Student Perceptions of Co-teaching: What do students think about co-teaching?

by

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ABSTRACT

Co-teaching is one of the most popular models for supporting students with disabilities in general education classrooms. In spite of this, there is a paucity of research on student perceptions of co-teaching. The purpose of this qualitative study was to investigate student perceptions of co-teaching in a high school biology classroom. Over nine weeks, data was collected from students in a co-taught and traditional classroom through observations and focus groups. Qualitative content analysis identified three themes and eight categories which highlight student perceptions of co-teaching. Themes and categories that emerged were: 1) Environment which included the categories of availability of help, students feeling supported and normalcy of the classroom, 2) Instruction which included student engagement, lesson activity and teacher(s) role(s) and, 3) Relationships which included relationships between teacher(s) and student(s) and parity between teachers. Information from the study deepens researchers’ and practitioners’ understanding of how students perceive co-teaching and provide new avenues for future research and best practices.
DEDICATION

This thesis is dedicated to my wife and best friend, Marin Lee Lersch. Only with your unconditional love and support am I able to achieve my goals. I am grateful to have you in my life and share this accomplishment with you.
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Chapter 1

INTRODUCTION

In response to recent trends and federal legislation, more students with disabilities are being served within the general education classroom (Gibson & Kozleski, 2010). Nationally, about 60% of all students with disabilities are served in general education classrooms with their non-disabled peers for more than 80% of the school day (U.S. Department of Education, 2008). According to the National Center on Educational Restructuring and Inclusion (1995), co-teaching is the most frequently reported service delivery model for students with disabilities in inclusive settings (Kloo & Zigmond, 2008). Co-teaching occurs when one general education and one special education teacher co-teach a unit or course together (Cook & Friend, 1995; Fennick & Liddy, 2001). Despite co-teaching’s popularity, there is a lack of research investigating the students’ perceptions of co-teaching (Wilson & Michaels, 2006). Although student opinions of their classroom environment can shape learning and influence educational outcomes, (Wilson & Michaels, 2006) research continues to overlook what students think of educational practices (Austin, 2001).

One subject where positive perceptions of the school environment could have an impact on student achievement is science education. Over the last 50 years, science education in the United States has slowly declined. Currently, the United States ranks 17th out of 34 Organization for Economic Co-operation and Development (OECD) countries when comparing science literacy skills of 15 year olds (OECD, 2009). Nationally, four-fifths of high-school seniors fail to reach
proficiency levels in science (National Center for Education Statistics, 2011). In Arizona the outlook for science education is particularly bleak as the state ranks 45th in science education (White & Cottle, 2011).

The aim of this research was to investigate student perceptions of co-teaching in a high school science classroom. Analyzing perceptions of students in a secondary science classroom may provide educators with fresh perspectives that can translate into new best practices and increased content understanding. This research is an interpretive inquiry that seeks to understand student perceptions of the co-teaching model in a high school biology classroom. It is an inquiry that attempts to take very seriously the nature of interpretation, particularly with respect to student perceptions and its role in classrooms. In this inquiry, two focus groups were held to ascertain how students perceived co-teaching. From these groups, three themes emerged that illuminate perceptions that can guide practitioners as they facilitate co-teaching. As more students with disabilities are taught in general education classrooms and receive support through co-teaching, it is essential that student perceptions be considered if such a model is to meet the emotional, behavioral and academic needs of students. Thus, the question must be asked: what are student perceptions of co-teaching in a high school biology classroom?
Chapter 2

REVIEW OF LITERATURE

Research over the last ten years has focused on benefits of co-teaching for students, pre-service training for co-teaching, effective collaboration, the need for co-planning time, evaluation of co-teachers, co-teaching components and issues associated with content knowledge of special education teachers (Gately & Gately, 2001; Gerber & Popp, 2000; Kamens, 2007; Mastropieri et al., 2005; Murawski & Lochner, 2011; Murawski & Swanson, 2001). Despite the growth of research on co-teaching, gaps still exist. One important gap that persists is student perceptions of co-teaching (Wilson & Michaels, 2006). The following section will first discuss the history of co-teaching and provide a definition. After this, gaps in the research will be presented with a discussion of why some researchers caution against deployment of the co-teaching model. This section will conclude with a discussion of student perceptions and the benefits that may come from analyzing student views.

**History of Co-teaching**

Co-teaching initially appeared in the field of general education (Reinhiller, 1996). During the Progressive Education movement of the 1960s, co-teaching was used to illustrate the value of collaboration in a classroom and model the social nature of learning (Villa, Thousand, & Nevin, 2004). In the 1970s, research on co-teaching first appeared but the use of co-teaching decreased mostly in response to legislative reforms which encouraged teachers to adjust instruction for an ever more diverse student population.
During the school reform movements of the 1980s, pullout programs, where special education students would receive their reading, writing, and math education in a separate location, began to be seen as ineffective and not meeting the needs of students with disabilities. During this time researchers and practitioners also began to doubt that at-risk students and exceptional learners were receiving appropriate support while in the general education classroom (Volonino & Zigmond, 2007). In 1989, Bauwens, Hourcade, and Friend introduced the concept of special and general education teachers working collaboratively (Dieker & Murawski, 2003). Soon special educators began teaching with general educators and co-teaching became more prevalent.

Throughout the 1990s co-teaching became more accepted and students with disabilities enjoyed many educational gains including enhanced attitudes and self-concepts, improved social and academic skills, and an improved likelihood of affirmative peer relationships (Hildenbrand, 2009). During the 1990s co-teaching research focused on existing models, meanings for teachers and the subsequent challenges and benefits. For instance, one study used surveys and teacher interviews to examine the implementation of co-teaching models in 23 schools across eight districts (Walther-Thomas, 1997). This study found students with disabilities had increased self-confidence and self-esteem, improved social skills exhibited through appropriate classroom behavior and expanded peer relationships. For students without disabilities the study found the co-taught class had an enhanced sense of community, there was an increased emphasis on cognitive strategies and study skills, and students had more time with and
attention from a teacher. The researcher theorized having more than one adult in the classroom enabled co-teachers to respond more efficiently to the many individual needs of students and not single out students with disabilities (Walther-Thomas, 1997). Such observable benefits urged more practitioners to attempt this type of collaboration.

At the turn of the century, these reported benefits, in combination with the No Child Left Behind Act of 2001 (NCLB) and the Individuals with Disabilities Act (IDEA) 2001 & 2004, led more schools to adopt inclusive practices and co-teaching arrangements increased. NCLB of 2001 requires educational systems assess most students with disabilities using the same statewide standards-based assessments as their general education peers, while requiring schools to look at different service-delivery options for special education (Weiss & Lloyd, 2002). IDEA 2004 continues by emphasizing inclusive instruction and access to the general education curriculum for students with disabilities and requiring schools place students in their least restrictive environment (LRE) (Kloo & Zigmond, 2008). Moreover, both NCLB and IDEA of 2004 require all teachers to be certified and highly qualified in the core academic content area or areas they teach (i.e. special education, math, science, physical education) (Friend & Hurley-Chamberlain, 2008). Therefore, special education teachers who provide direct content instruction must not only be highly qualified in special education but also meet the requirement for the content they teach. In Arizona, a teacher is highly qualified in special education or a core subject area if they pass the subject area Arizona Educator Proficiency Assessment (AEPA), hold an advanced degree in
the content, majored in the area or took 24 college credit hours in the subject (Arizona Department of Education, 2011). These demands may exacerbate special education teacher shortages which already exist and have caused schools to adjust practices (Quigney, 2009).

One result of these mandates is that schools have adopted more inclusive practices which have created more classroom environments where general education teachers have amplified responsibility for educating students with a wide range of abilities. In fact, over the last four years the percentage of students with disabilities served in general education classrooms with their non-disabled peers for more than 80% of the school day has increased in Arizona from 52% to 59% (U.S. Department of Education, 2006 & 2010). Unfortunately, many general educators feel inadequately prepared to instruct students with disabilities (Billingsley & Tomchin, 1992; Giangreco, Dennis, Cloninger, Edelman, & Schatiman, 1993; Karge, Lasky, McCabe, & Robb, 1995; Kearney & Durand, 1992; Sack, 1998; Welch, 1996). In order to provide support for general education classroom teachers who feel unprepared to meet the needs of students with disabilities and meet legislative requirements, co-teaching has expanded.

Definition of Co-teaching

Co-teaching occurs when one general education and one special education teacher co-teach a unit or course together (Cook & Friend, 1995; Fennick & Liddy, 2001). Co-teaching requires each instructor be a certified educator, collaborate on and deliver instruction jointly, work in one single classroom where students with disabilities are taught with their peers without disabilities and both
teachers assume teaching responsibilities for all students (Friend & Cook, 2007; Gately & Gately, 2001).

There are multiple co-teaching models which vary according to the parity of the roles and the duties of each team member (Austin, 2001; Murawski & Swanson, 2001; Trent, Driver, Wood, Parrott, Martin & Smith, 2003; Weiss & Lloyd, 2003). When planning, co-teachers must consider these models as they relate to the “instructional potential…to collaborate effectively in designing and delivering instructional interventions that will best meet the unique learning needs of the students” (Cook & Friend, 2003, p. 177).

