THE EFFECTS OF ADVENTURE EDUCATION ON THE SOCIAL INTERACTIONS OF STUDENTS WITH DISABILITIES IN GENERAL PHYSICAL EDUCATION

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By
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*****

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ABSTRACT

The purpose of this study was to examine the effects of an Adventure Education unit of instruction on the social interactions between students with and without disabilities in general physical education (GPE) classes. Participants were African American, Hispanic, and White American students (girls and boys with and without disabilities) who spoke either Spanish or English as their first language. A multiple baseline across participants design was used (Cooper, Heron, & Heward, 1987). The study was situated in contact theory (Allport, 1954). Data were collected on the social interactions that occurred between students with and without disabilities. Results show that effective facilitation of Adventure Education can potentially increase appropriate and positive social interactions and these results provide evidence that social interactions can increase through effective facilitation and the creation of an environment that encourages appropriate and positive interactions between students. Contact theory was partially supported in this study.
Dedicated to my family, to my adviser, and to my best friend; thank you for helping me become who I am today.
ACKNOWLEDGMENTS

I never thought the day would come when I finally would be writing this page of my dissertation, and in some way I think this page will be the hardest to write because completing this will end another chapter in my life. When I look back at my four years at The Ohio State University (OSU), I have made many friends from all over the world and I am so thankful for this opportunity. Being in such a diverse setting has given me many new perspectives, making this one of the most rewarding experiences of my life!

If someone were to tell me ten years ago that I would someday graduate with a PhD, I think I would have laughed at them. Since then, I have realized that the best way for me to make changes in the world is to help those who may not have as many opportunities as I have had throughout my life. By doing so, I needed to learn as much as possible to become the most effective at teaching and working with others, some may call this a “professional student” but I like to think of it as a “thirst for knowledge” with a desire to make a lasting contribution to someone’s life.

Throughout this process, there are many individuals who have supported me and the decisions I have made in deciding on a career that would best support my interests and desires. First, I would like to thank my family. These past four years have been the most stressful and tiring years of my life, but throughout it all, you all have remained by my side encouraging me and supporting my decisions. (Although I have a few more gray
hairs after finishing). Thank you to Jonathon and Robin for flying me out to see you so I could have a nice vacation where I could relax and temporarily forget about school while I rode on the four-wheeler in the desert with Jonathon and sat at the spa while Robin made me feel so beautiful. It really means a lot to me also that you will see me graduate and will celebrate this accomplishment with me, because it certainly was not easy for me to make it to this day. To my parents, thank you for always being there to support me when I needed it, and driving down to see me and to make sure that I ate good food and took my vitamins so that I could have the strength and energy to continue. I am thankful that I chose to come to OSU for many reasons, but I believe that my being at OSU has helped to bring us closer to each other, and that is something I will never forget. No matter where I end up after graduation, I am thankful that the past four years have given us all the opportunity to develop a stronger bond that will never be broken.

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work with the best than I would have ever had anywhere else. Thank you for all you have
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again in the future.

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Finally, thank you to the many friends I have made here at OSU. I have made friends with so many people from many places around the world, and I look forward to traveling the world to see and share in your countries and cultures as you have done with me in mine. Now that I have finished this chapter in my life, I do realize that I will miss the taste of the “tres leches” (thank you Alex), the challah bread and pasta (thank you Rona), but most important that I was part of a small world (and if you do not think it was a small world, consider that there were more than 14 countries represented in our doctoral program) that I will carry with me forever.
VITA

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CHAPTER 1

INTRODUCTION

The term inclusion is used to describe many variations of placing individuals with disabilities into a general education setting with peers without disabilities. Inclusion refers to an educational setting where students with and without disabilities are educated in the same environment where the needs of each child can be met (Block, 2000). More specific to physical education, an inclusive setting is one where “all students [not only students with disabilities] have a right to a high quality physical education experience that allows them the opportunity to achieve personal growth and success” (Webb & Pope, 1999, p. 41). One postulated benefit of an inclusive educational setting is that all students who have disabilities can benefit from the positive social interaction they may experience with their peers without disabilities (Block, 2000). Inclusion of students with disabilities into general physical education [GPE] classes is becoming more common (DePauw & Doll-Tepper, 2000). According to the National Center for Educational Statistics (2007), approximately 6.7 million public school students are served under the Individuals with Disabilities Education Act (IDEA), many of whom receive physical education services in inclusive GPE classes. Typically, inclusion refers to educating individuals with
disabilities in the least restrictive environment [LRE], when possible and appropriate
students with disabilities are educated in an environment with individuals without
disabilities where the individuals can thrive and succeed as any other student (Individuals
with Disabilities Education Improvement Act of 2004).

Benefits of Inclusion

In an inclusive setting, it is important to note that scholars have articulated many
benefits for both students with and without disabilities (Block, 2000). For example,
scholars have advocated inclusive programming as: (a) providing opportunities to learn
and practice social skills in more natural environments, (b) learning appropriate behavior,
(c) interacting of students with disabilities with their peers without disabilities who can
act as role models, (d) participating in age appropriate activities for all students, and (e)
developing relationships with others (Block, 2000).

The social aspect of inclusion can be considered one of the greatest benefits of
including students with disabilities in GPE (Block, 2000). Ideally, social inclusion is
typified as “positive personal interactions with classmates that contribute to feelings of
accepting and liking each other” (Sherrill, 2004, p. 242). Sherrill discussed social
inclusion as being either unidirectional [i.e. typically initiated by only the students with
or without disabilities] or equal status [i.e. reciprocal relationship where both students
with and without disabilities interact and initiate interactions]. However, research on
social inclusion indicates that interactions that occur between students with and without
disabilities in inclusive settings are limited and often unidirectional (Butler & Hodge,
2004; Place & Hodge, 2001). Findings from an emerging body of research indicates a
need for an increase in equal status relationships between students with and without
disabilities (Ammah & Hodge, 2006; Butler & Hodge, 2004; Goodwin, 2001; Goodwin & Watkinson, 2000; Hodge, Ammah, Casebolt, LaMaster, & O'Sullivan, 2004; Place & Hodge, 2001). To date, mostly descriptive and qualitative studies have been published on social inclusion variables (Ammah & Hodge, 2006; Butler & Hodge, 2004; Hodge et al., 2004; Place & Hodge, 2001).

To extend the current research base, there is a need for intervention models that seek to promote social inclusion within GPE settings, specifically for individuals with learning disabilities and emotional disturbances as the literature shows that such individuals tend to engage in inappropriate interactions and are typically rejected more by their peers without disabilities (Bryan, Wheeler, Felcan, & Henek, 1976; Cullinan & Sabornie, 2004; Farmer & Hollowell, 1994; LaGreca & Mesibov, 1981; Sabornie, Kauffman, Ellis, Marshall, & Elksnin, 1987; Schonert-Reichl 1993; Siperstein, Bop, & Bak, 1978; Vaughn, Elbaum, & Schumm, 1996). It is important that programs be designed to improve the contact settings of such individuals with their peers in order to create and foster an environment that is supportive of appropriate interactions and relationships between individuals with such disabilities in a GPE setting. Adventure Education is one such program that focuses on building interpersonal relationships and fostering social interactions of students with learning disabilities and emotional disturbances in a physical education setting.

*Adventure Education*

In a broad sense, Adventure Programming has different foundations and branches that seek to develop the total person, such as Outdoor Education and Environmental Education (Priest & Gass, 2005). What is known today as Adventure Education had its
foundation in 1941 in a program called Outward Bound where men were prepared to be a part of the armed forces (Priest & Gass, 2005). During their one month training, these individuals were prepared by taking part in search and rescue missions, orienteering, sailing, obstacle course training, and mountain climbing activities (Priest & Gass, 2005). As a result of the Outward Bound program, in 1970, Project Adventure was developed as a way to integrate the Outward Bound activities into educational settings (Priest & Gass, 2005). Now known as Adventure Education, a branch of outdoor education that aims to develop both inter and intrapersonal relationships, Adventure Education is also a curricular model that has been successful at integrating individuals with disabilities within various inclusive settings (McAvoy, Schatz, Stutz, Schleien, & Lais, 1989; Sugerman, 2001). Adventure Education aims to educate the total person while emphasizing team building games and activities. It has also been called Adventure Based Learning where the purpose is to follow a sequence of activities [i.e. problem solving initiatives, trust activities] to develop students both socially and physically (Cosgriff, 2000; Dyson & Brown, 2005) within groups and as individuals (Cosgriff & Schusser, 1999). This current study follows the intents and purposes of Adventure Based Learning to develop interpersonal relationships between students in each group.

In Adventure Based Learning, the development of trust through problem solving and communication with teammates is central to the experience. In such experiences, students move through an experiential learning cycle [see Figure 1.1] (Dyson & Brown, 2005; Kolb, 1984; Kolb, Boyatzis, & Mainemelis, 2001) of engaging in a concrete experience or activity, reflecting on the activity based on observations (also called the “what?” phase), generalizing the activity and the skills developed into other experiences through
abstract conceptualization (also called the “so what?” phase), and finally the transfer of meaning from the activity to experiences beyond physical education through active experimentation (also called the “now what?” phase) (Cosgriff, 2000; Kolb, 1984; Kolb, Boyatzis, & Mainemelis, 2001). This current study followed the intents and purposes of Adventure Based Learning to develop interpersonal relationships between students in each group.

Figure 1.1 Kolb’s Experiential Learning Cycle (Kolb, Boyatzis, & Mainemelis, 2001, p. 229).

The purpose of Adventure Education in this study was to present problem solving opportunities, cooperation, trust, challenge, and risk opportunities by following the
premises of Adventure Based Learning. This was done by introducing these concepts to the students in each class who must challenge themselves and each other to meet a common goal (Priest & Gass, 2005) of interacting appropriately with their group members through effective facilitation by the teacher. Adventure Education can have a positive impact on personal student behaviors and social interactions in the class as it is designed to facilitate interpersonal and intrapersonal relationships when implemented properly (Miles & Priest, 1990; Priest & Gass, 2005; Schleien, McAvoy, Lais, & Rynders, 1993).

Facilitation in Adventure Education is used to accomplish the goals of Adventure Education such as: enhancing the learning, assisting in lasting change, and creating transferable change (Priest & Gass, 2005). Facilitation can take different forms, such as: (a) letting the experience speak for itself by learning through doing, (b) speaking for the experience through learning by telling others about the experience, (c) debriefing the experience by encouraging learning through reflection, (d) directly frontloading the experience by direction with reflection, (e) framing the experience by reinforcement with reflection, and (f) indirectly frontloading the experience by redirection before reflection (Priest & Gass, 2005). In this study, facilitation took the form of debriefing where the teacher asked the students to reflect on each activity and experience they had during each lesson with regard to the interactions they had with their team members during the activities. The purpose of Adventure Education is to bring about an awareness of individual and group change and to enhance self-concept and social interactions between individuals (Miles & Priest, 1990) through effective facilitation. This purpose can be met by asking the students to reflect on what happened during the lessons (i.e. phases of
Kolb’s experiential learning cycle). In many cases, individuals with disabilities typically are not included socially in their GPE classes, although they are included physically in these settings (Butler & Hodge, 2004; Place & Hodge, 2001). To counter this, Adventure Education was used as a tool in this study to facilitate social inclusion of students with disabilities within a GPE setting.

**Theoretical Framework and Purpose**

This study was situated within the theoretical framework of contact theory [intergroup] developed by Allport (1954). In the original theoretical framework, Allport (1954) posited that contact between individuals with differences [e.g. individuals from different racial groups] can produce positive attitudes and interactions if four conditions are present: equal status contact, sharing of common goals, intergroup cooperation, and an environment supportive of contact (Allport, 1954; Pettigrew, 1998; Sherrill, 2004). Equal status contact [what Sherrill (2004) termed equal status relationships] occurs when individuals have the opportunity to interact and to become true acquaintances; prejudices are likely to decrease and result in tolerant and friendly attitudes toward one another. In the case of this current dissertation research, equal status relationships referred to an important aspect of Adventure Education where each member of a group (of eight to ten) was an integral part of the group’s success.

Termed “pursuit of common objectives” by Allport (1954, p. 276), a sharing of common goals is important because if contact occurs only between a few select individuals, people may not be able to generalize their experiences to other individuals who are different from them and may not interact with them in the future. If equal status contact occurs without the other components, it may in fact lead “to a dissociated, or
highly specific, attitude, and may not affect the individual’s customary perceptions and habits” (Allport, 1954, p. 276). Allport (1954) posited that contact must reach deeper than the surface in order to change relationships; and that only contact that is designed to lead people to work together is effective. Allport (1954) further stressed that the effect of contact would be greatly enhanced if a sense of cooperation was developed between groups leading to a sense of common interests and humanity [intergroup cooperation], and if the community surrounding the individuals supports and promotes such relationships [environment supportive of contact].

Allport’s (1954) contact theory was originally conceptualized as a way to improve relations between members of different racial groups, in particular Black and White Americans. Over the years, contact theory has been used increasingly to situate research in the area of integration [i.e., mainstreaming and inclusion] in educational contexts of students with disabilities with classmates without disabilities in general education environments (Slininger, Sherrill, & Jankowski, 2000). Importantly, Slininger et al. (2000) and others have determined contact theory to be an appropriate theory to address improving intergroup relations in a GPE setting. As evidenced throughout the adapted physical education [APE] and adapted physical activity [APA] literature [i.e. Archie & Sherrill, 1989; Block & Zeman, 1996; Slininger, et. al, 2000; Tripp, French, & Sherrill, 1995] improved attitudes toward students with disabilities in a GPE class are possible. However, Allport (1954) stated that simply placing together individuals who are different will not improve attitudes and stereotypes will not change; it is necessary to also include other factors such as those mentioned above (i.e. cooperation, common goals, and an environment supportive of contact). One concern of using contact theory as a theoretical
framework for inclusion studies is that few studies have been able to present positive changes in attitude and/or interaction that support contact theory in such settings (Hutzler, 2003). However, Tripp and Sherrill (1991) maintain that the direction of change in attitudes and/or positive interactions between individuals depend on the conditions in which individuals are in contact with each other. In other words, when conditions are favorable for contact (i.e. having equal status contact or a climate supportive of contact), positive changes in attitudes and interactions will occur. Conversely, when conditions are seen as unfavorable (i.e. competition between individuals or an environment that is full of tension), contact will lead to negative shifts in attitude or interactions between individuals.

Butler and Hodge (2004), and Place and Hodge (2001) have shown that interactions do not always occur between students with and without disabilities, their findings support Allport’s (1954) postulations that simply being together will not change the environment. This research indicates a need for interventions that will change this trend, such as that of Adventure Education. Furthermore, one important point of the attitude studies in APE that have utilized contact theory is that in situations where the contact between group members was structured, it was determined that attitudes were more likely to improve than when contact was unstructured (Archie & Sherrill, 1989; Block & Zeman, 1996; Slininger, et. al, 2000; Tripp, French, & Sherrill, 1995). Taken one step further, we can postulate that a unit of Adventure Education, if facilitated effectively, creates a structured contact setting between students in the class, providing a feasible means to promoting favorable attitudes leading to positive and appropriate social interactions between students.
Subsequent to an extensive literature search, there was no other theoretical framework that better situated the variables of interest in the current dissertation study than contact theory. Although originally developed to explain relationships between individuals of different races, contact theory has been used throughout the inclusion literature to explain relationships and interactions between individuals with and without disabilities (Slininger et al., 2000; Tripp et al., 1995). The variables of interest (i.e. independent and dependent variables) of this study are explainable using the four tenets of contact theory (i.e. equal status contact, sharing of common goals, intergroup cooperation, and an environment supportive of contact) [see Table 1.1].

<table>
<thead>
<tr>
<th>Contact Theory</th>
<th>Adventure Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal status contact</td>
<td>All group members necessary to complete the activities</td>
</tr>
<tr>
<td>Sharing of common goals</td>
<td>Goals enhance group cohesiveness, sense of a “team”</td>
</tr>
<tr>
<td>Intergroup cooperation</td>
<td>All group members work together to achieve the goal</td>
</tr>
<tr>
<td>Environment supportive of contact</td>
<td>Teacher facilitates an environment where students are encouraged to help each other and work together as a group</td>
</tr>
</tbody>
</table>

Table 1.1: Comparison of Main Tenets of Contact Theory and Adventure Education
This study best aligns with the postulations of Allport (1954) that there are four conditions that necessitate being present for positive interactions to occur between individuals with and without disabilities, and focused on these tenets to extend the literature base utilizing planned contacts in GPE settings to increase and improve interactions between individuals with and without disabilities.

This study is best situated by the main tenets of contact theory as opposed to any other theory available, such as the Theory of Planned Behavior (TpB). The Theory of Planned Behavior was designed to predict and explain behavior (Ajzen, 1991). The main tenets of TpB are illustrated in Figure 1 and include: (a) the intention to perform the behavior, including the motivation behind performing the behavior and the likelihood that the behavior will occur; (b) control over performing the behavior, or ability to perform the behavior (perceived behavioral control); (c) attitude toward the behavior referring to the degree that a person has a favorable or unfavorable attitude toward performing a behavior, and (d) subjective norm, which refers to perceived social pressure to perform a specific behavior.
In TpB, the main focus is on the intentions and attitudes toward performing a behavior. In this study, the purpose was not to measure the intents and attitudes of the students to interact with each other as a result of experiencing Adventure Education; instead, the purpose was to measure the actual number of times specific behaviors occurred throughout the study. It is for this reason that TpB was determined not to be an appropriate theoretical framework for this study.
Whereas contact theory was deemed appropriate for exploring and explaining the complex social-educational phenomena of inclusive programming within schools and communities (Sherrill, 2004; Slininger et al., 2000) and thus was judged appropriate to serve as the theoretical framework for this dissertation study.

Statement of the Problem

Students with disabilities, although physically included in GPE classes, often experience social isolation in which their peers without disabilities in the class do not socially interact with them (Butler & Hodge, 2004; Goodwin & Watkinson, 2000; Place & Hodge, 2001). There is a need to determine ways in which social inclusion of students with disabilities can be increased and retained in an inclusive physical education setting. Given the limited research on the social inclusion of students with disabilities in GPE (Butler & Hodge, 2004; Place & Hodge, 2001), this study sought to extend the literature in this area.

Purpose of Study

The purpose of this study was to examine the effects of an Adventure Education unit of instruction on the social interactions of students with and without disabilities. The focus of this study was on students who had documented disabilities [i.e. student receives IEP services in general and/or physical education] in each class taught by one teacher specifically targeting the interactions of students without disabilities and their peers with emotional disturbances and learning disabilities. The experiment [single subject multiple baseline across participants design] focused on the effects of an Adventure Education unit of instruction on student interactions as a critical aspect of social inclusion.
Research Questions

1. What effect did an adventure education unit of instruction have on the appropriate interactions between students with disabilities and their classmates upon implementation of the unit in their physical education classes?

2. What effect did an adventure education unit of instruction have on the positive interactions between students with disabilities and their classmates upon implementation of the unit in their physical education classes?

3. What effect did an adventure education unit of instruction have on the inappropriate interactions between students with disabilities and their classmates upon implementation of the unit in their physical education classes?

4. What effect did an adventure education unit of instruction have on the off task interactions between students with disabilities and their classmates upon implementation of the unit in their physical education classes?

5. What effect did an adventure education unit of instruction have on the maintenance of social interactions between students with disabilities and their classmates after completion of the unit in their physical education classes?

Significance of the Study

To date, studies have been conducted to determine the types and amounts of social interactions that occur between teachers and students with disabilities and between students with disabilities and their classmates in GPE contexts (Ammah & Hodge, 2006; Butler & Hodge, 2004; Hodge et al., 2004; Place & Hodge, 2001). Place and Hodge (2001) found that the participants in their study (students with physical disabilities) experienced social isolation (i.e. limited social interaction with peers without disabilities)
and segregated inclusion [i.e. included within the class, but physically separated from peers without disabilities, whether encouraged by the teacher or initiated by the students with disabilities]. This current study took the findings from previous studies an important step further, which was to determine if an Adventure Education unit of instruction would increase the amount of interactions that occurred between students with and without disabilities.

This current study used a Multiple Baseline Across Participants Design (Cooper, Heron, & Heward, 1987) to document the effects an Adventure Education unit of instruction had on the social interactions between students with and without disabilities. The purpose of using this design was to analyze the effects of the intervention across multiple students to measure the social interactions of these students (Cooper et al., 1987). This study has relevance for physical education in that it utilized the data to provide information on whether or not Adventure Education is a desirable, feasible, and practical way to socially include individuals with disabilities within a GPE context.

Specific to the targeted population, students with learning disabilities and emotional disturbances were chosen because research has shown that individuals with these disabilities tend not to be accepted by their peers without disabilities and they engage in few social interactions with their peers without disabilities (Bryan, Wheeler, Felcan, & Henek, 1976; LaGreca & Mesibov, 1981; Sabornie, Kauffman, Ellis, Marshall, & Elksnin, 1987; Schonert-Reichl 1993; Siperstein, Bop, & Bak, 1978; Vaughn, Elbaum, & Schumm, 1996). It is necessary that interventions be implemented to improve the social inclusion of such students to determine ways to best include these individuals into GPE settings.
Delimitations and Limitations

There were a number of delimitations, or boundaries, set by the researcher in this study. The delimitations were:

1. The study was delimited to one teacher and three middle school (i.e. 6th and 7th grade) physical education classes.

2. This study was delimited to recording the social interactions between the members of one group of six or seven students per class and did not include recording the interactions that occurred with individuals who were not members of the targeted groups.

3. The teacher and school for the study were purposefully selected based upon the availability of an experienced and effective teacher who taught an Adventure Education unit and who taught in an inclusive GPE setting.

4. This study was delimited to middle school students with and without disabilities.

5. This study was delimited to measuring the social interactions that occurred between students only during physical education classes; it was not intended to measure the interactions that occurred between students with and without disabilities outside physical education contexts.

6. The students within each of the targeted groups were chosen based on the students returning parental consent forms to the researcher (i.e. students who did not return consent forms, or students who returned their forms but whose parents did not agree to their children being videotaped, audio taped, or part of the study were not included within the target groups).
Limitations to this study were:

1. This study was limited to one teacher in one urban middle school in central Ohio. Although the intent was not to generalize to other teachers, this study was limited in that it only used one teacher whose classes and facilitation of Adventure Education may be different from that of others.

2. This study was limited due to the observation of available students with disabilities in each class.

3. Where relevant, student absences and problems with recording devices caused missing data points.

Definition of Terms

*Adventure Education:* Adventure Education refers to education aimed to improve interpersonal as well as intrapersonal relationships by using adventurous activities to provide individual and group problem solving and challenge tasks (Miles & Priest, 1990).

*Appropriate Interactions:* These interactions can be verbal or non-verbal in nature and include behaviors that are not positive in affect but rather are neutral in affect that occur between students with and without disabilities (Lavay, French, & Henderson, 2006).

*Bi-directional Interactions:* Bi-directional interactions refer to interactions that occur between two parties, in this case between the student with a disability and another peer [with or without a disability]. Interactions can be initiated in either or both directions (Sherrill, 2004).

*Equal Status Relationships:* Equal status relationships are “friendships or partnerships but may be any kind of collaboration in which both parties share power, benefit to the
same extent [although perhaps in different ways], respect and value one another equally, and experience mutual satisfaction and enjoyment in being together” (Sherrill, 2004, p. 35).

**General Physical Education:** Typically, general physical education [GPE] refers to one of two possible settings: (a) inclusive physical education classes in which individuals with and without disabilities are educated together, or (b) physical education classes in which no students with disabilities are included (Siedentop, 2007).

**Inappropriate Interactions:** Inappropriate interactions consist of verbal or non-verbal incidents where a student with or without a disability exhibits negative behavior toward a peer (Lavay et al., 2006).

**Instructional Inclusion:** Ideally, instructional inclusion refers to involving all students in the learning activities within the class setting (Sherrill, 2004).

**Multi-Directional Interactions:** Multi-directional interactions refers to interactions that occur between many students in the GPE setting, in this case between the student with a disability and multiple other students [with or without disabilities]; interaction will be initiated by more than one individual and the student with a disability (Place & Hodge, 2001).

**Off task Interactions:** Off task interactions consist of verbal interactions that occur between students when the students are not supposed to be interacting [e.g. when the teacher is talking], or when the interactions are not related to the activity [e.g. if the students are talking about what they did last weekend or other topics that do not have to do with their participation in a particular activity] (Siedentop & Tannehill, 2000). It is important to mention that off task interactions can be positive or negative in affect.
Physical Inclusion: Physical inclusion for the purpose of this study refers to the placement of students with disabilities into a GPE setting (Sherrill, 2004).

Positive Interactions: These interactions can be verbal or non-verbal in nature, and are positive in affect (Lavay et al., 2006).

Social Inclusion: Social inclusion refers to positive interactions between students in class that contribute to feelings of acceptance and belonging (Sherrill, 2004).

Social Isolation: Social isolation refers to times in a GPE class when students with disabilities are excluded, neglected, or experience awkwardness between them and students without disabilities (Place & Hodge, 2001).

Segregated Inclusion: Segregated inclusion refers to instances in a GPE class when students with disabilities are physically included in GPE classes, but are separated physically by proximity from the rest of the class (Place & Hodge, 2001).

Serious Emotional Disturbance:

... a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child’s educational performance:

1. An inability to learn that cannot be explained by intellectual, sensory, or health factors.
2. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers.
3. Inappropriate types of behavior or feelings under normal circumstances.
4. A general pervasive mood of unhappiness or depression.
5. A tendency to develop physical symptoms or fears associated with personal or school problems.

The term includes schizophrenia. The term does not necessarily apply to children who are socially maladjusted, unless it is determined that they have a serious emotional disturbance (Individuals with Disabilities Education Improvement Act, 2004).

*Specific Learning Disability:*

…means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not apply to children who have learning problems that are primarily the result of visual, hearing, or motor disabilities, intellectual disability, emotional disturbance, or environmental, cultural, or economic disadvantage (Individuals with Disabilities Education Improvement Act, 2004).

*Unidirectional Interactions:* Unidirectional interactions refers to interactions initiated by only one party in a two-person conversation or in non-verbal interactions [i.e. student with disability initiates the interaction each time] or with students with disabilities seeing themselves as helpers within the GPE setting (Sherrill, 2004).
CHAPTER 2

REVIEW OF LITERATURE

The purpose of this chapter is to provide an overview and critique of the available literature in relation to social inclusion, social interactions, Contact Theory, and Adventure Education. This review informs the purpose of the study and situates the study in the theoretical framework of contact theory. The review begins by providing relevant literature regarding (a) social inclusion in general education settings; (b) the perceptions of students with disabilities on inclusion; (c) social acceptance and attitudes toward students with disabilities; (d) social interaction with regard to individuals with learning disabilities and emotional disturbance; (e) Adventure Education; and (f) Contact Theory and inclusion. The research studies reviewed were selected based on their relevance to the purposes and intents of the study. Published research studies were retrieved based on searches using various combinations of the following key words: social inclusion, social interactions, inclusion, disability, learning disability, emotional disability, emotional disturbance, Adventure Education, inclusive physical education, Contact Theory, and general physical education.
Social Inclusion in General Education Settings

There are many benefits to inclusion of individuals with disabilities in a GPE class for all involved. Teachers as well as students with and without disabilities can benefit from a successful inclusive physical education setting (Block, 2000). Well known researchers in this field have indicated that one of the main benefits of inclusion in a GPE class for students with disabilities is that of social acceptance and interaction with peers (Block, 2000; Hodge et al., 2003; Sherrill, 2004), or in other words, being socially included in physical education. Research specific to social inclusion of students with disabilities will be discussed later in this chapter.

Ring and Travers (2005) explored the inclusion of an individual with a severe learning disability (LD) utilizing case study methodology to determine the perspectives of the individual, his mother, and peers with regard to his inclusion in a general education setting. Semistructured interviews were used along with non-participant observations and sociograms to determine the social relationships among the student and his peers. The student with LD was able to be successful in the general education curriculum and his mother was happy with the way his needs were being met by the teachers. The teachers did indicate the need to adapt and modify the goals of the general education curriculum to help him become successful in their classes. But, the teachers did indicate it was hard to meet the needs of the student with LD in the context of a large class setting. During the observations by the researcher, there were no discriminatory behaviors or negative attitudes directed toward the student with LD, however, it was noted that the interactions between he and his peers were limited to unidirectional interactions initiated by the student with LD. In most cases, when he initiated conversation or interaction with his
classmates, the interaction was not reciprocated. The sociogram indicated the same— the student with LD had no problem nominating three classmates that he would choose to interact with, although none of his peers nominated him as someone they would choose to interact with. The data from this study indicate that there was a lack of bi-directional and multi-directional interactions between the student and his peers, most of the interactions were unidirectional, initiated by the student with disabilities, and these initiations were often ignored by his peers. According to Ring and Travers (2005), it was clear that this student was not socially included with his peers. They indicated the need for the development of a model of inclusive practice that leads to better social inclusion of individuals with disabilities in inclusive settings.

Place and Hodge (2001) explored the inclusion of three eighth grade students with physical disabilities in a GPE class of 22 students with regard to the social interactions between the students in the class and how the students spent their class time during physical education. In addition, interviews with the students were also completed to triangulate the data from the field notes and observation instruments with the perceptions of the students regarding their experiences in the class. Two main themes appeared from their analysis of the data, termed by the authors as “segregated inclusion” and “social isolation” (p. 395). Segregated inclusion referred to instances when the students with disabilities were physically included in the class, but were segregated from the rest of the class in terms of proximity. Social isolation referred to the times where they were not included socially in the context of the class by their classmates or when they experienced awkwardness between the students with disabilities and their peers in the class. Although social interactions occurred infrequently between the students with and without
disabilities in the class, the students with disabilities did experience almost the same amount of activity time as their peers [36% and 31%, respectively]. This study indicates a need for GPE teachers to encourage interactions between all students in the class and to encourage physical inclusion where all students work together to achieve a common goal.

There is a need for more research in the area of social inclusion of students with disabilities in both the general education and physical education literature. Descriptive studies have been completed that have indicated that although students with disabilities are physically included in their GPE classes, they are not socially included by their peers (Butler & Hodge, 2004; Place & Hodge, 2001; Ring & Travers, 2005). This lack of social interaction between students with and without disabilities needs to be explored in terms of ways to increase the social interactions between all students in a GPE context.

Perceptions of Individuals with Disabilities on Inclusion

Many studies have explored inclusion from the position of the student who is included in a GPE class [i.e. the student with a disability] to determine their perceptions and feelings about how they are included in their classes with peers without disabilities. According to Blinde and McCallister (1998), by listening to the perspectives of the student, one can gain insight into how best to include that student with his or her peers in a GPE setting. Many studies have done so by completing interviews with the individual rather than on asking others or by having students fill out questionnaires (Blinde & McCallister, 1998; Goodwin, 2001; Goodwin & Watkinson, 2000; Hutzler, Fliess, Chacham, & Van den Auweele, 2002; Suomi, Collier, & Brown, 2003).

