How does the Presence of a Special Education Teacher impact Co-teachers' Behavior in an Inclusive Classroom

Ryan Kellems[1]

Abstract

The majority of studies regarding co-teaching have primarily looked at what specific instructional practices and teacher characteristics are needed to make co-teaching an effective practice. In contrast, this study investigates how co-teaching affects a teacher's particular teaching style and behavior. Of greatest interest is how a teacher's use of instructional technology is impacted by the presence of a co-teacher. With many schools making inclusion a priority, the number of co-taught classes is increasing. In order for students to gain the most from classes that are co-taught, it is important that we first understand the factors that affect co-teachers. Once we understand these factors, it will be possible to increase the effectiveness of co-teachers.

Literature Review

Many teachers and students believe that students with disabilities are better served in general education classrooms with the support of special education personnel. This shift in classroom dynamics is called inclusion. Friend and Cook (2000) define inclusion as a belief that all students are entitled "to be important and valued members of their neighborhood school communities" (p. 15). As more and more schools move to adopt the inclusion model, co-taught classrooms are becoming more common. Co-teaching, or collaborative teaching, has been defined as "a setting where two or more professionals (general and special education) coordinate and deliver substantive instruction to a diverse group of students in a single classroom" (Friend et al., 2000).

The shift towards inclusion increased dramatically with passage of No Child Left Behind (NCLB, 2001). NCLB mandated that 95% of students with disabilities must participate in the general education statewide assessments. Inclusive classrooms have provided mixed results in both teacher and student achievement and attitudes. A possible reason for these mixed results is that the factors affecting student achievement and attitudes that arise in inclusive settings are not fully understood. One of these factors is how a teacher's behavior and instructional practices change when they teach in an inclusive setting. Previous research has found that there are some obstacles that teachers must overcome in order to be successful in a co-taught classroom.

Murwaski and Dieker (2004) identified two obstacles that educators must overcome when establishing a co-teaching partnership: "First, teachers are sometimes faced with schedules crafted before co-teaching teams are assigned. As a result, students with disabilities are often placed in classes that are already full. Second, special educators are often assigned to work with multiple teachers during the same class period, and thus, the teachers are not able to effectively collaborate with any one" (p. 53).

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[1] PhD, Assistant Professor, Counseling Psychology & Special Education, Brigham Young University, 237-C MCKB, Provo UT 84602. Email: rkellems@byu.edu, Phone: (801) 422-6674

Due to the complex and personal nature of teaching, how a teacher overcomes or deals with these obstacles can vary greatly. To help understand how varied the co-teaching relationship can be, researchers have identified five different ways co-teaching has been implemented.

Cook and Friend (2000) describe these five models of co-teaching. These models included (a) one teacher and one assistant or one teacher drifting (one teacher primarily delivers instruction); (b) station teaching (both teachers deliver content to "stations" of children); (c) parallel teaching (teachers plan together but split the class and deliver content to groups); (d) alternative teaching (one teacher works with smaller groups to pre-teach, re-teach, or supplement regular instruction); and (e) team teaching (teachers share instruction for the entire class). Although any of those models could be used within a classroom situation, Cook and Friend (2000) suggested that the ideal model involves both teachers collaborating on all components of the educational process.

Some studies (Ysseldyke, Thurlow, Wotruba, & Nania, 1990) have found that teachers usually do not change their instructional practices or behaviorsfor inclusion of students with disabilities in their classrooms. Stone (1998) further stated that many general education teachers do not feel either the responsibility, or the need to expand their knowledge base, in order to implement instructional adaptations to meet the needs of students with learning disabilities.

Bender, Vail and Scott (1995) looked at the instructional strategies of 127 general education teachers. The study showed that teachers with positive attitudes towards inclusion utilized a wider variety of instructional practices than teachers who had negative attitudes towards inclusion. This study also concludes that teachers perceived some behaviors and strategies to be more effective than others. These perceptions were solely based on opinions and not research. A similar study conducted by Schumm and Vaughn (1991) found that a large portion of general education teachers did not employ specific instructional strategies that have been shown to improve academic achievement for students with learning disabilities.