Five major co-teaching variations have been identified and are typically used (see also Friend & Cook, 2003; Walther-Thomas, Korinek, McLaughlin, & Williams, 2000). These structures include: 1) the one-teach, one assist strategy; 2) station teaching; 3) parallel teaching; 4) alternative teaching; and 5) team teaching. The one-teach, one assist model occurs when one teacher, usually the general education teacher, assumes the teaching responsibility while the other teacher provides individual support when necessary. Station teaching is being used when various learning stations are formed and the co-teachers provide individual assistance at the different stations. Parallel teaching is in use when each teacher instructs part of the class on the same content but in different classrooms. Alternative teaching occurs when one teacher takes a small group of students to a different location for specialized instruction. Finally, team teaching (also known as interactive teaching) occurs when both co-teachers share teaching responsibilities evenly and are uniformly involved in leading instruction. Of the
five structures, team teaching necessitates the “greatest level of mutual trust and commitment” (Cook & Friend, 2003, p. 184).

**Co-teaching: Benefits and Gaps in the Research**

Co-teaching allows special educators to collaborate with highly qualified content teachers (general educators) while supporting the individualized needs of students with disabilities (Bouck, 2007). This model not only meets the legislative requirements of both NCLB and IDEA of 2004 but research has revealed documented benefits for both students with disabilities and their non-disabled peers. Students in co-taught classes have reported they enjoy school more, have increased motivation, learn more, and feel better about themselves and others (Walsh & Jones, 2004; Walther-Thomas, Bryant, & Land, 1996). Research has found students, whether they receive special education services or are considered at-risk, receive extra attention from the special education teacher in the classroom (Lawton, 1999). Moreover, the design of co-taught classrooms offers access to the general curriculum and the opportunity for enhanced pedagogical options for students with mild and moderate disabilities (Bauwens & Hourcade, 1997; Cook & Friend, 1995; Dieker, 2001; Murawski, 2002b). Additionally, the lower teacher to student ratio provides for better progress monitoring, re-teaching opportunities and individualized instruction (Walther-Thomas, Bryant, & Land, 1996) which enables pupils with information-processing difficulties (learning disabilities) who usually would not be included or who would struggle in unstructured traditional classrooms to gain necessary structure and support to improve both social and academic skills (Vaughn, Gersten, & Chard, 2000).
Rea, McLaughlin, & Walther-Thomas (2002) compared 22 students in pull-out programs with 36 students in inclusive environments in four key areas: standardized test scores, achievement grades, absences and behavior referrals and found more successful results for students in the inclusive program in three of the four areas. The standardized test results and academic content area grades of students in the inclusion program were considerably higher than those in the pull-out program. While there was no variation reported for behavior referrals, the absence of a growth in referrals points to successful school behaviors being exhibited or the providing of additional behavior support in inclusive, co-taught classrooms. Furthermore, students in the pull-out program had substantially higher incidences of absenteeism (Rea, McLaughlin, & Walter-Thomas, 2002). Lower incidence of absenteeism may point to improved perception of the school environment which is significant because as one study found “students with learning disabilities who had positive perceptions of their school environment had a greater likelihood of interacting with teachers and of completing school” (Wilson & Michaels, 2006, p. 208).

A large amount of research on co-teaching supports social gains made by students when placed in inclusive classrooms. For example, a study of the social systems of students with emotional and behavioral disorders found students in segregated classrooms depended on the companionship of students or teachers in special education and friends at home (Panacek & Dunlap, 2003). These groups of friends were smaller than the networks of their non-disabled peers who depended more on the friends they made at school. Limited chances for social integration
inhibit the maturation of social skills to those students who need them most. Panacek and Dunlap’s (2003) study clearly shows self-contained placement as the culprit of a diminished social network at school because evidence confirmed home friendships between children with and without disabilities. Thus, providing students with inclusive education may improve depressed social relationships.

Another study that found success for students in an inclusive program was done by Hunt et al. (2000). This study, which used focus groups of elementary school teachers to investigate the outcomes associated with co-taught classrooms, uncovered perceived benefits for both students with and without disabilities. Teachers remarked students became more socially conscious, had improved feelings of competency and self-esteem, increased academic and social achievement, mastered content through peer mentoring, and developed the ability to work through differences to complete tasks (Hunt et al, 2000). These results highlight how inclusive classrooms allow for the positive outcomes associated with collaboration.

Adding to these benefits, in a three-year qualitative study of current school delivery models done by Walther-Thomas (1997), students with and without disabilities experienced benefits in co-taught classrooms. These advantages were revealed as a result of semi-structured interviews of the participating teachers, classroom observations, as well as an analysis of school-developed documents. The study uncovered benefits to students with disabilities such as improved academic performance, enhanced self-esteem and self-confidence, increased performance of suitable social skills, and the progression of more socially
acceptable and beneficial peer relations. Moreover, the study states that a handful of participating teachers noted “many students with disabilities ‘lost’ their labels when special education service delivery format changed” (Walther-Thomas, 1997, p. 399). This study also illuminates shared benefits for students without disabilities in a co-taught inclusive classroom such as increased academic performance, enhanced social skills development, more individualized teacher time, improved attention to the development of cognitive strategies and study skills, and the promotion of stronger classroom-communities (Walther-Thomas, 1997). Furthermore, students without disabilities in this inclusive, co-taught classroom, reported a sense of “stronger support system, family-like feelings, and sense of community, and opportunities for caring and being cared about” (p.401). The presence of “an additional teacher in these classrooms increased the amount of time, individual attention, and supervision low-achieving students received” (Walther-Thomas, 1997, p. 400) whether or not they had been identified as having a disability or simply struggled with the grade-level content and did not meet the criteria for special education services. This finding demonstrates that all students could benefit from this co-teaching model.

Positive social and academic gains for students without disabilities were also found by Peck, Staub, Gallucci, and Schwartz (2004). In their study they discovered students without disabilities in an inclusive classroom were influenced positively “in terms of their perception of themselves, and their awareness of the needs of others” (p. 140). Although this outcome may be attributed to the design of the study which included seminar sessions and reflective journal topics
encouraging participants to talk about potential academic and social gains of all students in a co-taught classroom, it offers strategies for building classroom communities focused on equity. Peck et al (2004) also found greater growth on curriculum-based assessment measures for students without disabilities in inclusive classrooms than those in non-inclusive classes.

Advantages have not only been found for students as a result of co-teaching, but also for participating teachers. Roth (1998) found through an interpretive study of two elementary science co-teachers (grade 4 and 5) that teachers learned new pedagogical practices by working together. He determined that teacher learning was apparent as a result of the team “learning-in-practice; learning to talk about (or theorize) practice; and learning by attempting to put theory (propositional knowledge) into practice” (p. 363). He hypothesized benefits occurred as a result of the team learning to balance contradictory percepts of what it is to teach science.

Although initial data suggests co-teaching can positively impact the social and academic development of all students (Murawski & Swanson, 2001; Sapon-Shevin, 2003), some researchers have articulated concern about the efficacy of co-teaching on the academic achievement of students with and without disabilities (Wilson & Michaels, 2006). Currently, there is an abundance of qualitative research on theory, application, teacher perceptions, and procedures (Dieker, 2001) but gaps remain in regards to quantitative data on the impact of co-teaching on outcomes for students with disabilities and student perceptions of the model (Murawski & Swanson, 2001; Wilson & Michaels, 2006).
In a detailed review of literature where co-teaching was the inclusive service delivery model, Zigmond and Magiera (2001) identified only four studies centered on academic achievement gains. Three elementary school studies found co-teaching to be just as effective in facilitating academic gains as resource room instruction or consultation with the general education teacher. In the one study conducted at the high school level, student quiz and exam marks actually deteriorated following the co-teaching trial. Murawski and Swanson (2001), in their meta-analysis of co-teaching research revealed only six studies included adequate information to code its effect on students and the results were so mixed, little could be concluded. Mastropieri et al. (2005) explains about the study, “Twenty-two effect sizes were computed on the six studies - involving dependent variables such as grades, achievement, attendance, social and attitudinal outcomes - that yielded a total mean effect size of .40, indicating a low to moderate average outcome effect.” Both literature reviews concluded regardless of the current and growing prevalence of co-teaching as a service-delivery model, additional efficacy research is required.

Zigmond (2003) suggests co-teaching efficacy studies are lacking because it is difficult to design research treatments that capture the service model being evaluated. As Zigmond points out, “Random assignment of students to treatments is seldom an option, and appropriately matched (sufficiently alike) samples of experimental and control students and teachers are rare. As a result, where special education occurs is not a phenomenon that lends itself to precise investigation, and funding for research studies and publication of results in refereed journals are
difficult to achieve” (p. 196). Although this is an issue with any practice-based research, it remains a barrier for research on co-teaching and must be considered when analyzing effectiveness.