In Blinde and McCallister’s (1998) study, 20 students with physical disabilities were recruited to determine physical education experiences from their perspectives. Many of
the students interviewed explained that they were included in these settings, although the inclusion was limited. In other words, the teachers were sometimes able to modify the activities to include the students, but many times were not able to do so, thus delegating non-physical activities to keep the students involved in the class such as being a line judge or keeping score of a game. In some cases, the students were not included at all in lesson activities. One student in this study mentioned that he never participated unless he was cheering from the sideline of a game. Outside of physical education classes, many of these students were in fact very active in various sport activities where they were able to participate successfully. The students mentioned that when they were given the opportunity to participate, they felt no different from their peers without disabilities. Findings from this study indicate that although many students with physical disabilities are in fact able to participate in physical education, modification and/or adaptation attempts by teachers are not always appropriate or existent.

Goodwin and Watkinson (2000) also looked at students with physical disabilities to describe inclusive physical education from the perspectives of those students through focus group interviews, field notes of the interview process, and participant drawings. The purpose of this study [phase one of a two part study] was to “add the voices of students with physical disabilities to that of teachers, parents, classmates, administrators, and researchers in the discussion of inclusive physical education” (p. 146) by looking at inclusive physical education from the view of students with physical disabilities. In this study, nine fifth and sixth grade students with physical disabilities who used wheelchairs for physical activity participated in focus group interviews and were also asked to draw a picture of what physical education meant to them.
The main themes that emerged from the interviews that were also supported by the pictures drawn by the students were that there were good days and bad days in physical education. Under the idea of bad days in physical education, the students indicated that they felt what the authors referred to as social isolation, where the students were ignored, made fun of, or seen as an object of curiosity, a theme also noted in Place and Hodge’s (2001) study on social inclusion. A second idea under this theme was that the students tended to have their physical competence questioned by the other students, as though their disability limited their participation or their knowledge in some way. A third idea was that of restricted participation such as when the teacher did not modify tasks or activities to include them and they had to sit out and watch, and/or when the class went outdoors because the grass limited the mobility of their wheelchairs. These students also experienced physical isolation [similar to Place and Hodge’s “segregated inclusion”] where the students were physically separated from the rest of the class because of limitations such as outdoor participation. The second theme referred to good days in physical education, days which promoted a sense of community and belonging. At times, other classmates without disabilities would contribute toward the active participation of the individuals with disabilities in their class, such as helping with equipment as needed. The students interviewed also mentioned that they were able to share the benefits of being physically active on the days that they participated in physical education, noting that in some cases their disability could contribute toward poor health in the future, and they knew that being physically active was important to their health. Finally, these students also noted that skillful participation in which they were successfully engaged in the tasks was also meaningful to their participation experiences in physical education.
The findings of this study indicate that people can contribute in positive and negative ways toward the experiences of students with physical disabilities in GPE classes. The students indicated that they preferred to be included rather than segregated from their same age peers. However, adapting activities and fostering positive attitudes and social interaction become very important in the successful inclusion of students with physical disabilities in GPE.

Goodwin (2001), in the second phase of the preceding study, attempted to describe the meaning of help in physical education as described by students with physical disabilities. In this case, Goodwin (2001) was looking specifically for descriptions of the types of interactions that occurred in the classes, how the students [with disabilities] reacted to the interactions, and how meanings were given to the interactions across grade levels. In this study, three participants from the Goodwin and Watkinson (2000) study along with nine other students with physical disabilities participated in interviews and drew pictures of how they viewed their GPE experiences, supplemented with field notes from each interview session taken by the researcher.

Themes from the data indicated that the students looked at help from their peers in two ways. First, in positive self-supporting peer interactions where the peers helped the students with disabilities in mobility and equipment, cared about their well-being, and exhibited positive attitudes toward the individuals with disabilities, and when their peers recognized that help was not always necessary, and second that of self-threatening peer interactions. Reflective of self-threatening peer interactions, peers tried to do too much for students with disabilities, causing them to feel a loss of independence, when the help appeared to threaten self esteem, when the peers who tried to help did so in a reckless
manner, and when their help interfered with the participation of the individuals. It seemed as though the younger elementary students tended to like having help if it did not threaten their independence, while the middle and late elementary students did not like having incompetent help, help that was a threat to their self-esteem and independence, and valued caring and instrumental help instead. The author cautioned that help in physical education is sometimes necessary, and it should be encouraged in ways that do not damage the self-esteem of the individuals receiving the help. Similarly, by encouraging interaction between all peers in the class, physical educators can facilitate the development of positive attitudes and interpersonal relationships between students in a GPE class.

Hutzler et al. (2002) explored the experiences of ten students ages 9 to 15 with physical disabilities to identify [through semistructured interviews] experiences that supported and/or limited empowerment in their GPE classes. In the interviews, the students identified factors that best described those that limited as well as supported them in GPE. They also described the most prevalent situation they experienced as well as their most prevalent reaction to the situation. The most dominant supporting situation was that their friends helped them to participate, and that by doing so, their friends helped them to feel as though they were included by the rest of the class. In terms of mediating factors, the students indicated that at times, their assistive devices [e.g. braces, wheelchairs], peers, and physical activity were both supporting and limiting factors to their participation and success in physical education, depending on the situation. For example, in one case a student mentioned that he lied about the brace he wore because he was embarrassed by it. In some cases, the students recognized specific inclusion
techniques attempted by the teacher, and in other cases, there were times where they felt excluded [e.g. on field trips]. Findings from this study determined that to these students, failures in some way were actually empowering experiences that exposed them to real life situations and settings. It is important that students with disabilities be allowed to experience success and failure as any other student, however, it is the responsibility of the teacher to facilitate supportive environments that encourage positive interactions and relationships between all students.

Suomi et al. (2003) attempted to single out different factors that could have positive and negative effects on social experiences of students with disabilities in GPE settings. Kindergarten and fourth grade classes were purposefully chosen due to their inclusion of students with cognitive disabilities [CD] and learning disabilities [LD] in each class. From each grade, six students were chosen and placed into one of three categories based on their performance in physical education: (a) thriving, this included the students who tended to be more popular and successful in physical education; (b) struggling, this included students who were less skilled and had a hard time with social skills; and (c) students with disabilities [either CD or LD].

Data were collected through observations, student interviews, focus group interviews, and interviews with the physical education teacher (Suomi et al., 2003). Findings indicated that there were four main factors that affected the social experiences of the students. These factors were: (a) teachers, (b) social nature of the tasks, (c) cultures, and (d) social skills of the students. The teacher influenced the social experience by the ways the activities were structured [e.g. cooperative versus competitive], modifications made, and the caring nature of the classroom environment. The activities of the class rendered
both positive and negative social situations for the students. For example, the teacher would teach positive social skills and would pinpoint positive interactions of the students during class. In some cases, the situations became negative for the students, especially when they were excluded from certain activities due to physical limitations, or when they were excluded by their peers during games and activities and this went unnoticed by the teachers.

According to Suomi et al. (2003), the cultures within the classroom [e.g. “popular”, “comfort zone”, and “leftovers”] had a significant influence on the social experiences of the students. In many cases, the popular students could work with whomever they wanted because most of the other students in the class wanted to work with them. In other cases, students preferred to work within their comfort zone with other students who were similar to them, and finally some students were what the authors referred to as “leftovers” as they typically did not have partners, and on occasion, no other student wanted to work with them. Students with disabilities tended to work in their comfort zone or became part of the “leftovers” in the class. Social skills were emphasized and taught by both teachers, and this became evident at times when students without disabilities helped students with disabilities. There were also times when the students without disabilities were mean spirited toward and viewed the students with disabilities as different and thus excluded them in some cases. The authors concluded that students with disabilities tend not to interact with students without disabilities unless the teacher promotes an environment that is accepting of individual differences.
Social Acceptance and Attitude Toward Students with Disabilities

Today, many students with disabilities are being educated in GPE settings alongside their peers without disabilities. The integration of students with disabilities in GPE has gone through many changes throughout history. Beginning with mainstreaming, children with disabilities were sometimes “dumped” into GPE classes without support and were required to follow the same curriculum and goals as the rest of the class where they were believed to have a successful educational experience (Aufsesser, 1991; Greenwood & French, 2000; Grosse, 1991). The total inclusion movement followed mainstreaming where the push was to fully include all students with disabilities in a GPE setting with appropriate supports (Block, 1994; Block & Vogler, 1994). Today the emphasis is on placing a student with disabilities into the Least Restrictive Environment [LRE] as mentioned in the Individuals with Disabilities Education Improvement Act of 2004, also known as PL 108-446. LRE, according to Sherrill (1994), indicates that students with disabilities should be educated as much as possible together with students who do not have disabilities. In this setting, the needs of the students are taken into consideration so that the education process is as appropriate as possible and so that each individual can benefit from such a placement (Sherrill, 1994). It is believed that there are many benefits to individuals with disabilities being placed into GPE settings, where they can be appropriately included and can have their needs and goals met (Block, 2000; Hodge et al., 2003; Sherrill, 2004) along with the benefits that students without disabilities may gain from participation in GPE with individuals who have disabilities. Among the benefits for students without disabilities are improved attitudes toward individuals with disabilities, appreciation of individual differences, and a change in perspectives (Block,
Similar benefits have also been documented within the general education setting as well and several articles from both the general education and physical education literature will be discussed.

Voeltz (1980) surveyed 2,392 students in second to seventh grade general education classes to determine their attitudes and levels of acceptance of students with disabilities. The students surveyed were in schools that were either (a) no contact with individuals with disabilities, (b) low contact where there were few students with disabilities enrolled, and (c) high contact where there were several students with different disabilities enrolled in the schools. The findings in this study indicated that students had more of a desire to interact with individuals with disabilities if they were a girl, in fifth and sixth grades, or enrolled in a school where interactions with their peers with disabilities were more common or likely. It was also determined that contact (in the high contact school) had the most influence on whether a student interacted with a peer with a disability regardless of age or gender of the student. Also noted in the responses to the survey, when students were given examples of situations where they could interact with their peers with disabilities, they tended to show favorable responses indicating they would interact with these peers. The author cautioned that the differences in attitudes between the students could be due to other factors than having contact with peers with disabilities, such as socioeconomic status or cultural background, and that any negative attitude toward interaction with peers with disabilities should be viewed as a challenge that needs to be addressed rather than a limitation to inclusive environments.

A qualitative study by Fisher (1999) conducted in a general education setting was unique in the attempt to learn more about inclusive education from the perspectives of
students without disabilities. In this study, the author asked students without disabilities what their perspectives were about inclusion and whether inclusion should continue in schools. A total of 257 students participated in group interviews in their 12 respective English classes at one school with this researcher, each group ranged in size from 11 to 35 students. The findings centered on four distinct themes: (a) current involvement of students with disabilities in general education classes and school events, (b) rationale for including or not including individuals with disabilities in general education settings, (c) issues and challenges facing individuals with disabilities who are included in the English classes, and (d) increased involvement of individuals with disabilities and attitudes toward individuals with disabilities. Overall, the students without disabilities indicated that they thought inclusion of peers with disabilities was a positive and necessary component of the educational experience for all individuals. These students indicated that their peers with disabilities had learned important social skills as a result of being included, and that their own attitudes toward individuals with disabilities had become more positive and tolerant of individual differences through interacting with individuals who were included in their classes and activities in which they participated.

McDougall, DeWit, King, Miller, and Killip (2004) surveyed 1,872 ninth grade students [ages 12-16] from 23 Ontario, Canada high schools within a general education setting to determine the students’ attitudes toward peers with disabilities and to link different dimensions of the culture of the school [i.e. school environment and interpersonal factors such as alienation and anxiety] to their attitudes. It was found that most [61%] students held positive attitudes toward individuals with disabilities while 21% of the students held negative attitudes toward individuals with disabilities, female
students had more positive attitudes toward individuals with disabilities than males, and students who had direct past experiences with individuals with disabilities had more positive attitudes. The findings regarding individuals who have had prior experience with individuals with disabilities has also been shown to be true in pre-service physical education teachers’ attitudes toward individuals with disabilities (Folsom-Meek, Nearing, Groteulschen, & Krampf, 1999; Hodge, 1998; Rizzo & Kirkendall, 1995).

McDougall et al. indicated that one aspect of school culture that had the most overall association with positive attitudes toward individuals with disabilities was having an “equitable school task structure” (p. 305). In this case, it was having a culture that emphasized learning and interpersonal relationships that created and facilitated positive attitudes toward individuals with disabilities. Findings from this study point to the need of teachers and other school personnel to promote student relationships that foster positive relationships and positive attitudes toward students with disabilities.

Smoot (2004) sought to discover if students with mild intellectual disabilities who were partially included [these students were also members of a self contained special education class] into a general education class had formed relationships with students in the general education class. In this study, a convenience sample of 61 students with mild intellectual disabilities were chosen based on their partial inclusion in general education classes along with 286 students from two rural high schools, five middle schools, one elementary school, and one Headstart preschool. Pre-service special education teacher candidates served as data collectors who were trained to use sociograms. Two questions
were asked of the students in each of the classes within the respective schools relative to who the students would choose to sit next to on a bus (they were allowed to choose two other students).

Smoot’s findings indicated that 43% of the students with mild intellectual disabilities were chosen at least one time by their classmates, while 85% of the students without disabilities were chosen at least once. The author mentioned that the reason 57% of the students with mild intellectual disabilities were not chosen could be due to the limitation of allowing the students to pick only two other individuals. The author also mentioned that there is a need to educate individuals with mild intellectual disabilities as much as possible in the general education settings to foster social skill development and acceptance by peers. Implications from these findings indicate that sociograms can be used to deliberately group students to foster social interactions between students who tend not to interact otherwise.

Vogler, Koranda, and Romance (2000) completed a case study of including a child with severe cerebral palsy [CP] in a GPE setting. They sought to evaluate the effectiveness of using an APE specialist in an inclusive GPE class to provide instruction for a purposefully selected six-year-old boy with severe spastic diplegic CP who was nonverbal and used a wheelchair for ambulation [i.e. traveling]. Also participating in this study were his classmates [20 peers without disabilities] ages five to six years old and the GPE and APE teachers. Systematic observation procedures were employed [Academic Learning Time- Physical Education, or ALT-PE] to determine both teacher and student behaviors during the class, in addition, the researchers used interviews of ten students [five boys, five girls] and the APE and GPE teachers and subsequently transcribed the
interviews into written word. Systematic observation findings indicated that the student with CP was actively engaged for 41% of the class period, while his peers were actively engaged from 45-50% of the class period, and when students were not engaged in activity, they were on task with regard to the teacher’s instructions [i.e. were listening or waiting as told].

Two themes emerged from the interviews of the students and teachers: (a) social acceptance [how the students interacted with the student with CP] and (b) motor performance capability [of the student with CP]. Interviews with the students indicated that the student with CP was socially accepted as any other student in the class. The interview with the GPE teacher indicated that when the activities became competitive, the other students tended not to include the student with CP because they did not want him to slow them down. The interview with the APE specialist indicated that girls and boys tended to interact with him differently- girls were more nurturing while the boys were less emotional toward him, similar to the findings of Tripp et al. (1995). The GPE teacher did indicate that it was not desirable to teach individuals with severe disabilities in a GPE setting without appropriate help and support for these students. In terms of motor performance, the other students did realize that his performance was different, but they did not feel as though his differences limited him in his participation. The GPE teacher indicated that he performed well in this setting, but was concerned about what would happen in later years when he would attempt to play in more competitive atmospheres. Whereas, the APE specialist indicated the need for this student to have appropriate support and resources to be successful in an inclusive setting. Findings indicated that by
appropriately including a student with a severe disability in a GPE setting, the rest of the class did not suffer a loss of activity time, nor was there any loss of teacher allocated time to the class.

Obrusníková, Válková, and Block (2003) examined the impact [on students without disabilities] of including a student who uses a wheelchair in a fourth grade GPE class with no support through the use of an evaluative case study. The authors sought to determine whether this student would compromise the learning of the other students and if the students without disabilities thought that having a student in a wheelchair would negatively affect them in GPE. The authors used two purposefully selected classes, class one [C1, indicated as inclusive fourth grade] had a student with muscular dystrophy [MD] who used a wheelchair to travel, while the second class [C2, indicated as non-inclusive fifth grade] had no students with disabilities included. Data were collected through an adjective checklist to measure cognitive and affective dimensions of students’ attitudes toward other students with disabilities. Plus, the CAIPE-R survey was used to measure students’ attitudes toward including a student with disabilities in GPE. A motor skill test [volleyball set, bump, and serve tests along with a qualitative analysis of the overhead pass, forearm pass and underhand serve] was used to measure skill performance, and a volleyball knowledge test was used to measure student volleyball knowledge. The same teacher taught in both classes, and in C1, contact with the student with MD was unstructured [i.e. the teacher did not encourage interactions with him]. Results indicated that C2 showed slightly greater gain in motor skill than C1 during the volleyball unit, however, the differences were not significant. Similarly, the effect sizes indicated that the student with a disability had very little effect on volleyball skill and knowledge, in other
words, he did not compromise the learning of the other students. The attitudes of students in both classes were stable and positive toward individuals with disabilities in GPE, and there were no significant differences between the attitudes of the students in either class. The findings in this study indicate that if proper teaching strategies are used, having a student with MD without support in an inclusive GPE class will not negatively affect the learning of students without disabilities.

Although there is support in the extant literature that shows a range of unfavorable, ambivalent, and favorable attitudes toward students with disabilities, very little is known on how best to socially include individuals with disabilities in GPE settings. Limited research has been published on links between unfavorable to favorable attitudes toward individuals with disabilities and their social inclusion in GPE classes (Hodge et al., 2004). Clearly, there is a need to determine how to develop and facilitate relationships between students with and without disabilities in GPE settings.

Social Interaction and Individuals with Learning Disabilities

The National Center for Education Statistics (2007) indicated that the most prevalent disability among children ages 3-21 is the specific learning disability category at 13.8% of all students with disabilities served under IDEIA. It has been documented throughout the literature that individuals with learning disabilities tend to be less accepted by their peers than other individuals with disabilities (Bryan, Wheeler, Felcan, & Henek, 1976; LaGreca & Mesibov, 1981; Siperstein, Bop, & Bak, 1978; Vaughn, Elbaum, & Schumm, 1996) or their peers without disabilities. There exist several possibilities for the lack of interactions and acceptance between students with learning disabilities and their peers without disabilities such as deficits in social skills, behavioral problems, and low
academic performance (Lane, Carter, Pierson, & Glaeser, 2006). Lane et al. (2006) mentioned that there is a lack of literature available on interventions to help in the development of these areas. Nonetheless, it is necessary to review what literature is available to determine the status of students with learning disabilities in their general education or GPE classes.

Bryan (1976) completed a replication study of one he had completed in 1974. The findings of the 1974 study had indicated that European American students with learning disabilities were less accepted by their peers than African American students with learning disabilities (Bryan, 1974). In the replication study, only the same European American students ($n = 25$) were used. In addition, 25 control (i.e. students with no disabilities who were matched on variables such as gender, race, and classroom) students were used in this study. The purpose of this study was to provide reliability to the 1974 study with regard to the attraction and rejection of students with learning disabilities across time and classrooms. A sociometric scale was administered to measure who the students were friends with in their classroom (each student listed three friends; considered Social Attraction), who they were not friends with in their classroom (listing three individuals; considered Social Rejection), and what the author mentioned the “Guess who technique” where the researcher asked the students questions specific to members of the classroom and the students answered the questions.

Findings indicated that the students with learning disabilities received more votes on the Social Rejection scale and fewer votes on the Social Attraction scale when compared to the control group of students without disabilities (Bryan, 1976), replicating the findings from the 1974 study. When compared to how they were rated in the previous
study, social status of these students did not change over time. Although the students had experienced a 75% change in the composition of students in their classrooms, it appeared that the students with learning disabilities did not develop new friendships even when given a chance to do so by being with different classmates. It also appeared that these students tended to maintain their social status regardless of the composition of their class (i.e. those who tended to be rejected in the previous study were also rejected in this study). Bryan (1976) indicated that the rejection of the students with learning disabilities could have been on account of their being labeled as having a disability, due to their academic performance, or personality traits. Overall, students with learning disabilities in this study tended to be rejected more by their peers without disabilities, indicating a need to find ways to increase social acceptance and decrease social rejection of students with learning disabilities.

Bryan, Wheeler, Felcan, and Henek (1976) noted that many students with learning disabilities tended to be less favored than students without disabilities by both their peers and teachers, so they set out to determine what students with learning disabilities were saying that led to these less than favorable interactions with others. Seventeen students with learning disabilities were selected as participants and were matched with a randomly selected sample of students without learning disabilities who were the same gender and grade level as the students with learning disabilities. In this study, two observers wrote down each social interaction of all the participants word for word- one wrote down the statements of the participant and the other wrote down the statements of the peer interacting with the participant. Eight themes emerged from the data analysis and these were: (a) rejection, (b) information source, (c) self image, (d) cooperation, (e)
competition, (f) helping, (g) consideration, and (h) intrusiveness. One main finding was that students with learning disabilities tended to produce more rejection statements and they were also recipients of more rejection statements. It was also noted that students with learning disabilities tended to produce more competitive interactions and less considerate interactions, and they were less likely to be recipients of considerate statements.

Similarly, Bruininks (1978) completed a study to determine the peer status of individuals with learning disabilities as well as their perceived peer status within their peer group. Four hundred ten elementary students (grades 1-5) participated in the study, of the 410, 16 had learning disabilities and 16 others were chosen from the classrooms of the students with learning disabilities for comparison purposes although the measurement was used for each individual in the classes of the students with learning disabilities. The author used the Peer Acceptance Scale developed by Bruininks, Rynders, and Gross in 1972 to determine peer and perceived peer acceptance and status.

Findings indicated that boys with learning disabilities scored significantly lower on peer status as compared to the comparison and total class groups (p<.01 and p<.005, respectively). When combined, all students with learning disabilities scored lower on peer acceptance than did the comparison group (p<.01) and the class groups (p<.02). Boys with learning disabilities and the combined group of students with learning disabilities rated themselves as higher in peer status than what was the case. It was determined that students with learning disabilities were less socially accepted by their peers and that they were also less accurate in their judgments of their social status within the classroom setting.
Siperstein et al. (1978) administered a questionnaire to 177 fifth and sixth grade students, 22 of which had learning disabilities. The purpose of the questionnaire was to determine the social status of students with learning disabilities within their general education classes. The questionnaire consisted of questions where the students had to pick the same gendered peers in their class who they felt met certain qualities with regard to appearance, intelligence, and athletic ability. The researchers were able to determine who was isolated and not who was rejected by asking who fit the categories best and who fit them the least. Results indicated that students with learning disabilities were less popular than their peers without disabilities (p<.01). None of the students with learning disabilities were described as the smartest, but an equal amount of students with and without disabilities were chosen relative to athletic ability and appearance. One important determination from the results of this study indicated that just as many students without disabilities were considered “isolates” as those with disabilities. Based on this finding, the authors concluded that by labeling a student with a learning disability did not automatically isolate them socially.

LaGreca and Mesibov (1981) completed an intervention to develop communication in social relationships- “communication-conversation skills” and “taking the initiative in social situations” (p. 197). It was determined by the authors that these areas appeared to influence the acceptance of individuals with learning disabilities, so it was this area that was chosen as an intervention for the study. The participants were four boys ages 12 to 16 who had been referred to a summer school program located in a learning development center because they had exhibited “inappropriate social behavior, limited contact with peers, and poor social interaction skills” (p. 197). Four other students in the program who
exhibited no social interaction deficits or problems were matched by age as a comparison group who did not receive the intervention and only took part in the assessments. The intervention consisted of weekly meetings over a period of six weeks with two leaders who focused on modeling appropriate behaviors, coaching the students to act and react appropriately in different situations, and rehearsal sessions where they acted out situations and received feedback from the leaders. The students were videotaped and rated based on their rehearsal sessions on a nine point scale from “not at all skilled” to “very highly skilled socially.” In addition to those measures, the students also completed a self report rating scale to rate how they interact in other social situations.

It was found that the students who received the intervention had improved their social skills and interactions with peers by the end of the program. The participants had increased their conversational skills in initiating appropriate interactions and maintaining a conversation with another individual and that their interpersonal skills were more closely matched to the non-intervention group of boys. It was noted that the necessity of social skills training is paramount if individuals with learning disabilities are to be more accepted by peers without disabilities.

Schumaker, Wildgen, and Sherman (1982) compared adolescents (n = 94) with and without learning disabilities (all participants were paired- one with a learning disability, one without in terms of gender and class) to determine their social interactions. Participants’ ages ranged from 12 to 16 years old. Occurrences of social behaviors where the target individual interacted with a peer or teacher (e.g. conversation with peer or teacher, hand gestures) were measured in ten second intervals as they occurred in the classroom. Most of the time for both groups was spent attending to the teacher, but the
students with learning disabilities tended to listen to initial instructions by the teacher and less to content information. The authors found mainly that students with learning disabilities tended to be ignored more (21% of the time) when compared to their peers without learning disabilities (17%). Students with learning disabilities also initiated interactions more than students without learning disabilities (65 and 60%, respectively). The data from this study indicated that there were very few direct interactions between students in this study (regardless of the group); however, it was determined there were more similarities than differences between students with and without learning disabilities in social behaviors.

Cartledge, Frew, and Zaharias completed two studies, both of which were reported in a 1985 article. The first study was to determine the attitudes of students without disabilities toward their peers with disabilities, and the second study focused on social behaviors that teachers thought were needed the most in students with learning disabilities to be included by their peers without disabilities. The first study consisted of a questionnaire that was distributed to 450 students without disabilities ages nine to 11 that was based on video segments of different students. Findings indicated that the students without disabilities had less favorable attitudes toward students without disabilities. It was interesting that although it appeared that students without disabilities had less favorable attitudes, they believed that the students with learning disabilities would be more likely to be nice to them.

Cartledge et al. (1985) mentioned that these findings support findings of other studies that indicated that students without disabilities tended to interact more with other students
without disabilities. The students tended to show their preferences based on the labeling of the student in the video as having a learning disability or not because many times it was not evident if the individual in the video had a learning disability.

In the second study (Cartledge, Frew, & Zaharias, 1985), 14 fourth and fifth grade teachers completed the Social Behavior Assessment Scale developed by Stephens in 1979. Using this scale, the teachers were given 136 social skills and were asked to rank each one from one to five on how important they felt each skill was for an individual with a learning disability to be successfully included in a general education classroom. The top five most important social skills to these teachers were: (a) following directions, (b) completing tasks, (c) dealing with emergencies, (d) ethical behaviors, and (e) attending behaviors. The teachers indicated that behaviors related to specific tasks were the most important skills students with learning disabilities needed to be successful in their inclusive classes.

More recently, Vaughn, Elbaum, and Schumm (1996) studied the degree of peer acceptance, self-concept, loneliness, and social alienation of 64 second, third, and fourth grade students with learning disabilities to provide data on the social functioning of these students in inclusive general education classrooms. Data were collected toward the beginning and at the end of the school year with regard to the aforementioned variables through peer ratings of liking and positive and negative nominations [similar to a sociogram], a Loneliness and Social Dissatisfaction Scale, and a Social Alienation Scale for students who were perceived as low achieving, average/high achieving, and students with learning disabilities.
Vaughn et al. (1996) found that the peer acceptance of both students with learning disabilities and students who were low achieving were lower than students who were considered average/high achieving. Interestingly, the students with learning disabilities were fully included in the general education classroom all year and the number of students with learning disabilities who were disliked increased from the beginning to the end of the school year. Despite low peer acceptance, the students with learning disabilities tended to have self-concepts similar to those of students who were considered low achieving and average/high achieving status in terms of physical appearance, friendship, and self worth. From the beginning to the end of the school year, the researchers found no significant differences in the self-concepts of students with learning disabilities, and also found that they did not experience more feelings of loneliness than their peers. The findings of this study provide evidence for the incongruent benefits of inclusion in a general education setting of students with learning disabilities. What’s more, this study provided this information from the view of the students themselves on their feelings of self concept from an inclusive setting.

Much of the literature on social interactions of students with learning disabilities indicates that such students are not well accepted by their peers without disabilities (Bryan, Wheeler, Felcan, & Henek, 1976; LaGreca & Mesibov, 1981; Siperstein, Bop, & Bak, 1978; Vaughn, Elbaum, & Schumm, 1996). Educational researchers and medical authorities assert that children and youth with learning disabilities commonly exhibit many (but not all) of the following tendencies associated with learning and social behavior: (a) hyperactivity, which is typified with constant movement and over activity at inappropriate times; (b) impulsive behavior and lack of reflective thought prior to action,
which may create acts of overt assertiveness or carelessness; (c) low tolerance for frustration, which may create acts of overt assertiveness or even aggressiveness, misunderstandings, miscommunication, and inappropriate acts and behaviors, and social distance; (d) poor peer relationships, which may result in a failure to establish meaningful friendships with peers and others due to issues with communication and inappropriate acts and disagreements; (e) overly excitable during group play; (f) poor social judgment; (g) inappropriate, unselective, and often excessive display of affection, which may create awkward moments or embarrassment, unwanted or unanticipated advances, misunderstandings, miscommunication, and inappropriate acts and behaviors, and eventually social distance; (h) failure to see consequences for her or his actions, which may create occasions of poor decision making and questionable judgment before acting; (i) overly gullible, easily led by peers, which may create occasions of poor decision making and questionable judgment before acting due in part to the influence of others in various social contexts; (j) excessive variation in mood and responsiveness, which may create occasions of overreaction, inappropriate reaction, or negligent reaction to various situations; (k) poor adjustment to environmental changes, which may manifest as a limited ability to adapt to changing and dynamic situations; and (l) difficulty making decisions, all of which may result in inappropriate acts and behaviors with peers, and social distance (American Psychological Association, 2000; Child Development Institute, 2006). Nonetheless, Schleien, Heyne, and Dattilo (1995) indicated that by teaching and reinforcing social skills and appropriate interactions between students in their classes, students with disabilities will experience more positive learning experiences with their
peers without disabilities. Schleien et al. (1995) asserted that teaching leisure and recreation skills to individuals with disabilities can be an effective way to teach cooperation and to facilitate interactions between students.

**Social Interaction and Individuals with Emotional Disturbances**

The term emotional or behavioral disorders are used interchangeably in this document referring to the same population of students as defined in the *Individuals with Disabilities Improvement Act* (IDEIA) of 2004 as emotional disturbance. Use of the terms emotional and behavioral disabilities have varied over the years with no universally accepted definition for students exhibiting emotional-behavioral difficulties (Kauffman, 2005). Moreover, Kauffman asserted that the term emotional-behavioral disorder is considered by some professionals to be more educationally and culturally relevant than IDEIA’s term emotional disturbance, this is because the official definition often excludes students who need special education services (Kauffman, 2005). Cullinan and Sabornie (2004) mention that individuals with emotional disturbances tend to show similar tendencies as individuals with learning disabilities (as discussed above) due to problems with social, personal, and educational aspects of life. In fact, Farmer and Hollowell (1994) indicate that problems in interpersonal relationships are hallmark features of individuals with emotional disturbances. The *Individuals with Disabilities Education Improvement Act* of 2004 defines an emotional disturbance using these tendencies, among others such as an inability to develop personal relationships and manifestation of inappropriate behaviors toward other individuals. It is important that given these tendencies, researchers attempt to try new interventions that enhance the social interactions of individuals with emotional disturbances so such individuals do not turn their behavior into socially unacceptable
forms of behavior [such as violence] (Sabornie, Kauffman, Ellis, Marshall, & Elksnin, 1987; Schonert-Reichl 1993). Due to the fact that individuals with emotional disturbances tend to exhibit unacceptable behaviors and that their interactions with peers are limited, social interactions of such individuals will be discussed.