Other studies have looked at the characteristics that make co-teaching relationships effective. Findings from a study conducted by Rice, Dame, Owens (2007) revealed that general educators had their most effective co-teaching relationships with special education teachers who exhibited the ability to analyze teaching and learning styles (Rice, et. al., 2007). This ability to analyze teaching and learning styles is one of the specialized skills a special education teacher can bring into a co-teaching relationship. Special education teachers need to be able to pass this specialized skill on to the general education teacher in a way that impacts all of the classes that the general education teacher teachers—not just those that are co-taught.

Hardy (2001) conducted one of the most comprehensive qualitative studies to date dealing with the instructional behaviors of co-teachers. This study concluded that the presence of a special educator in a co-taught classroom did contribute to the creation of a new learning environment, and notable changes in the instructional behaviors and practices of a general educator. The presence of a co-teacher did contribute to the creation of a successful co-teaching partnership including the use of effective teaching behaviors. Another significant finding was that these positive changes in instructional behaviors and practices did not always continue in the general education classroom once the collaboration ended (Hardy, 2001).

Method

The purpose of this qualitative study is to examine how participation in a co-teaching situation affects a teacher's behavior. The study looked at factors that affected a teacher's willingness and ability to learn from the other teacher and if these behaviors were carried over when the teacher taught alone. Special attention was paid to how co-teaching affected a teacher's use of instructional technology.

This study was conducted using a naturalistic inquiry method. Using the naturalistic approach allowed us to look at how co-teaching affects teachers' behaviors as they occur naturally. A naturalistic approach fits the purpose of this study as it does not seek to establish a cause/effect relationship, but rather it seeks to understand the relationship and its components.

Research Questions

The research questions were designed to solicit perceptions of effective co-teaching practices from practitioners who currently are involved in a co-teaching situation, or have been in the past. Specifically,these questions seek to gain insight into the instructional practices that they perceive to impact student achievement as well as how co-teaching impacts their personal teaching style.

1. How does co-teaching affect a teacher's particular teaching style and behavior?
2. How does co-teaching affect a teacher's use of instructional technology?

Research Participants and/or Site –Purposeful Sampling Methods

Three co-teachers were asked to participate in this study using a purposeful criterion sampling method. The purposeful sampling method is appropriate for recruiting group of teachers who demonstrate particular traits and work in similar environments. This study focuses specifically on co-teachers who work in inclusive secondary schools in a large Midwestern urban district. Each co-teacher was a general education teacher who worked with a special education teacher with a differentiated knowledge bases; they worked at an inclusive school and utilize the team co-teaching approach in their classroom, and were perceived as effective teachers by their colleagues. Studying this distinct group of teachers helps to understand a specific phenomenon, co-teaching, in a rich and deep way.

The subjects interviewed were three secondary teachers who have been involved in co-teaching situations for varying amounts of time ranging from one to 15 years. The subjects were purposefully selected according to the co-teaching model they used. Participants were emailed an invitation to participate in the study. Only teachers that were involved in a co-teaching situation were contacted. There were no anticipated risks to the participants of the study. Participants were not paid or compensated for their participation in this study.

Participant 1

Participant one has been teaching social studies for 35 years.   He is certified and highly qualified in all of the subjects he co-teaches. He has been involved in some type of co-teaching for five years and has worked with four different co-teachers. He has employed a couple different co-teaching models depending on who he was teaching with. When he started co-teaching, he fell into the one teacher and one assistant model primarily because the other teacher did not want an active role in the class. During his last-co-teaching experience he employed the team teaching (teachers share instruction for the entire class) method.

Participant 2

Participant two has been a teacher for five years. He is currently a social studies teacher is certified and highly qualified in all of the classes he has co-teaches. He has been involved in some type of co-teaching for four years and has worked with two different co-teachers. With one of the co-teachers, he primarily uses an alternative teaching approach. With the other teacher, he uses a one teach and one assist model (primarily due to lack of common planning time).

Participant 3

Participant three has been a teacher for three years. He is currently a social studies and debate teacher and is certified and highly qualified in all of the classes he has co-teaches. He has been involved in some type of co-teaching for two years and has worked with one co-teacher. He uses the one teach and one assist model in his classroom for several reasons but primarily because he lacks a common planning time with the other teacher.

Data Collection

Interviews in qualitative studies aim to make sense of the topic being studied. Interviews allow the researcher to gather data while reducing researcher bias. Interviews in this study allowed the participants to reveal personal thoughts and feelings related to co-teaching.