In addition to the lack of empirical data about co-teaching’s impact on student achievement, some researchers have expressed concern that co-teaching may negatively impact the academic rigor and support for students with and without disabilities (Klingner, Vaughn, Schumm, Cohen, & Forgan, 1998; Zigmond & Magiera, 2001). Critics have cautioned teachers may “water down” class content to meet the needs of students with disabilities to the detriment of average- and high-achieving general education students (Sapon-Shevin, 2003; Tomlinson et al., 1997). Moreover, there are concerns about the equality of grading (Salend & Garrick-Duhaney, 2002) and the nature of accommodations and modifications connected with co-teaching (Fuchs & Fuchs, 1998; Mastropieri & Scruggs, 2004). In fact, research suggests within co-taught general education classrooms, special education students may lose some of the individual attention they need and which landed them in special education in the first place (Vaughn & Schumm, 1995; Yell, 1998). Wilson and Michaels (2006) assert, “When special education students do receive individualized support within the context of a general education classroom, co-teachers may attend to the remediation of skill deficits instead of focusing on access to the general education curriculum (Baglieri & Knopf, 2004) or, even more likely when high-stakes testing is involved, they may concentrate on content acquisition at the expense of basic skills (Mastropieri et al., 2005)” (p. 207). Also, special education teachers,
particularly those functioning in secondary co-teaching environments, may be demoted to the role of monitor or support personnel, as general education teachers normally do the bulk of content teaching (Austin, 2001). As a result, special education teachers may lack the assurance and ability to participate as the learning specialist in the classroom which decreases the individual attention special education students receives (Lenz, Deshler, & Kissam, 2004).

Student perceptions of co-teaching have largely been overlooked when analyzing the effectiveness of co-teaching. Although Wilson and Michaels (2006) investigated student perceptions of co-teaching among secondary students and found positive perceptions, they noted additional research is needed to better understand the role student views play in the model’s efficacy.

Student Perceptions

Although analyzing student views of the co-taught setting and teacher actions “can yield significant insight into determining program effectiveness” (King, 2003, p. 152), student perceptions are frequently overlooked when evaluating its practicality and efficacy (Austin, 2001; Whinnery & King, 1995). Research has shown schools and co-taught classrooms specifically, have the capacity to provide adolescents with chances to experience social support while simultaneously developing their empathy and academic knowledge (King, 2003, Midgley, Anderman, & Hicks, 1995; Roeser, Midgley, & Urdan, 1996). Researchers have contended that by creating inclusive and supportive educational environments, schools are able to develop and reinforce student perceptions of community and increase student engagement and achievement (Goodenow, 1993;
Osterman, 2000; Voelkl, 1996, 1997). In fact, Kortering and Braziel (1999) found students with learning disabilities who had positive opinions of their school environment were more likely to interact with teachers and graduate high school. Wentzel (1997) also found students who perceived their teachers cared about them seemed more motivated and put forth increased academic effort. Student motivation is particularly significant when you consider dropout rates, and poor motivation has been found to dramatically increase the likelihood of dropping out (Lan & Lanthier, 2003). Students with disabilities are more than twice as likely to drop out of high school, thus there is an added need to investigate perceptions of school (Wilson & Michaels, 2006). Regrettably, schools and researchers typically do not ask students what they think about school, and often during the vital developmental period of adolescence, schools choose to highlight social comparisons based on ability and minimize quality teacher-student relations (Midgley, Feldlaufer, & Eccles, 1989), which may restrict the overall positive impact schools can have in the lives of students (Eccles et al., 1993).

One of the philosophies behind inclusion is that schools are preparing students for the community in which they live. This preparation requires an acceptance of differences. “Special” must become normal, and students with learning differences should not be stigmatized and separated. “Differences are pervasive, ordinary, and acceptable. Inclusion of all students in general education is critically important for creating societies that recognize and embrace human variation” (Baglieri & Knopf, 2004, p. 526). The goal is to remove the stigma of differences and normalize divergent thinking and learning. Schools adopting
inclusive models, like co-teaching, believe such a practice will not only improve student achievement but also positively impact students’ support networks, motivation, sense of community and understanding of difference. The hope is students with disabilities feel an increased sense of belonging and maintain motivation to graduate. As a result, it is valuable to investigate student perceptions of co-teaching not only to learn about what students think of the model so teachers can improve best practices, but also to illuminate whether the practice is achieving its underlying goals.

While researchers have investigated student perceptions of various special education placements (e.g. Salend & Duhaney, 1999; Zigmond, 2003) and teacher perceptions of co-teaching (Cramer & Nevin, 2006; Ritter, Michel, & Irby, 1999; Trent, 1998; Walther-Thomas, 1997) the paucity of research on student views of co-teaching provides space for examination. In a qualitative study of effective co-teaching practices Dieker (2001) found students taught by effective co-teaching teams had an overall satisfaction with the instructional practice. Even though not all students comprehended why two teachers were in one classroom, they reported they felt as if they received more academic support and had less behavior problems in the co-taught class. Similarly, Gerber and Popp (1999) found students receiving special education services enjoyed co-teaching, expressed they learned better through hand’s on activities done in the classroom and felt they received more help and attention from the teachers. However, students expressed confusion associated with having two instructional leaders in the classroom, remarking they were often provided with two different explanations on topics.
In a mixed methods study of 346 secondary students (127 students with IEPs and 219 general education students) Wilson and Michaels (2006) found all the students responded favorably to co-teaching. Students indicated through a five-point Likert-type scale and open-ended survey questions they were developing better literacy skills, getting better grades and would choose to participate in a co-taught class again if provided the opportunity. Interestingly, special education students stated co-taught English classes gave them an opportunity to participate in the general education curriculum and improve literacy skills while general education students thought co-teaching exposed them to higher levels of concept development, literacy skill development and abstraction.

Hang and Rabren (2009) also used a Likert-type scale to gather student perceptions of co-teaching. Their study, which analyzed perceptions of 58 students with Individualized Education Plans (IEP), found students with disabilities had an overall positive perception of co-teaching. The students surveyed expressed feelings of increased self-confidence, having improved academic performance, receiving sufficient support, and behaving better in a co-taught classroom. The authors also commented future research should continue to investigate student perspectives, use a control group that is analyzed congruently and be content specific. The current study heeds these recommendations and hopes to further the fields understanding of how students perceive co-teaching in their school.
Chapter 3

METHODS AND DATA ANALYSIS

The purpose of this qualitative study was to explore student perceptions regarding co-teaching in a secondary science context. The study was designed to answer the following research questions:

1. What are student perceptions of co-teaching in a high school biology classroom?

The following sections will first describe participants of the study and then outline data collected. Next, data analysis techniques will be defined with a discussion of validity and trustworthiness.

Participants

This study was conducted in an urban high school of approximately 2,000 students located in Phoenix, Arizona. At the time of the study the school had been engaged in the practice of co-teaching for five years and had 11 co-taught sections; three in science, math, and social studies, one in English, and one elective. The participant sample consisted of students participating in a co-taught biology classroom (N=35) and students participating in a traditionally taught (one teacher) biology classroom (N=28). The participants in the sample receiving special education services were pre-assigned to the co-taught biology classroom based on their academic needs. The participants not receiving special education services, or not requiring placement in the co-taught biology class, were assigned randomly by the school’s mass scheduling system. The traditional classroom was selected randomly from the available biology sections offered at the school.
A total of 63 students participated in the study. Of the 63 students, 13 were classified as special education students. None of the participants was currently labeled as an English Language Learners. The demographic information of the two classrooms is shown in Table 1.

Table 1

*Participant Demographic Data*

<table>
<thead>
<tr>
<th>Percent</th>
<th>Co-taught Classroom</th>
<th>Traditional Classroom</th>
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<td>$(n = 28)$</td>
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<td>Native American</td>
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<td>Special Education</td>
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<td>Freshman</td>
<td>0.20</td>
<td>0.14</td>
</tr>
<tr>
<td>Sophomores</td>
<td>0.57</td>
<td>0.82</td>
</tr>
<tr>
<td>Juniors</td>
<td>0.115</td>
<td>0.0</td>
</tr>
<tr>
<td>Seniors</td>
<td>0.115</td>
<td>0.04</td>
</tr>
</tbody>
</table>

**Classroom Description**

The co-teaching team was comprised of two white male teachers, ages 29 and 36, who had been co-teaching together for three years. The general education teacher in the classroom holds a certification in secondary education biology with six years of teaching experience, three of those years at the research site. The special education teacher has taught for five years and is certified in cross-
categorical special education and highly qualified in biology. Over the three years of co-teaching together, the team had participated in two separate co-teaching trainings and support programs provided by the district. The first training program provided the team with six, 90 minute, trainings on the theory and practice of co-teaching. During these sessions, teams were provided time to co-plan and problem solve with other co-teaching teams in the district. The second program trained teachers during two, three hour, sessions using professional development material from an outside company. At this training, teams were not provided time to co-plan but were able to speak with other teams in the district.

The traditional classroom was taught by a Hispanic female, age 27, with four years of teaching experience. She holds a certification in secondary education biology and has taught biology for two years.

**Data Collection**

The researcher collected data through classroom observations and focus groups.

**Classroom observations.** Observations by the researcher provided evidence that a co-teaching model was in place and that co-teaching was not being utilized in the traditional classroom. Data from the observations provided information about the level of co-planning, classroom environment, differentiation, student engagement, use of five different co-teaching models and parity between instructors. The observations lasted 55 minutes and occurred once every two weeks for nine weeks in both the co-taught and traditional classes. The co-taught classroom and the traditional classroom were evaluated using the Co-
teaching Checklist developed by Murawski and Lochner (2011) (Appendix E).
The observations in the control biology classroom documented the lesson
objective, method of new material instruction, guided practice activity, and
assessments used to gauge student understanding (Appendix F).