Sabornie et al. (1987) examined social status among different groups of individuals with disabilities to see if one group of individuals with disabilities was more or less accepted by other groups of individuals with disabilities. In this study, the authors compared 9th through 11th grade students with learning disabilities and behavioral disorders (i.e. emotional disturbances) and their peers without disabilities in GPE classes. Students in each comparison group were matched on (a) gender, (b) race, (c) socioeconomic status, (d) grade level, (e) extracurricular activities, and (f) IQ for the individuals with disabilities only. There were 22 groups of three students (one from each comparison group) who participated in the study. A modified version of the 1946 Ohio Social Acceptance Scale (OSAS) was used as a questionnaire in the study to allow the students to rate their classmates according to different criteria.

Sabornie et al. (1987) found that each group exhibited more positive ratings toward their peers than their peers were of them, especially the individuals with behavioral disorders (i.e. the individuals with behavioral disorders were seen favorably by their peers without disabilities). The individuals with learning disabilities were more accepted than were the individuals with behavioral disorders. In fact, the individuals with behavioral disorders received more ratings of rejection than did the other groups, indicating a need for interventions to increase the social status and acceptance of individuals with learning disabilities and behavioral disorders.
Later, Sabornie, Kauffman, and Cullinan (1990) completed a similar study to that of Sabornie et al. (1987) in which they set out to determine which groups of individuals with disabilities were the most accepted, tolerated, or rejected and whether individuals with mental retardation, learning disabilities, and behavior disorders as well as their peers without disabilities differed in their social impact and social preferences. Both Sabornie et al. (1987) and Sabornie et al (1990) mention that GPE was the chosen setting for data collection because at the time, individuals with disabilities were educated more alongside their peers without disabilities in GPE than in any other class setting. Participants in this study were 9th to 11th grade students ($n = 120$). Groups were matched in this study on the following variables: (a) grade, (b) race, (c) gender, (d) extracurricular activities, (e) eligibility for free/ reduced school lunch, (f) familiarity among individuals without disabilities in their schools, and (g) IQ. The OSAS was used in this study as well to determine the acceptance of the participants toward other classmates.

Sabornie et al. (1990) found that of the students with disabilities targeted (learning disabilities, behavior disorders, and mild mental retardation), students with learning disabilities were the most accepted of the three groups, and the acceptance of individuals with behavior disorders and mild mental retardation did not differ from each other significantly ($p<.0001$). Of the three groups, the students with mild mental retardation and behavior disorders were the most rejected by their peers, whereas the individuals with learning disabilities were similar to that of individuals without disabilities ($p<.0001$). The groups did not differ in terms of social impact, but they did differ in social preference ($p<.0001$). The social preference of the students with mild mental retardation and behavior disorders was negative indicating that more peers rejected than
accepted these individuals, while the opposite was true for individuals with learning disabilities or with no disabilities. The authors indicated that there is indeed a difference in acceptance, rejection, and preference between different student groups, both with and without disabilities as well as among different groups of disabilities supporting the findings of Sabornie et al.’s (1987) previous study.

Schonert-Reichl (1993) examined empathy in individuals with behavior disorders to determine first if individuals with behavior disorders would exhibit less than their peers without disabilities, and second to determine if empathy would relate positively to interpersonal relationships between individuals. Participants were 39 males ages 14-19 with behavior disorders and 39 of their same aged peers without behavior disorders. Participants from each group were matched on several variables: (a) age, (b) socioeconomic status, (c) race, (d) gender, (e) school, and (f) neighborhood. The author used the Questionnaire Measure of Emotional Empathy to assess the empathy of the participants. In addition, the author also asked each participant to indicate the extracurricular activities in which they participated, the number of times they had contact with friends during a typical week, the number of close friends they had, and the quality of their relationships with others by asking them to rate how well (on a three point Likert scale) they get along with others.

It was found that adolescent males with behavior disorders showed less empathy, took part in fewer extracurricular activities, had less contact with friends, and experienced a lower quality relationship with others, contrasting with the findings of the participants without disabilities with regard to empathy level. Interesting to note was that both groups were similar in the self-reported amount of friends they had. This is interesting because
many individuals with behavior disorders tend to have problems with social relationships as indicated in this study. Finally, it was determined that empathy did predict quality of relationships with others; that is, low levels of empathy in individuals with behavior disorders indicated that they experienced deficiencies in their relationships with others.

Farmer and Hollowell (1994) noted that students tend to self select their groups of friends based on tendencies or features they have in common; furthermore, individuals exhibiting certain types of behavior tend to group together as well. Farmer and Hollowell (1994) examined the nature of social relationships and peer groups of individuals with emotional and behavioral disorders (EBD) who were educated with their peers without disabilities. There were three research hypotheses, which were that: (a) individuals with EBD would be a part of peer clusters that included individuals without disabilities, (b) the students in the classes would tend to group with others similar to themselves, and (c) the students with EBD would have relationships with individuals who exhibited similar behavior and fewer characteristics that are considered socially important.

The study (Farmer & Hollowell, 1994) included 246 students in grades three through six, 20 of whom had EBD. Data were collected using the Teacher Report Form to obtain information on the status of the students’ emotional and behavioral functions, a social network assessment to identify peer groups of the students, and the centrality of the most two nominated students in the groups, and peer perceptions of social and behavioral tendencies of others in their classes. Interestingly, the results of this study contradict the findings of many previous studies in this line of research (Farmer & Hollowell, 1994; Sabornie, Kauffman, Ellis, Marshall, & Elksnin, 1987; Schonert-Reichl, 1993). It was found that the individuals with EBD did interact with and have friends without
disabilities. They also tended to affiliate themselves with individuals who showed similar behavioral tendencies as themselves, and were rated lower in terms of cooperation, leadership, and academic ability by their peers. Farmer and Hollowell indicated that individuals with EBD were in fact capable of building relationships with their peers without disabilities.

Lane, Carter, Pierson, and Glaeser (2006) sought to determine the social, academic, and behavioral performance of high school students with learning disabilities and emotional disturbances. The participants consisted of 45 students with emotional disturbances and 49 with learning disabilities. The Social Skills Rating System- Teachers version was used to measure social skills, academic competence, and problem behaviors these students exhibited in school. The Walker-McConnell Scale of Social Competence and School Adjustment to measure school adjustment behaviors of the students, the Woodcock-Johnson III Achievement Test, and School Archival Records Search instruments were used to obtain information about the students’ records and demographic data.

Lane et al. reported that the teachers in their study tended to rate the students with learning disabilities higher in terms of academic competence. They also rated students with emotional disturbances as lower in social competence and adjustment to school. What’s more, the students with emotional disturbances had more negative comments written about them in their school records upon examination. The authors indicated a need for individuals with emotional disturbances to have additional support that focuses on the necessary social and behavioral skills in which high school students should engage.
The literature reviewed in this section provides evidence that individuals with learning disabilities and emotional disturbances tend to be rejected more and accepted less than their peers with other disabilities and peers without disabilities, likely as a result of problems with interpersonal relationships with others (Bryan et al., 1976; Farmer & Hollowell, 1994; LaGreca & Mesibov, 1981; Siperstein et al., 1978; Vaughn et al., 1996). It has been shown that individuals with emotional disturbances tend to exhibit behaviors that are negative and are less socially acceptable thus likely affecting their status among their peers (Cullinan & Sabornie, 2004; Farmer & Hollowell, 1994; Sabornie, Kauffman, Ellis, Marshall, & Elksnin, 1987; Schonert-Reichl 1993). Clearly, there is a need to intervene in some way to improve the social interactions and acceptance between individuals with learning disabilities and emotional disturbances, those individuals with other disabilities (e.g. autism), and individuals without disabilities. In this current study, the purpose of using an Adventure Education unit of instruction was to increase social interactions between students with and without disabilities through different activities so that students exhibit positive and appropriate interactions with each other. Adventure Education provided a means to development of social interactions between students with and without disabilities.

**Adventure Education**

*General description.* Adventure Education has become increasingly popular since its formal foundations in the 1940s by Kurt Hahn, although at that time it was known as Outward Bound. As originally developed, Outward Bound was named such for its purposes: to prepare young sailors for many of the experiences they would encounter as they sailed off to war (Miles & Priest, 1990; Priest & Gass, 2005). Outward Bound was
developed to prepare young men in lifesaving activities such as orienteering, sailing, survival skills, as well as other activities such as ocean and mountain expeditions (Miles & Priest, 1990). At the time, these activities were very important because many young men entering the army, navy, and other armed forces did not know how to survive hardships they faced, while the older and more experienced men were the ones surviving many of these hardships (Priest & Gass, 2005). Kurt Hahn designed Outward Bound to prepare these men in their attitudes and physical abilities in the following areas: fitness, initiative and enterprise, memory and imagination, skill and care, self discipline, and compassion (Hattie, Marsh, Neill, & Richards, 1997; Miles & Priest, 1990).

As Outward Bound gained respect and notability in the United States, other programs developed from the foundation of Outward Bound. One of the most notable was Project Adventure developed in 1970, which took Outward Bound into the educational world (Priest & Gass, 2005). Project Adventure is one of the most known programs that has integrated adventure activities into the physical education curriculum in schools (Dyson & Brown, 2005). Project Adventure is student based and offers many opportunities for students to develop themselves as a total person. In physical education, Adventure Education has been called Adventure Based Learning, a sequenced use of adventure based activities to help individuals to develop interpersonal skills as well as personal development of each individual (Cosgriff, 2000).

No matter what it is called, Adventure Education has at its core many of the same features, and these include: (a) small groups, (b) engaging in mentally and/or physically challenging activities, (c) frequent and intense interactions among group members during activities, (d) a trained facilitator, and (e) a duration of two to four weeks (Hattie et al.,
In this current study, Adventure Education was used with an effective and trained facilitator to foster social interactions between group members in a GPE setting while utilizing many of the features previously mentioned to develop interpersonal relationships between group members.

**Facilitation.** Facilitation in Adventure Education is a necessary component that cannot be overlooked when designing an Adventure Education unit of instruction. According to Miles and Priest (1990), the role of a facilitator is to create a situation where participants (in this case the participants are students) can learn about themselves and others through experience by designing the experience in a safe and accepting setting. It is important to note that the effective facilitator presents a task along with objectives for the students to reach. In the event that a task is not completed, the objectives of the task can still be met (i.e. cooperation, interacting with group members). This is where the role of an effective facilitator lies— in not promoting the completion of the task as much as meeting the objectives set before the group (Miles & Priest, 1990). The facilitator serves as a guide to help the groups meet their objectives while enhancing the participants’ learning about themselves and others in their groups through a series of carefully sequenced, well-planned activities (Miles & Priest, 1990).

Gass and Gillis (1995) stated that an effective facilitator is able to help the individuals he or she is working with to process their experiences in adventure education. In this article, the authors discuss the difference between a “problem” centered and “solution” centered focus to facilitation in which the facilitator could focus on the problem itself (i.e. what is going wrong) or on finding a solution (i.e. what they are doing right). It appears that many adventure programs focus more on the problem solving rather than on the
solution focused approach, and the authors suggest the solution focused approach as an alternative to the norm of focusing on the problem at hand.

Priest and Gass (1997) completed a study focusing on facilitation utilizing the problem and solution centered techniques. The authors defined problem focused facilitation as investigating the cause of the problem and what keeps the problem going, in essence learning as much as possible about the problem in order to solve it. On the other hand, a solution focused technique focuses on the solution to the problem (with the clients want) rather than on the problem itself, what is working for the clients, what the clients are doing that is working for them, and assisting them in doing something different rather than on something that is not working. In the case of the current dissertation study, the problem-focused type of facilitation would require the teacher to focus on the problems that each group may be having with regard to completing the activity as a group successfully. The solution focused approach would engage the teacher in helping the groups find solutions to any problems they may be having within their groups in order for them to complete the activity successfully.

The purpose of the study (Priest & Gass, 1997) was to test the problem focused and solution focused approaches to facilitation in functional (i.e. members got along with one another and worked well together) and dysfunctional (i.e. members did not like one another and did not work well together) corporate groups. Within each corporation, members were divided into three groups of 20 (functional corporation) or 23 (dysfunctional corporation). From the six groups, one from each corporation was facilitated with a problem focused and one with a solution focused approach; these groups contained an assortment of employees at all levels/departments. The last two
groups (one from each corporation) contained management level individuals who were excluded from the study because they were not randomly assigned to the groups they were placed. All of the groups participated in adventure activities as an intervention over a two day period, with the facilitators using their pre-determined facilitation techniques (problem or solution focused).

One month prior and two months following the study, each participant was administered the Team Development Indicator questionnaire requiring the participant to determine the percent of time their group exhibited certain characteristics or behaviors on a scale of 0% to 100%. The authors indicated that each of the four experimental groups achieved a change in their teamwork as a result of the intervention; however, the greatest change appeared in the dysfunctional solution focused facilitation group. In this group, change was significantly greater than for the other three groups ($p = .0001$). In both functional groups, both facilitation techniques worked equally, while in the dysfunctional problem focused group the changes and improvements were less evident. The authors suggested that a possible reason that the dysfunctional solution focused group experienced so much positive change could be attributed to the fact that they had been stuck in a problem focused state where they were not working together to achieve a solution. Instead, they were focusing on their problems and were not working together as they did post-intervention.

Greenaway (2004) discussed five varieties of facilitation, in which facilitation is an opportunity for the educator to focus on the learner and what he or she is doing and experiencing rather than on the instruction itself. The first variation is non-directive facilitation where the facilitator watches the students and determines from the actions of
the students in which way they will go (which activities they will engage in) and then leads them in that way. The second is appreciative facilitation where the facilitator emphasizes what is working well in the activities and focuses on success and achievement, in other words, catching students while they are doing or saying something good and recognizing that action, or the facilitator can focus on what worked well in a specific activity or interaction between students. Activity facilitation, the third variation, focuses on the facilitator changing activities as needed in order to influence what the students experience. The fourth, group facilitation, requires the facilitator to focus on group dynamics and development in order to enhance their experiences. Finally, the adventure programming variation includes more directive facilitation where the facilitator will focus on specific questions and actions of the students in order to enhance an experience. This can take several forms: (a) letting the experience speak for itself by learning through doing, (b) speaking for the experience through learning by telling others about the experience, (c) debriefing the experience encouraging learning through reflection, (d) directly frontloading the experience by direction with reflection, (e) framing the experience by reinforcement with reflection, and (f) indirectly frontloading the experience by redirection before reflection (Greenaway, 2004; Priest & Gass, 2005).

In the present study, facilitation took the form of debriefing the activities with the students through asking a series of directive questions following the activities or at the end of the lesson, such as “What”, “So what”, and “Now what” aimed at helping the students take the activities they participated in, determining the meaning the activities had for the students, and transferring that meaning to their lives outside the physical education setting. These activities will be directed by an individual who has been
determined to be an effective facilitator of Adventure Education in order to enhance the social interactions between students with and without disabilities in each group.

What is an effective facilitator? Priest and Gass (1997) have determined that appropriate facilitation techniques depend on group dynamics, but it takes an effective facilitator to determine the appropriate techniques to use with the group. There are different approaches to facilitation and roles that a facilitator can take, and there has been no one way to be an effective facilitator defined in the literature (Greenaway, 2004), however, in reviewing different sources in the literature, several characteristics in an effective facilitator were used to define an effective facilitator for the purposes of this current study. First, an effective facilitator needs to be him or herself throughout the activities and to be comfortable with the facilitation techniques used (Greenaway, 2004). Second, an effective facilitator asks questions instead of leading individuals or groups toward an answer (Priest & Gass, 2005). Third, an effective facilitator creates a safe environment where students can feel comfortable sharing their thoughts and feelings about an experience (Priest, 1995; Priest & Gass, 2005). Fourth, an effective facilitator enables students to move through Kolb’s Experiential Learning Cycle so that students are able to experience an activity, make meaning of the experience, and transfer it to make meaning in their lives in a debriefing session (Dyson & Brown, 2005; Kolb, 1984; Priest, 1995; Priest & Gass, 2005).

Debriefing. Debriefing (also called processing, reflecting, or reviewing) in Adventure Education serves an important role in the transfer and application of activities to their importance in daily living activities outside the Adventure Education setting or the GPE class. It can include processes such as reflecting on an experience, analyzing an
experience, making sense of an experience, communicating experience, reframing
experience, and learning from experience (Greenaway, 2006).

The purpose of debriefing in Adventure Education is to enhance an experience that an
individual has just experienced in any one of many ways and refers both to what the
learner and facilitator do in the experience (Greenaway, 2002). Debriefing is important
because as a facilitator, it is important to let the learners/students know that their
experiences are important and that they can share them in a safe environment. It is also
important because each individual will have different experiences. In order to facilitate
acceptance and social interactions, it is important that the students talk about what their
experiences meant to them (Greenaway, 2005).

The four stages of Kolb’s Experiential Learning Cycle provide the basis for debriefing
(Dyson & Brown, 2005; Hutchinson & Dattilo, 2001). The individuals engage in an
experience (such as a problem solving activity), they reflect on their experience (“What
happened?”) and examine what happened during the experience, they generalize (“So
what?”) and make connections between what happened and to make generalized
statements about their experience that can help them process their experience and what it
meant to them, and they apply or transfer (“Now what?”) what they learned through the
experience to another setting (Dyson & Brown, 2005). Debriefing in this manner can take
place immediately following an activity or experience or at the end of the class period in
a lesson closure (Hutchinson & Dattilo, 2001), and for the purposes of this current study,
was done as a lesson closure due to time constraints (short class periods). The students
were also asked to debrief in what the teacher termed “exit tickets” where the researcher
and teacher worked together to determine a question that the students must write an
answer to before leaving the class. This was done in addition to the debriefing at the lesson closure during the Adventure Education unit for each class as another form of debriefing (see chapter three for an explanation of the “exit ticket”).

Debriefing is a necessary component in Adventure Education as it provides individuals with an opportunity to reflect on their experiences and to facilitate change in behavior and attitudes (Hutchinson & Dattilo, 2001; Luckner & Nadler, 1995). If debriefing does not take place, the experience will be lost and the individuals will not grow from their experience. In this study, debriefing was used as a facilitation technique by the teacher to enhance the experiences students engaged in during the class activities. It was used as a tool to help the students reflect on the opportunities (both opportunities missed and those taken) they had during the activities to interact with their group members, and to serve as a reinforcing factor for interactions between all students in each group.

*Adventure Education for Individuals with Disabilities.* In Adventure Education, the experiential activities focus on the attainment of social skills and intrapersonal skills to develop an environment where students take risks as well as problem solve together to reach a common goal (Forgan & Jones, 2002). Through Adventure Education, students are encouraged to work together, keep each other physically and emotionally safe, give and receive feedback to each other, not devalue anyone, and to move past any differences between each other (Forgan & Jones, 2002). The benefits of Adventure Education have been well documented throughout the literature with regard to the inclusion of individuals with disabilities in these activities (Anderson, Schleien, McAvoy, Lais, & Seligman, 1997; Cross, 2002; McAvoy, 2001; McAvoy, Schatz, Stutz, Schleien, & Lais, 1989;
Sable, 1995). For the purpose of this literature review, only published works relating to Adventure Education and individuals with and without disabilities were reviewed to discuss the applicability, feasibility, and benefits of Adventure Education for individuals with and without disabilities. A number of myths have evolved out of the ways people view individuals with disabilities (McAvoy, 2001). Many people believe that individuals with disabilities do not prefer to participate in adventure programming activities, that these activities are too dangerous for individuals with disabilities or that they are too challenging for individuals with disabilities, that individuals with disabilities cannot benefit from adventure activities because of their limitations, and that developing an adventure program for individuals with disabilities is not possible (McAvoy, 2001). Despite these perceived myths, the literature tells a different story.

Witman (1987) worked with individuals who were receiving psychiatric treatment to determine if in fact adventure programs develop trust and cooperation and to determine the differences between social recreation and adventure programs with regard to the variables of trust and cooperation. The author used participants who were enrolled in an adolescent psychiatric treatment program ages 15-19 ($n = 17$) and randomly assigned them to one of three groups: control, social recreation, or adventure program. In this study, each participant filled out a Cooperation and Trust Scale prior to and at the end of the study. Data were also collected by the teachers with regard to their behavior on the Behavior Rating Scale to record the perceptions of the observer with regard to cooperation and trust behaviors that the participants engage in. The control group participated in activities that were considered “regular” for participants in the program, the social recreation group participated in different cooperative games together, and the
adventure group participated in different trust and adventure activities. Findings indicated that the individuals in the adventure group showed more cooperation and trust than the other two groups as perceived by the teachers. In addition, the attitudes of the participants in this group on cooperation and trust tended to be more positive. The researchers indicated that the social recreation group appeared to have more fun while participating in their activities; however, having fun did not develop trusting and cooperative attitudes toward their group members as did that of the adventure group.

Davis-Berman and Berman (1989) studied the effectiveness of an outdoor wilderness therapy program on the attitudes, self-perceptions, and behavioral characteristics of 23 (15 boys, 8 girls) participants who were between 13 and 18 years of age. Participants included in this study were all involved in outpatient mental health programs and were experiencing problems such as relationship problems, depression, and difficulties with anger and impulse control. Excluded from this study were individuals with severe conduct disorders or psychotic disorders. The authors administered a pre- and post-test of four separate instruments to measure locus of control, self efficacy, and self esteem. The instruments used were the Internal-External Locus of Control Scale developed by Rotter (1966), a self efficacy inventory developed by Sherer (1982), the Piers-Harris self-esteem inventory (1969), and the Behavioral Symptom Inventory by Derogatis (1975). The Behavioral Symptom Inventory was administered as a pre test, post test, and a follow up test two weeks following the program. In addition to these instruments, the researchers developed measures specific to the study. These measures were: the number of critical incidents each participant experienced each day (i.e. the number of behavior problems
exhibited such as harmful behaviors), and a Wilderness Therapy Checklist to measure peer interaction, affect, self esteem, response initiation, and conflict, this checklist was used as a pre- and post- test measure during the study.

Four backpacking trips were conducted in the study, and participants attended two orientation meetings with their parents prior to the trips and during the trips, group therapy/counseling sessions were held daily. The authors indicated that as a result of the trips, the Wilderness Therapy Program appeared to have beneficial effects for the participants. The most obvious improvements were in the areas of behavioral symptoms, self efficacy, and self esteem. However, improvements were also noted in the areas of affect and cooperation indicating that the participants had improved their behavior and cooperation with others during and following participation in the program.

McAvoy et al. (1989) examined and assessed the effects of a wilderness adventure program on the personal and lifestyle traits for individuals with and without disabilities. In this study, 180 adults ages 20-70 with and without disabilities participated in an integrated wilderness program together. Disabilities included: head injury, cerebral palsy [CP], multiple sclerosis [MS], osteoporosis, visual impairments including blindness, paraplegia, cataplexy, amputation, narcolepsy, and Parkinson Disease. A typical group contained two leaders, two individuals with sensory disabilities, two individuals in wheelchairs, two individuals with other types of disabilities, and three to five individuals with no disabilities. In this case, both qualitative and quantitative data were gathered where the researchers measured anxiety based on the State-Trait Anxiety Inventory [STAI] Form Y as well as through structured interviews with the participants in the
program. In the interviews, questions were centered on attitudes, tolerance, and feelings about participating in the program with individuals with and without disabilities.

McAvoy et al. reported that all participants experienced a reduced state of anxiety after participating in the program, however, individuals with disabilities tended to experience higher anxiety than those without disabilities both before and after the program. Furthermore, the findings from the interviews indicated that the program had a positive effect on all participants. Most of the participants who were interviewed mentioned positive lifestyle changes they had made following the trip that were a result of the wilderness inquiry trip, including relationships with others, recreation skills, changed attitudes toward individuals with disabilities, tolerance of others, stress management, and skills in relating to new situations appropriately. Implications were that inclusive wilderness adventure programs “can result in positive attitude and lifestyle changes including: attitudes toward persons of varying abilities; interpersonal relationships; confidence levels; willingness to take risks; feelings about self; goal-setting abilities; leisure skills; tolerance of stress; and, in some participants, an increased ability to live independently” (p. 62). Between individuals with and without disabilities, both groups did report positive changes in these areas, and perceived they benefited from participating in a wilderness program in attitude and lifestyle changes.

Luckner (1989) used an outdoor adventure course to determine the effects of the course on the locus of control of ten individuals with hearing impairments, and that of a matched (i.e. gender, age, ethnicity, degree of hearing loss, age of onset of hearing loss, hearing status of parents, and no secondary disability) control group. In this study, locus of control was referred to as an individual’s perception of control and power over the
rewards and reinforcement they receive, and could be external (beyond the individual) or intrinsic (from within the individual). The participants in the experimental group took part in a ten day course during the winter, which consisted of three phases: (a) training, (b) expedition, and (c) conclusion. Training prepared the individuals for the trip, expedition was the trip itself, and the conclusion ended in a final event of the course. The researcher used a group design, administering a pre, post, and follow up implementation of the Levenson Locus of Control Scale. It was found that individuals who participated in the course experienced a positive effect on their internal locus of control, and that this effect was maintained for two months following the course. The course did not have a significant effect on the external locus of control of the participants. These findings indicated that the course did have an effect on the individual’s perceptions of control of participating in the activities that come from within the individual rather than from those around the individual.

Rawson and Barnett (1993) conducted an exploratory study to determine the efficacy of a short term camping experience on the anxiety of participants with severe behavioral disabilities. The researchers hypothesized that as a result of participation in the experience, participants would decrease their levels of anxiety within completion of the short term experience. Participants were 147 boys and 44 girls ages eight to 12 who had been referred to the program by various social workers and mental health caregivers. Fifty-four percent of the participants had been diagnosed with having a disability, of that percentage: 18% had attention deficit disorder, 2% attention deficit hyperactive disorder, and 24% conduct or oppositional defiant disorders.
The instrument used to measure anxiety levels of the participants was the Revised Childhood Manifest Anxiety Scale consisting of 37 self report items. This instrument was administered as a pre- and post- test measure. During the program, individuals participated in individual learning modules where they could succeed in the activities by themselves, and in group learning modules where they could succeed only with the help of others in their group. The results showed that the participants did decrease their total anxiety by the end of their participation in the individual and group activities, however, the authors caution that there are many different things that can influence anxiety (such as internal factors) and a conclusion cannot be reached as to whether or not participation in this program directly influenced these results.

Schleien, Hornfeldt, and McAvoy (1994) studied the effects of an Outdoor Education program on the effects that the program would have on including individuals with severe developmental disabilities (i.e. severe to profound intellectual disabilities) on their peers without disabilities while participating in a one day Outdoor/Environmental Education experience. Participants were 93 children who were in kindergarten to sixth grade. Of these participants, 88 did not have disabilities, and five did have disabilities. These participants were split into 11 groups (average group size was nine) and each group had at least one individual with a disability.

The program consisted of a four hour program that discussed the food chain and an outdoor hike while searching for items on the food chain discussed in the indoor component. Participants without disabilities were pre and post tested on a knowledge test of the food chain processes, and 37 participants were also given a follow up test two months after their completion of the program. In addition to the test, a questionnaire was
given to the naturalists who led each group through the program. The naturalists were asked to provide information on how successful the individuals with disabilities were and how they felt about leading integrated versus segregated programs.

Quantitative results of the knowledge tests showed that integration of the students with disabilities did not negatively affect the knowledge gain of the students without disabilities from the pre to post test and on the retention test. The data from the instructor questionnaires showed that overall it was a positive experience for the naturalists, but that they also faced challenges in including the students with disabilities into the program, but the naturalists remained positive about including individuals with disabilities into their programs in the future. This indicates that including individuals with disabilities, although possibly difficult in adapting, can be rewarding for all individuals involved and inclusion of individuals with severe disabilities into a short term Outdoor Education experience will not negatively affect the learning of students without disabilities.

Pommier and Witt (1995) studied the effect that an Outward Bound School program would have on changes in the home environment the participants were expected to function in following the intervention. The hypothesis was that the participants receiving intervention would score higher on measures of self worth, family functioning, and behavior than the participants who did not receive the intervention. Study design was a group (treatment, control) by time (pre or post test; four week and four month) repeated measures design where data were collected by the participants and/or their parents depending on the variable of interest. Participants were 107 juvenile status offenders and their parents (61 treatment group, 46 control group), although only 79 completed the instruments during all three data collection points in the study.
The intervention provided to the treatment group consisted first of an intake procedure where background information was collected from the participants and their parents. This was followed by a two day orientation period where the parents attended workshops on conflict resolution and other related topics while their children lived in the wilderness setting and learned about the program procedures and expectations. Next, the children/youth participants lived in the wilderness for 16 days where they learned skills such as survival, first aid, nutrition, camping, and appreciation for the outdoors. Parents attended more workshops on other issues that parents face with their children at home such as anger management during this time. The next stage was the reunion period where the parents and their children put what they had learned into practice by individualizing what they had learned and developing contracts between the parents and children that specified appropriate behavior and attitudes. The fifth stage, a reinforcement period, consisted of ten days where games and activities were used that reinforced what the participants had learned in the wilderness and in the workshops. This consisted also of three home visits and seven phone calls where each family reinforced the contract that had been developed between the parents and their children. Finally, a facilitation period was designed to provide the parents with ongoing support for 14 days with visits, phone calls, or whatever they needed to help the parents and their children maintain what they had learned throughout the intervention.

Data were collected through the Self Perception Profile for Adolescents (SPAA), the Family Adaptability and Cohesion Evaluation Scales- II, and behavior reports from the parents using the Eyberg Child Behavior Inventory. Data were collected for both the intervention and control groups at the same time for each of the three data collection
periods. The authors indicated that the results of the SPAA showed a significant difference (p< .05) between the treatment and control group on five of the subscales and global self worth portions of the instrument. There were no significant differences between the treatment and control groups on both post tests on the family cohesiveness variables, but there were significant differences on the adaptability family component at the first post test but not at the second post test. Finally, the behavior scores of the participants showed significant differences between the first and second post test, but that the problem behaviors had started to increase toward their pre test levels. These findings show that although this program was initially effective in improving self concept and in reducing problem behaviors, over time, these changes started a trend toward the pre test scores indicating that the effects were not maintained over time. The authors mentioned that this could have happened due to the short duration (16 days) of the Outward Bound trip or due to the lack of reinforcement of the positive changes that had been achieved following the completion of the program.