The interview structure this study employed was a semi-structured interview format. Such a format allowed the researcher to structure the interview around a sequence of questions, yet also allowed the interviewer flexibility during the interview process. This flexibility is important because it allowed the researcher to focus on issues relevant to the participants and ask probing questions where appropriate (Kvale, 1996).

These interviews aimed to reveal the nature of the co-teaching relationship and underlying beliefs and perceptions. In addition, the interviews allowed the researcher the opportunity to ask detailed questions associated with co-teachers' planning and instructional practices particularly their use of instructional technology. Each interview lasted approximately 30 to 45 minutes and was conducted in each teacher's classroom before or after school or during planning period. The interviews were recorded and transcribed.

The interviews were transcribed using voice-recognition software. This software allowed the researched to save time transcribing the interviews. The process consisted of the researcher listening to the interview in one ear. The researcher then repeated word for word the content of the interview in to a headset. As the researcher watches the software converts his voice to text. After the initial dictation the researcher then re-listened to the interview as he reviewed the transcript to ensure the accuracy of the transcript.

After the interviews had been transcribed, the researcher provided the teachers with a copy of the transcript and asked them to check it for accuracy. No transcript inaccuracies were found by the teachers. The recordings and transcripts were stored on a password-protected computer.

Data Analysis

The primary form of data that was used for this study was the transcripts of the interviews.
These transcripts were reviewed by the participants to make sure they were accurate and then analyzed. Data was coded and analyzed following procedures set forth by Coffey and Atkinson (1996).

The data was coded in order to break-up and simplify the data. First the researcher began the coding process by reading through each of the transcripts to familiarize himself with the data. From this initial reading, the researcher established the general framework he would use to code and further categorize the data. Words and phrases that were common to multiple interviews were used to identify themes that were mentioned by more than one of the teachers. An example of this is that the phrase "common planning time" came up in all of the interviews. From this common phrase the researcher was able to establish common themes.

Once the general coding framework was established the researcher went through and hand coded each transcript. The researcher used the method from the Coffey (1996) book that uses brackets on the margins of the transcript to break the data up into smaller segments. This method was selected because it allowed the data to be coded using different levels of complexity. The brackets made it possible to identify broad themes in addition to the smaller themes that are components of those themes. As the data was coded several general themes emerged which were then further broken down.

Reliability and Validity

The way reliability is measured in a qualitative study is the replicability of the research findings (Merriam, 2002). The notion of reliability assumes that if the study was completed again and it produced the same results this would establish the truth of the results. However, Merriam (2002) explains that human measurements and observations can be repeatedly wrong or inaccurate due to naturally occurring errors.

This is especially true in qualitative research due to the methods used. In this study reliability is achieved through careful documentation of the procedures and methods used.

Internal validity refers to how consistent the research findings are with the reality of the situation. Merriam (2002) identified several strategies to enhance internal validity within a qualitative study.

This study utilized member checks to establish the internal validity of the findings. Each participant was asked to review the transcript of their interview to make sure it accurately reflected their thoughts and feelings.

Ethical Issues

This study was approved by the human subjects' research committee at the researchers university. The study will followed ethical research guidelines. One special concern is that the researcher personally knew all of the participants. To ensure that the participants did not feel coerced into participation, it was made very clear their participation was purely voluntary. They were also reminded along the way they could drop out at any time for any reason and there would be no repercussions.

Results

Respect and Valuing Each Other

One of the main themes apparent in all three of the interviews was the importance of mutual respect by both teachers. Mutual respect for the other teacher was something that all of the teachers stated as being important. However, the reasons the teachers listed this as was an important component varied. Some teachers believed in the importance of mutual respected made them more able to appreciate and utilize their partners' individual talent. Utilizing both teachers' talents leads to higher student achievement.

At the high school where the teachers work, co-teaching is an arranged partnership the school administrator (principal) established based on logistics (school schedule) and available resources (personnel). The teachers indicated that teacher personalities and styles were not often considered during the matching and implementation process. As a result, the partnering of two teachers who were an incompatible match had occurred. This incompatibility often encompassed multiple areas, such as classroom management, academic expectations, and level of interest and ability in specific academic content areas. Participant one described one exception to this arbitrary matching of teachers that occurred with his first co-teaching experience. He stated that the first time he was asked to participate in a co-teaching situation that he was picked by the other teacher "because we knew one another before. I've known him and his wife since college.