Focus groups. Focus group interviews were utilized to provide the
researcher with the student's account of his or her classroom experience. Two
student focus groups, one from the co-taught biology classroom and one from the
traditional biology classroom, were held by the researcher near the end of the
study. Participants were randomly chosen from those students who had received
parental permission to participate in the focus group. Twelve students, six from
each classroom in two separate group sessions, were asked five loosely structured
questions pertaining to their perceptions of their biology class (Appendix G):

1. Can you tell me about your science class?
2. What is it like having one / two teachers?
3. Describe the classroom environment of your science class?
4. What do you think are the benefits of being taught by one / two
teachers?
5. What do you think are the drawbacks of being taught by one /
two teachers?

During each focus group, the researcher provided non-directive probes,
when necessary, to clarify or expand student perceptions.
Potential Conflicts of Interest

During the interview process, the researcher was aware of his position of authority at the high school. As the special education department chair, the researcher had a prior relationship with all of the special education students in the study. In order to address this student participants were assured three times (with the recruitment letter, with the parental consent information and when students signed a letter of assent) their participation or non-participation in the focus group, and study at large, would in no way impact their grade in the class or standing in the school. Additionally, the researcher provided personal contact information to students and parents so questions and concerns could be answered regarding the purpose, process or impact of the study on students. Moreover, at the onset of the focus group the researcher assured participants the interview would be kept anonymous and would not impact class grades in any way.

Focus Group. The focus group consisting of students in the co-taught classroom lasted twenty minutes and seven seconds while the focus group consisting of students in the traditional classroom lasted ten minutes and eleven seconds. The focus group interviews were audio taped and transcribed verbatim for each question by the researcher.

Data Analysis

Data from the focus groups were analyzed using a qualitative content analysis procedure known as the constant comparative method (Glaser & Strauss, 1967; Strauss, 1987; Glaser, 1992). This method of data analysis seeks to provide a version of reality from the participants’ points of view, with minimal researcher
interpretation. This technique “uses a systematic set of procedures to develop an inductively derived grounded theory about a phenomenon” (Strauss & Corbin, 1990, p. 24). Unlike most deductive theories, within this qualitative method, the theory “is not derived from hypothetical deduction; it is predicated on consistency across events or actions observed in the field. This means that the researcher interprets the actions and meanings of the data from the data collected, not from priori schemas” (Weiss & Lloyd, 2002, p. 62).

For this study the unit of analysis was the meaning units presented by focus group participants (Downe-Wamboldt, 1992; Graneheim & Lundman, 2004). “A meaning unit is a collection of words, paragraphs or statements that communicate the essential meaning through content or context” (Hightower, 2009). The researcher analyzed meaning units in three progressive stages; open coding, axial coding, and selective coding. In this study, data analysis occurred after data were collected. Open coding occurred by developing preliminary concepts from initial analysis of meaning units and then forming these concepts into themes by the researcher. Open coding involved reading through the focus group transcripts line by line and highlighting information that indicated a student perception of co-teaching. During this process, numerous readings of the text were done in order to get a sense of the content of the interviews. The highlighted information became initial themes that were labeled with the terms Environment, Instruction and Relationships.

The second stage of examination, axial coding, involved making connections between themes and more precise categories (Strauss & Corbin,
Weiss and Lloyd (2002, p. 63) state when performing axial coding, “The researcher identifies the causal conditions (events or incidents that lead to the occurrence of a phenomenon), contexts (specific set of properties that pertain to a phenomenon), intervening conditions (broad and general conditions that influence the strategies taken), and consequences of actions involved in each category” (Weiss & Lloyd, p. 63). The goal is to discover and connect categories in terms of the theory being established (Strauss & Corbin, 1990). During this stage the researcher looked beyond the themes and developed smaller units of analysis called categories. Categories were more precise descriptions for student perceptions that presented themselves throughout the transcript, such as lesson activity, availability of help and relationships between teachers and students.

Finally, once themes and categories were defined, selective coding occurred with the intent of integrating all of the data by placing each category developed during axial coding into a theme. The intent with this stage was to discover and relate categories in terms of the theory being developed by the themes already previously identified (Strauss & Corbin, 1990).

**Trustworthiness:** A few concepts of qualitative standards of rigor were applied to report the study findings or establish trustworthiness of the research study. The researcher used observational data collected from structured classroom observations to verify co-teaching was occurring in the co-taught classroom and not in the traditional classroom. To establish external validity, credibility was established through peer examination which occurred throughout the process to
check for consistent researcher application of meaning units to categories and themes and validate analysis (Lincoln & Guba, 1985).
Chapter 4

RESULTS

Data analysis revealed a wide range of information pertaining to student perceptions of co-teaching. The following section provides results of the focus group interviews including themes and categories that emerged. First, themes are explored with frequency data. Next, each theme and its associated categories is defined and analyzed using meaning units from the transcript. Results from classroom observations will be used throughout to certify student perceptions.

Qualitative Analysis

The focus group interviews were based on perceptions of co-teaching. Extraction of student perceptions from the focus-group interviews revealed 268 meaning units - 172 meaning units from students in the co-taught classroom and 96 meaning units for students from the traditional classroom. After comparing codes, three themes and eight categories were identified. The themes were: 1) Environment, 2) Instruction and 3) Relationships. The percentage of meaning units for each focus group and theme is presented in Figure 1. It should be noted the themes were created primarily for utilitarian purposes to capture the breadth and depth of responses. The themes should not be perceived as mutually exclusive but instead as interrelated. Furthermore, not all student meaning units fit solely into one theme. Remarks with overlapping content where coded into no more than two themes. This was the case for two comments in the traditional focus group and 14 comments in the co-taught focus group. Additionally, meaning units were
coded without regard for whether they were positive, negative or neutral as perceived by the researcher.

Figure 1. Percentage of meaning units by theme

![Bar chart showing percentage of meaning units by theme for Co-taught and Traditional classrooms]

**Theme One: Environment.** Environment was conceptualized as the “psychosocial milieu of the classroom” (Pulvers & Diekhoff, 1999). Meaning units placed into this theme captured the “climate” or “personality” of the classroom (Diekhoff & Wigginton, 1992a). This theme accounted for 53 out of 96 (55%) of the total meaning units in the traditional classroom focus group and 47 out of 172 (28%) of the total meaning units in the co-taught classroom focus group. Three categories support this theme: 1) availability of help, 2) students feel supported and 3) normalcy of the class.
Both focus groups remarked most frequently on *the availability of help* in class (64% in the traditional classroom and 49% in the co-taught classroom). The most dominant aspect of *the availability of help* was how quickly students perceived they could get questions answered by a teacher. This perception was exemplified by one student’s comment, which described an experience he had while taking a test: “Every time I had a question one of them would come up. It’s easier because with one teacher they would normally have to go to each person with a question. With two teachers they get to us twice as fast.” Students recognized that having two teachers increased opportunities for one-on-one attention and altered when help was available. For example, one student recognized that a teacher was available during direct instruction, a time that traditionally students cannot get a teacher’s undivided attention, remarking, “While one teacher is teaching, the other one like walks around and sees if you are like…doing the work.” This remark got students thinking about what their class would be like without two teachers. In fact, one student in the co-taught classroom explained what he believed would happen if their class no longer had two teachers: “If we didn’t have two teachers [it would] probably take longer for the teacher to answer questions.”

Interestingly, perceptions about the promptness with which students can receive help when there are two teachers were not exclusive to the co-taught group. Students in the traditional classroom also commented on this advantage. One student, who was in a different co-taught math, remarked that, “With two teachers you get attended faster and … with one teacher you have to wait your
turn to, you know, ask something.” This comment received lots of feedback from her peers, who shared views about the lack of in-class help they get from one teacher. In fact, this comment may be why students in the traditional class shared more about the availability of help than their counterparts in the co-taught class. Students with one biology teacher described how, “If we need help she tells us to come in for tutoring after school, before school or at lunch” and that, “After school tutoring isn’t always available because sometimes she has meetings.” This frustration illuminates one of the clearer distinctions students perceived between co-taught and traditional classrooms—help in a classroom with two teachers is available during class time, while help in a classroom with one teacher is available outside of class time.

Students in the co-taught class commented on feeling supported 26% of the time whereas students in the traditional class mentioned it 23% of the time. There was a variety of comments regarding a willingness to take chances in class, like the student from the traditional class who said, “I feel like I can take a chance on an answer I am not sure about.” Two students from the co-taught class also remarked, “On the test we just had I knew I was going to fail but I just did it anyway; I failed, but I did it anyway” and “Oh yea, I feel supported in class.” Generally, comments about feeling supported centered more on students’ self-confidence with performing academically in front of peers than the influence of the teacher(s) on classroom culture. A good example comes from one student who said, “Like most people will say they don’t have any questions and mostly some
of them do.” This exemplifies how students’ anxiety about being perceived as not understanding content may trump asking questions.