Sable (1995) studied the effect of three different adventure based programs on the acceptance of individuals with disabilities to determine how these programs influenced the attitudes of students without disabilities toward those with disabilities. This was a quasi experimental study where a convenience sample of 66 children without disabilities, and 5 children with disabilities [disability types unspecified] who participated in a one week inclusive camp setting were randomly assigned to treatment groups. The groups were: (a) a disability awareness group, (b) an adventure group, and (c) a control group who participated in the normal camp setting. The disability awareness group received a one hour per day meeting and discussing disabilities, participating in simulation
activities, reading about and determining accessibility issues. In addition, each participant in this group spent two hours per day interacting one on one with an individual with a disability who was a part of the camp. The adventure group participated in different adventure activities consisting of group initiatives and ropes courses. This setting was also inclusive and contained support staff for the individuals with disabilities. The control group participated in normal activities within the camp program and had limited interaction with individuals with disabilities. All groups were pre tested at the beginning of the week and post tested at the end of the week using an Acceptance Scale that was modified from an education setting to fit a recreation setting.

Sable (1995) found there were highly significant differences between the two treatment groups in the positive change in attitudes toward individuals with disabilities when compared to the control group, but there were no significant differences in the changes in scores between the two treatment groups. The author indicated that it may not be necessary to have a specific program focusing on disability awareness, rather, by having children participate in activities that encourage interactions, cooperation, and group initiatives with individuals with disabilities can be very influential in positively changing attitudes toward individuals with disabilities.

Anderson, Schleien, McAvoy, Lais, and Seligmann (1997) investigated the efficacy of an integrated outdoor adventure program in creating positive changes in individuals with and without disabilities over a two and a half year longitudinal study. The research questions sought to determine if there were positive attitude changes toward individuals with disabilities, whether there were increases in interpersonal relationships, if there was a development of leisure skills in the individuals with disabilities, and what other positive
lifestyle changes occurred as a result of participation in the Wilderness Inquiry program. Throughout the study, 12 individuals with disabilities ages 27-59 and 14 individuals without disabilities ages 22-65 participated, and were volunteers [individuals without disabilities] or were recruited [individuals with disabilities] to be a part of the study. Seventeen of the 26 completed the entire study as the study was completed during the course of three summers and some participants did not return for all three summers.

An ABAB reversal design nested within a multiple baseline design across groups was utilized within this study (Anderson et al., 1997). The first year formed the baseline data, with one group subsequently participating in a wilderness trip. In year two, baseline data were collected for both groups, but then both groups participated in a wilderness trip. Attitudes toward individuals with disabilities were assessed using an adapted version of the Peer Acceptance Scale, relationship development was assessed using a sociometric assessment tool in which participants made choices among the group members based on specific probes from the instrument. Canoe skill acquisition was measured using a task analysis tool for the participants with disabilities, and follow up interviews with the participants were completed four to six months following the trip to determine the impact of participation in the program.

Anderson et al.’s results indicated that the participants experienced a positive change in attitude toward individuals with disabilities, they developed relationships with each other [individuals with and without disabilities], and that they developed skills as well as experienced lifestyle changes following their participation in the program. The changes experienced that were of particular importance were: those of positive attitude
development toward individuals with disabilities by both individuals with and without
disabilities, relationship development, skill development, and lifestyle changes.

Herbert (1998) studied the immediate and long term effects of an adventure therapy
program on employees with disabilities. Herbert wanted to determine self esteem would
be higher in the individuals who participated in the adventure therapy program as
compared to a control group, that the effects of the program would be maintained at a
three month and one year follow up, and to determine if the two groups (treatment and
control) would differ over time.

Participants were 36 individuals recruited from rehabilitation programs that offered
employment to individuals with disabilities, including individuals with developmental
disabilities, mental illness, and orthopedic, sensory, and multiple disabilities. Participants
were assigned to one of three groups: (a) an experimental group (Group A) receiving an
eight day adventure therapy program with a three day follow up program three months
following the treatment, (b) Group B, who received the adventure therapy program and
no follow up, and (c) a control group. Two instruments were used to evaluate the effects
of the program: the Coopersmith Self-Esteem Inventories and the Internal-external Locus
of Control Scale.

The adventure program consisted of activities such as backpacking, rock climbing,
canoeing, camping, ropes courses, and initiative activities designed to promote the
themes of communication, interdependence, and overcoming fears and obstacles. Each
day participants would take part in activities that focused on one of the themes and the
leaders would give a bead to the participant at the end of the day if the participant
demonstrated excellence in the theme, and this program was followed for both experimental groups while the control group participated in a similar condition for the same eight day period.

The author reported that the first hypothesis: that individuals who participated in the adventure therapy program would have higher self esteem and a shift toward a more internal locus of control compared to individuals who did not participate in the program, was the only hypothesis supported in this study. This change was not maintained over time for Group A during the follow up procedures, possibly because the program was short in duration (8 days), and that the impact of the program was not enough to be maintained for one year following the program. This indicates a need to increase the length of such a program when working with individuals with disabilities to enable the individuals to sustain a lasting effect from their participation in an adventure therapy program.

Autry (2001) studied the effects of an adventure therapy program that was designed to meet specific goals for girls who were considered “at risk”. The purpose of this study was to determine the perceptions the girls had of themselves following their participation in the program, and to determine the meanings the girls attached to their experiences in the activities. The adventure therapy program at this facility was a long term program that provided residents with training to learn how to survive in challenging environments. Specific activities included camping, backpacking, and hiking trips of three to four days and experiential education sessions followed by ropes courses.

The nine girls who participated in the program were residents in a residential psychiatric rehabilitation center. All of the girls were between the ages of 13 to 18 and
had been living at the center for at least two months prior to the study to allow for
acclimation to the center. Each of the girls had participated in one or two backpacking
trips and from two to 24 experiential education sessions that included both high and low
ropes courses.

Data collection included interviews of the participants (all were interviewed once,
seven of the nine were interviewed as a follow up to participation), which were later
transcribed by the author and analyzed using a constant comparison method. During data
analysis, four main themes emerged: trust in self and others, empowerment from
participation, teamwork, and personal values gained from the experiences.

The theme of trust showed that the girls were able to develop trust in themselves and
within their groups through participation in the activities. Empowerment emerged after
participation in the ropes courses or on the hiking trips and indicated that the girls felt as
though they had more control over their lives and brought out feelings and attitudes that
they did not experience on a regular basis. The third theme of teamwork was a main goal
set by the program, and the girls recognized the importance of teamwork in achieving
many of the activities set forth before them. The theme of personal value was evident in
the girls’ recognition of things that became important to them as a result of participating
in the activities. One sub theme was evident in the data analysis as well: the girls felt
unable to transfer what they learned in the adventure therapy program into their daily
lives, which was a source of concern and frustration for the girls. For example, if a girl
was able to trust herself to complete an activity on one of the courses, she may have felt
unable to trust herself to do the same on an activity back at the facility.
Overall, the author indicated that the girls felt more positive about their sense of self due to participating in the adventure therapy program, and that although these benefits were very important to the girls, the benefits did not transfer to other settings in their daily lives. This finding indicates the importance of effective facilitation and debriefing in adventure therapy programs. Debriefing can utilize the “what”, “so what”, and “now what” questions to facilitate the transfer process from such programs to daily life. Without debriefing, the transfer process is not likely to happen similar to what happened to the girls in this program.

Finally, Cross (2002) utilized an Adventure Education program to determine whether it would present a change in students’ perceptions of being alienated from their peers [social isolation] and whether this program could help these individuals develop a sense of control over their own lives. Although these students did not have identified disabilities, it is important to note that they all attended an alternative high school and that they were considered to be at-risk. The author defined these children as students who did not fit in with school or society, who lived in negative environments, and lacked necessary skills to become contributing members of society. Thirty-four adolescents ages 12 to 19 [volunteers] who were considered at risk participated in the study, which consisted of one group participating in a five day outdoor rock climbing program, and the other group not participating in the program. Students in the comparison group were matched to students in the first group based on age, gender, ethnicity, and family living situation [e.g. one versus two parent homes]. Data were collected before and after the program to determine changes in their sense of alienation and control over their lives. In this study, the basic premises of Adventure Education were followed, and specific to the
study, the variables considered most important in the rock climbing experience were a novel setting; a cooperative, caring, and trusting environment; problem solving; experiencing success; and time for reflection.

Cross reported that the group that participated in the Adventure Education activities experienced less feelings of alienation following participation in the program as well as a stronger sense of control over their lives than the comparison group. There were no significant differences on gender, ethnicity, and family variables, indicating that the effects were due to participation in the Adventure Education program and not because of other variables. Indications from this study are that by participating in an Adventure Education program, individuals develop a sense of belonging and can help foster the development of interpersonal relationships between students in similar settings. By placing these individuals in settings where individuals worked together, cared for and trusted each other, and reflected on their experiences, group cohesiveness was developed. Likewise, it was the premise of the current study to develop an environment such as this one to enhance social interactions between students in each group.

Adventures in Education for Individuals without Disabilities. Young and Crandall (1984) indicated a need for research that linked self actualization and wilderness experiences, and therefore completed a study with the intent to show a link between the two variables of self actualization and the use of wilderness settings. The authors tested three hypotheses: (a) that individuals who used the wilderness as a recreation or leisure activity had more self actualization than individuals who did not; (b) among individuals who did not use wilderness settings, individuals who intended to use such settings would have more self actualization than individuals who did not intend to use these settings; and (c)
that among individuals who used wilderness settings, those individuals who were
considered frequent users would be more self actualized than individuals who were not
frequent users. Two groups of adults participated in this study, one group of randomly
selected wilderness users from a list of individuals who had obtained a Boundary Waters
Canoe Area Wilderness (BWCAW) permit, who completed a mail in questionnaire (of
the 289 questionnaires, 79% return rate) and one group from the general public. The
group from the general public was randomly selected to complete a telephone survey (n =
503). Both groups received the same questions from the Personal Orientation Inventory
which was validated by Shostrom in 1974. The telephone group answered the questions
verbally while the wilderness users filled out a mail questionnaire.

Specific to the first hypothesis, the authors indicated that there were significant
differences (p< .03) between individuals who utilized wilderness settings and those who
did not. That is, individuals who used wilderness settings had higher self actualization
than those who did not, and the first hypothesis was accepted. The second hypothesis,
that individuals who intend to use wilderness settings would have higher self
actualization than those who did not, was not accepted because the differences between
the groups was not significant. The third hypothesis was not accepted; the differences in
self actualization between more and less frequent wilderness users were not significant.
The implications that this study hold are that individuals who use wilderness settings are
more self actualized than those who do not use wilderness settings for recreation.
Although the individuals who were selected as part of the wilderness group had self
selected the setting in which they participated in leisure and/or recreation activities, they
did have higher self actualization. This possibly indicates a relationship between those
who use wilderness settings and higher self actualization, as this was one of the first studies in this area to show a relationship between the two variables.

Marsh, Richards, and Barnes (1986a) studied the effect of an Outward Bound program on the responses of participants on two instruments (the Self-Description Questionnaire [SDQ] III and the Rotter Locus of Control [RLC] Scale). The authors hypothesized that the individuals who took part in the programs would have self-concepts that were more positive and that they would have more of an internal locus of control. In this study, participants included 361 individuals ages 16-31, who were a part of one of ten different 26-day residential Outward Bound programs in Australia (multiple replication time series group design). The participants, who were split into 27 groups, completed the SDQ III one month prior to their participation in the Outward Bound program on the first day of the program and again at the end. They also completed the RLC scale at the beginning and end of the program.

The results of SDQ III instrument showed that there was little change between the participants’ responses on the first and second times they filled out the questionnaire, but then a significant increase (p< 0.01) between the second and third times they completed the questionnaire, indicating that the program had an impact on the self-concept of the participants overall. This finding was consistent across all of the groups in the different Outward Bound programs in the study. Participants also had a shift in locus of control toward more internal responses as indicated by the authors, although very little information on the responses of the participants on the RLC scale was reported. These
findings indicate that Outward Bound is a feasible way to improve different aspects of self-concept and locus of control (at least short term) in individuals who choose to participate in these programs.

Marsh, Richards, and Barnes (1986b) completed a long term follow up of the previous study (Marsh, Richards, & Barnes, 1986a) which was part of a series of studies to determine the effects of participation in an Outward Bound program on the same participants \( n = 361 \) from their first study. The purpose of the Marsh et al. (1986b) study was to test three hypotheses, and these were that: (a) the responses of the participants from the previous (1986a) study on the questionnaires (RLC and SDQ III) would remain stable over time, (b) the enhanced self-concepts of the participants would not decline over time, and (c) the internal locus of control shown at the end of the Outward Bound program would not become more external over time.

In the follow up study, the authors mailed out the instruments to all 361 participants 18 months after their participation in the different Outward Bound programs. The authors reported a 63% return rate \( n = 229 \) of the questionnaires in the mail. The authors did mention that in the first three times the questionnaires were administered to the participants (in the first study) the non-respondents did not differ from the respondents among their answers in either instrument. The findings of this study show evidence that the responses of those who participated in the long term follow up did not change significantly over time, their self-concepts did not change, and their locus of control remained internal from the completion of the first study to the completion of the second 18 months later. These findings show that the benefits of participation in an Outward Bound program can be retained over time (i.e. specific to locus of control and self
concept). As such, these findings have relevance for this current study in that the effects of participation in Adventure Education on the social interactions between students with and without disabilities were targeted with a retention measure taken to determine whether the effects of an Adventure Education unit of instruction are retained similar to the effects of participation in the Outward Bound programs in the Marsh et al.’s (1986b) study.

Ewert (1988) completed a study on Outward Bound programs and the effect they have on the type of fears individuals have before, during, and one year following participation in the program, the intensity of the fears, and whether the fears were related to gender, age, or the duration or length of the Outward Bound program. Participants in this study were two groups of individuals: (a) students participating in an Outward Bound program and (b) the leaders of the courses. Prior to the Outward Bound course, the participants were mailed the Situational Fear Inventory (SFI). The participants also completed the SFI at the end of the course and again one year following their participation. The leaders were given the instrument immediately before and after the beginning of the courses they led.

The author reported a 57% response rate for all three phases of data collection ($n = 550$ mailed out; $n = 311$ returned). In the returned questionnaires, of the five situations that were the most frightening to the participants, three were social-based and two were physical-based fears. Females consistently reported higher fear levels for specific situations than males and the younger participants experienced more fear about not fitting in with others than did the older participants. Following participation in the Outward Bound program, reduced levels of fear were reported in both post intervention measures. However, the authors did report a large gap between the fears that the participants
experienced and the fear levels that the instructors thought the participants experienced, that the instructors overestimated the amount of fear the participants experienced.

In Ewert’s study, length of the course engaged in did not show significant differences between the participants who engaged in longer versus those who engaged in shorter programs indicating that length of the course may not be as important as simply engaging in a course with regard to situational fears. Overall, the participants who took part in the Outward Bound programs experienced less fear following participation in the programs immediately following and one year after their participation.

In 1989, McDonald and Howe completed a study to determine if self concept of children who were abused would change after participation in a challenge/initiative games in a traditional setting (not outdoor adventure) as compared to children who participated in a traditional recreation program in a similar setting. Participants were 38 children (grades three through 12) who lived in a residential home for children who were abused and removed from their homes because of the abuse.

The authors used the Piers-Harris Children’s Self Concept Scale (PHSCS) instrument to measure the self concept of the children who participated in the study and a demographic questionnaire to obtain data about the participants’ gender, age, and last incidence of abuse the participants had experienced. All participants completed the PHSCS instrument prior to the study and were then randomly assigned to either the intervention or control groups. The intervention group participated in a 28 day challenge and initiative activity program, while the control group participated in playground activities for the same 28 days; both groups were led by the same individual (one of the authors). In the experimental condition, the leader led challenge and initiative games for
the first part of each day for 40 minutes, followed by a debriefing period of 20 minutes focusing on the group dynamics and how the participants felt about the activities.

The results from the intervention group indicated an increase in self-concept from the pre to post tests (from a combined pretest score of both groups at 44.8 to a 53.7), while the control group did increase slightly to 48.3. In addition, the intervention group showed higher self-concept on the items of behavior, anxiety, popularity, and happiness than the control group. In comparison to traditional recreation programs, the results in this study show that engagement in challenge and initiative games can be an effective way to increase the self-concept of the children who participate in these programs and activities.

Gillett, Thomas, Skok, and McLaughlin (1991) studied the effects of a six-day wilderness camping and hiking experience on the self-concept and knowledge of/attitude toward the environment. The hypotheses tested were that a high quality short term program would have no effect on the self-concept, environmental knowledge, or attitudes toward the environment of the participants, and that the measures of change of self-concept on the Tennessee Self-Concept Scale (TSCS) would be no different than those of the Coopersmith Self-Esteem Inventory (SEI). Environmental knowledge and attitudes were measured using the Cross Regional Environmental Attitude Survey and questions designed by the researchers to measure knowledge. Participants were 16 to 18 year old high school seniors ($n = 77$); the experimental group consisted of 61 students, while the control group consisted of the rest of their senior class ($n = 16$), and both groups contained males and females.

On the TSCS, scores of the experimental group improved significantly ($p < .001$) from the pre to post test, while the control group scored lower in four of the scales on the
TSCS from the pre to post test. The scores of the SEI for the experimental group showed a significant increase (p < .001) in scores from the pre to post test while there were no significant differences for the control group between the pre and post tests, and in two of the five subscales, the scores in the control group decreased from pre to post test. On the environmental questionnaire, there was a significant increase in scores (p< .05) for the experimental group on knowledge, but not attitude, while there were no significant differences for the control group in their answers on the instrument. These findings indicate that participation in a six-day wilderness trip improved the self-concept of the participants in the experimental group with respect to both instruments as well as knowledge of the environment, leading the researchers to reject their null hypotheses that there would be no difference in self-concept or environmental knowledge, while the other null hypothesis (that there would be no difference between the two instruments) was accepted as was that of attitude toward the environment.

Ewert and Heywood (1991) studied group development in a wilderness setting. The study was based on the tenet that wilderness settings are effective in fostering group development because of the collection of individuals who are a member of a small group, are in close proximity to each other, and who have frequent interactions with each other. The Ewert and Heywood study used an Outward Bound program to provide such opportunities for the individuals in the groups to interact and develop primary (i.e. warm, familiar, close) relationships with each other. The purpose of this study was to determine whether participation in an Outward Bound program would indeed facilitate the development of groups, and the role that gender, age, identification with the group, type of course taken, and length of the course would play in group development.
Participants ($n = 198$) were individuals who had registered to take one of seventeen Outward Bound courses. All participants were mailed a questionnaire one week before they engaged in the course, and then were given a second questionnaire at the completion of the course. The instrument used was the Group Development Assessment Questionnaire (GDAQ) which consisted of 40 items that described a characteristic of a group. On the GDAQ, the participants were asked to rate how true they felt each statement was on a scale of one to six. Return rate on the first questionnaire was 28.8% ($n = 57$), and 33.8% on the second questionnaire ($n = 67$), so results must be taken cautiously as the return rate was very low and could be a threat to the validity of the study.

The authors indicated that there were no significant differences based on gender with respect to group development expectancies, or in other words, that males and females alike expected that their groups reach mature and functioning group characteristics. The authors also noted increases in interaction and problem solving in an interdependent fashion within the groups, and that groups that gave themselves a group name were more interdependent on their group members than groups that did not. The strongest indicator of group development was the type of course engaged in (i.e. water-based, land-based) indicating that the groups that participated in water-based programs were more interdependent than those who participated in land-based programs. Finally, the authors reported that there were no differences between the longer and shorter courses with respect to group development, although the groups who engaged in the longer programs reported more conflict between members than did groups in shorter programs.
In a study by Finkenberg, Shows, and DiNucci (1994), 18 college students enrolled in an Adventure Education course and 32 students enrolled in a general health course (control group) were administered the Tennessee Self Concept Scale to measure the self concepts of these students at the beginning and end of the semester at their college (Non-equivalent Pretest Posttest Control Group Design). The Adventure Education course consisted of topics such as: initiative and trust activities, ropes course activities, rock climbing, dynamic belay systems, and use/care of adventure equipment. Importantly, none of the students in the control group had been exposed to any adventure activities previously or during the study.

Findings reported by Finkenberg et al. indicated that there were significant differences (p<.05) in the overall self concepts between groups and that the self concepts of the students in the Adventure Education course were higher than those in the control group. The authors concluded that individuals who have higher self concepts tends to like himself or herself, feels as though she or he has value and worth, has self confidence, and acts as such. Finally, it is suggested that individuals who participate in Adventure Education may have higher self concepts, but there was a need for longitudinal research and follow up studies to determine the maintenance of the change in self concepts of the participants.

Garst, Scheider, and Baker (2001) examined the influence an outdoor adventure experience would have on the self perception following the trip both immediately and four months later, and to determine whether or not the influence of the trip transferred to the home environments of the participants. Participants were 58 youths who were a part of outdoor adventure programs that took trips that included activities such as hiking,
caving, initiatives, and other outdoor adventure activities. The participants were in small groups of four to five and were responsible for setting up the campsites, cooking, and organizing the materials of the group, and they were also allotted free time to engage in activities that they liked such as exploring the surrounding area.

The researchers (Garst et al., 2001) collected both quantitative and qualitative data. The quantitative data were collected through pre test, post test, and long term post test questionnaires that included demographics, reasons for participation, self perceptions using Harter’s Self-Perception Profiles for Adolescents, and previous experience in outdoor adventure activities. Qualitative data were collected through participant observations, journaling by the group leaders, and interviews. The journals provided additional information on group interactions and the impact of the day’s activities on the group. In addition, the leaders rated the self perception of each participant based on their observations of the participants during the activities. Interviews included questions aimed at exploring the influence of the trip on the participants immediately following and then again four months after their participation in the outdoor adventure experience.

Of the 58 participants, 36 completed the consent form and all three surveys (pre test, post test, and follow up), and 17 of the participants were chosen to complete interviews with the researchers. Based on the observations of the leaders, there were nine emerging themes that related to self perception: (a) escape, (b) novelty, (c) impression management, (d) peer interactions, (e) teamwork, (f) positive adult interactions, (g) challenge, (h) structure, and (i) duration and intensity (p. 45). The qualitative data also led the researchers to conclude that the structure of the program positively affected the personal and social components of the experience for the participants. The structure of
the experience provided the participants with a safe environment where they could work together and establish an interdependent group relationship. These data were also supported by the quantitative data, which indicated that there were significant increases in peer acceptance from pre to post test. The authors indicated that the quantitative data led the researchers to conclude that the behavior of the participants at home improved following their participation in the outdoor adventure experience. Self perception scores were also positively influenced by participation in this experience as indicated by Harter’s self perception profile questionnaire in the areas of social acceptance and behavioral conduct.

Bobilya and Akey (2002) sought to determine the impact on in-class learning and college experiences that participation in an Adventure Education program would have on a residential learning community of college students. In this study, the authors defined a learning community as characterized by a group of individuals linked by a certain theme and variety of approaches to link the individuals together during a specific time period. Participants were selected through criterion sampling (participants had to be members of the learning community program), and all participants were first year, first semester college students. Each participant took part in an Adventure Education experience with their respective learning community groups. The Adventure Education experiences in this study consisted of activities such as high and low ropes courses and a climbing wall as well as group initiative activities.

Data were collected through focus group interviews and observation (specific type of observation not mentioned) and the data were analyzed through constant comparative methods to determine emerging themes from the interviews and observations.
Trustworthiness of the data was established through triangulation of data analyzed by three different individuals, peer debriefing by discussing the emerging themes during data analysis with various individuals not part of the study. Finally, trustworthiness was enhanced by the use of member checks by discussing themes and findings with individuals who were involved with the learning community program to ensure that the data were interpreted as accurately as possible.

Through data analysis, ten different themes emerged. The first theme was that the ropes course helped develop critical thinking skills by providing the participants with challenges that were not easily overcome. Second, the ropes course helped develop personal competence in the participants where they were able to overcome fears, learn to trust themselves, and to facilitate the development of self confidence. Third, peer support was evident as the participants began to encourage and help each other throughout the experience. Fourth, the development of peer support for student academic success where the support developed during the experience transferred to the academic setting. Fifth, participation in the ropes course helped develop social integration of the participants where each individual interacted and developed relationships with others in their learning community group. Sixth, trust, communication, and respect were developed through the ropes course by facilitating group development and interaction. Seventh, the students were able to develop relationships with various faculty members during these experiences by providing the students opportunities to interact frequently with different faculty members during the experience. Eighth, the participants were able to learn and socialize in a setting outside what they would normally experience in a college setting. Ninth, the
groups developed a bond with each other through sharing similar experiences during the program. Finally, the groups were able to work together through teamwork that was developed during the program.

These themes lend importance to the current dissertation study as each class involved in the dissertation study participated in small groups on activities that sought to develop a sense of “us” within each group similar to the program Bobilya and Akey (2002) described in their study. In that study, the sharing of common goals with group members was encouraged to facilitate the interactions between group members within the group setting by using problem solving, communication, and trust building activities during the intervention.

Hurtes (2002) investigated the critical aspects of the cultures of adolescent girls and sought to identify how the culture affected their leisure behaviors. Sixteen adolescent female participants aged 15 years were the focus of the investigation. The researcher purposefully chose girls who were members of a leadership program at a residential camp. In this program the girls took part in adventure activities such as canoeing, backpacking, group initiatives, high ropes courses, and rock climbing activities. Data were collected through participant observation/field notes and focus group interviews. Participant observations took place throughout the day where the observer took field notes as a member of the group on specific interactions and behaviors of the girls. Focus groups took place at the end of every day and were unstructured. The girls started out by talking about the day and the researcher asked questions based on what the girls mentioned while they were talking.
Hurtes (2002) stated that data analysis revealed several themes, listed in order of most important: (a) friends, (b) clothes and appearance, (c) boyfriends, (d) activities, (e) parents, and (f) leaders. The girls noted that real friends were people they could talk to about anything, cool friends were friends they wanted others to see them with, and guys as friends were also important because the girls could be themselves, and the guys liked them for who they were. In this study, the other themes were important to the girls, but interactions with friends tended to be the most apparent and prevalent topic of discussion.

The importance of social acceptance by others was also observed throughout the daily activities. The girls tended to form their own groups of friends naturally, but it was obvious that the group of girls who were part of the “in” crowd had closer relationships and fostered interactions that were encouraging and positive toward one another. The girls who were part of the “out” crowd tended to isolate themselves from each other and did work together when asked, but did not actively encourage or interact with each other otherwise. There was no sense of one large group even thought all these girls had been together for several weeks, and team building activities did not influence group cohesion.

The author indicated that for girls to experience social acceptance and comfort in participating in the activities, it was necessary for them to be placed in their chosen group of friends.

Glass and Benshoff (2002) examined the effects of a one day adventure education-based challenge course on the group cohesion of volunteer adolescent participants ($n = 167$, ages 11-14) with respect to differences in perception based on gender, age, and race. The study consisted of a low-element challenge program that consisted of several initiative activities designed to facilitate group cooperation and team communication to
complete the task. The Adventure Education course lasted approximately 6 to 6 ½ hours per group (6 groups were observed in six different days). Participants completed the Group Cohesion Evaluation Questionnaire (GCEQ) at the beginning and end of the day as a pre and post test measure. This instrument was developed specifically to address the purpose of this study; it was designed to address each participant’s evaluation on how well their group was able to work together and on how well the activities helped to develop cohesion among the group members. Glass and Benshoff indicated that group cohesion in this case could have been developed based on the nature of the activities or from the focus of group discussions on the importance of working together. They also mentioned that this type of course can help groups experience more cohesion while “minimizing the effects of variables such as race, gender, and age” (p. 273). In Glass and Benshoff’s study, group cohesion was established regardless of race, age, or gender of the participants in the groups. Further, it was suggested that participation in challenge programs can lessen discrimination and can help each individual become more a part of the group.

**Contact Theory and Inclusion in GPE**

Contact is an important part of the formation of positive attitudes toward others (Tripp, French, & Sherrill, 1995). “The direction of attitude change depends largely on the conditions under which contact has taken place” (Tripp et al., p. 324) and the direction of change depend on the conditions (either favorable or unfavorable) in which contact takes place (Tripp et al., 1995). Favorable conditions exist, when relationships: (a) are equal status, (b) are cooperative rather than competitive, (c) are rewarding to all individuals involved, (d) have common goals, and (e) exist for an extended period of
time. However, when unfavorable conditions exist, there is: (a) competition between
groups and/or group members, (b) an environment that is not pleasant or is full of
tension, and (c) group members are frustrated (Tripp et al., 1995). Although originally
designed to describe relationships and interactions among individuals of different races
and ethnicities (Allport, 1954), contact theory has also been used in inclusive settings
including physical education to describe relationships between and among individuals
with and without disabilities (Archie & Sherrill, 1989; Butler & Hodge, 2004; Slininger
et al., 2000; Tripp et al., 1995). It is important to note that although the theory originated
in 1954, many aspects of the theory are still relevant in today’s society (Archie &
Sherrill, 1989; Sherrill, 2004; Slininger et al., 2000; Tripp et al., 1995). On interactions
between individuals with and without disabilities, the literature reviewed in this chapter
has shown that interactions between individuals with disabilities, specifically those with
learning disabilities and emotional disturbances and their peers, do not occur often
(Baron, Wheeler, Felcan, & Henek, 1976; Cullinan & Sabornie, 2004; LaGreca &
Mesibov, 1981; Sabornie et al. 1987; Siperstein, Bop, & Bak, 1978; Vaughn, Elbaum, &
Schumm, 1996).

Archie and Sherrill (1989) used Allport’s (1954) contact theory to examine the
influence of contact and gender on the attitudes of fourth and fifth grade students who
were in integrated and non-integrated physical education settings. Two elementary
schools were selected with a sample size of 143 students educated in an integrated setting
and 86 students who were not educated in an integrated setting. Data were collected
through student responses on the Children’s Attitudes Toward Handicapped Scale, and
through interviews with the teachers and principals from each school. The interviews
indicated that in the classrooms and schools where students with and without disabilities were educated together, there were several assumptions guiding the integration practices. These assumptions were: (a) individuals with disabilities were viewed as having equal status, (b) integrated physical activities were meaningful, and (c) contact contributed to positive attitudes toward all individuals. Findings indicated that there was no significant interaction between contact groups or between genders of the students. The findings from this study lend partial support to Allport’s theory that increased contact would positively influence attitudes. When each item on the instrument was analyzed separately, students who were in integrated settings did have more favorable attitudes toward individuals with disabilities than did the students who were not educated in integrated settings. Archie and Sherrill advocated a need for interventions that would positively influence the attitudes of individuals without disabilities toward individuals with disabilities.

