the last two days it seemed that both of my teachers have the same amount of power in the classroom.	
4	Over the last two days it seemed that, for the most part, both of my teachers have the same amount of power in the classroom.	
3	Over the last two days it seemed that one of my teachers may have had a little more power than the other teacher.	
2	Over the last two days one of my teachers seemed more powerful than the other teacher.	
1	Over the last two days it is obvious that one of my teachers is more powerful than the other teacher.	

Table 2.

Teacher Rubric

	Classroom Management	"X" One
5	We presented ourselves as equal partners with regard to discipline and answering student questions.	
4	We mostly presented ourselves as equal partners with regard to discipline and answering student questions.	
3	Some of the time one of us would answer student questions and manage discipline while the other would teach the class material.	
2	Most of the time one of us was in charge of answering student questions and managing discipline while the other taught the class.	
1	One teacher answered student questions and disciplined students while the other teacher taught the class.	
	Teaching Model	"X" One
5	Both teachers presented new material to the class	
4	For the most part, both teachers presented new material to the class.	
3	Some new information was provided by one of us, but most new information came from my partner.	
2	Almost all new information came from my partner while I added a few things here and there.	
1	New material was presented to the class by one teacher.	
	Teacher Confidence	"X" One
5	I am totally confident I could answer any question my students may have about the new material that we covered.	
4	I am fairly confident I could answer any question my students may have about the new material that we covered.	

3	I am not totally confident I could answer any question my students may have about the new material that we covered.	
2	I am fairly certain I cannot answer questions my students may have about the new material that we covered.	
1	I know that I would have to defer to my partner to answer a question my students may have about the new material that we covered.	
	Learning	"X" One
5	It seemed as though this style of teaching helped my students to understand 90-100% of the material covered.	
4	It seemed as though this style of teaching helped my students to understand 80-89% of the material covered.	
3	It seemed as though this style of teaching helped my students to understand 70-79% of the material covered.	
2	It seemed as though this style of teaching helped my students to understand 60-69% of the material covered.	
1	It seemed as though this style of teaching helped my students to understand less than half of the material covered.	
	Implementation	"X" One
5	This model was very difficult to implement and took much longer than normal to plan.	
4	This model was somewhat more difficult to implement and took longer than normal to plan.	
3	This model was not much more difficult to implement and didn't seem to take much longer than normal to plan.	
2	This model was easily implemented and took almost the same amount of time as normal to implement.	
1	This model took no extra effort on our part to implement.	
	Behavior	"X" One
5	As a result of the model used, student behavior improved significantly.	
4	As a result of the model used, student behavior improved.	
3	As a result of the model used, student behavior seemed to improve.	
2	As a result of the model used, student behavior didn't really seem to improve.	
1	As a result of the model used, student behavior did not improve at all and may have gotten worse.	
	Student Confidence	"X" One
5	I feel very confident that any student could answer questions about the material we have covered in the last two lessons.	
4	I feel confident that any student could answer questions about the material we have covered in the last two lessons.	
3	I feel somewhat confident that any student could answer questions about the material we have covered in the last two lessons.	
2	I do not feel confident that any student could answer questions about the material we have covered in the last two lessons.	

1	I don't feel like the students could confidently answer questions about the content that we have covered in the last two lessons.	
	Teacher Authority	"X" One
5	Over the last two lessons neither teacher appeared to have any more authority than the other teacher.	
4	Over the last two lessons both teachers mostly appeared to have the same amount of authority.	
3	Over the last two lessons my co-teacher may have appeared to have more authority than me.	
2	Over the last two lessons it appeared that I had less authority than my co-teacher.	
1	Over the last two lessons it appeared that I had no authority in the classroom.	

Comments/Clarifications:

Table 3.
Mean Ratings comparing Student responses to Teaching Model as it relates to each Co-teaching Model (with Standard Deviations in Parentheses)

Student	Co-teaching Model				
	One Teach/One Assist	Station Teaching	Alternative Teaching	Parallel Teaching	Team Teaching
Student	3.750(1.32)	4.166(1.12)	3.500(1.53)	4.416(.829)	4.333(.816)

Note. $N = 24$.