In fact, student remarks from both groups of feeling supported may be disingenuous. Most occurred after students were asked the probing question, “Do students feel supported?” Following this question, students may have perceived a desire by the researcher to hear that students felt supported and thus provided the positive remarks above. One statement that may provide a clearer picture of student perceptions of feeling supported came from a student in the co-taught classroom who said, “Let’s say this: he discourages you to ask stupid questions.” This view supports the hypothesis that students may not ask or answer questions in class because they do not want be judged for an incorrect response.

Finally, both groups perceived a normalcy to their classroom environments. Students from the co-taught class remarked on normalcy 26% of the time they discussed Environment, whereas students from the traditional class mentioned it 13% of the time. Generally, comments focused on how their biology class was similar to other science classes they had previously. One student in the co-taught class adamantly stated that, “It’s not very different. It’s the same thing. All we really do is take notes. It’s not very different. It doesn’t really feel like a co-taught class.” Others said, “You can’t tell there are two teachers,” and “The environment is not as different as a normal classroom.” Overall, one student strongly believed that his co-taught class was no different than any other biology class on campus. This may have skewed the results and inflated the percentage of meaning units dedicated to the category. In fact, these remarks were made at the
beginning of the co-taught focus group following one student’s comments about how the co-taught class was normal, and diminished as students discussed other unique aspects of the model.

Overall, conversation from the traditional classroom did not focus on the normalcy of the classroom for long because students had little to share about a teaching model that was not novel. Students explained that, “It’s normal having one teacher in class,” and “Some of the things we do in there are fun but other than that you know, it’s biology.”

Classroom Observations: Environment. Classroom observations of the co-taught class confirmed a space where two teachers worked together and had written both names on the board, used plural “we” and “our” language and engaged students in appropriate behavior management. Furthermore, heterogeneous groupings were used when appropriate, and it was difficult to tell special education students from general education students. Observations of the traditional classroom confirmed there was one teacher; student desks were paired for partner work throughout direct instruction, guided practice and independent practice; a before and after school tutoring schedule was posted; and students were observed visiting the teacher one by one for assistance.

Theme Two: Instruction. Instruction was conceptualized as "the act or practice of imparting knowledge through a lesson" (The American Heritage College Dictionary, 2002). Meaning units placed into this theme captured the action or strategy used by teachers to convey, practice, reinforce or assess attainment of new knowledge. This theme accounted for 29 out of 96 (30%) of the
total meaning units in the traditional focus group and 54 out of 172 (31%) of the total meaning units in the co-taught group. Three categories support this theme: 1) student engagement, 2) lesson activity and 3) teacher(s) role(s).

Students in the traditional classroom commented on the lesson activity most frequently (69%). They mentioned student engagement and teacher role less often at 21% and 10%, respectively. This differed from those who participated in the co-taught classroom focus group, who remarked on teachers’ roles most often at 44%, lesson activity 30% of the time and student engagement the least, at 26% of the time.

Discourse from the traditional focus group about Instruction primarily focused on the lesson activity, which was defined as the teacher-initiated actions students performed to acquire new information or practice previously learned material. Students stated, “We do a lot of hands on type things and that’s my strong way of doing things,” or “Sometimes she puts power point notes on the board and we take notes,” and “We always go to the computer lab and do these learning labs.” For these students, perceptions about Instruction focused on what students were doing to learn information. Having one teacher meant there was one source for information, and instruction was the activity students were performing to learn material. This also came through for student engagement which included remarks from students like, “It’s pretty boring,” “It’s fun sometimes,” and “It’s less boring.” Student engagement largely depended on whether or not students were hooked by the teacher’s lessons. Again, having one teacher meant that
whether or not students perceived *Instruction* as “fun” or “boring” depended on the actions of a single person.

Finally, students in the traditional classroom mentioned the role of the teacher with *Instruction* only 10% of the time. This equaled three total meaning units. Interestingly, each of the meaning units coded in this category mentioned how instruction would differ if two teachers were in the classroom. For example, one student, who was in a different co-taught math class, explained, “It’s weird [having two teachers] because one teacher might have one way of teaching something while the other teacher has a different way of teaching it.” Following this, another student commented, “With one teacher like you have her side, and if you have two teachers, if you don’t [understand] one teacher’s way then the other teacher can try and explain differently.” In this instance, the *teacher’s role* in the classroom was discussed only after differences with a co-taught class were described. For students in this classroom, the role of the teacher with instruction was not as important as the activity they were performing or their interest in the material.

This perception differs from students in the co-taught classroom who remarked on *teachers’ roles* during instruction 44% of the time. Students clearly recognized that having two teachers provided instructional advantages. Students explained, “We get two perspectives from like two kinds of teachers, like Mr. M has one way of telling us; Mr. A has another way of telling us” and “if we have any trouble, Mr. M will like explain it one way and Mr. A will like explain it in another way.” Not only did students perceive each teacher explaining information
differently, but they also recognized that each teacher had different instructional strengths, saying, “Mr. A gives you the technical explanation, the one that is good for the AIMS tests …Mr. M give you the short explanation, the one that helps you with everyday life,” and “Mr. A is good for like teaching but Mr. M is good for helping us understand it better,” and finally, “They both have an equal role in teaching us; Mr. M just takes more of an explanatory position.” These remarks are interesting because they allude to students picking up on who the general education teacher (Mr. A) and special education teacher (Mr. M) were in the classroom.

Lastly, students recognized when teachers used different co-teaching models during instruction commenting, “Mr. A usually gives like the first part and then Mr. M usually reinforces it somehow” and “It’s kind of helpful because while Mr. A is talking, Mr. M is taking notes on the board helping us write it shorter so we can understand it better.” For students in the co-taught class, observations about teachers’ roles during instruction were prominent because having two teachers was unique. Overall, this impacted their perception of classroom instruction and caused more of the discussion to focus on what the teachers were doing rather than on student actions or engagement.

*Lesson activity* and *student engagement* represented 30% and 26% of the total meaning units about *Instruction*. Similar to students in the traditional class, remarks which were coded as *lesson activity* focused on note taking. Students said, “All we really do is take notes,” “Yea, mostly notes, we don’t do much of anything else,” and “This (science class) is mostly notes, at least in the other
science classes I had we did activities,” and finally, “They provide us with better notes because there are two of them, as the saying goes, ‘two heads is better than one.’” Students also described working in groups saying, “They tell us to work in partners as long as we behave and we do our job when working together,” and “he also lets us pair up, which helps.” Although, the researcher observed other lesson activities occurring in the classroom, students focused on note taking and group work most. This emphasis may also be related to comments about normalcy that occurred during the focus group, in which one student articulated his feeling that because they often took notes, the class was normal.

Finally, students in the co-taught class perceived that having two teachers increased engagement and made the classes, “go by faster.” Several remarks support this, like the student who said, “the process of having two teachers makes the class go by faster; it’s faster,” also “there are two teachers so it goes by faster,” and, “having just one teacher would make the class go by slower.” Students did not share what about the class increased engagement but it may be related to the availability of help and differing roles each teacher played in the class.

Classroom Observations: Instruction. During classroom observations of the co-taught classroom, multiple co-teaching instructional methods were observed including alternative teaching, station teaching and most frequently one-teach, one assist. There was evidence of co-planning and co-assessing, and during instruction both teachers assisted students with and without disabilities. Furthermore, each teacher was observed asking closed and open-ended questions
at a variety of levels to remediate or expand student understanding. This team’s planning and execution of instruction appeared to be at the compromising stage (Gately & Gately, 2001). According to Gately and Gately (2001), this stage consists of co-teaching partners who have a sense that they have to “give up” something in order to “get” something instructionally. Regular use of the one-teach, one assist model supports higher percentages of student meaning units regarding teachers’ roles, especially a diminished role for the special education teacher as a content instructor. Although observations showed examples of differentiated instruction, the degree to which instruction was altered for students with disabilities was limited to the special education teacher providing an alternate text for an activity requiring students to read. This may be a sign of limited communication regarding content rigor prior to instruction, which resulted in teachers relying on one method, or a lack of flexibility by the general education teacher to alter instruction to match the needs of the students.

Traditional classroom observations confirmed direct instruction from one teacher. The teacher was observed providing students with prepared sets of notes that followed power points, remediating student understanding and providing extension questions to students who were quick to grasp the content. Moreover, students were observed both working in pairs on a practice activity and completing a lab that required hands on measurements and analysis of information.

**Theme Three: Relationships.** *Relationships* were conceptualized as the elements of control, trust and understanding between teacher(s) and student(s),
and teacher and teacher (Dobransky & Frymier, 2004). This theme encompassed meaning units that described interactions, or perceived connections, between participants in the classroom setting. *Relationships* accounted for 14 out of 96 (15%) of the total meaning units in the traditional classroom focus group, and 71 out of 172 (41%) of the total meaning units in the co-taught group. Two categories support this theme: 1) *relationships between teacher(s) and student(s)*, and 2) *parity between teachers*.