Tripp, French, and Sherrill (1995) also used contact theory within an ex post facto design to determine attitude scores of elementary students [who were educated in integrated and segregated settings] toward individuals with disabilities using the Peer Attitudes Toward the Handicapped Scale [PATHS]; a second purpose was to determine and compare the differences in attitudes of boys and girls toward individuals with disabilities. One hundred nineteen girls and 107 boys in an integrated setting and 122 girls and 107 boys [ages nine to 12 years old] in a segregated setting participated in this study. In the integrated setting, 21 students with disabilities [7 with physical disabilities, 10 with learning disabilities, and 4 with behavioral disabilities] participated in physical education classes together with peers without disabilities, while the segregated setting had no students with identified disabilities participating in physical education. Findings in
this study were similar to those of Archie and Sherrill (1989). There were no significant differences between the attitudes of students in both settings toward individuals with disabilities. There was a difference between girls’ and boys’ attitudes, however. Girls tended to have more positive attitudes toward classmates with disabilities than did boys. Interestingly, the PATHS scores indicated that within the integrated setting, the students tended to have less favorable attitudes toward classmates with physical disabilities than the students in the segregated setting. The students in the integrated setting viewed individuals with behavior disorders more positively than those in segregated settings, and there were no significant differences between the groups in their attitudes toward individuals with learning disabilities. The findings of this study revealed a hierarchy of attitude preferences toward individuals with varying disabilities, and that there is a need to address attitudes as multidimensional rather than one dimensional.

Block and Zeman (1996), in a quasi-experimental study [Non-equivalent Pretest-Posttest Control Group Design], attempted to determine the effects that including individuals with severe disabilities would have on the motor skill development and attitudes of students without disabilities following the tenets of Contact Theory. It was hypothesized that with appropriate support [e.g. adapted physical education [APE] specialist and adapted equipment], there would be little effect on skill development, and that the students without disabilities would develop positive attitudes toward the inclusion of students with severe disabilities in physical education classes. Two intact sixth grade physical education classes in which one of the classes had three students with moderate to severe mental retardation included [experimental group] while the other class had no students with disabilities included [control group] were used. However, only 16
students from each class returned consent forms and participated in the attitude survey. Students were pre and post-tested on their motor skills relative to basketball [chest pass, shooting, and dribbling] and were given the Children’s Attitudes Toward Integrated Physical Education- Revised [CAIPE-R]. Findings indicated that including students with disabilities did not negatively affect students without disabilities. The experimental group had similar improvement in shooting and passing compared to the control group. Differences were noted in dribbling skills but were attributed to sampling discrepancies as both groups received the same amount of instruction in dribbling. Attitude scores indicated that on the pre test, the experimental group showed more positive attitudes than did the control group. This was possibly because they had been educated in an inclusive setting for three months prior to the study. When analyzing gain scores, the attitudes of the experimental group did drop slightly from pre to post test, however, there were no significant differences between the groups in terms of attitude toward inclusion in GPE or in modifying the rules of the game for individuals with disabilities. The decrease from the pre to post test in the experimental group attitudes was attributed to the fact that these individuals had already been in an inclusive setting for three months, giving them higher pre test scores and more possibility of reaching a ceiling effect on their attitude scores. The results in this study indicate that if given appropriate support, students with disabilities can be educated with peers without disabilities without negatively compromising the performance and attitudes of students without disabilities, lending support to contact theory.

Slininger, Sherrill, and Jankowski (2000) utilized Allport’s (1954) contact theory to compare the effects of three different physical education settings: (a) structured contact,
(b) non-structured contact, and (c) no contact on the attitudes of fourth grade students toward students with severe mental retardation [MR] who were in wheelchairs. The authors indicated that one main assumption of this study relative to contact theory was that children (i.e. those with disabilities) who are very different from their peers experience prejudice and discrimination such as avoidance and unequal treatment from peers without disabilities. Utilizing intact classes of students in a GPE setting, the authors used quantitative (adjective checklist, intention scale) and qualitative (weekly journal entries from the structured contact group) data in this study. The adjective checklist was used to determine stereotypes related to acceptance and rejection, the intention scale was used to determine which activities individuals would or would not do with individuals with disabilities, and the weekly journal entries were used to determine how the students perceived the class climate.

In each experimental (structured and non-structured contact) group, two children with severe MR who had limited verbal communication (one boy, one girl) with a paraprofessional were randomly assigned to the class to participate; they were not already a part of the class (Slininger et al., 2000). In both experimental groups, the students were informed ahead of time that two individuals with severe disabilities would be joining their class and were also given information about how to interact with these individuals and how to push their wheelchairs. Differences between the groups were in the amount of contact time a student was assigned to be a helper for the students with MR. In the structured contact group, all students had at least one opportunity to be a helper and all students were encouraged to interact with the students with MR, some students had two turns at being helper. In the non-structured group, only two students were assigned to be
helpers and no instructions about contact were given to the class. Similar to Vogler et al. (2000) and Tripp et al. (1995), findings indicated that girls had more positive attitudes toward individuals with disabilities.

Overall, Slininger and colleagues reported that the posttest scores were better than pretest scores on the adjective checklist, and more so for males than females. This could possibly be because it is easier to change low scores than high scores from pre to post test due to a ceiling effect in individuals who had high scores on the pre test. The structured group improved most on the adjective checklist while the non-structured group improved more on the intention scale, and the expected strong support for the structured contact group improvement was not seen in the findings. Specific to the qualitative data, students in the structured contact class were required to write a reflective journal one time per week to determine what the students liked and disliked during the week. The authors indicated that 85% or more of the students wrote about liking the class activities, and 25 to 34% of the students wrote positive statements about their peers with disabilities.

Slininger et al.’s findings did not support Allport’s (1954) theory that attitudes will improve through equal status relationships, cooperation, intimate, and supported settings through a structured group setting. Although their findings did not support Allport’s (1954) theory, it is important to mention that in this study, we cannot say that the four main tenets of contact theory were met (equal status relationships). One of the main premises of Allport (1954) is that all four conditions are necessary in order to promote positive relationships between individuals. It is necessary that a teacher provide an environment supportive of social interaction where each student is an important part of reaching a goal, which will be an important aspect of the current dissertation study.
In 2004, Butler and Hodge completed a case study to describe the social interactions that occurred between students with and without disabilities in a GPE setting. In this study, 18 sixth grade students participated with two of the students having disabilities, one student with Down Syndrome, and one student with juvenile scoliosis. This study utilized similar data collection measures as Place and Hodge (2001). In this study, Butler and Hodge focused only on social interactions between the students and conducted interviews with the students based on the field notes of the observer. During the lessons observed, the category of “no interaction” was most frequently observed for both target students. The interactions that did occur were mostly positive and were unidirectional in nature and there were many other variables that could have affected the low percentage of interaction in the observed classes. The findings in this study partially support contact theory (Allport 1954). In that, if a teacher provides favorable conditions, positive interactions between students with and without disabilities are possible. The authors indicated a need for further research in the area of social inclusion utilizing different curricular models, teaching methodologies, and strategies within a GPE context.

To date, many of the studies that have used Allport’s contact theory in GPE settings have been descriptive and/or qualitative in approach, and they have shown that interactions between students with and without disabilities do not always occur. Equal status relationships between students with and without disabilities are not developed overnight, if at all. Critics of contact theory in the inclusion literature indicate that the main critique of contact theory is the lack of effectiveness in producing favorable results (Hutzler, 2003). However, in some cases, one or more of the four necessary components of the theory were not present in those studies and could have affected the results.
It is important that we add to the existing body of literature in different ways to encourage and foster equal status relationships and increased interaction between students in GPE settings. There is a need for interventions that utilize a sharing of common goals and cooperation between and among group members to develop reciprocal relationships and interactions as postulated in contact theory in GPE settings. Hence, contact theory was judged a suitable theoretical framework for situating this study. An Adventure Education unit was one possible solution to facilitate equal status relationships between and among students with and without disabilities in a GPE setting and was further explored in this current dissertation study.

**Chapter Summary**

This chapter provided information relevant to social inclusion and acceptance of individuals with disabilities in inclusive settings as well as on adventure programming for individuals with and without disabilities. Although the literature is limited on the social inclusion of students with disabilities in physical education, it is clear that in the case of the existing research, individuals with disabilities (e.g. students with emotional disturbances and learning disabilities) tend not to be included socially by their peers without disabilities. This information has been gleaned through interviews with students who have disabilities as well as through systematic observation systems and survey instruments.

There is a clear need in the literature for interventions that aim to improve the social inclusion of individuals with disabilities into GPE contexts. Adventure Education has been shown to increase positive attitudes and to foster appropriate and positive interpersonal relationships between individuals with and without disabilities in recreation
settings. The literature reviewed on Adventure Education facilitation and debriefing shows that by allowing individuals a chance to review their experiences, they will be able to better relate their experiences (i.e. interactions with each other) to the importance of transferring these experiences (of interacting with others) into real life settings outside physical education. Findings from studies such as that of Garst et al. (2001) have particular relevance to the current dissertation study with regard to behavioral conduct and social acceptance as these were two areas addressed in the dissertation study. Individuals with learning disabilities and emotional disturbances were specifically targeted in this current study because these individuals tend to be accepted less than individuals with other disabilities or those without disabilities. Through structured activities, individuals with disabilities had the opportunity to work together to achieve a common goal, and through the use of group initiatives and other activities, individuals with emotional disturbances had the opportunity to learn to improve their behaviors and could start to build interpersonal relationships with others in their groups. This study best aligns with the postulations of Allport (1954) that there are four conditions that necessitate being present for positive interactions to occur between individuals with and without disabilities, and focused on these tenets to extend the literature base utilizing planned contacts in GPE settings to increase and improve interactions between individuals with and without disabilities.
CHAPTER 3

METHOD

The purpose of this study was to examine the effects of an Adventure Education unit of instruction on the social interactions of students with and without disabilities in GPE. The study was situated in the four main tenets of Allport’s (1954) contact theory (i.e. equal status contact, sharing of common goals, intergroup cooperation, and environment supportive of contact). The study focused on extending the literature base on social inclusion in GPE settings by utilizing planned contacts and creating an environment that was supportive of inclusion and interaction through an effective facilitator of Adventure Education in the GPE setting to increase and improve the interactions between individuals with and without disabilities in the GPE setting.

The purpose of this chapter is to explain the methods that were used for this study. This chapter is divided into several sections: (a) pilot study; (b) dissertation study; (c) participants; (d) description of independent variable; (e) definition of dependent variables; (f) measurement of dependent variables; (g) procedures; (h) observation and coding procedures; (i) experimental design; (j) external validity; (k) social validity; and (l) data analysis.
Pilot Study

In a pilot study, the researcher used the Analysis of Inclusion Practices in Physical Education- student version (AIPE-S Revised) instrument developed by Hodge et al. (2000) to code the social [verbal and nonverbal] interactions that occurred between students with and without disabilities in a GPE setting. The researcher coded behaviors that occurred between students during the implementation of an Adventure Education unit of instruction taught by one middle school GPE teacher.

Purpose

The purpose of this pilot study was to determine the suitability, reliability, and usability of the revised AIPE-S instrument for use in measuring social interactions between students with and without disabilities in a specific time frame that had been predetermined by the teacher. This was done to determine whether the teacher’s predetermined time frame of an eight day Adventure Education unit of instruction would be long enough to increase social interactions between students with and without disabilities. In addition, a functional relationship between adventure programs and attitudes of individuals without disabilities toward individuals with disabilities (Anderson, et al., 1997; Davis-Berman & Berman, 1989), acceptance of individuals with disabilities in inclusive adventure programs (Sable, 1995), and increases in interpersonal relationships between individuals with and without disabilities in adventure settings (Anderson, et. al, 1997) has been shown in previous research. Therefore, a functional relationship between Adventure Education and social interactions was not a specific focus for this pilot study. Based on data gathered in the pilot study, procedural changes
were made as necessary to the dissertation study (e.g. not allowing students to self-select their groups) and the AIPE-SR instrument (e.g. adding the category of “off task interactions” to the instrument).

Participants

The pilot study was conducted in a sixth grade physical education class of 25 students in an urban middle school after receiving approval from the university’s Institutional Review Board and the Columbus Public School district (CPS). The observed group of students consisted of eight students: (a) two Hispanic females who were English Language Learners (ELL), (b) five African American students (two males, three females, of which one female had a learning disability), and (c) one White American female. This group was chosen because the only individual with a disability who exhibited regular attendance in the class was a member of this group, and one target group was chosen by the researcher because data were collected through live coding with the AIPE-SR instrument as videotaping was not allowed by the university’s Institutional Review Board. At the beginning of the unit, the teacher had allowed the students to choose their own groups for the duration of the unit, and changes were made as necessitated by the teacher (e.g. if two students tended to be off task together, she moved them to different teams). Students in the target group had all returned their consent forms to the teacher prior to the start of data collection.

Setting

The pilot study was conducted in an urban middle school in Columbus, Ohio. This school is considered an International middle school, in which students attending this school learn a second language in sixth, seventh, and eighth grades. At the time of the
pilot study, there were 453 students in the school, and of this number, 388 (85.7%) were identified as Black (African) or African American, 47 (10.4%) Hispanic, 14 (3.1%) White American, and four (less than 1%) Asian or Asian American. Ninety-four (20.8%) students were ELL, and 57 (12.6%) students received special education services (Columbus Public Schools student breakdown counts, 2006). The test scores for the previous school year (2005-2006) indicated that the sixth grade students tested at a level that put the school in “academic emergency,” the seventh at “academic watch,” and the eighth at “continuous improvement” (Mifflin International Alternative Middle School Performance Index Break Down, 2006). At the time of this pilot study, the school was considered in “academic watch.” These terms are measured by what is referred to as Performance Index (PI), and is one measure that is used to determine school report card distinctions (Ohio Department of Education Performance Index calculator, 2006).

“The PI is calculated by using a weighted average of individual student performance levels on the proficiency and achievement tests at grades where multiple score levels are reported” (Ohio Department of Education Performance Index calculator, 2006). Schools in academic emergency have a PI score of zero to 69, schools in academic watch score 70-79, and schools in continuous improvement score 80-89 (Ohio Department of Education Performance Index calculator, 2006).

A sixth grade physical education class of 25 students in this urban middle school was observed for eight days. The class consisted of two students with disabilities, a female with a learning disability (student observed for the pilot study) and a male with what is considered “other health impairment” that was minor. Both students worked with a tutor as necessary outside of their regular education classes, but were fully included in GPE
with no tutor or aide. There were nine males and 16 females in the class, 19 of the students were Black African or African American, five were Hispanic, and one was White American. Seven of the students in the class were ELL.

Instrument

In the pilot study, a revised version of the *Analysis of Inclusion Practices in Physical Education*, Form S - Student version [AIPE-S] by Hodge, Ammah, Casebolt, Lamaster, and O’Sullivan (2000) was used. After speaking with the lead author about the AIPE-S instrument, several modifications were deemed necessary. First, the instrument was designed by the authors to record the entire class session as one observation period. However, Cooper et al. (1987) mention that it is necessary to break long observation periods into smaller periods of time to increase inter observer agreement in coding each observation period, what is known as a frequency within intervals procedure. For example, instead of using an entire 30-minute class as one observation period, it may be necessary to break the class period down into six smaller periods of five minutes to increase the chances of agreement between observers.

Second, to decrease the complexity of the interactions to be coded, a simpler coding system was warranted where only three different categories of behavioral interactions were coded (i.e. appropriate, positive appropriate, and negative interactions). Each category can include more than one specific behavior, but to increase the likelihood of interobserver agreement, it was deemed necessary to decrease the complexity of the behaviors and codes. [See Appendix A]

The revisions to this instrument warranted the completion of a pilot study using the revised instrument in a setting similar to that of the eventual dissertation study using the
same intervention. The pilot study was approved by the Institutional Review Board at The Ohio State University [project number 2006E0398], and by the Columbus Public School [CPS] District for access to schools in CPS district. Appropriate steps were taken to gain consent of the desired middle school, teacher, and students/parents to begin a pilot study in that setting.

*Data Collection and Analysis*

Data were collected in one GPE class each day for eight days. The teacher had taught one lesson with the students prior to the researcher being present, but due to a lack of returned consent forms, data collection was not feasible during the first day. The teacher introduced Adventure Education activities to the students on Monday through Thursday for two weeks, and on Fridays the students participated in what the teacher calls “Fitness Fridays” where she performed physical fitness tests and fitness activities that did not relate to the unit she was teaching during the other days of the week. Due to the fact that the study was approved by the OSU Institutional Review Board on an exempt status, videotaping was not allowed, so the researcher observed the target group and coded live the number of times team members interacted appropriately, positively, or inappropriately with the student with a learning disability to determine the feasibility of the AIPE-SR instrument.

The researcher also took brief field notes with regard to each activity that was introduced and the “exit ticket” for the day. The teacher had all the students fill out what she termed an “exit ticket” that the students had to complete before leaving class. Each day, the exit ticket focused on different parts of the lesson where the students had to answer a question about what they did or learned through the activities. The purpose of
the field notes was to determine the structure of the lessons and unit of instruction as well as any important information about the interactions of the observed group of students.

Visual inspection of the data show the students in the group interacted more with the student with a learning disability at the end than they did at the beginning of the unit. The student with a disability also showed more interaction throughout the unit and started to take a leadership role within her group by suggesting strategies to the group to become more successful at the activities presented by the teacher (field notes, day eight).

_Procedural Changes_

Based on data collected in the pilot study, the researcher and adviser decided that a fourth category was necessary in coding the behaviors that occurred during the lessons. The category of off task interaction was added because the researcher observed that the students would occasionally interact with each other when the teacher was talking, and although the interactions may have been socially appropriate behaviors, it was not appropriate that these interactions occur at that time. Second, it was determined that the GPE teacher would need to focus specifically on reinforcing and encouraging positive and appropriate interactions between students in the class. A visual analysis of the data showed that increased interactions occurred throughout the unit. For example on the first day of observation, 12 interactions were initiated by students without disabilities with the student with a disability (eight appropriate interactions, three positive appropriate interactions, one inappropriate interaction) during the entire class period. By the seventh day of the unit, interactions had increased to 30. Specifically 30 interactions (26 appropriate, but two were determined to be off task and two inappropriate) occurred in a 45 minute class session. In addition, although the interactions had increased during the
unit, the interactions were not at a level desired by the researcher, and in discussing with a noted scholar in the area of Adventure Education, it was determined that the unit of instruction needed to be longer than eight days, and it was decided to increase the unit to 15 lessons (Sue Sutherland, personal communication, October 2, 2006). Finally, after consulting a noted scholar who often uses single subject designs, it was determined that it would be necessary to follow the set list of activities from the curriculum guide [see appendices B and C] to determine the degree to which the teacher taught Adventure Education in her classes [procedural integrity] (Gwendolyn Cartledge, personal communication, September 28, 2006). The purpose of the list of activities from the curriculum guide was to provide a way to ensure that the teacher was following the intervention and not straying from the tasks outlined in the list of activities for this unit of instruction. This also will aid other researchers to determine what exactly was done in the intervention of this study if others seek to complete replication studies utilizing Adventure Education.

**Dissertation Study**

The aim of this dissertation study was to target the social inclusion of middle school students with learning disabilities and emotional disturbances in three classes of approximately 25 students per class. Students with learning disabilities and emotional disturbances were chosen as the targeted disabilities for this study because literature has shown that individuals with these disabilities tend not to be accepted by their peers without disabilities (Bryan, Wheeler, Felcan, & Henek, 1976; LaGreca & Mesibov, 1981; Sabornie, Kauffman, Ellis, Marshall, & Elksnin, 1987; Schonert-Reichl 1993; Siperstein, Bop, & Bak, 1978; Vaughn, Elbaum, & Schumm, 1996). Therefore it is important that
strategies be implemented to counter the social isolation and exclusion these students typically experience in general education settings. Each observation took place in the regular GPE facilities [i.e. gymnasium, playing fields, physical education equipment] employed by this teacher for the Adventure Education unit of instruction. During the Adventure Education unit, students engaged in various activities that aimed to promote social interactions between all students including communication, cooperative, trust-building, and problem solving activities. The key reasons for selecting Adventure Education as the unit of instruction were: (a) the teacher was familiar with Adventure Education, (b) Adventure Education encouraged social interactions by requiring students to work together to complete tasks, and (c) it was a novel unit of instruction for these students, which minimized student familiarity with the content and activities during the unit.

Setting and Participants

School setting. This study took place in an urban middle school [i.e. sixth and seventh grade] GPE classes within an urban school district in central Ohio. All classes were at the same school and were taught by the same teacher as the pilot study. This teacher taught students who had documented disabilities in many of her classes. At the time of the study, the demographics of the student body had changed and were updated to better reflect the students attending the school. According to the Columbus Public Schools Student Breakdown Count (2007), there were 444 students enrolled in the school, and of this number, 204 (46%) were male and 240 (54%) were female. When broken down further, 383 (86.3%) of the students were identified by the school as Black, 47 (10.6%) students as Hispanic, 12 (2.7%) students as White, 1 (0.2%) student as Asian, and 1
student as Native American. Many students in this school were assigned to the school by a lottery system in which 303 (68.2%) of the students were assigned by lottery, while 141 were assigned to the school because of their address or due to an assignment to the school for other reasons. Of these students, 89 (20%) were considered “active ESL [ELL]” where they were taking a class that was designed specifically for English language learners, while there was one student (0.2%) considered “inactive ESL” where this student spoke English as a second language, but did not take classes designed for English language learners. There were 59 (13.3%) students in this school who received Special Education services, 365 (82.2%) students who received free lunch, and 29 (6.5%) who received reduced lunches.

To gain access to the participants, approval was sought from the university’s Behavioral Sciences Institutional Review Board as well as from the specific school district to be used through the Office of Outreach and Engagement. Once access was granted, the teacher and principal were contacted for permission for the researcher to complete research in their school with the teacher teaching an Adventure Education unit of instruction with specific focus on student interactions in a GPE setting. Upon agreement by the teacher and principal, students in this teacher’s classes were asked for their participation in the study, and all appropriate measures were taken to gain their consent as well as that of their parents.

In this particular school, the Adventure Education unit of instruction lasted between 8 -15 days as prescribed by the Middle School Curriculum Guide (see Appendix B) for
the school district (Columbus Public Schools Middle School Curriculum Guide, 2006). For the purposes of this study, the Adventure Education unit lasted for 15 days of instruction.

**Teacher.** The selection of the teacher was based on the reputation of the teacher and previous collaboration with faculty at a nearby university with regard to effective implementation and facilitation of Adventure Education (as defined in Chapter 2) in middle school sixth and seventh grade physical education classes in an urban school district.

**Students.** In the study, students without disabilities and students who had documented disabilities [i.e. student receives IEP services in general and/or physical education and had been identified by the school as having a disability] in each class were used, specifically targeting the interactions of students without disabilities and their peers with emotional and learning disabilities. Two sixth grade classes and one seventh grade class with one group of seven to eight students in each class participated in the study; each group consisted of both students with and without disabilities. After discussing with an individual who has much experience with Adventure Education, it was determined that optimal group sizes for Adventure Education activities is eight to ten students to allow the students to gain full benefit of the intents and purposes of Adventure Education (Sue Sutherland, personal communication, October 2, 2006).

Students who did not return signed consent forms to the investigator and students who exhibited poor attendance records were excluded from the study because data were collected daily and lack of consent to participate would limit their participation [students who did not return consent forms] and would contribute to missed data points [students...
who were absent. Both boys and girls participated in this study and the physical education classes met daily for half of the school year for 42 minutes each day.

In this study, only the interactions between the three participants and their group members were targeted. Cooper et al. (1987) mention that in a multiple baseline across subjects design, two or more participants can be used, therefore, the use of three participants and their group members were judged adequate and feasible for observation and data collection. As mentioned previously, only students with disabilities who returned their consent forms and those students who had shown few absences throughout the first half of the school year were chosen as targeted students for this study, thus eliminating other students with disabilities from the study. It was not practical to include more students with disabilities in this study due to the amount of students who did not return signed consent forms as those students could not be included in the study. Pseudonyms were used in discussing all participants identified.

Class one. This class consisted of 30 seventh grade students with and without disabilities of both genders and different ethnicities. There were five Hispanic students, 23 students who were Black (African or African American), and two students who identified themselves as multi-racial (one female who identified herself as African American and Native American and one male who identified himself as Cherokee, White, and Black). This class consisted of 23 males and seven females ages 12 to 15, and 11 students spoke a language other than English as their first language. There were nine students with documented disabilities in this class. Of the students who were identified by the school as having a disability, four indicated that they were born with a disability (three males, one female), one acquired a disability (male), and the other four individuals
said they did not have a disability. Interestingly, Ignacio (pseudonym) did not identify himself as having a disability although he did receive special education services at this school. Ignacio was identified with a learning disability, and tended to exhibit off-task interactions at times during the teacher’s introduction of the lessons during the baseline phase of this current study. In addition, he appeared at times to not be paying attention to what the teacher was saying because he would lay down while she was talking, and at times he would also be talking. In looking at the answers Ignacio wrote for the exit tickets, it appeared at times that he did not understand the question or did not answer the question completely and had a hard time spelling many words. The target group was chosen by the teacher and consisted of seven individuals (both male and female) who returned their consent forms and agreed to participate in the study (Table 3.1). In addition, three of the seven students in the target group (all male, including Ignacio) spoke Spanish as their first language, while the rest of the group spoke English as their first language.
<table>
<thead>
<tr>
<th>Gender</th>
<th>Ethnicity</th>
<th>Disability (Y/N)</th>
<th>Pseudonym</th>
</tr>
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Table 3.1. Demographic Information for Target Students in Class One.

Class Two. This class consisted of 20 sixth grade students ages 11 to 12; similar to Class One, this class had students with and without disabilities of both genders and different ethnicities, but only one student with a disability (Baron). Baron did not label himself as having a disability although the school had identified him as a student with a disability (emotional disturbance) and he was currently receiving special education services at the time of this study. Many of the behaviors Baron exhibited throughout this study were behaviors that have been identified by the IDEIA (2004) definition of an emotional disturbance, such as inappropriate behaviors and/or socially unacceptable actions or words. Baron was one of six students in the class for whom English was a
second language; Baron spoke Spanish as his first language and did not speak much English. There were 13 students who identified themselves as African or African American, four Hispanic students, one White (non-Hispanic) student, one student who identified himself as Native American, and one student who identified himself as multi racial (African American and Native American). The target group in this class was chosen by the teacher and consisted of seven individuals (both female and male) who returned their consent forms and agreed to participate in the study. This group contained only one student with a disability (Baron); two students were Hispanic (both spoke Spanish as their first language; Baron spoke very little English), and the other five were African American; five were male, two were female.

<table>
<thead>
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<th>Disability (Y/N)</th>
<th>Pseudonym</th>
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</tr>
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<td>N</td>
<td>Ayesha</td>
</tr>
<tr>
<td>Female</td>
<td>African American</td>
<td>N</td>
<td>Satasia</td>
</tr>
</tbody>
</table>

Table 3.2. Demographic Information for Target Students in Class Two.
Class Three. Class Three consisted of 28 sixth grade students of both genders (13 males and 15 females ages 11 to 14) and different ethnicities; seven students in this class spoke English as a second language. There were 16 students in the class who identified themselves as African American, four students who identified themselves as Hispanic, three students who identified themselves as White, three who identified themselves as Native American, and one who identified himself as multi-racial. Of the 28 students in this class, 14 (six females, eight males) had documented disabilities (most with learning disabilities). When asked to identify whether or not they had a disability, 13 indicated that they did not have a disability (Benett included), although they had all been identified by the school as having a disability and were receiving special education services. In the target group for this class, there were seven students initially, however, one student ended up switching out of this class after two days of data collection. Of the six students who were present throughout the study, five were African American and one was White (non-Hispanic); all spoke English as their first language. Benett was the target student chosen for this group, and he had been identified by the school as having a learning disability. Benett’s behaviors tended to be off task on many occasions, he usually talked while the teacher was talking throughout the entire study. In looking at Benett’s answers to the exit tickets, it appeared that he had a hard time spelling and answering the questions, and at times (especially during the Adventure Education unit) he would not answer the questions on his exit ticket at all. When asked to complete the student demographic form, Benett copied many of his answers from Taniel.
<table>
<thead>
<tr>
<th>Gender</th>
<th>Ethnicity</th>
<th>Disability (Y/N)</th>
<th>Pseudonym</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>African American</td>
<td>Y</td>
<td>Benett</td>
</tr>
<tr>
<td>Male</td>
<td>African American</td>
<td>Y</td>
<td>Dajuan</td>
</tr>
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<td>Male</td>
<td>African American</td>
<td>N</td>
<td>Taniel</td>
</tr>
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<tr>
<td>Female</td>
<td>African American</td>
<td>N</td>
<td>La’ Mya</td>
</tr>
<tr>
<td>Female</td>
<td>European American</td>
<td>Y</td>
<td>Heather</td>
</tr>
</tbody>
</table>

Table 3.3. Demographic Information for Target Students in Class Three

Experimental Design

This study used a single subject Multiple Baseline across Participants Design (Cooper et al., 1987) to examine social inclusion of students with disabilities using one observational instrument (AIPE-SR) to determine the nature and frequency of interactions between students with and without disabilities during physical education. This type of design is one that allows the researcher to analyze the effects of an independent variable on a dependent variable across multiple behaviors, settings, or participants without withdrawing or reversing the treatment (Cooper et al., 1987).

A multiple baseline design is especially relevant in situations where it may not be possible to reverse the effects of an intervention or ethical to withdraw the intervention
from the participants. When applied to multiple participants, the researcher measured the same behaviors [in this study social interactions] of different participants in the study by implementing sequential applications of the intervention to the participants (Cooper et al., 1987). In this design, baseline logic (Cooper et al., 1987) consisting of three components: (a) prediction, (b) verification, and (c) replication were followed.

Prediction is made during the baseline condition that the responding of the participants would remain relatively stable [or predictable] if the intervention were not introduced, this is done by achieving a stable baseline of responding of at least five data points (Horner et al., 2005) when the baseline condition began at the same time for both groups. In this study, the students in the class who achieved a stable baseline first received the intervention [Adventure Education] first (Class 1), while the other students in Class 2 and Class 3 remained in baseline. When Class 2 received the intervention, Class 3 remained in baseline, and then subsequently received the intervention.

Verification is made when there is little to no change in behavior to the students who do not receive the intervention while the other students do receive intervention. When the students in Class 2 and later in Class 3 receive the intervention, replication of the intervention will show the effect of the independent variable in two different classes with different students.

The independent variable was the Adventure Education unit of instruction taught by an experienced physical education teacher who was considered to be an effective facilitator in Adventure Education. The dependent variable was student behaviors as measured by the AIPE-SR [social interactions] instrument.
Independent Variable

Baseline Condition. At the start of the baseline condition, the students were placed into groups of seven to eight in which they remained throughout the study (i.e. intervention and maintenance phases), these groups were determined by the teacher in order to make them as heterogeneous as possible. During baseline, data were collected for the target behaviors while the students were participating in activities other than Adventure Education related activities (i.e. activities that were not similar to Adventure Education such as team handball, volleyball, and basketball). Each session was videotaped and subsequently analyzed by the researcher and a trained observer for interobserver agreement purposes.