Table 4.
Mean Ratings comparing Student responses to Teacher Authority as it relates to each Co-teaching Model (with Standard Deviations in Parentheses)

Student	Co-teaching Model				
	One Teach/One Assist	Station Teaching	Alternative Teaching	Parallel Teaching	Team Teaching
Student	3.904(1.17)	4.476(.601)	3.761(1.37)	4.428(.870)	4.381(.804)

Note. $N = 24$.

Table 5.
Mean Ratings comparing Student responses to Student Confidence as it relates to each Co-teaching Model (with Standard Deviations in Parentheses)

Co-teaching Model					
-------------------	--	--	--	--	--

Student	One Teach/One Assist	Station Teaching	Alternative Teaching	Parallel Teaching	Team Teaching
Student	3.454(1.056)	4.136(.774)	4.227(.812)	4.090(.921)	4.136(.888)

Note. $N = 24$.

Table 6.

Mean Ratings comparing Student responses to Student Learning as it relates to each Co-teaching Model (with Standard Deviations in Parentheses)

Co-teaching Model					
Student	One Teach/One Assist	Station Teaching	Alternative Teaching	Parallel Teaching	Team Teaching
Student	3.875(.797)	4.041(.907)	4.333(.816)	4.333(.761)	4.166(.816)

Note. $N = 24$.

Table 7.

Mean Ratings comparing Student responses to Classroom Management as it relates to each Co-teaching Model (with Standard Deviations in Parentheses)

Co-teaching Model					
Student	One Teach/One Assist	Station Teaching	Alternative Teaching	Parallel Teaching	Team Teaching
Student	3.666(1.34)	4.375(1.01)	4.166(1.16)	4.291(1.12)	4.166(1.00)

Note: $N = 24$.

Instruments

Student rubric. Student rubrics were designed by the author to measure perceptions of students in specific areas (i.e., classroom management, teaching model, teacher confidence, engagement, learning, motivation, behavior, differentiated instruction, work requirements, student confidence, and teacher authority)(See Table 1). The reading level of the rubric was determined to be fifth grade level and was measured using the Frye Readability test.

Teacher rubric. Teacher rubrics were designed by the author to measure

perceptions of teachers in specific areas (i.e., classroom management, teaching model, teacher confidence, engagement, learning, motivation, behavior, differentiated instruction, work requirements, student confidence, implementation, and teacher authority)(See Table 2). All of the teacher categories mirrored student categories aside from implementation. The implementation category was included to determine how difficult each co-teaching model was to integrate in to instruction.