*Relationship* was the dominant theme of the co-taught focus group. Students remarked on the *relationships between teacher(s) and student(s)* 49% of the time while comments about *parity between teachers* occurred 51% of the time. Like with *Instruction*, students perceived differences between their teachers when it came to relations. One student explained that, “I think most of the students are afraid of Mr. A,” and “Mr. M is a good guy and all but when students look to someone with authority they expect them to act at least a little bit like Mr. A.” Although both teachers were observed taking part in behavior management, students clearly valued one teacher’s authority over the other. One student clarified this saying, “It’s uh, the typical way of people reacting towards him (Mr. A); they’re instinctively scared of him because he is in a higher power.” Students perceived the general education teacher (Mr. A) as more of an authority figure in the classroom, while the special education teacher was more of a confidant. “Mr. M is more sociable and has a friendlier aura around him, and Mr. A is more unapproachable,” said one student. These relational differences could be attributed to the fact that students were in the general education teacher’s
classroom and received a schedule with only his name on it. It may also be related to each teacher’s behavior management styles. Based off of classroom observations, it appeared as if the general education teacher was more comfortable disciplining students in front of the whole class, while the special education teacher would work with students individually. Like with Instruction, this could be attributed to each teacher’s training, as general education teachers are typically trained to work with a large class, while special education teachers are proficient with working individually with students.

Students did express comfort with asking either teacher for help. One student explained, “I would ask Mr. A for help because like he is funny, every time you ask him something dumb, he like just puts you on blast and is funny to me.” This differed from the student who said, “I would rather go to Mr. M because he takes the time to explain things.” One student had no preference and remarked, “Um…probably, I don’t know, I would go [to] either one.” Students did perceive that they had a good enough relationship with one, or both, of their teachers to ask for help and work through problems they had.

Strong perceptions about parity between teachers were evident. Remarks included, “Most of the time Mr. M is just his assistant, at least that’s what it feels like” and “It feels like sometimes one of them is the teacher’s assistant and sometimes the other one is, sometimes they are both teachers. It really differs from day to day.” Instructional parity was evident, and both teachers were observed providing direct instruction. This is supported by the student who remarked, “Usually on Wednesdays for early release Mr. M takes over and
teaches the class and gives the assignments.” The strongest opinion related to parity had to do with both teachers being in sync with the topic being taught. One student said, “Sometimes you get help from one teacher and then the other teacher doesn’t know what you are talking about,” and another remarked, “Sometimes I get the feeling they are not in sync with each other, like one person is saying this and the other person is say that so it’s confusing.” Being in sync was very important to students in the co-taught class. One student even stated, “If the teachers are not in sync then I would just like to have one teacher.”

Although participants in the traditional focus group had one teacher they mentioned parity between teachers 36% of the time. Like with the co-taught class, students in the traditional class perceived both teachers being in sync as essential. One student said, “If we had two teachers… they might be confusing because he might try to say it one way and then she might say it a different other way. The teachers might start talking at the same time.” These comments may have occurred after one student mentioned having two teachers in her math classroom and her perception that, “Sometimes the teachers explain things differently and it’s confusing.”

This student’s comment about having two teachers also impacted how students discussed their relationship with their one biology teacher. Interestingly, students commented how having two teachers would relieve some of the stress their biology teacher faced each day remarking, “I think that if there were two teachers it would be less stress on her. I know it’s pretty hectic right now with all
the grading” and “with two teachers it might be less stressful on her and the class would be, you know, more inviting.”

Not surprisingly, most of the meaning units for the theme of Relationship (64%) focused on how the students related to their biology teacher. Remarkably, many of the comments about student relationships with their teaching in the traditional class alluded to how actions outside of the classroom impacted her relations with them inside of the class. One student elucidates by stating, “Whatever is going on in your personal life you don’t use toward everybody else, so you leave that where you stand at and you go on with your day. You can’t take it out on everybody else in the class.” This comment is interesting because it came from the same student who remarked, “I am pretty social so I like to talk and she looks at me and says, ‘Shut up!’ so it’s not really inviting some days, and you will know by the way she is walking or the way she is like, her face expression, if she is having a bad day or not because it usually tends to be a bad day when she acts like that.” This student perceived his relationship with his teacher as being largely dependent on whether or not his teacher was having a “good day” or “bad day,” and not on his actions in the classroom. This perceptual disconnect impacted students’ relationship with their biology teacher and caused them to feel unwelcome or worry about her stress level. This was not the case in the co-taught biology class, as students had two teachers with whom to build a working relationship, and as a result felt they could approach either teacher when necessary.
Classroom Observations: Relationships. Co-taught classroom observations showed physical space being shared by the teachers, including instructional materials and a teacher’s desk. When observing teacher-student interactions, it was difficult to tell the special educator from the general educator. Furthermore, both teachers were observed providing one-on-one instruction to students, but the special education teacher was not observed providing direct, whole group instruction.

Observation of the traditionally taught classroom confirmed one teacher having a level of control, trust and understanding with the entire class of students. Although one of the student exemplars makes light of harsh teacher language towards a student, it was not observed.
Chapter 5

DISCUSSION, LIMITATIONS AND FUTURE RESEARCH

The purpose of this study was to explore student perceptions of co-teaching. The following section will discuss study results by applying study findings to prior research in the field. Significance of emergent themes will be considered and limitations provided. Finally, implications for future research will be offered.

Qualitative analysis revealed students in the co-taught class made the most comments about classroom relationships (41%). As the literature states, the relationship between co-teachers is an integral part of running a successful classroom (Friend, 2007; Gately & Gately, 2001). Students in the co-taught classroom recognized the importance of their teachers’ relationship and clearly perceived the benefits of teachers working well together, along with the pitfalls of teachers who are out of sync. Interestingly, when asked if students would rather have two teachers who were out of sync with instruction or a single teacher, students in the co-taught class remarked they would prefer to have a single teacher. This viewpoint exemplifies a best practice offered by researchers to school administrators which states relationships between teachers are paramount when assigning teams (Murawski & Dieker, 2008). Additionally, this perception of students raises the question of what administrators should do when co-teaching teams are out of sync and if new teams should be assigned once it is clear a relationship has deteriorated. Although many factors should be considered when
making such a decision, these results add worth to the importance of having cohesive teaching teams.

Extending this point was the fact students in the co-taught classroom remarked on the relationship between teachers as frequently as they did the parity among instructors. Keep in mind, the theme of relationship was conceptualized as the elements of control, trust and understanding between teacher(s) and student(s) or teacher and teacher (Dobransky & Frymier, 2004). Results reveal how relationships between participants, including co-teachers, build a sense of community. In this study, the classroom community was extended by, and in fact largely dependent on, co-teacher team parity. Although the impact of positive collaboration between co-teaching teams sits outside the scope of this study, it does provide promise especially considering the impact some researchers believe classroom communities can have on student engagement and achievement (Goodenow, 1993; Osterman, 2000; Voelkl, 1996, 1997). It may be an enhanced co-taught classroom community has the influence to involve students who are naturally disengaged.

It is also important to note when students in the traditional classroom commented on the theme of instruction, they discussed the lesson activity, whereas students in the co-taught classroom remarked on teachers’ roles during instruction. Traditional classroom student responses were somewhat expected, as questions focused on activities during instruction, whereas co-taught students were unique because they highlighted teachers’ roles without being directly asked to do so. Such responses illuminated that co-taught students perceived differing
teacher roles in the classroom and added value to each. In fact, co-teaching literature has described general educators as content specialists in the classroom and special educators as the learning specialists (Dieker & Murawski, 2003; Mastropieri et al. 2005). This is important, because if struggling students recognize the value and role of the learning specialists (special education teachers) in the classroom, they may be more likely to approach the teacher for help and find success in the class. Additionally, administrators must monitor co-teaching teams to ensure both teachers are satisfying their share of the partnership, because students are attune to discrepancies and may respond accordingly.

Like with other studies (Gerber & Popp, 1999; Wilson & Michaels, 2006), students perceived an increase in the availability of help in a co-taught classroom. Interestingly, students in the traditional classroom commented on the need to attend tutoring outside of the regular class time, whereas students in the co-taught class remarked on the ease at which they could receive help when needed during class. This finding is significant, especially for students with learning disabilities who often struggle with organization or to prioritize requirements (NASET, 2006/2007) and may lack the skills to consistently attend tutoring sessions. With help available in the classroom, this may decrease initial misunderstandings and limit the need for future remediation.

One interesting category that emerged within the theme of Environment was the normalcy of the co-taught classroom. This perception is intriguing and had not appeared in other studies investigating student perceptions of co-taught
classrooms. This result is remarkable because it simultaneously demonstrates students comfortable with the co-taught model while generating questions as to why an exceptional teaching arrangement was perceived as typical. One explanation could be students recognize the model is atypical and expect instruction to be more diverse. When initial perceptions were not confirmed, and students participated in characteristic lesson activities, such as teacher directed notes, they were disappointed and discounted the uncommon model as normal. Another explanation may be the parity between instructors was not as strong as it needed to be to be perceived as an uncommon model. Specifically, students from the co-taught focus group remarked the general education teacher controlled classroom instruction and management. They described feeling as if the special education teacher was more of an instructional aide than a teacher. This sentiment, which overall constituted four meaning units, led the group to discuss how “normal” the class was and thus bring to light its similarities with a traditional classroom. For practitioners this perception is noteworthy. Research supports that special education teachers can be relegated to subordinate positions in the classroom (Mastropieri et al., 2005). When co-teachers reflect, they should analyze each teacher’s position in the classroom and remain sensitive to how students perceive each. The risk would be if students perceive one teacher as an instructional assistant they may not respect that teacher’s instruction or knowledge of the subject, and thus miss out on advantages of having two teachers in the classroom.
It is also important to discuss mixed responses given by students within the category *students feel supported*. Although students provided responses that describe teachers positively impacting the environment, they may not have been genuine. Students may have perceived a desire by the researcher to hear how their teachers created a classroom culture where students took chances when they were not sure about content. Despite positive remarks, a truer explanation may be that both sets of teachers failed to alter student behavior when students were unsure about information. Two comments indicated that students actually preserved their standing with peers by not asking questions, and the culture was such that students would not provide teachers with responses out of fear of judgment. This result indicates that more work needed to be done to create classroom cultures free of judgment, and in this case having two teachers did not have an impact.