Experimental Condition. In this study, an Adventure Education instructional unit was considered the intervention or experimental condition. For the purposes of this study, the favorable conditions outlined in contact theory (Allport, 1954) guided the development of the Adventure Education unit of instruction as the intervention. Students with and without disabilities were placed into small groups during physical education classes where they would be in contact with each other each day. However, in addition to being in contact with each other through the creation of a structured contact setting, the teacher also focused on creating and facilitating an environment that was supportive of appropriate and positive interactions between all students and where students worked on common goals together as a group. One of the goals and ultimately, benefits of inclusive outdoor and adventure based activities is that of social integration where individuals with
and without disabilities work together to become accepted members of the group, to
develop necessary social skills, and to develop relationships between individuals with and
without disabilities (Schleien et al., 1993).

To socially include individuals with disabilities into adventure programs, it is
necessary that the facilitator/staff members are the individuals who guide the norms of a
group to ensure that everyone focuses on abilities and not limitations. They must also
believe and teach that each activity depends on the contribution of the entire group and
not on only one or two people (Schleien et al., 1993). Furthermore, in developing and
successfully implementing an adventure program, it is necessary for the facilitator to
address three specific areas: (a) help to establish ground rules for each person’s
contribution to the group and activities, (b) build all individuals into the team, and (c) use
strategies to promote team and individual benefits. For this study, the GPE teacher was
the facilitator and was asked to include the three areas just mentioned in each class
session to promote the social inclusion of students with disabilities into the GPE class
(Schleien et al., 1993). Many times in Adventure Education units, activities follow one
another in each lesson without a time to debrief and to allow the students to reflect on
their actions during the previous activity (Frant, Roland, & Schempp, 1982). It is
necessary that facilitators allow for a debriefing period that occurs during each lesson; the
debriefing period may be at the end of each activity or at the end of the lesson as a
closure.

Although the teacher had already been identified as an effective teacher and an
effective facilitator of Adventure Education, it was necessary to reiterate the importance
of implementing the unit in such a way that social interaction between all students,
specifically between those with and without disabilities, was targeted during the unit. The primary researcher and a Physical Education Teacher Education (PETE) faculty member from a local university met with the teacher one month prior to the implementation of the unit to discuss the goals of the unit and any questions or concerns the teacher may have had. This meeting consisted of the researcher and PETE faculty member discussing the following points with the teacher:

1. The focus of the intervention was on social inclusion of students with disabilities, and social interactions between students with and without disabilities would be targeted.

2. The groups needed to stay intact for the duration of the study in all conditions (baseline, intervention, maintenance).

3. The teacher needed to be the one to determine the division of the teams.

4. The teacher needed to focus on the process (i.e. teamwork, interactions with group members) of achieving the product, not on the end product itself (i.e. being the first group to complete the activity).

5. The sequence of activities was very important, that is she did not want to have the students doing an activity that involved trust in each other on the first day of the unit because they had not built the trust relationship at that point. Activities needed to follow the sequence of activities prescribed in the curriculum guide (see Appendix B for list of activities).

6. Did she have questions about how to facilitate an Adventure Education unit, what had she done in the past when she taught the unit?
7. The importance of debriefing in Adventure Education to help bring the activity or activities into more of a real life perspective for the students.

8. The process of the study (i.e. length, videotaping, consent forms).

During the first lesson of the intervention, the teacher was asked to model and facilitate the process of the following:

1. Establish ground rules for student behavior with the students: such as do not make assumptions or judgments about another person’s abilities; have a strong interest in working together as a group; emphasize the importance of positive attitudes, encouragement to group members, efforts, and accomplishments; to respect each other; and to ensure physical and emotional safety.

2. Build all individuals into the group: the teacher discussed the differences between working as a group where all members are included and where they are segregated during the introduction of the first lesson in the Adventure Education unit. It was also important to discuss feelings relative to being included and segregated from the group to ensure that all students understood the differences between the two. The teacher also discussed the importance of having good relationships and the value of friends with the class at the start of the unit.

In each activity throughout each lesson, the teacher implemented the third area while continuing to emphasize the first two areas:

3. Lead students through the activities by enhancing and promoting interactions between group members: this was done by using cooperative and problem solving
activities where each group member had a role and where social interaction was
enhanced in each activity by the teacher using prompts such as “Are you working
together?” or “Who did you help in that activity?”.

The teacher was asked to facilitate each activity by traveling throughout the activity
area reinforcing positive interactions between students, redirecting behaviors if they
became inappropriate, and stepping in if necessary to redirect behaviors [e.g. if a student
belittled another student in the group] (Schleien et. al., 1993). During each lesson, the
teacher held a debriefing session where students were asked to provide incidents during
the activities where they interacted with their teammates and the teacher would reinforce
positive examples of student interactions and to then transfer what happened into the
“Now what?” aspect of the experiential learning cycle (Cosgriff, 2000; Kolb, 1984; Kolb,
Boyatzis, & Mainemelis, 2001).

*Procedural Reliability.* Procedural reliability refers to the manner in which the
intervention was implemented as planned (Cooper et al., 1987). In this study, procedural
reliability was assessed first by reiterating with the teacher ahead of time the important
aspects of implementing Adventure Education as an effective facilitator. The briefing
session consisted of re-emphasizing each portion of the intervention procedures to the
teacher, and then by providing the teacher with a checklist of procedures as a reminder
before each lesson (Appendix J). During each lesson, the researcher had a copy of the
checklist as well as the lesson activities from the Curriculum Guide for the school district
and filled the checklist out at the conclusion of each lesson. Finally, at the end of each
lesson, the researcher met briefly with the teacher to discuss the procedures that were
followed during the lesson (Appendix J).
Definition of Dependent Variables

The dependent variables were student interactions measured in this study as: (a) appropriate interactions, (b) positive appropriate interactions, (c) inappropriate interactions, and (d) off task interactions. Dependent variables were coded by counting the number of times the target behaviors occurred between the students with and without disabilities and were initiated by students with or without disabilities in the target groups during the class period. Behavioral type [positive, negative/inappropriate, off task, or appropriate verbal and non-verbal] was important to determine for the purposes of this study in order to distinguish among the interactions between students with and without disabilities, and was the reason for the four behavioral categories used in this study.

Appropriate Interactions. These interactions can be verbal or non-verbal in nature and include behaviors that are not positive in nature, but are neutral in affect.

1. Verbal examples of appropriate interactions occur when the student with or without a disability initiates talk with a peer with or without a disability, such as giving specific feedback, is asking something politely of the student, uses peer’s first name, asks a peer to model or demonstrate for her/him (Hodge et al., 2000), or is talking with the student in normal conversation.

2. Non-verbal examples of appropriate interactions occur when the student models or demonstrates an activity for a peer (Hodge et al., 2000) or initiates hands on contact to guide a peer through an activity

Positive Appropriate Interactions. These interactions can be verbal or non-verbal in nature, and are positive in affect.
1. Verbal examples of positive appropriate interactions consist of when a student with or without a disability offers positive statements (Vidoni, 2005) such as praise or positive feedback to a peer, such as “Good job!” “Good throw!”

2. Non-verbal examples of positive appropriate interactions consist of behaviors such as handshakes between peer with and without disability, high-fives between peer with and without disability, clapping or cheering [using arms] for peer, thumbs up, hugs, or pats on the back of peer (Hodge, et al., 2000; Vidoni, 2005).

**Inappropriate Interactions.** Inappropriate interactions consist of verbal or non-verbal incidents where a student with or without a disability exhibits negative behavior toward a peer.

1. Verbal examples of inappropriate interactions consist of when a student used a put-down toward or unjustly criticizes a peer [e.g. “Shut up!” “You don’t know what you are doing!”]. The use of sarcasm toward or mocking of a peer was also included in this category (Vidoni, 2005).

2. Non-verbal examples of inappropriate behaviors consist of when a student makes fun of or mimics a peer, pushes, hits, or shoves a peer, or makes obscene gestures toward a peer (Vidoni, 2005).

**Off task interactions.** Off task interactions consist of any verbal or non-verbal interactions that occur between students when the students are not supposed to be interacting [e.g. when the teacher is instructing], or when the interactions are not related to the activity that students are participating in (e.g. if students are talking about what they did on the weekend). These interactions are not considered “wrong,” in fact, they
may be positive or negative in affect but what makes these interactions off task is that they occur at times where they are not supposed to occur. For the purposes of this study, these interactions were coded as off task because the premise of this study was to promote a learning context with appropriate and positive interactions between students, and off task interactions would not benefit this premise.

1. Verbal examples of off task interactions include students talking to each other when they are supposed to be listening to the teacher or when students are talking about something that does not relate to the activity [e.g. if the students are talking about what they did last weekend or other topics that do not have to do with their participation in a particular activity].

2. Non-verbal examples of off task interactions include students making gestures to each other when they should be listening or participating in activity [e.g. when students are pointing at another student when the teacher is talking].

Measurement of Dependent Variables

AIPE-SR. The AIPE-SR, a revised version of the Analysis of Inclusion Practices in Physical Education Form S- Student version (Hodge et al., 2000) was used for this study (Appendix A). As mentioned previously, several modifications were warranted to strengthen the instrument; these revisions were pilot tested before the use of the instrument for this study. Further, the revised instrument was shown to the lead author of the first version of this instrument for face validity purposes (i.e. that the instrument appears valid for its intents and purposes). Following this, the instrument was given to two university faculty members with expertise in the area of adapted physical education for their feedback and to reaffirm content validity of the revised instrument [i.e. that the
items and definitions on the instrument represented a balanced and accurate
representation of the domain being measured] (Ary et al., 2002; Johnson & Christensen,
2004).

For this study, student interactions were videotaped and subsequently analyzed by the
researcher to determine the types and frequencies of the interactions that occurred
between and were initiated by both the students with and without disabilities throughout
the lessons [Appendix A]; one student with a disability wore a wireless microphone for
coding purposes so that the researcher and observer were able to hear the interactions that
occurred. An observer was trained for interobserver agreement purposes to 95% accuracy
(Cooper et al., 1987) on a videotaped activity that was not part of the study. The observer
watched the activity session alongside the researcher (also trained on AIPE-SR) who had
already observed and recorded the lesson to minimize the influence of the researcher on
the observer or vice versa and their responses were compared for accuracy in calculating
interobserver agreement during the training session.

Data were coded using a frequency count (broken into five-minute intervals for the
purpose of increasing IOA) for the duration of the class; each time an interaction
occurred between students with and without disabilities, the initial representing the
interaction were coded on the recording sheet in the space allowed. This is also known as
event recording, or tally counting where the behavior is recorded each time it occurs
(Cooper et al., 1987). It was determined during the pilot study that five minute intervals
were not too long as there were not many interactions between students, therefore
interobserver agreement remained high. In Class One the baseline condition lasted ten
sessions; Class Two for 20 sessions; and Class Three for 28 sessions. Each lesson during
the unit of instruction was also observed and recorded as well as eight sessions following the intervention (maintenance) were recorded for social interactions between students using the AIPE-SR instrument for observation data.

**Demographic Data.** In this study, the demographic data of the students within each class was obtained by the students filling out a demographic questionnaire (Appendix A). The purpose of collecting demographic data on all the students in the class was to be able to describe the class in terms of gender, age, and ethnicity. The students with disabilities were asked to provide specific information on their disability in addition to filling out the demographic questionnaire. The teacher was also asked to provide additional information about the students with disabilities as appropriate or necessary. In addition to these data, demographic data of the middle school was also included such as location of the school, ethnicity, socioeconomic status, and percent of the students receiving free or reduced lunches.

**Direct Observations.** Direct observations were made by the researcher each lesson throughout the study (Yin, 2003). In addition, observation notes were taken by the researcher in order to supplement the data from the AIPE-SR instrument. The purpose was not to gather qualitative data, but to explain the activities engaged in during each lesson in this study for replication purposes. Observation notes focused on the target student groups in each class: the student(s) with and without disabilities. The observations included the following information: verbal descriptions of the setting, activities, and actions of the students of interest, descriptions of verbal and/or non-verbal
interactions between the student with a disability and students without disabilities, descriptions of the activities introduced by the teacher, and any other comments the researcher made based on the observations.

Maintenance. Following the end of the Adventure Education unit of instruction, the researcher followed each group of students in each class for eight days following the intervention to determine maintenance of interactions between students on whether the students performed the target behaviors that were emphasized in the Adventure Education unit (Cooper et al., 1987). Eight lessons were observed at this time, and students were in the same groups they had been placed in during the baseline and intervention conditions during the study.

Observation and Coding Procedures

Equipment. All lessons occurred in GPE facilities [i.e. gymnasium or fields]. The researcher came to the classes prior to the start of the lesson to set up the video camera on top of a stage that was located at the end of the gym. In this way, the researcher was able to capture the target group for the entirety of the lesson without having to also operate the camera. Classes were recorded using a digital video recorder that recorded the actions of the students engaged in the Adventure Education activities. The camcorder remained in the same area away from the playing area throughout the study. Videotaping occurred from the beginning to the end of each lesson [i.e. when the teacher started taking attendance until the students were dismissed]. In each group, one student (with or without a disability) wore a wireless microphone that was attached to the camera to provide sound during data coding from the video tape. In this study, only one video camera was utilized due to the researcher taking field notes and operating the video camera throughout each
observed lesson to capture student interactions within the targeted groups. In addition, not enough signed consent forms were returned from parents to allow the researcher to observe two groups in the same class simultaneously.

*Participant Reactivity.* Reactivity, or the reaction of the participant to the observation (Kadzin, 1979) can become a potential limitation if not addressed within the study. To combat the effects of participant reactivity, the researcher used the following tactics:

1. The researcher attended the class for five sessions before data collection was to begin and set up the camcorder and microphone in the same manner as planned for data collection.
2. The observer arrived prior to and left after the lesson to reduce interruptions occurring during the class.
3. Camcorder remained outside the activity area where it would not interfere and was in the same place each lesson.

*Observer Training.* First, the observer read and familiarized himself with the coding instrument and definitions of each behavior and interaction. The observer was then trained in the definitions of each category within the AIPE-SR instrument so the definitions of each category were clear to the observer. This was done through a written quiz requiring the observer to both define the terms and through a series of scenarios requiring the observer to distinguish between the categories to decide the category that best fit each scenario (Cooper et al., 1987).

To assess initial agreement between observers [before analysis of sessions for the study] for the AIPE-SR instrument, the following procedures occurred as suggested by Cooper et al. (1987): immediately following observer training prior to the study, the
observer and researcher watched a short vignette of a class session not related to this study. The observer coded the lesson along with the researcher and inter observer agreement [IOA] was calculated. If there was less than 90% IOA, the observer was re-trained and watched another tape until at least 90% IOA was reached. If the agreement was less than 90%, the observer and researcher watched the video again and discussed each behavior as it occurred and the category into which it fit. Following the short vignette, the observer then watched a longer vignette that was closer to the period of a complete lesson until IOA had reached 90% or better (Cooper et al., 1987).

**Procedures**

Upon gaining approval to begin the research from the university’s Institutional Review Board, and gaining access to the school district from district through the Office of Outreach and Engagement, the researcher and a PETE faculty member from the university who was thoroughly trained in Adventure Education and Adventure Education facilitation briefed the teacher on important aspects of Adventure Education implementation in this study. The teacher for this study was chosen based on her teaching effectiveness in using Adventure Education, teaching classes containing students with disabilities, and on her willingness to participate in the study. During the teacher briefing session, Adventure Education activities were discussed as well as strategies introduced that the teacher was able to use to become an effective facilitator of social interactions within an Adventure Education unit such as encouraging students to help each other and to discuss solutions as a group, and encouraging students to include everyone in the group.
Following the teacher briefing, students in each class participated in their GPE classes as they normally would participate. What’s more, the researcher attended the physical education classes for five days prior to baseline data collection to familiarize the students with having an extra person in their classes to minimize participant reactivity. Data were obtained in each class from the AIPE-SR instrument before the implementation of Adventure Education unit of instruction was to commence to establish a stable baseline. Students then participated in the Adventure Education unit of instruction for 15 days, during this time AIPE-SR data were also collected. Observations by the researcher were accompanied by observation notes each day during the unit to obtain information regarding the context of the class. In this way, the researcher was able to determine a pattern or trend of interaction between the students (Cooper et al., 1987) and was able to describe the context of a typical lesson for the purposes of this study.

A typical Adventure Education lesson in these classes consisted of students entering the gym and going straight to their assigned home base. At this time, the teacher would take attendance and make any announcements before she introduced the activities to the class (see Appendix B for the middle school curriculum guide for the school district, Appendix C for the Adventure Education unit plan, and Appendix D for descriptions of each Adventure Education activity taught during this study). The teacher had a portable white board that she would use dry erase markers to write the names of the activities for the day so the students could see the activities. The teacher would then introduce the first activity to the students by telling them the name and the objective of the activity, but not how they could reach their objective, the groups had to work together to figure out a solution. Once the activity was described, the teacher would send the students to their
groups to participate in the activity. During the activity, the teacher would travel from
group to group to ensure that the students understood the task and that they were
interacting with each other to achieve their group goal of helping and including each
other.

Once each group finished the activity, the teacher would bring the groups back
together to introduce the next activity, and then would send them back to complete the
activity. The activities engaged in were the same in each class throughout the Adventure
Education unit, although at times Class Three got behind schedule due to student
behavior and disruptions during teacher instructions and debriefing, and ultimately the
unit was terminated after only nine days of intervention due to student misbehavior and
safety concerns with regard to the misbehavior. The teacher would follow this pattern
until ten minutes were left in the class. At this point, the students would return to their
home bases where the teacher would debrief the class using the “what,” “so what,” and
“now what” questions to help bring the activities to a close and to help the students to
make a connection between what they did in the activities and their real lives outside
physical education. Finally, the students were required to fill out what the teacher calls an
“exit ticket” where they had to answer a question the teacher provided them with that
focused on interactions and Adventure Education (see Table 3.4 for Adventure Education
exit ticket questions). The teacher and researcher worked together to develop exit ticket
questions that related to the study such as asking the students to discuss how they worked
together with their group to reach the goal of the activity. The students filled this out each
day at the end of the lesson.
Following the study, the researcher returned to the school during a different unit of instruction to measure student maintenance of the social interactions practiced during the Adventure Education unit.

<table>
<thead>
<tr>
<th>Intervention Day</th>
<th>Exit Ticket Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Explain one of your group rules and why it is important.</td>
</tr>
<tr>
<td>2</td>
<td>Explain what your group had to do to accomplish the group juggle.</td>
</tr>
<tr>
<td>3</td>
<td>Which type of communication is better, positive or negative? Why?</td>
</tr>
<tr>
<td>4</td>
<td>Give an example of how you communicated positively with someone in your group.</td>
</tr>
<tr>
<td>5</td>
<td>Why is positive communication important for good cooperation with your group members?</td>
</tr>
<tr>
<td>6</td>
<td>Why is cooperation important when working with a group?</td>
</tr>
<tr>
<td>7</td>
<td>No exit ticket.</td>
</tr>
<tr>
<td>8</td>
<td>How do you know if you trust someone?</td>
</tr>
<tr>
<td>9</td>
<td>How does positive communication build trust?</td>
</tr>
<tr>
<td>10</td>
<td>How do you know if someone trusts you?</td>
</tr>
<tr>
<td>11</td>
<td>Give an example of positive communication that you used with your group.</td>
</tr>
<tr>
<td>12</td>
<td>What was your team’s strategy for retrieving your pot of gold?</td>
</tr>
<tr>
<td>13</td>
<td>How did positive communication help your team be successful?</td>
</tr>
<tr>
<td>14</td>
<td>What was your group’s biggest challenge during Marble Pass?</td>
</tr>
</tbody>
</table>
| 15                | What have you learned during the Adventure Education unit?

Table 3.4. Adventure Education Exit Ticket Questions.
Inter-Observer Agreement

Inter-observer agreement [IOA] was assessed between the lead researcher and another observer for approximately 30% of the lessons in each phase of the study [i.e. baseline, intervention, and maintenance phases]. Cooper et al. (1987) mention that minimally, a researcher should assess IOA one time in each condition and that ideally all sessions are assessed, however, many researchers tend to fall in between ideal and minimal. When IOA measures were calculated, the target IOA measure was 90% or greater, although Cooper et al. (1987) indicate that traditionally many researchers use 80% IOA as an acceptable level of agreement. In this study, the formula for calculating IOA was to divide the smaller total of recorded occurrences by one observer by the larger total of occurrences by the other observer and then multiply by 100. To minimize observer drift throughout the study, the researcher retrained the observer halfway through the study to ensure that the observer did not change in the way he defined the dependent variables. This observer also spoke Spanish as his first language, and the researcher had studied Spanish for two years. This was important to this study because two of the three target students spoke Spanish as their first language and tended to speak Spanish with their friends who also spoke Spanish. It was important to determine what the students were saying to know into which dependent variable category their interactions fit.

For the AIPE-SR lessons that were observed, the researcher did not tell the observer in which order the lessons occurred while coding to minimize observer expectations during the coding session [e.g. that interactions would naturally increase toward the end of the unit] (Cooper et al., 1987).
To obtain higher IOA, Cooper et al. (1987) also mention that the complexity of the measurement system can also be a factor that influences IOA, therefore, a small number of behaviors were simultaneously observed, and observation sessions were kept short.

External Validity

In single subject research, external validity can be defined as “the degree to which a functional relationship found reliable and valid in a given experiment is considered meaningful under other conditions” (Cooper, et al., 1987, p. 239). Functional relationships refer to events that can be shown to happen by manipulation of another event (Cooper et al., 1987). In single subject research, external validity is established through replication of experimental procedures. For purposes of this study, replication of the experimental procedures took place in three classes taught by the same teacher using the same intervention. External validity was also enhanced by operationally defining and describing the participants, context, and intervention procedures within the study (Horner et al., 2005).

Social Validity

Social validity refers to “the social significance of the target behavior, the appropriateness of the procedures, and the social importance of the results” (Cooper, et al., 1987, p. 249). In this study, social validity of the results was assessed by the students with and without disabilities in the form of a social validity questionnaire (Appendix K) regarding the importance of peers initiating interactions with them during their GPE classes. This was done to determine whether the students believed that their behaviors changed, the importance of these changes for the students, and whether the students liked to participate in Adventure Education. Similarly, a social validity questionnaire
(Appendix M) was given to the teacher to determine the importance of the intervention in facilitating interactions between all students, especially those with and without disabilities in his/her class. Furthermore, the social validity of the procedures (Cooper, et al., 1987) were evaluated by the teacher on ease of implementation, practicality, and cost effectiveness [i.e. requirement of outside resources and equipment in order to effectively implement the unit]. Social validity measures can also be gathered from other individuals such as other teachers who teach these students in other subject areas and/or parents/guardians, although these measures are not required (Cooper, et al., 1987). For the purposes and feasibility of this study, social validity data were collected by all individuals directly involved in the study to determine their thoughts and feelings regarding the intervention used in this study.

**Data Analysis**

*Visual Analysis of Data.* Visual analysis of data occurs when the researcher visually compares the behavioral occurrences between and within each phase of a study [i.e. baseline and intervention phases] (Horner et al., 2005). This was done to determine the level of responding [mean performance] during a condition, the rate of increase or decrease in responding [trend] and if the patterns of responding tend to fluctuate during a phase [variability] (Horner et al., 2005) through the use of trend lines. In addition to the within-phase visual analysis, the researcher also analyzed across, or between phase visual analysis in order to determine the immediacy of the effect of the introduction of the intervention and the magnitude of the change in participant responding (Horner et al., 2005). This was done by taking the means from the baseline and intervention for each dependent variable and subtracting the larger from the smaller number. Following that,
the number obtained from the previous calculation was then divided into the baseline mean and then multiplied by 100 to determine a percentage of increase in behavior. In the case of a decrease in behavior from baseline to intervention, the larger number was again subtracted from the smaller number, and the number obtained was divided into the baseline mean and multiplied by 100. In addition, trend lines described the direction of the data path (Cooper et al., 1987) whether stable, ascending, or descending, and were used when a rate of responding did not appear stable from a visual analysis of the data and were used in this study to enhance the reliability of the visual analysis of the graphed data (Alberto & Troutman, 2006).
RESULTS

In this study, a multiple baseline design across participants was used to determine the effectiveness of an Adventure Education unit of instruction on changing the social interactions between students with and without disabilities in a middle school general physical education class. In this case, the students in each of the groups were combined for data analysis, that is, the graphs for each class represent the target student and the target students’ group. The intervention was replicated in two additional classes taught by the same teacher. The results of the study are organized into the following sections: (a) dependent variables; (b) interobserver agreement; (c) treatment integrity; (d) student social validity answers; and (e) teacher social validity answers.

Dependent Variables

This section represents the results of four dependent variables related to student social interactions in GPE. The dependent variables consisted of: (a) appropriate interactions, (b) positive interactions, (c) inappropriate interactions, and (d) off task interactions. Dependent variables were coded for each lesson (baseline, intervention, and maintenance phases) from the time the bell rang to begin class until the bell rang at the end of class. In reporting the results for each class, it was determined that it would be best to combine the
students in each target student’s group into one due to the high absence rate in each of the classes during the baseline condition after discussing this issue with a noted scholar in single subject research design (Gwendolyn Cartledge, personal communication, September 28, 2006). During the baseline condition on any given day there was at least one student absent from each group, and these absences would have contributed to multiple missing data points, therefore it was determined that these data (i.e. the data of the group members of the target students) should be combined to alleviate this risk.

Class One

In Class One, there were ten lessons in the baseline condition, 15 lessons in the intervention phase, and eight lessons in the maintenance phase of the study. Behaviors were coded by counting the number of times the target behaviors occurred between the target student with a learning disability (Ignacio) and his group members (males and females with and without disabilities) and whether the interactions were initiated by the target student or students in his group during the class period. The missing data on days five and 12 were due to Ignacio’s absence from class, and on days 24 and 25 were due to a malfunction of the wireless microphone that prevented data coding because there was no sound. Data for Ignacio and his group members are represented on two different graphs for each dependent variable (Ignacio initiating the interaction and his group members initiating the interaction), are summarized in Table 4.1, and also included in Appendix N.
<table>
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<tr>
<th>IGNACIO'S BEHAVIORS</th>
<th>BL MEAN</th>
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<th>INT MEAN</th>
<th>RANGE</th>
<th>MAINT MEAN</th>
<th>RANGE</th>
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<td>18.7</td>
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<td>15</td>
<td>1-39</td>
</tr>
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Note: BL = Baseline phase, INT = Intervention phase, and MAINT = Maintenance phase

Table 4.1: Summary of dependent variable data Class One.

_Appropriate interactions_. Data for appropriate interactions between Ignacio and his group members were coded for each observed lesson. Figure 4.1 represents the data for Ignacio’s appropriate interactions with his group members. During baseline, Ignacio’s appropriate interactions with his group members followed a decreasing trend over the
first ten days of the study. These interactions ranged from 15 to 68 occurrences per lesson with a mean of 47.6 occurrences of appropriate interactions per lesson. During intervention, a visual analysis of the data points showed an increase in appropriate interactions for Ignacio (a trend line verified the visual analysis), which ranged from 17 to 163, with a mean of 62.2 appropriate interactions during the days of the intervention that Ignacio was present and that audio was recorded. The mean increase from baseline to intervention was 14.6 or a 30% increase from baseline. During the eight day maintenance follow up, Ignacio’s appropriate interactions started to decrease in number from the trend that was observed in the intervention; these interactions ranged from 23 to 96 with a mean of 55.4 per lesson. However, there was still a mean increase from the baseline phase of 7.8 or 16%.
Figure 4.1: Appropriate interactions initiated by Ignacio.

Figure 4.2 represents the data for the appropriate interactions initiated by Ignacio’s group members toward him. During the baseline phase, the group’s appropriate interactions with Ignacio followed a fairly stable baseline (trend line was almost horizontal) ranging from zero to 49, with a mean of 16 appropriate interactions per lesson. During intervention, visual analysis of the data indicated an increase in the appropriate interactions of the group, and a trend line followed an ascending trend. These behaviors ranged from six to 151, although day 19 showed a very high increase in
appropriate interactions (151), the rest of the interactions during the intervention were between six and 57. The mean of the appropriate interactions of Ignacio’s group during intervention was 38.6 per lesson, and the mean increase was 22.6 or 141% from baseline to intervention. Finally, during the eight day maintenance phase, appropriate interactions of Ignacio’s group members with him ranged from three to 64 with a mean of 28.9 appropriate interactions per lesson, following a sharp decrease in trend from intervention to follow up. Although there was a decreasing trend in this phase, the mean difference between baseline and maintenance was 12.9, or an increase of 81%.
Figure 4.2: Appropriate interactions initiated by Ignacio’s group members.

Positive interactions. Data for positive interactions between Ignacio and his group members were coded for each observed lesson. Figure 4.3 represents the data for the positive interactions of Ignacio toward his group members. During baseline, Ignacio’s positive interactions were zero for every lesson except lesson seven, when he initiated two positive interactions with his group members (mean of 0.2 positive interactions per lesson). During intervention, Ignacio’s positive interactions remained at zero for every
lesson except lessons 11 (three positive interactions) and 12 (two positive interactions). In this phase, the mean was 0.4 indicating a 0.2 mean difference or a 100% increase in positive interactions from baseline to intervention. During the maintenance phase, positive interactions were at zero for four of the lessons, one positive interaction during the fifth maintenance day, and two positive interactions during two different lessons (the second and sixth maintenance days). In this phase, the mean was 0.6, with a mean difference of 0.4 from baseline to maintenance, or a 200% increase in positive interactions.

![Figure 4.3: Positive interactions initiated by Ignacio.](image-url)
Figure 4.4 represents the data for the positive interactions initiated by Ignacio’s group members toward him. During baseline, there was one positive interaction initiated toward Ignacio during lesson one and one during lesson seven (mean 0.2 per lesson). During the intervention, positive interactions ranged from zero to three (there were positive interactions on six of the 12 days of the intervention) following a sharp increase in trend throughout the duration of the intervention. The mean during intervention was 0.8, indicating a mean increase of 0.6, or 300% from baseline to intervention. During the maintenance phase, Ignacio’s group members initiated six positive interactions toward him during the eight days (two positive interactions each in lessons two and six, one each in lessons three and five). The mean in the maintenance phase was the same as the intervention at 0.8, indicating a mean increase of 0.6 or 300% from baseline to maintenance. A visual analysis of the data indicates an increase in positive interactions across the intervention and maintenance phases; however, different from the intervention where the trend line was ascending, the trend line followed a decreasing path in the maintenance phase of the study.
Inappropriate interactions. Data for inappropriate interactions between Ignacio and his group members were coded for each observed lesson. Figure 4.5 represents the inappropriate interactions of Ignacio toward his group members. Ignacio’s inappropriate actions took the form of negative or inappropriate comments toward his group members and in one case on day one of the intervention (day 11 of the study), Ignacio got into a pushing fight with a group member who had been calling him derogatory names the day before and at the beginning of this class period. Ignacio’s inappropriate interactions during baseline ranged from zero to six (five of the nine days his inappropriate interactions were at zero) with a mean of 1.7 inappropriate interactions per lesson; these data follow a descending trend throughout this phase. During intervention, Ignacio’s
inappropriate interactions ranged from zero to 15 (seven of the 12 days were at zero), with a mean of 2.6 inappropriate interactions initiated per lesson; and although the mean is higher, the trend line indicated a descending trend for inappropriate interactions during intervention. In the intervention, the mean difference was 0.9, or 53% increase from baseline to intervention. During the maintenance phase, Ignacio’s inappropriate interactions ranged from zero to five with a mean of 1.8 inappropriate interactions per lesson, following a more stable but decreasing trend in this phase of the study. The mean difference from baseline to maintenance was 0.1, or an increase of 5% from baseline.