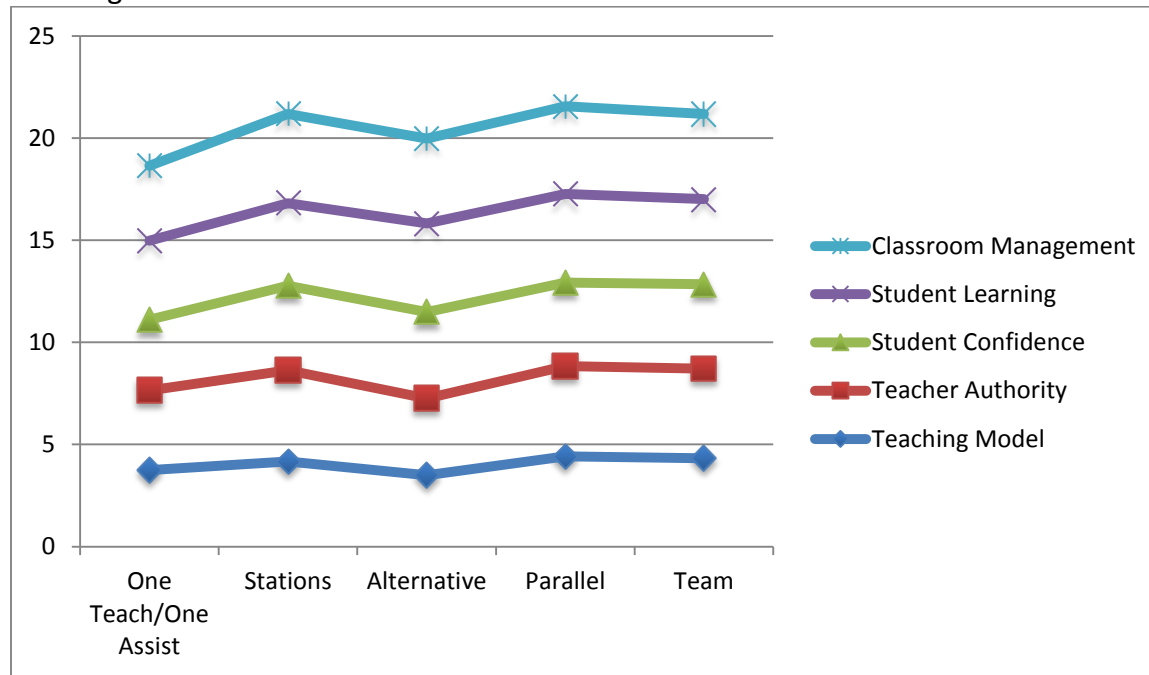
Results

Question One: Student Perceptions

Results from the ANOVA with repeated measures revealed the following statistical differences for teaching model (F, (3.277)= 0.0029, with the level of significance $\alpha > 0.05$), teacher authority (F, (3.021)=0.049, with the level of significance $\alpha > 0.05$), student confidence (F, (4.49)=0.002, with the level of significance $\alpha > 0.05$), student learning (F, (4.133)=0.004, with the level of significance $\alpha > 0.05$), and classroom management (F, (2.356)=0.059, with the level of significance $\alpha > 0.05$). Additionally, mean ratings for teaching model (Table 3), teacher authority (Table 4), student confidence (Table 5), student learning (Table 6), and classroom management (7) are provided in graph form in Figure 1.

Other descriptors were measured; however, student perceptions of teacher confidence (F, (0.390) $\alpha = 0.681$), work requirements (F, (0.801) $\alpha = 0.508$), motivation (F, (1.993) $\alpha = 0.134$), engagement (F, (0.692) $\alpha = 0.547$), and behavior (F, (0.575) $\alpha = 0.624$) were not at a statistically significant level. The statistical analysis suggests that student perceptions regarding these areas did not vary with the co-teaching models. The statistical findings with regard to student behavior echoes previous research that student behavior becomes minimized because of the presence of two teachers and is not related to the teaching model (Burks-Keeley & Brown, 2014; Dieker, 2001; Magiera & Zigmond, 2005).

Figure 1.
Mean Rating results for all student responses as they relate to the specific category and co-teaching model.



Question Two: Teacher Perceptions

Results from the ANOVA with repeated measures for the two participating co-teachers testing for differences in teacher perceptions across the teaching models revealed significant differences for classroom management ($F, (34.000)=0.001$, with the level of significance $\alpha > 0.05$) and implementation ($F, (13.833)=0.007$, with the level of significance $\alpha > 0.05$).

Among the other descriptors measured, the following data with no significant findings were recorded teacher confidence ($F, (0.833) \alpha = 0.558$), teaching model (no results), engagement ($F, (0.500) \alpha = 0.739$), learning ($F, (1.000) \alpha = 0.486$), behavior ($F, (1.500) \alpha = 0.329$), differentiated instruction ($F, (0.500) \alpha = 0.739$), student work production ($F, (1.400) \alpha = 0.376$), student confidence ($F, (1.370) \alpha = 0.384$), teacher authority ($F, (1.000) \alpha = 0.500$), teacher impact ($F, (1.296) \alpha = 0.404$), and learning accommodations and strategies ($F, (1.222) \alpha = 0.425$).