Tom felt comfortable and asked me if I would be willing to teach with him." This was the only time a teacher mentioned they had any say in choosing the other teacher.

Some of the teachers expressed how the co-teaching assignments were made at their school had a negative impact on how they viewed the other teacher. When participant three was asked if he had any say in the teacher he got to work with he gave this poignant response referring to his co-teaching assignments: "No it is assigned. In fact both years I have co-taught I haven't known I was co-teaching until he (the other teacher) stepped in the room on the first day of class. I think if you're going to co-teach with someone else you need to know that the May before. If I'm going to start co-teaching in August, I need to know the previous May." The ramifications of how his co-teaching assignments are made resonated throughout the rest of his interview.

Participant three had some of the strongest opinions regarding co-teaching. When he was asked if he enjoyed co-teaching he stated "I enjoy the theory of co-teaching. I think the way we do it here is not the way it should be done so I don't enjoy it here." When asked to elaborate on the theory of co-teaching he stated:

Co-teaching ought to be a situation where you have two teachers in the room for all of the classes. So you have a shared plan time where you and the co-teacher can get together and plan and be on the same page. The way we do it here is you're given a co-teacher somewhat randomly. This teacher is placed in the courses were they have the highest ratio of special ed students. What ends up happening then is that you don't have a co-teacher teaching with you in all of your classes. I have a co-teacher this semester for only fifth and sixth hour. We don't have a similar plan time so what happens is that I do all of the teaching and he periodically chimes in. It's not a real co-teaching model.

From statements like these it became apparent that participant three didn't respect and value his fellow co-teacher as much as some of the other participants did. The results of this was that he employed the one teach one assist model and the other teacher really didn't have any responsibilities.

This was not because he didn't like the other teacher but a result of the overall situation. The result was it strained their relationship and the benefits of co-teaching were lost.

In order to establish mutual respect, co-teachers must be compatible on some level. When asked if compatibility was more important than being an expert in the content area participant one stated: "Absolutely, basically when it comes to content the kids can learn anything they choose to learn—at least in social studies. That may not be so much true in the other content areas. But in social studies content isn't as important as having a co-teacher you can get along with." For participant one, teacher compatibility was a huge factor—outweighing content knowledge.

The participants understood on some level that each of their co-teachers possessed unique skills that could help students; all of the teachers felt it was important to recognize and capitalize on the unique strengths of their colleagues when they approached their partnerships. They felt that their combined knowledge bases could not only benefit the children in their classes, but could also help them increase their own skills. They believed they would learn from each other in their separate areas of expertise and then understand each other's fields more completely. Of all the teachers, participant one probably respected and valued his co-teachers the most. This respect and value translated into increased student achievement and personal growth. He stated the following when asked what things he learned from the co-teachers he worked with:

Each experience brought to meet new ways to look at teaching students. Those co-teaching years really added to my knowledge of teaching. The core of teaching is not subject matter. The core of teaching is the personal relationship you develop with your students. Having a second opinion made me see things in a different light. Sometimes my co-teacher would help me see students from a different light which would help me reach them. Sometimes I couldn't reach them and the co-teacher could. So we were able to reach the student and if we were not co-teaching the student would've not been reached.

This statement makes it very apparent that participant one not only learned from his fellow teacher but that what he learned significantly added to his knowledge of teaching. This in turn had a direct positive impact on his students.

Teacher Behaviors

Another major theme that emerged upon analyzing the data was how individual teacher behaviors changed as a result of co-teaching.

This theme was further broken down into several sub-themes in an effort to understand what change in teaching behavior occurred and what may have caused these changes. The sub-themes that emerged were: student interaction, teaching behaviors, and use of technology. Special attention was paid if a teacher's use of instructional technology was affected and if the changes in behavior were carried over to solo teaching situations.

Student Interaction. Student-teacher interactions were affected by participating in co-teaching. Most of the time, teachers had more interaction with their students. This increase in student interaction could be one of the factors that lead to the creation of a new learning environment in the co-taught classroom as identified by Hardy (2002). These changes in teacher behavior that led to changes in teacher/student interaction were understood differently by each participant.