**Study Limitations**

There were several limitations identified within this study. Data were collected in one urban high school where there was only one co-taught biology classroom, and only a limited number of traditional biology classes were available to select for participation in the study. Therefore, study participants were a sample of convenience rather than randomly selected. Additionally, the students participating in the study may have been involved in a different co-taught class, or classes, prior to or during the study and this information was not collected. Another limitation was the study’s time frame was limited to nine weeks, which made it impossible to analyze any change in student perceptions over time. Also, each focus group differed in length because data collection had to be done during
class time and could not occur before or after school because study participants received bus transportation to and from school. Also, student perceptions of co-teaching were collected exclusively through transcripts from one small focus group per classroom. Member checks did not occur to verify participant meanings and time did not allow for a second round of focus groups to expand data collection based off of themes emerging from the first group. Additionally, student achievement data was not collected. Collecting standardized test scores, pre and post summative tests and formative assessments may have provided information needed to analyze the impact of co-teaching on student achievement. Finally, this study focused solely on gathering empirical data on one stakeholder group’s perceptions of co-teaching. It did not include how a variety of stakeholders perceive co-teaching and how these stakeholders independently and mutually construct a shared meaning of co-teaching.

**Future Research**

This study was conducted not only to add to the existing literature on co-teaching but to contribute to a deeper understanding of student perceptions and encourage new research. Future research should continue to investigate student perceptions. Specifically, research should analyze how student perceptions of their co-taught classroom impact achievement and engagement. Future studies should not only analyze a group of students in a co-taught class but differentiate student perceptions by participation in special education. Research should also examine how having co-taught classes on a campus impact student perceptions of community and sense of belonging. The importance of community is also
important when considering whether or not co-teaching occurs in low-income schools. Future research should follow Morocco and Aguilar (2002) who explored co-teaching structures in low income schools and across co-teaching teams.

There is also a need to examine how co-teachers’ communication and collaboration impact students. Such research should draw on co-teacher team evaluations already developed (see Gately & Gately, 2001; Murawski & Lochner, 2011) to analyze if teacher skills impact students. Such research would not only begin to link co-teachers’ actions to student actions but it would also provide administrators new spaces for teacher evaluation and professional development. This line of research gains significance as more and more school districts begin to institute pay-for-performance structures. Finally, research should continue to analyze how students’ with disabilities achievement in co-taught classes compares to other available settings (i.e. general education classroom without a co-teacher, and resource classrooms). As co-teachings’ popularity grows it is imperative schools not lose sight that other models for educating students with disabilities exists.
Chapter 6

CONCLUSION

Although often overlooked, student perceptions could provide important information to educational institutions as they evaluate the effectiveness of educational practices. Therefore, it is imperative for educators in special and general education classrooms to understand how pedagogical models are perceived by students. When combined with other evidence, such as parent and teacher perceptions, standardized test grades and informal assessment data, student perceptions complete the holistic impact of an approach. The existence of effective co-teaching relationships is probably not powerful enough to produce positive academic results for students, but in tandem with a strong curriculum, effective instructional scaffolding, and a universally designed curriculum, it does provide schools with another way to support students with disabilities. As long as legislation continues to require schools to include students with disabilities in general education classes, co-teaching will continue to grow and students’ perception of co-teaching will remain significant.
REFERENCES


Dieker, L. A. (2001). What are the characteristics of “effective” middle and high school co-taught teams? Preventing School Failure, 46(1), 14–25.


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APPENDIX A

HUMAN SUBJECTS APPROVAL
To: Elizabeth Kozoleki
SST

From: Mark Roosa, Chair
Soc Beh IRB

Date: 07/15/2011

Committee Action: Exemption Granted

IRB Action Date: 07/15/2011

IRB Protocol #: 110600600

Study Title: Student perceptions of co-teaching. What do students think about co-teaching?

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(1).

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be embarrassing to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.
APPENDIX B

CONSENT FORM
Student Perceptions of Co-Teaching: What do Students Think about Co-Teaching?

LETTER OF PARENT OR GUARDIAN PERMISSION

Dear Parent or Guardian:

My name is Matt Lersch. I am a graduate student under the direction of Professor Elizabeth Kozleski in the Mary Lou Fulton Institute and Graduate School of Education at Arizona State University. I am conducting a research study to gain knowledge of student perception of co-teaching.

I am inviting your child's participation, which will involve my gathering of academic performance data (quarterly grade), performing direct observation of the classroom, completion of a student survey about their view of co-teaching and the holding of a 75 minute focus group. Your child's participation in this study is voluntary. It will not affect your child’s educational support at Tolleson Union High School. If you choose not to have your child participate or to withdraw your child from the study at any time, there will be no penalty. The results of the research study may be published, but your child's name will not be used.

Additionally, the focus group will be audio taped. The focus group will not be recorded without your parental permission. Audio tapes will be kept in a locked file cabinet. Audio recordings will be listened to only by the research team.

The audio recordings will be utilized for data analysis. The audio tape will be destroyed upon completion of data collection and analysis. No identifying information will be recorded within the data analysis.

Although there may be no direct benefit to your child, the possible benefit of your child's participation is improvement of the co-teaching model currently being used within the Tolleson Union High School District. There are no foreseeable risks or discomforts to your child’s participation.

Responses will be confidential. The results of this study may be used in reports, presentations, or publications but your child’s name will not be known/used.

If you have any questions concerning the research study or your child's participation in this study, please call me at (623) 478-4351.

Sincerely,

Matt Lersch

By signing below, you are giving consent for your child _ ________________________________ (Child’s name) to participate in the above study.
<table>
<thead>
<tr>
<th>Signature of Parent or Guardian</th>
<th>Parent or Guardian printed name</th>
<th>Date</th>
</tr>
</thead>
</table>

| I give permission for my child to participate in a focus group if randomly selected | Initials | Date |

| I give permission for my child to be audio taped if randomly selected for the focus group | Initials | Date |

| I give permission for my child’s quarterly grade to be used in the study. | Initials | Date |

| Signature of investigator | Date |

If you have any questions about you or your child's rights as a subject/participant in this research, or if you feel you or your child have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the Office of Research Integrity and Assurance, at (480) 965-6788.
Student perceptions of co-teaching: What do students think about co-teaching?

August 11, 2011

Dear Parent:

My name is Matt Lersch. I am a graduate student working under the direction of Professor Elizabeth Kozleski, in the Mary Lou Fulton Institute and Graduate School of Education Curriculum & Instruction, Special Education at Arizona State University.

I am conducting a research study to examine student perceptions of the co-teaching model.

The purpose of this study is to investigate the classroom environment focusing on the level of support students perceive receiving from two certified teachers (one, the general educator and the other, the special educator) in the classroom.

Your child is enrolled in a Biology class that is co-taught. This semester, I will be studying the impact of that co-teaching model on student learning and engagement. I will be observing the teaching strategies used by the co-teachers during class time when your child is in the classroom. I am asking for your permission to involve your child in my study by agreeing to have your child (1) complete a ten question survey about whether or not they perceive a benefit from having two teachers in the classroom, and (2) possibly participate in an audio taped focus group. Only seven randomly selected students will participate in the focus group. The group will last 75 minutes and involve answering 5 open ended questions pertaining to their perception of the classroom environment and student achievement. In addition, I need your permission to have access to your child’s grade at the end of the quarter.

Your child’s participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty to you or your child.

Although no direct benefit to you or your child may emerge, the possible benefit of your child’s participation is alteration to the co-teaching model currently being used across the Tolleson Union High School District to better meet the needs of
students. In the future, your child may participate in a co-taught classroom and benefit from alterations derived from this study.

The results of this study may be used in reports, presentations, or publications but your child’s responses and actions will be anonymous. Your child’s name will not be used and their privacy will be protected. Results will only be shared in the aggregate form. Survey responses, observation notes, student grades, and audio tapes from the focus group will be destroyed upon completion of analysis of the data and no identifying information will be retained.

I would like to audio tape the focus group. The focus group will not be recorded without your permission. Audio tapes will be kept in a locked file cabinet. Audio recordings will be listened to only by the research team. The audio recordings will be utilized for data analysis. The audio tape will be destroyed upon completion of data collection and analysis. No identifying information will be recorded within the data analysis.

If you have any questions concerning the research study, please contact the research team at: Matt Lersch (623) 478-4351 or Elizabeth B. Kozleski (480) 965-0391. If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Please return the attached consent form by August 12, 2011. Data collection will begin after August 15, 2011. Return of the attached consent form will be considered your consent to participate.