Question 3: Student Perceptions Versus Teacher Perceptions

Statistical interactions with regard to student and teacher perceptions included classroom management [(Category: $F, (1.164)=.018$, with the level of significance $\alpha > 0.05$) (Model: $F, (4.164)=3.833$, with a level of significance $\alpha \leq 0.05$) (Category and Model: $F, (4.164)=2.073$, with a level of significance $\alpha > 0.05$)] and teaching model [(Category: $F, (1.164)=.033$, with a level of significance $\alpha > 0.05$) (Model: $F, (4.164)=6.223$, with a level of significance less than .05) (Category and Model: $F, (4.164)=4.702$, with a level of significance $\alpha \leq 0.05$). Furthermore, although an interaction was not discovered with regard

to student work ($F, 1.160=20.970$, with a level of significance $\alpha \leq 0.05$) and student confidence ($F, (1.162)=6.664$, with a significance $\alpha \leq 0.05$) between teachers and students, there was a significant difference between the categories.

The statistical power of all statistical analysis is minimized because of the small number of participants. However, this study served as an exploratory pilot study to determine the need for continued research.

Discussion

Question One: Student Perceptions

With regard to *research question one*, students' perceptions of co-teaching models varied greatly across multiple categories when applied to the five co-teaching models. For example, the classroom management category asked students about how they perceived teaching responsibility balance. Students indicated that the balance of teacher responsibility was most evident when Station Teaching or Parallel Teaching was incorporated especially when compared to One Teach/One Assist. This suggests that students are aware when they are receiving instruction from only one teacher, additionally, it indicates that student prefer receiving instruction in smaller groups and from both teachers as opposed to one.

The next category to obtain significant findings for student perceptions was teaching model, this descriptor measured student perceptions of teacher instruction and indicated if both teachers were providing students with content instruction. Student rubric responses suggest that when teachers implemented Parallel Teaching or Team Teaching that students were able to perceive that both teachers were providing content instruction equally when compared to One Teach/One

Assist or Alternative Teaching. These results highlight students' awareness of teaching model and how it applies to their experience in the classroom. Student responses signify a preference for Parallel and Team teaching. These results are likely because Parallel Teaching allows students to be separated in two smaller groups, providing a more individualized learning experience. Additionally, Team Teaching is fast-paced and engaging model, continually pulling student attention from one teacher to the other. It is likely that students prefer these two models because when compared to One Teach/One Assist and Alternative Teaching, students are not asked to sit and attend to a long lecture or be separated based on a weakness or deficiency.

Perhaps the most important finding of this research is that of the students' perceived level of learning. Student responses revealed that learning was significantly improved when Station Teaching, Parallel Teaching, or Team Teaching was used when compared to One Teach/One Assist. Additionally, students preferred Parallel Teaching over Station Teaching for perceived learning. The most commonly used co-teaching model, One Teach/One Assist, is consequently the teaching model that students indicated helped them learn the least. Students are suggesting that this particular model is not their preferred learning model and further reiterates that this model should be used with discretion.

Similarly, another pivotal finding of this study was that students responded that their confidence about their learning was significantly higher when Station, Alternative, Parallel, or Team Teaching was implemented when compared to One Teach/One Assist. Students prefer all other models over One Teach/One Assist when

referencing their confidence in learning. This student result suggests that the teaching format lecture from one educator while the other teacher assists does not aid in students becoming more confident about their learning. Collectively, student data imply a preference for co-teaching models that provide movement, small groups, lower student-teacher ratios to improve their overall learning experience with regard to how confident they are after a lesson has concluded.

Lastly, students' data revealed that the power balance between co-teachers was uneven when the One Teach/One Assist model was used when compared to Station and Team Teaching. Furthermore, the power balance was significantly uneven between Alternative Teaching compared to Station, Parallel, and Team Teaching. This group of students illustrated their awareness of unbalance in the classroom depending on the co-teaching model implemented. In their responses, students indicated that specific co-teaching models (i.e., Station Teaching, Team Teaching, and Parallel Teaching) provide a power balance between teachers. Neither teacher should seem less "powerful" than the other; therefore, by incorporating the preferred models (i.e., Station Teaching, Team Teaching, and Parallel Teaching) at a more regular rate, then the power balance can be sustained between co-teaching partners.