Figure 4.5: Inappropriate interactions initiated by Ignacio.
Figure 4.6 represents the inappropriate interactions of Ignacio’s group members toward him during the study. In the baseline condition, inappropriate interactions followed an increasing trend and ranged from zero to 16 (four of the nine days were at zero inappropriate interactions), with a mean of 3.1 inappropriate interactions per lesson. During the intervention, inappropriate interactions demonstrated a decreasing trend ranging from zero to 14 per lesson (five of the 12 days were at zero inappropriate interactions) with a mean of 2.8 inappropriate interactions per lesson. The mean difference was 0.3 or a 10% decrease from baseline to intervention. Finally, during the maintenance phase, inappropriate interactions ranged from zero to nine per lesson (three of the eight lessons were at zero inappropriate interactions) with a mean of 2.3 inappropriate interactions per lesson; these data demonstrated a decrease in trend following the intervention phase of the study. The mean difference for the inappropriate interactions of Ignacio’s group was 0.8 or a 43% decrease from baseline to maintenance.
Figure 4.6: Inappropriate interactions initiated by Ignacio’s group members.

*Off task interactions.* Data for off task interactions between Ignacio and his group members were coded for each observed lesson. Figure 4.7 represents the data for Ignacio’s initiated off task interactions with his group members. During baseline, Ignacio’s off task interactions ranged from two to 73 per lesson, following an increasing trend, with a mean of 30.8 off task interactions per lesson. During the intervention, Ignacio’s off task interactions ranged from two to 39, with a mean of 20.1 off task interactions per lesson; the mean difference was 10.7 or a 10% decrease from baseline to intervention. These data followed a stable trend throughout the intervention phase of the study, whereas the data for off task interactions in the maintenance phase demonstrated an ascending trend. During the maintenance phase, Ignacio’s off task interactions ranged
from five to 60 with a mean of 20.9 off task interactions per lesson. The mean difference was 9.9 or a 32% decrease from baseline to maintenance.

Figure 4. 7: Off task interactions initiated by Ignacio.

Figure 4.8 represents the data for Ignacio’s group members and their off task interactions initiated toward Ignacio. These data follow similar trends as those of Ignacio’s off task interactions where the data demonstrated an increase during the baseline, followed a stable trend during the intervention, and an ascending trend during the follow up phase. During the baseline, the off task interactions ranged from one to 64,
with a mean of 25.2 off task interactions per lesson. During intervention, the off task interactions ranged from one to 41, with a mean of 18.7 off task interactions per lesson. The mean difference was 6.5 or a 26% decrease from baseline to intervention. During the maintenance phase, the off task interactions of Ignacio’s group members ranged from one to 39, with a mean of 15 off task interactions per lesson. The mean difference was 10.2 or a 40% decrease from baseline to maintenance.

Figure 4.8: Off task interactions initiated by Ignacio’s group members.

Class Two

In Class Two, there were 20 lessons in the baseline condition, 15 lessons in the intervention phase, and eight lessons in the maintenance phase of the study. Behaviors for
this class were coded in the same way as for Class One. The missing data on days ten, 32, and 35 were due to Baron’s absence from class, and on days 27 and 28 due to a lack of audio on the recorded tapes. Data for Baron (student with an emotional disturbance) and his group members are represented on two different graphs for each dependent variable (Baron’s initiated interactions and the initiated interactions of Baron’s group members toward him), are summarized in Table 4.2, and included in Appendix N.

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<th>BARON’S BEHAVIORS</th>
<th>BL MEAN</th>
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<td>15.5</td>
<td>1-36</td>
<td>21.1</td>
<td>9-39</td>
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</table>

Note: BL = Baseline phase, INT = Intervention phase, and MAINT = Maintenance phase

Table 4.2: Summary of dependent variable data Class Two.
Appropriate interactions. Data for appropriate interactions were coded for each observed lesson. Figure 4.9 represents the data for Baron’s appropriate interactions with his group members. During the baseline phase, Baron’s appropriate interactions with his group members followed a descending trend, ranging from two to 68 per lesson, with a mean of 30.9 appropriate interactions per lesson. During the intervention, Baron’s appropriate interactions ranged from seven to 68, with a mean of 30.5 appropriate interactions per lesson. The mean difference was 0.4 or a 1% decrease from baseline to intervention. Although the mean for the intervention phase was close to that of the baseline phase, the trend line followed a descending pattern during this phase. During the maintenance phase, Baron’s appropriate interactions ranged from seven to 61 in the eight observed lessons following the intervention. Baron’s appropriate interactions followed a slightly ascending trend with a mean of 22.4 per lesson. The mean difference was 8.5 or a 28% decrease from baseline to maintenance.
Figure 4.10 represents the data for the appropriate interactions initiated by Baron’s group members toward him. During the baseline, the appropriate interactions of Baron’s group ranged from six to 47, with a mean of 21.1 appropriate interactions per lesson. During the intervention, the group’s appropriate interactions with Baron ranged from 13 to 68 with a mean of 41 appropriate interactions per lesson. The mean difference was 19.9 or a 94% increase from baseline to intervention. The trend lines in the baseline and intervention phases for Baron’s group followed similar patterns to that of Baron’s appropriate interactions with both trend lines following a descending trend but the mean of the intervention was higher than that of the baseline condition. In this phase, the mean
difference was 0.4 or a 2% decrease from baseline to intervention. The data for Baron’s group in the maintenance phase follow an ascending trend similar to that of Baron ranging from nine to 40 and with a mean of 20.7 appropriate interactions initiated toward Baron each class during the eight day maintenance phase of the study.

Figure 4.10: Appropriate interactions initiated by Baron’s group members.

**Positive interactions.** Data for positive interactions were coded for each observed lesson. Figure 4.11 represents the data for Baron’s positive interactions with his group members. In the baseline condition, the positive interactions initiated by Baron demonstrated an ascending trend, ranging from zero to ten interactions per lesson,
although his positive interactions were at zero for most lessons (ten of the 19 lessons). The mean for positive interactions in this phase of the study was 1.4 per lesson. The intervention condition also followed an ascending trend; although the increase was not as sharp and the mean interactions per lesson were lower (0.6 per lesson). Positive interactions during the intervention were at zero for eight of the 11 lessons where data were recorded; the range of positive interactions was zero to four interactions per lesson. The mean difference in this phase was 0.8, or a 57% decrease from baseline to intervention. Baron’s positive interactions in the maintenance phase followed a slightly ascending trend; however, for six of the eight lessons, Baron initiated zero positive interactions toward his group members. For the maintenance phase, the mean was less than one positive interaction per lesson (0.4) and the range was zero to two positive interactions. The mean difference was 1.0 or a 71% decrease from baseline to maintenance.
Figure 4.11: Positive interactions initiated by Baron.

Figure 4.12 demonstrates the data for the positive interactions of Baron’s group; these data follow a pattern similar to that of Baron’s positive interactions in the baseline and intervention phases where the trend lines ascend in both phases but the mean for positive interactions was higher in the baseline than in the intervention phase. In the baseline phase, the positive interactions of Baron’s group ranged from zero to three and a mean of .95 positive interactions per lesson with nine of the 19 lessons demonstrating zero positive interactions. During the intervention phase, the positive interactions ranged from zero to four, with a mean of 0.7 positive interactions per lesson; the mean difference was .25 or a 26% decrease from baseline to intervention. In the maintenance phase, the mean for Baron’s group was one positive interaction per lesson, although for six of the eight lessons, there were zero positive interactions initiated by Baron’s group members toward
him. The mean difference was .05, or a 5% increase from baseline to maintenance. These data for the maintenance phase follow an ascending trend of positive interaction and range from zero to six positive interactions.

![Figure 4.12: Positive interactions initiated by Baron’s group members.](image)

**Inappropriate interactions.** Data for inappropriate interactions were coded for each observed lesson. Figure 4.13 represents the data for Baron’s inappropriate interactions toward the members of his group. During the baseline phase, Baron’s inappropriate interactions remained at a stable and low trend ranging from zero to 14 interactions with a mean of 2.1 inappropriate interactions per lesson. For most lessons in the baseline
phase, the interactions ranged from zero to four with the exception of lesson 13, where Baron exhibited 14 inappropriate interactions toward members of his group; these inappropriate interactions took the form of negative or inappropriate comments toward his group members. During the intervention phase, Baron’s inappropriate interactions ranged from zero to four, with a mean of 1.4 inappropriate interactions per lesson, demonstrating a stable trend across the intervention. The mean difference was 0.7 or a 33% decrease from baseline to intervention. Baron’s inappropriate interactions in the follow up phase were at zero for every day except on the sixth day of the maintenance phase where he initiated one inappropriate interaction toward a group member. The mean difference was 2.0 or a 95% decrease from baseline to maintenance.

Figure 4.13: Inappropriate interactions initiated by Baron.
Figure 4.14 represents the data for the inappropriate interactions of Baron’s group toward Baron. During the baseline condition, the inappropriate interactions of Baron’s group followed a slightly descending trend ranging from zero to nine, with a mean of 1.8 inappropriate interactions per lesson (for most lessons, the interactions ranged from zero to four, and on one occasion the interactions were at nine). During the intervention, the data followed a slightly ascending trend ranging from zero to six interactions, with a mean of 2.2 inappropriate interactions per lesson. The mean difference was 0.4 or a 22% increase from baseline to intervention. In the maintenance phase, inappropriate interactions remained at zero on every day except day six, where two inappropriate interactions were initiated by members of Baron’s group. The mean difference was 1.5 or an 83% decrease from baseline to maintenance.
Figure 4.14: Inappropriate interactions initiated by Baron’s group members.

**Off task interactions.** Data for off task interactions were coded for each observed lesson. Figure 4.15 represents the data for Baron’s off task interactions toward his group members during the study. During the baseline condition, Baron’s off task interactions demonstrated a descending trend. These interactions ranged from zero to 41 with a mean of 11.4 off task interactions per lesson. Different from the baseline condition, the trend line for Baron’s off task interactions increased in the intervention phase of the study. The range of off task interactions during the intervention was one to 54, with a mean of 21.3 off task interactions per lesson. The mean difference was 9.9 or an 87% increase from baseline to intervention. Baron’s off task interactions during the maintenance phase
ranged from nine to 51 per lesson following a slightly descending trend. The mean of Baron’s off task interactions during this phase was 28.5 per lesson. The mean difference was 17.1 or a 150% increase from baseline to maintenance.

Figure 4.15: Off task interactions initiated by Baron.

The off task interactions of Baron’s group are represented in Figure 4.16. These data followed a similar pattern as that of the baseline and intervention data of Baron’s off task interactions. The off task interactions for the baseline condition follow a descending trend ranging from zero to 34, with a mean of 10.9 off task interactions per lesson. During the intervention, the data for the off task interactions of Baron’s group follow a descending trend ranging from one to 36, with a mean of 15.5 off task interactions per lesson. The
mean difference was 4.6 or a 42% increase from baseline to intervention. During the eight maintenance lessons, off task interactions of Baron’s group followed a descending trend, ranging from nine to 39 off task interactions per lesson with a mean of 21.1 off task interactions each lesson. The mean difference was 10.2 or a 94% increase from baseline to maintenance.

Figure 4.16: Off task interactions initiated by Baron’s group members.

Class Three

In Class Three, there were 28 lessons in the baseline condition, nine lessons in the intervention phase, and eight lessons in the maintenance phase of the study. The
intervention in this class was terminated early because the entire class became increasingly off task and safety became a concern of the teacher. During the last day of the intervention, there were several fights that occurred in the class, and some students were using the Adventure Education equipment as weapons to hurt each other, so the teacher and researcher decided to stop the intervention for the safety of the students and the teacher in the class. In this class, Dajuan (student with a learning disability) had been the initial target student at the start of the study, but after 20 days of baseline data collection, the researcher was told that Dajuan would be staying in the resource room to complete his school work indefinitely and was not allowed to return to his physical education class until he was caught up with his work; however, he returned to physical education approximately one week later. At that point, the researcher switched target students to Benett (student with a learning disability who was in the same group), and watched the first twenty baseline lessons again with Benett as the target student. On days eight, nine, 14, and 21, Dajuan had been absent and data were not coded nor was the class videotaped, so coding for Benett was not possible on those days. On days 26 and 27, Benett was absent, so data were not collected during these days of the baseline condition. Data for Benett and his group members are represented on two different graphs for each dependent variable (Benett’s initiated interactions and the initiated interactions of Benett’s group members toward him) and are also included in Appendix N. A summary of each dependent variable for this class is represented in Table 4.3.
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<td>53.22</td>
<td>15-94</td>
<td>102.0</td>
<td>57-151</td>
<td>43.0</td>
<td>2-72</td>
</tr>
</tbody>
</table>

Note: BL = Baseline phase, INT = Intervention phase, and MAINT = Maintenance phase

Table 4.3: Summary of dependent variable data Class Three.

Appropriate interactions. Data for appropriate interactions between Benett and his group members were coded for each observed lesson. Figure 4.17 represents the appropriate interactions initiated by Benett toward members of his group. During baseline, Benett’s appropriate interactions ranged from 11 to 117 and produced a mean of
40.8 per lesson. In this phase of the study, these data followed a slightly ascending trend, although a visual analysis of the data showed that appropriate interactions initiated by Benett were decreasing toward the end of the baseline phase of the study for the last four lessons. During the nine-lesson intervention, the mean of Benett’s appropriate interactions was much lower at a mean of 15 per lesson. The mean difference was 25.8 or a decrease of 63% from baseline to intervention. The data in this phase of the study followed a stable but slightly ascending trend ranging from zero to 29 appropriate interactions per lesson. During the eight day maintenance phase, Benett’s appropriate interactions increased in number when compared to the intervention and baseline phases, with a range from 26-85 per lesson and a mean of 54.9. The mean difference for this phase was 14.1 or a 35% increase from baseline to maintenance. These data followed an ascending trend throughout the maintenance phase of the study.

Figure 4.17: Appropriate interactions initiated by Benett.
Figure 4.18 represents the data for the appropriate interactions initiated toward Benett by his group members. During the baseline phase, appropriate interactions initiated by Benett’s group members ranged from six to 98 per lesson, with a mean of 40 per lesson. These data followed a descending trend throughout this phase of the study although the data did not appear stable upon visual analysis. During the intervention, the mean of the appropriate interactions was 9.2, which was significantly lower than the mean of appropriate interactions in the baseline phase; the mean difference in this phase was 30.8 or a 77% decrease in appropriate interactions from baseline to intervention. The range was one to 20 per lesson, and these data appeared more stable upon visual analysis than did the baseline condition, although a trend line showed a slightly decreasing trend at this point in the study. In the maintenance phase, the appropriate interactions of Benett’s group members increased compared to the mean of the intervention phase, but did not recover to where they started during the baseline phase of the study. At this point in the study, the mean of appropriate interactions was 23.9 with a range of 8–49 appropriate interactions per lesson; the mean difference was 16.1 or a 40% decrease from baseline to maintenance. A visual analysis of these data appeared unstable; however, a trend line indicated that these data followed an ascending trend for this phase of the study.
Positive interactions. Data for positive interactions were coded for each observed lesson. Figure 4.19 represents the data for Benett’s positive interactions during the study. In the baseline condition, Benett’s positive interactions ranged from zero to 13 per lesson with a mean of 3.3 positive interactions per lesson. Although data in this phase appeared to be unstable, a trend line showed that the data were fairly stable with only a slightly ascending trend throughout this phase of the study. During the intervention, there was a sharp decrease in positive interactions initiated by Benett—every day except days 31 and 36 of the study (days three and eight of the intervention) was at zero, the other two days Benett had initiated one positive interaction each day showing a stable trend across this phase of the study. During intervention, the mean was 0.2 positive interactions per lesson; there was a mean difference of 3.1 or a 94% decrease from baseline to intervention. In the
maintenance phase, Benett’s positive interactions increased greatly compared to the intervention phase where these interactions ranged from zero to one. In the maintenance phase, Benett’s positive interactions ranged from zero to six with a mean of 2.6 positive interactions per lesson. Different from the intervention phase of the study, there was only one day where Benett did not exhibit positive interactions with his group members whereas in the intervention phase, there were only two days of the nine where he initiated one positive interaction each day. During the maintenance phase, the trend line for positive interactions initiated by Benett indicated an upward trend as did visual analysis of the data signifying that his positive interactions had risen following the intervention. The mean for this phase of the study was 2.6 (range zero to six) positive interactions per lesson; the mean difference was 0.7, or a decrease of 21% from baseline to maintenance.

Figure 4.19: Positive interactions initiated by Benett.
Figure 4.20 represents the data for the positive interactions of Benett’s group toward Benett. During baseline, the mean for positive interactions was 2.8 per lesson and the range was zero to ten positive interactions. These data, although appearing unstable upon visual analysis, follow only a slightly ascending trend similar to that of Benett in the baseline phase of the study for this dependent variable. In the intervention phase, positive interactions of Benett’s group were exactly the same as from Benett during this portion of the study. There were only two lessons (days three and eight) during the intervention that positive interactions were greater than zero- both days there was just one positive interaction by a group member and the mean for positive interactions of Benett’s group was 0.2 in this phase of the study. The mean difference was 2.6, or a 93% decrease from baseline to intervention. In the maintenance phase, the data for the positive interactions of Benett’s group followed a similar pattern to that of Benett’s positive interactions where the trend followed increased positive interactions initiated by Benett’s group. The mean and range for this phase were 2.3 and 0-5 positive interactions per lesson, respectively. The mean difference was 0.5 or an 18% decrease from baseline to maintenance. Similar to Benett, there was only one day that no positive interactions were initiated by his group during the maintenance phase.
Inappropriate interactions. Data for inappropriate interactions were coded for each observed lesson. Figure 4.21 represents Benett’s inappropriate interactions initiated toward his group members. On most occasions, these interactions were observed as negative or inappropriate comments, and on one occasion was a result of a fight between Benett and Dajuan (During the seventh follow up lesson, day 44 of the study). During the baseline, inappropriate interactions were stable (at zero to four inappropriate interactions) except for days 15, 23, and 24 where Benett initiated 17, 19, and 13 inappropriate interactions toward his group members, respectively. The range for this phase was zero to 19, however, when the three aforementioned days were added to calculate the mean, the mean was at 3.2 per lesson, these data followed a trend line that was ascending.
throughout this phase. During the intervention, there was a decrease in inappropriate interactions, with the mean at 0.4 per lesson and the range at zero to three; the mean difference was 2.8 or an 88% decrease from baseline to intervention. In this phase, the data follow a descending trend where most days Benett did not exhibit inappropriate interactions toward his group members. The only two days during the intervention that were not at zero were days 29 and 37 (days one and nine of the intervention), where Benett initiated three inappropriate interactions on the first day and one on the last day of the intervention. In the maintenance phase, Benett’s inappropriate interactions followed a slightly descending trend, however, the mean remained low at 0.8 inappropriate interactions and the range was zero to three per lesson. The mean difference was 2.4 or a 75% decrease from baseline to maintenance. Similar to the previous phase, most of the days, Benett’s inappropriate interactions remained at zero (five of the eight days).

Figure 4.21: Inappropriate interactions initiated by Benett.

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Figure 4.22 illustrates the inappropriate interactions initiated by Benett’s group toward him during the study. Although a visual analysis of the data during this phase indicates that the interactions were not stable, a trend line indicates that the data path followed a slightly ascending trend of inappropriate interactions initiated toward Benett during the baseline phase. The mean during the baseline phase was 2.9 with a range of zero to 12 inappropriate interactions per lesson. During the intervention, the inappropriate interactions decreased to a mean of 0.4 per lesson and a range of zero to two inappropriate interactions similar to that of Benett at this point in the study. The mean difference was 2.5 or an 86% decrease from baseline to intervention. During the eight day maintenance phase observations, the inappropriate interactions remained low at a mean of 0.6 per lesson and a range of 0-4 inappropriate interactions; the mean difference was 2.3, or a decrease of 79% from baseline to maintenance. Although a trend line indicates a slightly ascending trend during this phase, most days (six of the eight days) inappropriate interactions remained at zero. During the other two days, there was one inappropriate interaction on day 43 of the study (day six of the maintenance phase), and four on day 43 of the study (day seven of the maintenance phase). On this seventh day of the maintenance phase, a fight occurred between Benett and Dajuan causing them to hit each other until the teacher was able to break up the fight.
Figure 4.22: Inappropriate interactions initiated by Benett’s group members.

*Off task interactions.* Data for off task interactions were coded for each observed lesson in the study. Figure 4.23 illustrates the off task interactions initiated by Benett toward his group members. The data for this dependent variable are much higher than for that of any other dependent variable in this study, indicating that most of the time Benett initiated interactions with group members, he was either talking when he was not supposed to be talking, or was talking about something other than the day’s lesson. During baseline, the mean of Benett’s off task interactions was 56 per lesson, ranging from 23 to 127 throughout the observed lessons in this phase of the study. These data appear unstable by visual analysis; however, a trend line indicated a stable horizontal data path throughout this phase. During intervention, there was a marked mean increase of 83.7, or a 149% increase from baseline. The mean for off task interactions during the
intervention was 139.7 (range 70-211). A visual analysis of the data for off task interactions indicated a higher rate of off task interactions compared to the baseline phase, although a trend line indicated that the data path was descending during this phase. At the follow up, the mean for off task interactions had increased by 17% from the baseline condition (mean difference of 9.3). The mean for the maintenance phase was 65.3 with a range of eight to 103 off task interactions. At this point in the study, a trend line indicated that Benett’s off task interactions were following a descending data path.

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Figure 4.23: Off task interactions initiated by Benett.
Data for the off task interactions of Benett’s group initiated toward Benett were coded for each observed lesson. Figure 4.24 represents the off task interactions initiated by Benett’s group members toward him; these data follow a pattern similar to that of Benett’s off task interactions throughout each phase of the study with the exception of the follow up phase. During baseline, the mean was 53.2 off task interactions per lesson (range 15-94). However, during intervention, the mean jumped to 102 per lesson with a range of 57-151. The mean increase from baseline to intervention was 48.8 or an increase of 92% from baseline. Visual analysis confirms the increased off task interactions, and a trend line indicated that although the mean was higher, the data path follows a descending trend throughout this phase. In the maintenance phase, the mean decreased from the mean of both the baseline and intervention phases to 43.0 (range 2-72). The mean decrease was 10.22 or 19% from baseline. Visual analysis appeared to indicate that the off task interactions were decreasing and a trend line confirmed that in fact the data path was decreasing during this phase.
Interobserver Agreement

Interobserver agreement (IOA) was coded for approximately 30% of each of the observed and coded lessons in the three classes from within each phase of the study. In Class One 30.3% (see Table 4.4), Class Two for 28.9% (see Table 4.5), and Class Three for 30.8% (see Table 4.6) of all the lessons were observed and coded for IOA.
<table>
<thead>
<tr>
<th>Lesson Number</th>
<th>IOA Percentage</th>
</tr>
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<tbody>
<tr>
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<td>8</td>
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<tr>
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<td>11</td>
<td>98.5%</td>
</tr>
<tr>
<td>15</td>
<td>97.3%</td>
</tr>
<tr>
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<td>99.1%</td>
</tr>
<tr>
<td>21</td>
<td>94.3%</td>
</tr>
<tr>
<td>28</td>
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</tr>
<tr>
<td>33</td>
<td>98.2%</td>
</tr>
</tbody>
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Table 4.4: Summary of interobserver agreement percentages class one.
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<td>39</td>
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</tbody>
</table>

Table 4.5: Summary of interobserver agreement percentages class two.
<table>
<thead>
<tr>
<th>Lesson Number</th>
<th>IOA Percentage</th>
</tr>
</thead>
<tbody>
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<td>7</td>
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<tr>
<td>44</td>
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<tr>
<td>45</td>
<td>97.8%</td>
</tr>
</tbody>
</table>

Table 4.6: Summary of interobserver agreement percentages of class three.

Procedural Reliability

Procedural reliability was measured by the use of a checklist (Appendix J) that specified whether certain teacher behaviors of interest were present for each lesson during the Adventure Education unit of instruction. These teacher behaviors were rated as
a yes (behavior was present) or no (behavior not present) during each lesson. Targeted
teacher behaviors included five components:

1. Review of appropriate and positive interaction during introduction
2. Provide specific prompts/cues to encourage students to interact during lesson
3. Provide feedback based on interactions observed
4. Positive pinpointing during closure
5. Followed list of activities in unit plan

Table 4.7 presents a summary of the procedural reliability data for each teacher behavior
during the intervention phase and an overall percentage for each class. The five teacher
behaviors were averaged across lessons for each class, and although in the literature there
is no specified acceptable range for procedural reliability data, it was desired for this
study that the percentages were at least above 80%, but preferably above 90% overall.

**Class One**

Class One engaged in 15 Adventure Education lessons, but two of the lessons did not
have audio, so the first four statements on the treatment integrity sheet were not able to
be addressed for those lessons. The teacher reviewed positive and appropriate interactions
during the introduction for 11 lessons (85%), provided prompts to encourage students to
interact with their group members for 100% of the lessons, provided feedback on the
observed interactions both for 100% of the lessons, engaged in positive pinpointing for
10 (77%) of the lessons, and followed the list of activities in the unit plan for 100% of the
lessons. Overall procedural reliability for Class One was 92.4% during the intervention.
Class Two

Class Two engaged in 15 Adventure Education lessons, however, for two of the lessons, there was no audio so the first four statements on the treatment integrity sheet were not able to be measured. The teacher followed the list of activities in the unit plan for 100% of the lessons (this was able to be determined on all 15 lessons including the lessons that had no audio from a visual observation of the videotaped lessons). The teacher encouraged appropriate and positive interactions with the class during the introduction of the lesson for eight of the 13 lessons (62%), provided prompts to encourage students to interact with their group members in 100% of the lessons, provided feedback based on interactions observed for all but one lesson (92%), and engaged in positive pinpointing during the closure for all but one lesson (92%). Overall procedural reliability for Class Two was 89.2%.

Class Three

Class Three engaged in nine Adventure Education lessons. In this class, the teacher encouraged positive and appropriate interaction between members of the entire class in 100% of the lessons, provided prompts to encourage students to interact with their group members on all but one lesson (88%), provided feedback based on interactions observed on all but one lesson (88%), and followed the list of unit plan activities 100% of the time. For four of the nine lessons, the teacher was not able to give a lesson closure because she either ran out of time or had to discuss behavior concerns with the students instead of reviewing the activities, so treatment integrity for the statement “positive pinpointing during closure” was low at 44%. Overall procedural reliability for Class Three was 84%.

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<table>
<thead>
<tr>
<th>Teacher Behavior</th>
<th>Class One</th>
<th>Class Two</th>
<th>Class Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>85%</td>
<td>62%</td>
<td>100%</td>
</tr>
<tr>
<td>2</td>
<td>100%</td>
<td>100%</td>
<td>88%</td>
</tr>
<tr>
<td>3</td>
<td>100%</td>
<td>92%</td>
<td>88%</td>
</tr>
<tr>
<td>4</td>
<td>77%</td>
<td>92%</td>
<td>100%</td>
</tr>
<tr>
<td>5</td>
<td>100%</td>
<td>100%</td>
<td>44%</td>
</tr>
<tr>
<td>Overall</td>
<td>92.4%</td>
<td>89.2%</td>
<td>84%</td>
</tr>
</tbody>
</table>

Note: 1 = Review of appropriate and positive interaction during introduction; 2 = Provide specific prompts/cues to encourage students to interact during lesson; 3 = Provide feedback on interactions observed; 4 = Positive pinpointing during closure; and 5 = Followed list of activities in unit plan.

Table 4.7: Summary of procedural reliability data averaged across teacher behaviors from procedural reliability checklist.

**Student Social Validity**

**Class One**

In Class One, each student responded to a questionnaire that targeted the students’ thoughts and feelings about their participation in Adventure Education. Due to some students not returning parental consent forms, or returning consent forms that indicated the parents did not want their children to be a part of the study, only the answers of the
students in Ignacio’s group will be discussed for Class One. A list of how each student answered the questionnaire for each specific question can be found in Appendix K.

Statement 1: *I liked participating in the Adventure Education unit in my gym class.*

Most of the students responded positively to this statement (either rating the statement as a 3= Kind of, or a 4= Yes), while one student (Enrique) mentioned that he did not like participating in the Adventure Education unit.

Statement 2: *It is important to work together by communicating with my teammates.*

Six of the seven students in Ignacio’s group responded yes to this question, while Maurice answered “Maybe” to this question.

Statement 3: *I interacted a lot with all of my teammates during the Adventure Education unit.*

Students responded to this statement by indicating “Kind of” or “Yes” to this statement. Four students responded “Kind of”, while three responded “Yes”.

Statement 4: *It is important to interact with all of my teammates no matter what.*

Students responded to this question favorably, with five of the students answering “Yes”, one answering “No” and one answering “Maybe”.

Statement 5: *I increased the number of times I interacted with my teammates during the Adventure Education unit.*

In responding to this question, student answers varied: three students mentioned that they did increase their interactions, one said he did not increase his interactions, and two fell in the middle.

Statement 6: *I would like to participate in another Adventure Education unit.*
Students in Ignacio’s group responded differently to this statement. Ignacio, Enrique, and Lorenzo said they would not like to participate in another Adventure Education unit. Tashawna and Maurice were divided in their responses (they answered two and three, respectively), and the rest of the students in the group said they would like to participate in another Adventure Education unit.

*Statement 7: My teammates interacted with me more during the Adventure Education unit than they did before we started this unit in class.*

Similar to statement six, students in Class One responded differently to this statement. Enrique and Ignacio answered “No” to this statement while De’Asia answered “Yes”, and the other students in this group fell in the middle on this statement.

*Statement 8: Adventure Education has helped me in my physical education class.*

Two students did not agree that Adventure Education helped them in their GPE class, two fell in the middle, and two answered “Yes” to this statement indicating that Adventure Education did help them in physical education; one of the students who answered “Yes” to this statement was Ignacio.

*Statement 9: It is important to interact with every student in my class even if they speak another language than me or if they have a disability.*

Most students responded favorably to this statement by answering “Yes” (six of the seven students in the group), while De’Asia answered “Kind of”.