Sincerely,

Matt Lersch
9419 W. Van Buren
Tolleson, AZ 85353
(623)478-4351
mslersch@asu.edu
APPENDIX D

SITE AUTHORIZATION LETTER
This letter is to confirm that Matthew Lersch has permission to conduct his research study on student perceptions of co-teaching. His study was approved by Dr. Margo Seck, Interim Superintendent and Dennis Dowling, Executive Director for Curriculum and Instruction.

I am the Director of Special Services for the district and have reviewed and also support Matt’s study. If there is a need for further information I can be reached at wendy.barrie@tuhsd.org or telephone number 623-478-4058.

Wendy Barrie
Wendy Barrie M.Ed
Director of Special Services
Tolleson Union High School District
APPENDIX E

CO-TEACHING CHECKLIST
<table>
<thead>
<tr>
<th>LOOK FOR ITEMS</th>
<th>0 – Didn’t See It</th>
<th>1 – Saw an Attempt</th>
<th>2 – Saw It Done Well</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two or more professionals working together in the same physical space.</td>
<td>0 = only one adult; two adults not communicating at all; class always divided into two rooms</td>
<td>1 = two adults in same room but very little communication or collaborative work</td>
<td>2 = two adults in same room; both engaged in class &amp; each other (even if not perfectly)</td>
</tr>
<tr>
<td>Class environment demonstrates parity and collaboration (both names on board, sharing materials, and space).</td>
<td>0 = no demonstration of parity/collaboration; room appears to belong to one teacher only</td>
<td>1 = same attempt at parity; both adults share materials and space</td>
<td>2 = clear parity; both names on board/report card; two desks or shared space; obvious feeling from teachers that it is &quot;our room&quot;</td>
</tr>
<tr>
<td>Both teachers begin and end class together and remain in the room the entire time.</td>
<td>0 = one adult is absent or late; adults may leave room for time w/ reason related to this class</td>
<td>1 = one adult may be late but for remaining time, they work together</td>
<td>2 = both adults begin and end together, and are with students the entire time</td>
</tr>
<tr>
<td>*Note – if adults have planned to use a regrouping approach (e.g., &quot;parallel&quot;) and one adult takes a group of students out of the room (e.g., to the library), that is perfectly acceptable.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>During instruction, both teachers assist students with and without disabilities.</td>
<td>0 = adults are not helping students or are only helping &quot;their own&quot; students</td>
<td>1 = there is some helping of various students but adults primarily stay with a few of &quot;their own&quot;</td>
<td>2 = it is clear that both adults are willing to help all students &amp; that students are used to this</td>
</tr>
<tr>
<td>The class moves smoothly with evidence of co-planning and communication between co-teachers.</td>
<td>0 = planning appears to have been done by one adult and/or no planning is evident</td>
<td>1 = minimal planning and communication is evident; most appears to be done by one adult</td>
<td>2 = it is clear that both adults had input in lesson and communicate regularly as class progresses</td>
</tr>
<tr>
<td>Differentiated strategies, to include technology, are used to meet the range of learning needs.</td>
<td>0 = there is no evidence of differentiation of instruction or use of technology in the classroom</td>
<td>1 = there is minimal differentiation and use of technology; most differentiation appears to be focused on groups rather than individuals</td>
<td>2 = it is clear that adults considered individual student needs; differentiation and use of technology is used when needed to meet individual student needs, as well as that of the group</td>
</tr>
<tr>
<td>A variety of instructional approaches (5 co-teaching approaches) are used, including regrouping students.</td>
<td>0 = students remain in large class setting; adults rely solely on One Teach/One Support or Team</td>
<td>1 = Adults regroup students (using Alternative, Parallel, or Station) at least once</td>
<td>2 = Adults use more than one of the 5 approaches (Friend &amp; Cook's One Teach/One Support, Team, Parallel, Station &amp; Alternatives); at least one of the approaches involves regrouping students</td>
</tr>
<tr>
<td>*Note – if teachers have been observed using other approaches in the past and only one approach is observed today (e.g., Stations), it is acceptable to recall previous observations and give a 2 for using a variety of approaches as adults have demonstrated competency.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both teachers engage in appropriate behavior management strategies as needed and are consistent in their approach to behavior management.</td>
<td>0 = there is no obvious plan for behavior management, nor do adults appear to communicate about how they are approaching class management; possibly inappropriate class management</td>
<td>1 = behavior management strategies are utilized but there is very little clear evidence of how adults have communicated about their use</td>
<td>2 = it is evident that adults have discussed how they will approach classroom behavior management and adults are consistent in their approach; clear communication between adults</td>
</tr>
<tr>
<td>It is difficult to tell the special educator from the general educator.</td>
<td>0 = Observer could easily determine who was the general/special educator by their language/instructional lack of parity.</td>
<td>1 = Observer could tell who was the general/special educator but there was a clear attempt at parity between the teachers.</td>
<td>2 = Observer would not be able to tell who was the general/special educator as parity was evident and adults shared the roles and responsibilities in the classroom.</td>
</tr>
<tr>
<td>It is difficult to tell the special education students from the general education students.</td>
<td>0 = Observer could easily determine who were the general/special education students by their lack of integration (e.g., students at back or separated from class).</td>
<td>1 = Observer could tell who were the general/special education students but there was a clear attempt at inclusion of students for most activities.</td>
<td>2 = Observer would not be able to tell who were the general/special education students as parity was evident and adults shared the responsibilities for working with all students.</td>
</tr>
</tbody>
</table>
# CO-TEACHING CHECKLIST

**General Educator:** ____________________  **Special Educator:** ____________________  
**Observer:** ____________________  **Date/Time:** ____________________  

## LISTEN FOR ITEMS

| Co-teachers use language ("we": "our") that demonstrates true collaboration and shared responsibility. | 0 = Adults use "I" language frequently (e.g., "I want you to ..." or "In my class ..."), lacking parity.  
1 = Adults attempt to use "we" or "our" language and include each other, but it is clear that one adult is more used to "ruling" the class.  
2 = Adults clearly use "we" or "our" language (e.g., "We would like you to ..."), showing that they both share the responsibility and students know they are equally in charge. |
|---|---|
| Co-teachers phrase questions and statements so that it is obvious that all students in the class are included. | 0 = Class is very teacher-directed and little involvement by students; questions/statement are general, and not inclusive of all students.  
1 = A few statements/questions are phrased to encourage participation from a variety of students.  
2 = A clear attempt is made by both adults to engage all students through the use of a variety of types of questions and statements. |
| Students’ conversations evidence a sense of community (including peers with and without disabilities). | 0 = Students do not talk to one another ever during class or specific students are clearly excluded from the student interactions.  
1 = Most students appear to be included in the majority of student interactions.  
2 = It is evident from the students’ actions and words that all students are considered an equal part of the class and are included in all student interactions. |
| Co-teachers ask questions at a variety of levels to meet all students’ needs (basic recall to higher order thinking). | 0 = Adults do not use questions or ask questions geared just to one level (to the middle or "watered down").  
1 = Adults use closed and open questions at a variety of levels in a general manner.  
2 = Adults use closed and open questions at a variety of levels in a way that demonstrates they are able to differentiate for specific students in order to ensure maximum (appropriate) levels of challenge. |
Lesson Objective:

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Lesson Description

Intro to new material:
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Guided Practice Activity:
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Assessment:
__________________________________________________________________
__________________________________________________________________
APPENDIX G

INTERVIEW PROTOCOL
<table>
<thead>
<tr>
<th>Questions</th>
<th>Detail Probes or Expanders</th>
<th>Elaboration and Clarification Probes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Can you tell me about your science class?</td>
<td>In what ways is your science class unique when compared to other science classes you have had in the past or are aware of on campus?</td>
<td>Could you say something more about how co-teaching impacts students? You mentioned a way does having two teachers impacted the students, could you talk more about that?</td>
</tr>
<tr>
<td>2. What is it like having one / two teachers?</td>
<td>In what ways does having two / one teacher impact you? In what ways would your class be different if you did not have one / two teachers? In what ways does each teacher interact with the students? In what ways does their interaction impact the classroom environment?</td>
<td></td>
</tr>
<tr>
<td>3. Describe the classroom environment of your science class?</td>
<td>Do students feel welcomed? Do students work together? Do students feel supported? Can students get the help they need? Do students feel supported to try and not succeed?</td>
<td>In what ways do the teacher(s) interacting with students? Can you elaborate on how you feel in class?</td>
</tr>
<tr>
<td>4. What do you think are the benefits of being taught by one / two teacher(s)?</td>
<td>Availability of help? Description of lesson material? How lessons are taught? After school tutoring? What is the classroom environment like?</td>
<td>Could you say something more about In what ways does this affect your learning? Could you say something more about the help you receive with learning the material? Can you say more about the classroom environment?</td>
</tr>
<tr>
<td>5. What do you think are the drawbacks of being taught by one / two teacher(s)?</td>
<td>Availability of help? Description of lesson material? How lessons are taught? After school tutoring? What is the classroom environment like?</td>
<td>In what ways does this affect your learning? Could you say something more about the help you receive with learning the material? Can you say more about the class environment?</td>
</tr>
</tbody>
</table>