Student response findings implicitly indicate that the One Teach/One Assist co-teaching model is largely ineffective in establishing balanced classroom management, teaching responsibilities, and teacher authority. Additionally, the One Teach/One Assist model is found to be significantly inferior regarding student learning and confidence. The findings of this study suggest that the co-taught classroom

is not providing “special” education when the One Teach/One Assist model is being implemented when compared to other co-teaching models. This research does not suggest that the One Teach/One Assist model should never be used; however, by varying the models often and frequently, the categories studied herein (i.e., classroom management, teacher authority, student confidence, student learning, and teaching model) can become more balanced with regard to students.

Question Two: Teacher Perceptions

Teacher responses to classroom management across the co-teaching models revealed that the overall instructional responsibility on one teacher was greatly reduced when the One Teach/One Assist co-teaching model is implemented as compared to all other co-teaching models. This result is appropriate in that the One Teach/One Assist model only requires instruction from one teacher. Additionally, teachers recorded that of all the co-teaching models, One Teach/One Assist is the easiest to implement. This is also appropriate and is supported by research (Kloo & Zigmond, 2008). All other categories returned no significant data.

Question Three: Student Perceptions versus Teacher Perceptions

Perhaps the most intriguing data collected is the difference in responses between students and teacher with regard to matching descriptors across the co-teaching models. While teachers returned no significant results for learning or student confidence, students did. Students indicated specific model preference for learning and confidence (e.g. Station, Alternative, Parallel, and Team). Additionally, students were highly aware when the teaching model was varied, indicating that teacher instructional duties were most evenly

balanced when Parallel and Team teaching were being incorporated. Lastly, students perceived an imbalance of authority between teachers when the One Teach/One Assist model was used, which was not indicated in teacher results. These results demonstrate the awareness of students with regard to their instruction and suggest that co-teaching instructional practices should be altered to compliment the preferences of students.

Limitations

While the findings of this research are important to the co-taught classrooms, limitations exist. (1) To determine generalizations for this study would be risky and difficult due to the small number of participants, (2) The findings of this research are perceptions and are limited to the experiences of the students in the study representing a small demographic of participants, (3) Measuring the perceptions of students using a Likert Scale is limiting, (4) The short data collection period did not allow for individuality of instruction for the co-teaching partners. Perhaps the content did not match the co-teaching model as well as it could have, and (5) Lastly, student self-reporting in the demographic questionnaire was unreliable, because many students receiving special education services were unaware that they received services.

Implications for Inclusive Practices

This research provided input regarding the co-teaching models from both the teacher and student perspective. Co-teaching research rarely provides a glimpse into the perceptions of students, but rather relies on teacher, administrator, and professional perspectives. Because co-teaching is a widely used service delivery model for students with disabilities and a

clear understanding of the student perceptions of potential limitations of this teaching method is necessary for the improvement of special education understanding student perceptions is paramount to improving this option for inclusion. Consequently, this research attempted to explain how the co-taught classroom provided “special” education for students with disabilities and when is it most effectively implemented to improve learning, confidence, and perceptions of the instructional method and teacher impact.

Co-teaching is an important and highly prevalent service delivery model for inclusive practices. Improving this teaching approach is important for the further inclusion of students with disabilities. In this small study, students indicated that the One Teach/One Assist model is ineffective in multiple areas (i.e., classroom management, teaching model, teacher authority, student confidence, and learning). Yet, this model is widely used among co-teaching partners and is in fact the most often used co-teaching model (Zigmond & Matta, 2004). Therefore, as long as the One Teach/One Assist model is consistently implemented in the co-taught classroom, students are not experiencing any of the student perceived benefits as indicated are present when other co-teaching models are incorporated. This study calls for additional research to confirm these findings and determine methods for the increased implementation of the student preferred co-teaching models.

Conclusion and Recommendations for Further Research

This study indicates the need for further research in this specific area of co-teaching. Future research should (1) determine the magnitude in which students prefer co-teaching models in each specific

category; (2) this determination should be collected by including a larger group of student and teacher participants. Furthermore, (3) student performance measurements should be taken to determine whether or not student perceptions align with student output. Lastly, (4) research indicating appropriate content that compliments each co-teaching model should be determined to promote the use of multiple co-teaching models.