When asked if his interaction with students changed when he co-taught participant two stated, "Yes. I was able to give more time to fewer students, so that each student received more personalized attention more often."

This personalized attention benefited the students by providing them with more direct instruction from the teacher. When asked why participant two was able to spend more time interacting with students in the classes he co-taught compared to the classes he taught alone, the reason he gave was:

I was able to interact with the students more because I had another teacher in the classroom and had two sets of eyes. It is very important you know your kids and you know something about your kids; and that your kids feel wanted, comfortable, and at ease in the classroom.
It's hard to do that when you're the only teacher and have 25 kids in the classroom. When you try to divide yourself up to 25 pieces its very hard. So what you do is divide yourself up into five pieces a day and try to get to all the kids in a week. When there are two teachers in the room you can give more of these pieces of you to the students.

Participant one saw one of the benefits of co-teaching as having "more teacher to go around." Participant two also saw an increase in interactions with students when asked if co-teaching allowed him to interact with students more or less he stated "I would say definitely more. I'm able to interact with them more. Having another teacher in the room allows me to do this more."

However, all of the changes in how teachers interacted with students were not positive. When participant three was asked the same question he stated:

I don't think it changes the amount I interact with the class as a whole. I would say having a co-teacher, especially the way we do it, decreases the amount of time I spend directly with the special ed students. A lot of times I'll have the other teacher pull aside those students who need help while I address the rest of the class. So I think my amount of interaction with the class as a whole is not changed, but my immediate interactions with special needs students has probably decreased.

This decrease in interaction with special education students is troubling considering the primary goal of the inclusion movement is to increase special needs student involvement in the classroom. The reason for this may be due to the one teach one observe model that participant three employs. It is common in this model for teachers to take responsibility for specific members of the class. In this way they take ownership for some of the students but see the rest as the others responsibility—defeating one of the primary goals of co-teaching.

Teaching Behaviors

Several of the participants' teachings behaviors were affected by the presence of another teacher. Each of the participants saw the changes in their teaching behavior in different ways. Some of these changes in teaching behavior were carried over into classes the teachers taught alone.

When participant one was asked if co-teaching changed how he taught he stated: "I think my co-teaching experiences changed me. Before co-teaching, my teaching was different than it was after co-teaching." The context of the statement in the interview indicated that the change was a positive one.

When participant two was asked if teaching with another teacher got him to think about teaching differently, he stated: "Yes. The other teacher tries to get me to diversify out of the single teacher model, which would be to stand in front of the class and lecture. He would say 'why don't you try teaching like this or why don't you try teaching backwards'. So he's really stretched me especially during my first years of teaching. He introduced me to many new teaching models; he was very molding in that respect."

When asked if what he learned transferred over to when he taught alone, participant two said, "Yes, I still use those methods to this day. I believe that the other teacher helped form me into the teacher I am today." The methods participant two learned from his fellow teacher had a direct and lasting impact on his teaching style.

When participant three was asked if co-teaching changed how he teaches, he stated, "Yeah in some of our informal discussions he [the other teacher] has thrown ideas about other ways to teach a subject.

It is nice to have somebody to bounce ideas off of—sort of the idea of a mentor teacher, if an experienced co-teacher is placed with an inexperienced teacher." When asked if any of the behavior changes he experienced because of co-teaching were positive, participant three responded, "I know it was beneficial to me. My first year I didn't have a co-teacher in my second year I did and during the second year I gained a lot from the person I taught with—not necessarily new lesson plan ideas but ways to improve my lesson plans."

When participant three was asked if he used what he learned from the other teacher in his other classes he said, "Yes." He then gave the following answer which describes some of the specific changes he made to his teaching:

When I teach History Two, I do a WWI simulation. My co-teacher suggested making some changes for our class and we tried it and liked it. I no longer co-teach with him, but I still use the changes he suggested. He also gave me a lot of ideas on how to do test reviews. I guess I was kind of old-fashioned with the way I did my test reviews. He brought in some ideas to test student knowledge, for example he tied new ideas back to previous things the students have learned to make sure they are still with you.

This example illustrates one method that co-teachers have used to learn from the other teacher and then generalize that into other teaching situations. Participant three make it very clear that he learned and applied this new knowledge and skill into all of the classes he taught regardless of if there was another teacher present.