References

- Burks-Keeley, R. & Brown, M. (2014). Student and teacher perceptions of the five co-teaching models: A pilot study. *Journal of the American Academy of Special Education Professionals*.
- Cook, L., & Friend, M. (1995). Co-teaching: Guidelines for creating effective practices. *Focus on Exceptional Children*, 28(3), 1-16.
- Conderman, G. (2011). Middle school co-teaching: effective practices and student reflections. *Middle School Journal*, 42(4), 24-31.
- Dieker, L.A. (2001). What are the characteristics of “effective” middle and high school co-taught teams for students with disabilities? *Preventing School Failure*, 46, 14-23.
- Education for All Handicapped Children Act of 1975. U.S. Public Law 94-142. U.S. Code. Vol. 20, secs. 1401 et. seq.
- Fenty, N., & McDuffie-Landrum, K. (2011). Collaboration through co-teaching. *Kentucky English Bulletin*, 60(2), 21-26.
- Forbes, L., & Billet, S. (2012). Successful co-teaching in the Science classroom. *Scope*, 36(1), 61-64.
- Harbort, G., Gunter, P.L., Hull, K., Brown, Q., Venn, M.L., Wiley, L.P., & Wiley, E.W. (2007). Behaviors of teachers in co-

- taught classes in a secondary school. *Teacher Education and Special Education*, 30(1), 13-23.
- Hepner, S., & Newman, S. (2010). Teaching is teamwork: preparing for, planning, and implementing effective co-teaching practice. *International Schools Journal*, 29(2), 67-81.
- Individuals with Disabilities Act of 2004, § 1400 et. seq.; 34 C.F.R. § 300 et. seq.
- Keefe, E. B., & Moore, V. (2004). The challenge of co-teaching in inclusive classrooms at the high school level: What the teachers told us. *American Secondary Education*, 32(3), 77-88.
- Kloo, A. & Zigmond, N. (2008). Co-teaching revisited: Redrawing the blueprint. *Preventing School Failure*. 52(2), 12-20.
- Magiera, K., & Zigmond, N. (2005). Co-teaching in middle school classrooms under routine conditions: Does the instruction experiences differ for students with disabilities in co-taught and solo-taught classes? *Learning Disabilities Research and Practices*, 20, 79-85.
- Murawski, W. W. (2008). Five Keys to Co-Teaching in Inclusive Classrooms. *School Administrator*, 65(8), 29.
- Murawski, W.W. (2009). *Collaborative teaching in secondary schools: Making the co-teaching marriage work!* Thousand Oaks, CA: Corwin.
- Nichols, J., Dowdy, A., & Nichols, C. (2010). Co-teaching: An educational promise for children with disabilities or a quick fix to meet the mandates of No Child Left Behind? *Education*. 130(4), 647-651.
- No Child Left Behind Act of 2001, PL 107-110, 115 Stat. 1425, 20 U.S.C. 11 6301 et seq.
- Rice, N., Drame, E., Owen, L., & Frattura, E. M. (2007). Co-instructing at the secondary level. *Teaching Exceptional Children*, 39(6), 12-18.
- Sileo, J. M. (2011). Co-teaching: Getting to know your partner. *Teaching Exceptional Children*, 43(5), 32-38.
- Volonino, V., & Zigmond, N. (2007). Promoting research-based practices through inclusion? *Theory Into Practice*, 46(4), 291-300.
- Walther-Thomas, C.S. (1997). Co-teaching experiences: The benefits and problems that teachers and principals report over time. *Journal of Learning Disabilities*, 30(4), 395-407.
- Zigmond, N., & Matta, D. (2004). Value added of the special education teacher in secondary school co-taught classes. In T.E. Scruggs & M.A. Mastropieri (EDS.), *Secondary interventions: Advances in learning and behavioral disabilities* (Vol. 17, pp. 57-78). Oxford, UK: Elsevier Science/JA.