Use of Technology

All of the participants varied greatly both in the types of instructional technology they used and in the frequency of its use. The level of technology used by the teachers prior to co-teaching ranged from participant one, whose only use of technology was the occasional video, to participant two who utilized a computer based learning system where each student had a remote that allowed them to vote and interact with the teacher's computer. The interviews revealed several interesting ways participating in co-teaching affected how these teachers used technology.

With 35 years of teaching under his belt, participant one had the most experience as a teacher by a substantial margin when compared to the other participants. He also utilized the least amount of technology in his classroom. When asked if he utilized technology on a regular basis when he taught alone he said no. He indicated that prior to co-teaching his use of technology in the classroom was limited to periodically showing dvds. The reason he didn't use technology on a regular basis was primarily due to his age, lack of mechanical understanding, and ignorance of available technologies.

The fact that participant one did not use much technology did not mean he was not open to using it in his class. When asked how he would make decisions regarding technology use with his co-teacher, he responded, "I was very open to whatever technology a teacher wanted to use because I'm not very technologically advanced myself." This statement indicated his co-teacher could have a significant impact on the technology used in his classroom.

The following probing question was asked in an effort to gain additional insight. What are some specific examples of how you used technology with a co-teacher? Participant one responded that the last teacher he co-taught with was into technology. He stated, "I would use his lesson plans and whatever technology that the co-teacher wanted to use. We had an interactive Jeopardy game that we used. We also took the kids to the computer lab."

This statement demonstrates that participant one's use of technology was directly impacted by his co-teacher. Another important thing to note is that this is the teacher he employed the team teaching model. This would indicate that for this particular teacher, those he taught with using the team teaching with had a greater impact on his use of technology that those he taught with using the one teach one observe model.

Participant two utilized the most instructional technology both in terms of sophistication and frequency. He indicated that he constantly used technology when he taught alone. When he was asked how he integrated technology into his lesson plans when he taught alone he stated:

I have started to use a CTS unit. It's a series of 30 remote controls that individually give the students power to interact with my computer. I can ask a question and let the students answer via their remote. I can ask them how many are familiar with the specific topic.

They can respond with a remote control and I can see the breakdown of the demographics of the class. When we start to review, I can show them specific test questions and test their knowledge prior to the test. When asked how he decided what technology to use when he taught with another teacher participant two stated:

I would do it [use technology] anyway. I don't usually modify that part of it unless we actually go to the library to do research. That way we can do a good job of fanning out and helping multiple kids as they use technology. They may be making power points or using the Internet to do research for a paper. The presence of another teacher makes it more possible for me to go take the kids to the computer lab.

The comments of participant two would indicate that his use of technology really didn't change as a result of his co-teaching. He did indicate he was able to go to the computer lab when he had another teacher but this could have just as easily been accomplished with a para assisting him. Participant two maintained his high level of technology use regardless of if he taught alone or with another teacher. This would be consistent with the one teach one assist model he primarily used; it was his technology that was implemented since he was the one teaching.

Participant three also utilized a fair amount of technology in his classroom. When asked what types of technology he used in his classroom he stated, "I have a mounted LCD projector that connects to my computer so I use a lot of power points.

I also use the internet a lot for videos. Sometimes I'll show six or seven minutes of a CNN clip that can say exactly what I want said as opposed to notes or worksheet." When asked how he decided what technology to use when he taught with a co-teacher his response was:

Generally speaking the technology that's used is whatever I bring into the lesson plan because they're my lesson plans and my co-teacher is adapting to them. He is more of an implementer whereas I'm more of an originator. I'll craft the idea and he will help see that it happens. I'm the supervisor he's the floor manager.

This response is very similar to that of participant two in the fact that the technology they used in their lesson plans was what they already had planned to use. This is consistent with the one teach one assist model. Participants two and three's behavior towards instructional technology didn't change while co-teaching. A possible explanation for this is that when the co-teacher is not involved in the planning process that absent co-teacher has no insight as to how instructional technology is used in the class.

Discussion

The results from this study demonstrate that co-teaching does affect a teacher's behavior. The reason for these behavior changes are caused by a variety of different factors including: the method for choosing co-teachers, the personalities of the two teachers, the use of technology by the teachers, as well as the co-teaching model that the general education teacher employed.

Certain themes became evident: the necessity of each teacher respecting and valuing the other. The study's results showed that teachers who employed the team teaching model were more likely to respect and value the other teacher. This respect and value diminished in those teachers who employed the one teach one assist model. The co-teaching model that the general education teacher employed became pivotal in nurturing a respectful teaching relationship. Participant one used the team teaching model. As a result, participant one respected the teachers he worked with.

Additionally, his statements make a strong argument that respecting and valuing the other co-teacher can be beneficial to not only the teacher but also the students. Participant three however, used the one teach one assist model and failed to develop a relationship of respect with his co-teacher.

Another theme was teacher-student interaction. Some of the participants felt that co-teaching lead to less time interacting with the students. For example, participant three indicated that having a co-teacher present resulted in him spending less time with the special education students. In other instances, the general education teacher felt that co-teaching lead to more student interaction.

Participant one indicated that he was able to interact with the students more and provide additional direct instruction to students in the classes he co-taught.

Some of the most interesting findings were related to how the presence of co-teacher affects a teacher's use of technology. For participant one, having a co-teacher greatly increased both the level of sophistication of the technology he used and the frequency he used it. These positive changes in his use of instructional technology carried over into all of the classes he taught. However, for the other participants, having another teacher in the classroom made no substantial difference in either the type of instructional technology used or the frequency of its use.

Implications

Despite the small sample size and each participant's unique situation, this study's results has implications for both teachers and those involved in making decisions about co-teaching situations and assignments.

One of the most significant implications resulting from this study is that a teacher's behavior can be either positively or negatively affected depending on the co-teaching situation and the co-teaching model used. When a teacher respects and values the other teacher they are more likely to acquire and implement positive teaching behaviors from their fellow co-teacher. One implication for those who make decisions regarding co-teaching situations and assignments is that this process can have a direct impact on whether the teachers develop a relationship of trust. A participant indicated that he didn't know he was co-teaching until the other teacher showed up on the first day of class. The way his particular assignment was made had a negative affect on his overall co-teaching experience and led to him employing the one teach one assist model.

All of the participants indicated they lacked an adequate common planning time. This lack of a common planning time has significant implications.

It is impossible, regardless of the skill of the teachers, to employ an effective model of co-teaching if they are never able to get together to plan. This lack of planning time led to two of the participants using their own lesson plans with little to no input from the other teacher. This lack of planning time was more significant than teacher compatibility.

The study showed that co-teaching can increase both the level of technology used and the frequency of its use. It is important to note that in order for this technology transfer to take place between teachers they must have adequate time to plan and prepare. It is also important to note that the teacher who showed the most significant gain in his use of technology was using the team teaching model. When teaching alone, the teacher implemented what he had learned regarding instructional technology. The knowledge gained from a co-teacher can transfer to solo taught classes.

The final implication of this study is that the model of co-teaching employed by the teachers may have a significant impact on if the teachers acquire skills and behaviors from their partner. Those who employed a one teach one assist model were more likely to simply view the other teacher as someone who came into their class for a couple periods a day and not as someone they could learn from. Those teachers who employed the team teaching model were more likely to see their partner as someone who they could learn from. In the team teaching situations the positive behaviors learned were usually carried over by the teacher into the classes they taught alone.

Limitations

This study explored the factors that affected teacher behaviors in co-teaching situations. Limitations in the study included a participant sample that was small and only composed of regular education teachers. Because the participants were regular education teachers, few of them had any formal special education training. This dynamic may have created an opposition to working with special education teachers or participating in co-teaching.

Another limitation that may have influenced the results of the study was that participation in co-teaching for these teachers was not voluntary.

The school administration assigned teachers to their co-teaching partners based on the needs of the student body (especially the special education population) and available personnel. Teaching styles and personalities were never considered. The way co-teaching assignments were made may have influenced the way teachers responded to certain questions during the semi-structured interviews. The fact that the interviews took place at the school during school hours may have affected the way some of the questions were answered. The participants were asked questions regarding their current teaching situation at the school they were currently employed at. This may have resulted in some of the participants withholding their true feelings regarding some of the questions. A final limitation that may have influenced the results involves the socioeconomic status andgeographic location of the school. The fact that all co-teacher participants taught in an urban school limits the generalizability of the findings.

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