*Class Two*

Students in Class Two also responded to a questionnaire targeting their thoughts and feelings about the Adventure Education unit following the completion of the unit. Although there were other students in the class who returned signed consent forms, only
students in Baron’s group were included in the discussion of the answers to this
questionnaire as they were the targeted group during the data collection for this study.
A list of how each student answered the questionnaire for each specific statement can be
found in Appendix K.

Statement 1: I liked participating in the Adventure Education unit in my gym class.

In Class Two, Baron and Gregory did not like the Adventure Education unit, while
three students (Jerome, Ayesha, and Satasia) said they did like the unit; two students
(whose answers are exactly the same for all statements) said “Kind of”.

Statement 2: It is important to work together by communicating with my teammates.

Every student except Baron (who answered “Maybe”) responded favorably to this
statement and said that it is important to work together by communication with their
group members.

Statement 3: I interacted a lot with all of my teammates during the Adventure
Education unit.

Student answers varied to this question; while three students (Jerome, Ayesha, and
Satasia) answered “Yes”, two (Radwan and Reuben) responded “Maybe”, and two
(Baron and Gregory) responded “Kind of”.

Statement 4: It is important to interact with all of my teammates no matter what.

The students responded rather favorably to this questions; the majority of the students
in this group responded that it was important to interact with all of their teammates, while
Ayesha answered “Maybe” to this question.

Statement 5: I increased the number of times I interacted with my teammates during
the Adventure Education unit.
Most (five) students responded “yes” to this statement, indicating that they believed they had increased their interactions with the other individuals in their group, while Baron and Gregory answered “Maybe” and “Kind of”, respectively.

Statement 6: I would like to participate in another Adventure Education unit.

In answering this statement, three students (Reuben, Radwan, and Gregory) mentioned that they would not like to participate in another Adventure Education unit, while two (Baron and Satasia) responded “Kind of” and two (Jerome and Ayesha) mentioned “Yes”.

Statement 7: My teammates interacted with me more during the Adventure Education unit than they did before we started this unit in class.

Baron answered “No” to this statement, however, the data show that interactions of the other students with him were much higher during the intervention. The other students answered “Kind of” (Reuben, Radwan, and Gregory) and “Yes” (Jerome, Ayesha, and Satasia).

Statement 8: Adventure Education has helped me in my physical education class.

Four students answered “Yes” indicating that they felt Adventure Education had helped them in their physical education class, while Radwan and Reuben mentioned they did not think Adventure Education had helped them, and Baron answered “Maybe”.

Statement 9: It is important to interact with every student in my class even if they speak another language than me or if they have a disability.

For the most part, students in this group responded positively to this statement, while Radwan and Reuben answered “Kind of” to this statement.
Class Three

All the students in the targeted group for Class Three responded to the same questionnaire as the first two classes to ascertain their thoughts about their participation in Adventure Education in their physical education class (Appendix K). Although the intervention was terminated six days early, it was important to determine how they felt about Adventure Education to try to determine why the behavior of the students during the Adventure Education unit was increasingly off task and negative toward the teacher, each other, and other students in their groups.

Statement 1: I liked participating in the Adventure Education unit in my gym class.

Student answers to this statement were split. Heather and Dajuan said “No”, Benett and Taniel said “Maybe”, and Adonica and La’Mya answered “Kind of”.

Statement 2: It is important to work together by communicating with my teammates.

Students’ answers varied greatly to this statement: Heather mentioned “No”, Adonica said “Maybe”, Benett and Taniel answered “Kind of”, and Dajuan and La’Mya answered “Yes” to this statement.

Statement 3: I interacted a lot with all of my teammates during the Adventure Education unit.

Four students in Benett’s group answered “Kind of”, Dajuan answered “Maybe”, and Heather answered “No” to this statement.

Statement 4: It is important to interact with all of my teammates no matter what.

Dajuan mentioned that it was important to interact with all his teammates, and Adonica answered “Maybe”, while Heather said that it was not important to interact with her teammates. Benett, Taniel, and La’Mya answered “Kind of” to this statement.
Statement 5: I increased the number of times I interacted with my teammates during the Adventure Education unit.

Interestingly, four students responded “Kind of” indicating that it was possible that their interactions had increased, while Heather and Adonica disagreed with this statement.

Statement 6: I would like to participate in another Adventure Education unit.

Heather, Dajuan, and La’Mya mentioned that they would not like to participate in another Adventure Education unit. Adonica mentioned “Maybe” and Benett and Taniel stated that they “kind of” wanted to participate in another Adventure Education unit.

Statement 7: My teammates interacted with me more during the Adventure Education unit than they did before we started this unit in class.

In responding to this statement, Dajuan and Adonica disagreed with this statement, while La’Mya answered “Maybe” and the other three students in the group answered “Kind of”.

Statement 8: Adventure Education has helped me in my physical education class.

Heather and La’Mya did not believe that Adventure Education helped them in physical education, while the other students in the group answered “Kind of” to this statement.

Statement 9: It is important to interact with every student in my class even if they speak another language than me or if they have a disability.

Heather, Dajuan, and Adonica responded positively to this statement, indicating that it was important to interact with everyone, while La’Mya disagreed, and Benett and Taniel answered “Kind of”.

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Exit Tickets

In addition to the student social validity questionnaire, the teacher also asked the students to fill out what she called “exit tickets” at the end of most days in her physical education classes. For the teacher, this was one way to reinforce with the students the concepts and skills they learned in her classes. The exit tickets given to the students during the Adventure Education unit focused on interactions with other members of their group, although the questions were always posed differently each day. During the baseline data collection in Baron’s class, it was determined that Baron did not understand the exit tickets that were given to him in English (during baseline he either did not answer the question, asked someone else to translate the question for him, or asked another student to write an answer for him), so the researcher and another individual who spoke Spanish as his first language translated each exit ticket into Spanish specifically for Baron to answer. There were days that students were absent and at times other students simply did not answer the exit ticket, therefore not every student had answers to each exit ticket (Appendix L).

Class One.

Exit ticket one: Explain one of your group rules and why it is important.

Only three students responded to this exit ticket, although six of the seven students were present during this lesson. Of the three who responded, only one actually answered the exit ticket correctly and mentioned one of the rules developed by the group; the other two did not know what the group rules were, so they made up their own answer.
Exit ticket two: Explain what your group had to do to accomplish the group juggle.

This exit ticket was answered by all five of the students who were present this day. Students mentioned aspects of communication, cooperation, and remembering who to pass the chicken to so that they could accomplish the task. For example, Tashawna mentioned: “We had to work together to make a pattern and pay attention”.

Exit ticket three: Which type of communication is better, positive or negative? Why?

All students who were present (five) answered this question. Four of the five mentioned that positive communication was better and that it would help them get along with their group members and would keep them from becoming frustrated if they communicated positively. Ignacio mentioned that negative communication was better: “Because today we did not have a good time to but at last we were doing”. During observation of the lesson, at first the group was not successful at this activity, but by the end of the activity, they became successful and stopped being negative toward each other.

Exit ticket four: Give an example of how you communicated positively with someone in your group.

In looking through the students’ folders, the exit tickets could not be found for this day.

Exit ticket five: Why is positive communication important for good cooperation with your group members?

Every student in Ignacio’s group was present during this lesson; however, Ignacio was the only students who did not answer the exit ticket at the end of this lesson. Students gave a variety of answers to this question, such as working well together, completing activities easier and faster, and cooperating with group members.
Exit ticket six: Why is cooperation important when working with a group?

During this lesson, six of the seven group members were present, and all six wrote answers to the question, although Enrique, Maurice, and Ignacio wrote answers that did not answer the question. For example, Ignacio wrote: “We did some good and bad”. Some of the students answered this question and said that it would help them complete the activity and to complete it faster, and Tashawna mentioned: “Cooperation is important when working with a group because if you don’t cooperate nobody is going to want to work with you.”

Exit ticket eight: How do you know if you trust someone?

This question was answered by five of the six students who were present during this lesson. Some students did not answer the question, for example, Maurice said: “My team was good in gym”, other students were unsure how to answer such as Lorenzo: “I don’t know”, and others mention the importance of friendship in determining trust in someone else, such as Deion: “Because you have been friends with them or if you know them”.

Exit ticket nine: How does positive communication build trust?

Although all the students in Ignacio’s group were present this day (Tashawna left early), only five answered the exit ticket question (Ignacio did not complete his exit ticket). Most of the students in Ignacio’s group who answered the question had answers that had to do with communication leading to trusting someone, such as Lorenzo’ answer: “By communicating with others that you can’t trust that well”.

Exit ticket ten: How do you know if someone trusts you?

Every student in Ignacio’s group was present during this lesson. When the students answered this question, many of them thought it was the same question as exit ticket
eight, but the teacher assured them it was different. The students in Ignacio’s group answered this question very differently from trusting others (Ignacio): “I trusted my friends a lot and I crashed I hop my insurance can pay for it” to others trusting them (Lorenzo): “They didn’t hurt you when you were blind folding. Or they did not crash you.”

Exit ticket eleven: Give an example of positive communication that you used with your group.

The teacher had discussed with the class on numerous occasions what positive communication was and had asked the students to give her examples of positive communication during class discussion and many of the students in Ignacio’s group gave good examples of positive communication such as saying “good job” (Enrique, De’Asia, Deion), congratulating each other (Lorenzo), or saying other positive things to each other.

Exit ticket twelve: What was your team’s strategy for retrieving your pot of gold?

This question elicited more technical answers such as exactly what they did to be successful in the activity (using the ropes) rather than talking about working together or communicating with their group members. One member (Maurice) did mention using teamwork to be successful: “My team was good in pot of the gold and what use teamwork.” Ignacio did not finish his exit ticket for this question.

Exit ticket thirteen: How did positive communication help your team be successful?

Some of the students in Ignacio’s group answered this question, but Ignacio, Maurice, and De’Asia did not answer the question as it was asked. Enrique mentioned: “We did not fight or scream at each other we did what we had to,” Tashawna said: “It
helped everybody participate, follow directions and get to the end of the jym fast and safe”, while De’Asia answered her exit ticket by saying: “We got there on 3rd place.”

*Exit ticket fourteen: What was your group’s biggest challenge during Marble Pass?*

For this exit ticket, the students mentioned more technical issues for this activity as being the most challenging thing to being successful in the activity, such as: the entire activity was challenging, putting the pipes together, detaching the pipes, and working as an entire class were the most challenging aspects of the activity.

*Exit ticket fifteen: What have you learned during the Adventure Education unit?*

Although Ignacio and Maurice did not answer the question for this exit ticket, the other students in the group mentioned that communication, cooperation, and trust were very important parts of learning to work with a group. For example, Enrique mentioned: “I learnt to work as a group, to dont give up, to trust in people and other things” Lorenzo also mentioned: “don’t give up. Trust other people. Comunication.”

*Class Two.*

As previously mentioned, Baron did not answer any of the exit tickets that were written in English during previous units of instruction, so his exit tickets for the Adventure Education unit were translated into Spanish for the Adventure Education unit (Appendix L). Although it was clear to the researcher that he was able to read the questions in Spanish because he did not ask for help from other students as he did in the past, most days he did not answer the questions posed at the top of the exit tickets, instead he answered whether or not he liked the activity by saying “Me gusto” [I liked it] or “No me gusto” [I did not like it]. The only exception was on the tenth day of the
intervention (exit ticket was “How do you know if someone trusts you?”), Baron answered: “‘lo confió en la gente si me tratan bien” [I trust people if they treat me well].

Exit ticket one: Explain one of your group rules and why it is important.

Most of the students who responded to this question discussed the rules developed by the team (rules were: do teamwork, no put downs, communicate, learn and have fun). In some cases, students in Baron’s group mentioned a rule, but did not discuss why the rule was important. For example, Gregory mentioned: “Do teamwork and don’t put down and learn and have fun.” Most students mentioned teamwork as an important rule (Radwan, Gregory, and Jerome), and Satasia discussed the importance of not putting down other members of the group in order to have teamwork: “No put downs because if we want to have teamwork we can’t put down.”

Exit ticket two: Explain what your group had to do to accomplish the group juggle.

In this exit ticket, Radwan and Reuben mentioned communication and positive communication as something they needed to do to be successful in the activity, while Satasia mentioned the importance of teamwork in being successful.

Exit ticket three: Which type of communication is better, positive or negative? Why?

All students answered indicating that positive communication was better to help complete the activity, to increase team confidence, to work better with the group, and to build people up instead of to put them down.
Exit ticket four: Give an example of how you communicated positively with someone in your group.

Of the five students who answered this exit ticket, most said that they said good things to each other such as “good job” and that they worked together well and that contributed to positive communication with group members.

Exit ticket five: Why is positive communication important for good cooperation with your group members?

On this day, the students were not happy that they were not able to play basketball, so they started the lesson with negative attitudes and complaining, and their exit tickets reflected their feelings. Gregory mentioned the group was not successful, two other individuals mentioned their group did not have positive communication, and Reuben said: “This was stupid today and we was supposed to play basketball.”

Exit ticket six: Why is cooperation important when working with a group?

The students felt positively about the importance of cooperation in a group activity. For example, Gregory said: “So you can use team work,” while Jerome mentioned: “It helps team courage.” Finally, Reuben mentioned: “Because without them you could not do it and you need them to do a group project.”

Exit ticket eight: How do you know if you trust someone?

Student answers to this question varied greatly. Some students mentioned that a person would tell you the right things (for the trust portion of the unit, many of the activities required individuals to be blindfolded), others were unsure “Because I don’t know” (Gregory), and Reuben said: “I know when they do something and they tell if it is wrong or right if I do something hard.”
Exit ticket nine: How does positive communication build trust?

Students indicated that by being positive and listening (Reuben and Radwan), trust is built, and that by doing this, the entire team is encouraged (Jerome).

Exit ticket ten: How do you know if someone trusts you?

Student answers to this question varied. Some students mentioned first you have to trust others so they can trust you (Satasia), or that you need to help them to earn their trust (Jerome), that they would tell you something they had not told anyone else (Reuben), or if the person is your friend (Gregory).

Exit ticket eleven: Give an example of positive communication that you used with your group.

Students mentioned that they said things like “good job”, “great job” or that they patted someone on the back, while others said they worked as a team and talked positive talk to each other during the activities.

Exit ticket twelve: What was your team’s strategy for retrieving your pot of gold?

Some of the students in Baron’s group indicated that teamwork and communication as well as listening to each other were the strategies they had used to complete the activity successfully. For example, Gregory mentioned: “Do team work,” while other students in the group focused on the more technical aspect of completing the activity, such as Jerome: “We use two ropes, surrounded the bucket, pick it up and took it home.”

Exit ticket thirteen: How did positive communication help your team be successful?

Student answers to this question varied greatly. For example, Ayesha gave an example
of something she said to her group members: “I said good job, nice smoth [smooth],”
Jerome mentioned how it helped them to communicate with each other, and Satasia
mentioned: “Now we know that we can trust our team.”

Exit ticket fourteen: What was your group’s biggest challenge during Marble Pass?

On this day, some of the students did not fill out their exit tickets at the end of the
lesson. However, those students who did complete their exit tickets mentioned that the
hardest part of the activity was keeping the marble in the pipes and trying to get it in the
bucket.

Exit ticket fifteen: What have you learned during the Adventure Education unit?

The students in Baron’s group differed greatly in their answers to this question. For
example, Gregory said: “Nothing,” while the other students mentioned that success is
possible if you try (Ayesha), working with others (Radwan), trusting the other individuals
in the group (Jerome), and communication with others in their group (Reuben). Finally,
Satasia mentioned the importance of communication with others to help them understand
the activities if they did not understand what to do. Baron mentioned that he really liked
the Adventure Education unit as well.

Class Three.

In reading through the exit tickets of Class Three, on many occasions, the students did
not answer the exit tickets, or the teacher was unable to give the exit tickets to the class
because of classroom management issues that became more important as a result of
students being unsafe with the equipment or with each other. The teacher was able to
have the students complete seven exit tickets during the nine day intervention (Appendix
L).
Exit ticket one: Explain one of your group rules and why it is important.

The only student who answered this exit ticket was Adonica, and she mentioned: “To cooperate with others, it’s important because if you don’t cooperate with others, you will get in fights”.

Exit ticket two: Explain what your group had to do to accomplish the group juggles.

Similar to the first day, only one student (La’Mya) answered the exit ticket and said: “We had to get at least three turkeys in game while juggling”.

Exit ticket three: Which type of communication is better, positive or negative? Explain why.

Of the students who answered this question, La’Mya answered: “Positive because it makes a positive attitude and behavior,” while Taniel mentioned: “Positive because you can try.”

Exit ticket four: Give an example of how you communicated positively:

This question was answered differently by the students in Benett’s group. For example, La’Mya remarked: “we did hand motion,” and Heather said they did not communicate positively with one another during the activities.

Exit ticket five: Why is positive communication important for good cooperation with your group members?

Students in Benett’s group mentioned that positive communication helped them to develop positive attitudes (La’Mya) and to get through the activities (Dajuan). Finally, Adonica mentioned: “Positive communication is important because it teaches you from having fights and arguments.”
Exit ticket six: Why is working with others important to complete an activity?

Only two students answered this exit ticket out of the four who were present that day. Taniel mentioned that it helped to complete the activity and Adonica said it helped them complete the task on time.

Exit ticket seven: What was your group’s strategy for retrieving your pot of gold?

Although the group did not complete the task successfully, the students discussed what they did to try to complete the task and why it was difficult for them. Adonica discussed the reason why they did not complete the task, which was because the teacher had to have a discussion with them after a fight that happened between Dajuan and Adonica.

Teacher Social Validity

At the end of the intervention in Class Three, the teacher was asked to fill out a questionnaire regarding the acceptability and practicality of the intervention and special focus on social interactions between students. The teacher’s responses are summarized in this section, while Appendix M shows the teacher’s exact responses to each question.

Question One: Do you think Adventure Education is a feasible way to improve social interactions between all students? Please explain.

The teacher indicated that she felt Adventure Education was a good way to encourage and improve social interactions between students due to the nature of the activities where students work together to accomplish a common goal. The teacher also mentioned that each individual was an integral part to accomplishing each activity as each activity requires the involvement of all of the students to be successful. Finally, the teacher
mentioned that one student in Class Two told her in the unit following Adventure Education that he could see a difference in their team after their participation in Adventure Education.

*Question Two: Did you feel comfortable implementing Adventure Education in your classes?*

The teacher had been a part of a team of individuals who had worked together to develop the middle school curriculum for her school district, and had helped her to become more familiar with the activities she was teaching. She also had taught other individuals (teachers and student teachers) how to teach Adventure Education activities which had also helped her to become more comfortable with the activities.

*Question Three: Do you think emphasizing social interactions between students is a good way to help students with disabilities become more included with their peers without disabilities? Please explain.*

The teacher mentioned that this was a good way to help students with disabilities to become included by their peers; however, the teacher also mentioned that it was hard to force students to interact with each other and that her students did not always understand the importance of interacting with every student in the class, whether they had a disability or not.

*Question four: Did emphasizing and reinforcing social interactions between students take too much time from your instruction? Why?*

The teacher mentioned that for most groups of students, she only needed to mention it toward the beginning of the unit because most of the times, the groups start working together and it is not necessary for her to spend much time emphasizing interactions
between students. The teacher did mention the value of teaching this unit at the beginning of the school year before the students develop relationships with each other and have what she called “a history with each other”. She mentioned it was hard for her students to overcome conflicts that they had in the past and start to work together, and this could have been one reason why one of her classes became confrontational and the teacher had to abandon the Adventure Education unit.

*Question five: Do you think emphasizing social interactions is something that should be included in physical education classes? Please explain.*

The teacher said she did feel social interactions should be emphasized in physical education and that classroom teachers usually do not address social interactions between students because of focusing on other matters such as testing. She said it was important in this setting because social interaction is part of everyday life and a physical education setting is conducive to learning to work together in a sport setting where not every individual has the same skill level.

*Question six: Is there any part of this teaching strategy that you would change or exclude? Please explain.*

The teacher said that she felt Adventure Education was most effective when taught at the beginning as the first unit of instruction instead of after students have engaged in other sport units and that appropriate social interactions should be emphasized and taught before other units are started. The teacher also mentioned the difficulty of the trust activities embedded into Adventure Education because she felt that her students had a hard time learning to trust each other.
Question seven: Were there any differences in the students’ social interactions before, during, and after the Adventure Education unit? Please explain your observations.

The teacher mentioned that the students were off task and argued a lot prior to the Adventure Education unit, and at times she had to stop the activity because students were arguing too much. However, after Adventure Education, she felt her students worked together as a group better and that each member was held accountable for his/her actions in the activities. Finally, she mentioned that the students seemed to be more positive with one another and helped each other more than they did prior to Adventure Education.

Question eight: Would you use Adventure Education again focusing on social interactions between students? Please explain.

The teacher said she would use Adventure Education again in the future because social interaction skills are very valuable for these students to learn. She indicated that she felt the best scenario for Adventure Education in physical education is to implement it as the first unit of instruction because it developed better group cohesiveness and reduced off task behavior and discipline problems with her students.

Chapter Summary

The results of the study show that a functional relationship existed where an increase or decrease in a behavior (dependent variables) was evident upon by introduction of the intervention for some participants. For Ignacio (target student with a learning disability) and his group members as well as for Baron’s (target student with an emotional disturbance) group members, a functional relationship was demonstrated for appropriate interactions upon implementation of the intervention where appropriate interactions increased when the intervention was implemented in their classes. The opposite was true
for Benett (target student with a learning disability) and his group; appropriate interactions decreased greatly upon implementation of the intervention in Benett’s class. A functional relationship was demonstrated for Ignacio and his group and their positive interactions, where these interactions increased during the intervention. The data for the inappropriate interactions of Ignacio’s group members, Baron, Benett, and Benett’s group members demonstrate a functional relationship where inappropriate interactions decreased upon implementation of the intervention. The off task interactions of Ignacio and his group members also show a functional relationship where off task behaviors decreased upon implementation of the intervention.

The maintenance data for this study also show functional relationships where the (dependent variable) behaviors were retained, increased, or decreased during the eight day maintenance measure following the intervention in each class. The maintenance data for Ignacio and his group show a functional relationship for appropriate interactions, that is, although appropriate interactions decreased slightly following the intervention, these data were still higher than those of the baseline phase of the study. Interestingly, both Benett and his group’s appropriate interactions increased following the intervention. Benett’s appropriate interactions were higher in the follow up data than they were in the baseline phase of the study, while for Benett’s group, these data were higher than in the intervention, but lower than the baseline data. Positive interaction data also show a functional relationship for Ignacio and his group as well as Baron’s group, whose data fell during the intervention but increased in the follow up to become higher during this phase than in both the baseline and intervention phases. Benett and his group also followed a pattern similar to Baron’s group where the data for positive interactions were
lower during the intervention but increased in the follow up phase. The data for inappropriate interactions show that there was a decrease for all the target students and their groups. During the follow up phase, the data are lower than the baseline phase data for all except for Ignacio. However, Ignacio’s inappropriate interactions during the follow up were lower than during the intervention. Finally, off task interactions decreased from baseline to intervention and then to the follow up for Ignacio and his group, showing a functional relationship for this dependent variable. Both Benett and his group’s off task interactions increased during the intervention, but following the termination of the intervention, these interactions decreased below the level of the intervention (both Benett and his group) and the baseline for Benett’s group. In summary, the results of this study are mixed.
CHAPTER 5

DISCUSSION

The purpose of this study was to examine the effects of an Adventure Education unit of instruction on the social interactions of students with and without disabilities. To date, studies that have examined the social inclusion (interactions) of students with disabilities in GPE classes have been descriptive or qualitative in nature. This study sought to extend the literature base by using an intervention to increase the amount of appropriate and positive social interactions between students in each observed group.

This chapter discusses the results of Adventure Education on the social interactions between students in each of three classes and is organized into the following sections for discussing the results of the study: (a) research questions answered and discussed, (b) theoretical framework, (c) procedural limitations, (d) implications for teachers, (e) implications for researchers, (f) recommendations for future research, and (g) concluding remarks.
Research Questions Answered and Discussed

This section discusses the results of the study in terms of answering each research question for each class observed.

Research Question One: What Effect Did an Adventure Education Unit of Instruction Have on the Appropriate Interactions Between Students with Disabilities and Their Classmates Upon Implementation of the Unit in Their Physical Education Classes?

Adventure Education facilitated an increase in the appropriate interactions between the target students and their group members in Class one and for Baron’s group. Appropriate interactions for Baron and in Class Three decreased upon implementation of Adventure Education in these classes. Contact theory was supported in Class One (i.e., favorable conditions leading to increased appropriate social interactions, and in Class Two (i.e., unfavorable conditions leading to decreased appropriate social interactions).

Class one. The data for both Ignacio (student with a learning disability) and his group appeared variable across the first two phases of the study. Therefore, it was necessary to use a trend line to show the direction of the data path throughout each phase, and it was determined that there was an ascending trend of appropriate interactions upon implementation of the Adventure Education unit for both Ignacio and his group. In addition, there was an increase in the mean number of appropriate interactions from baseline to intervention for both groups, indicating a functional relationship between the implementation of the unit and the increase in appropriate interactions between Ignacio and his group members. During the intervention, all students in Ignacio’s group appeared to be cooperating more and worked together well, even if the activities did not necessarily require the students to talk to each other.
Previous social inclusion research, where no intervention was implemented, has indicated that students with disabilities tend not to be socially included by their peers without disabilities (Butler & Hodge, 2004; Place & Hodge, 2001; Ring & Travers, 2005). To the contrary, during an Adventure Education unit, Ignacio was socially included in his physical education class by his peers without disabilities, and engaged in multi directional interactions with classmates in his group who spoke Spanish as their first language. In fact, throughout the study, the individuals who interacted most often with Ignacio were the other boys in his group who spoke Spanish as their first language, not the other students with or without disabilities who spoke English as their first language. Many of the appropriate interactions initiated by Ignacio’s group members were initiated by Lorenzo and Enrique. Plausibly, speaking a common language was a stronger bond between the students than was having a disability and possibly sharing a common culture was an influence on who Ignacio interacted with, similar to what Suomi et al (2003) found in their study (reviewed in Chapter 2). In many cases, Ignacio’s initiated appropriate interactions were few with the other individuals in his group, and on the occasions that he did initiate appropriate interactions, these interactions were mostly unidirectional and went unreciprocated.

During the intervention in this class, the teacher’s consistency (i.e., procedural integrity) at implementing the Adventure Education unit remained high, at an average of 92% for the five teacher behaviors on the treatment integrity sheet. This could have added to the increased appropriate interactions between Ignacio and his group during the study because the teacher encouraged positive and appropriate interactions between students for 11 (85%) of the observed lessons where data were able to be coded during
the intervention. The teacher physically included the students with disabilities into each of the student groups in this class, and encouraged students to work together on the tasks presented to them during this unit. This promoted favorable contact experiences between Ignacio and his group members, which is a condition of contact theory.

The literature on social interactions of individuals with learning disabilities has shown that such students often are not accepted well by their peers without disabilities (Bryan, Wheeler, Felcan, & Henek, 1976; LaGreca & Mesibov, 1981; Siperstein, Bop, & Bak, 1978; Vaughn, Elbaum, & Schumm, 1996). Despite this lack of acceptance, researchers have advocated for teaching and reinforcing social skills to improve the educational experiences of students with learning disabilities (Schleien, Heyne, & Dattilo, 1995). The appropriate interaction data for Ignacio and his group support this statement. By providing opportunities for students with and without disabilities to interact and then reinforcing appropriate interactions, the teacher is attempting to provide all students with positive learning experiences in their physical education classes.

Class two. The data for Baron’s (student with an emotional disturbance) appropriate interactions upon visual analysis appeared variable, but a trend line indicated that these interactions were stable across the baseline and intervention phases in this study. The mean for Baron’s appropriate interactions had decreased from baseline to intervention by 1%. The data for the appropriate interactions of Baron’s group initiated toward Baron followed a descending trend in the baseline condition, and then upon implementation of Adventure Education, their appropriate interactions increased, indicating that a functional relationship was present in this case. In fact, the mean appropriate interactions of Baron’s group increased to above the mean of Baron’s appropriate interactions during the
intervention phase. At this time, it appeared that the students in Baron’s group were trying to include him in the activities by explaining to and/or showing Baron what to do for some of the activities. In some cases, Baron’s group members were also asking Gregory to translate what they were saying into Spanish so Baron could understand, creating a more favorable contact experience for Baron. These data suggest that Baron’s appropriate interactions with his group members were multidirectional (between different students) and bi-directional (initiated by both Baron and members of his group) in nature. This reflects positive contact between these students, a component of contact theory.

One factor that could have affected the number of appropriate interactions initiated by Baron with his group members was the fact that he spoke mostly Spanish and very little English. Most of the appropriate interactions during the intervention that were between Baron and Gregory occurred when Baron was asking Gregory to translate for him and when Gregory was explaining the activities to Baron. When Baron spoke to other students in his group, he spoke in very short (i.e. three to five word) sentences, and when a student would reply or would initiate a conversation with Baron, many times he did not reciprocate and would say that he did not understand.

Similar to Ignacio’s data, these data suggest that Baron was included socially by his peers during the intervention phase of the study more than he had been during the baseline phase. The published literature on social interactions of students with emotional disturbances has indicated that the behaviors initiated by such individuals tend to be less socially acceptable. This in turn contributes to fewer appropriate social interactions and affects their social status with peers without disabilities (Cullinan & Sabornie, 2004; Farmer & Hollowell, 1994; Sabornie, Kauffman, Ellis, Marshall, & Elksnin, 1987;
Schonert-Reichel 1993). Contrary to those reports, the data from this study suggest that upon implementation of Adventure Education in Baron’s class, appropriate social interactions initiated by Baron’s group did increase.

The teacher’s consistency in implementation of Adventure Education in Baron’s class averaged an 89% across the five teacher behaviors on the treatment integrity sheet. Although this number is lower than for Ignacio’s group, it did not appear to negatively affect the appropriate interactions of the students in Baron’s group. During the times when the teacher would discuss the importance of interacting appropriately, Baron appeared not to be paying attention, possibly because he did not understand what the teacher was discussing with the class. This could have affected the appropriate interactions of Baron because he did not know what the teacher was advocating for the class to do; on many occasions, Baron simply imitated the actions of his group members or watched to see what they were doing before he would start to perform the activities. This may have had a limiting effect on his contact experiences with his group members.

Class three. The data for Benett (student with a learning disability) and his group appear variable across the baseline condition, and a trend line for Benett indicated that his appropriate interactions were following a slightly ascending data path, while the appropriate interactions of his group followed a slightly descending trend throughout the baseline phase. Upon implementation of the intervention, appropriate interactions decreased sharply for both Benett and his group members and stayed low for both throughout the intervention. It appeared that in this class, Adventure Education created a negative contact environment for these students and did not increase appropriate interactions in this case. For example, it appeared that the tasks may have been too
difficult for these students and that these students tended not to be patient with each other or in solving the task at hand. This, in turn, decreased the appropriate interactions between students and facilitated an increase in off task interactions between Benett and his group. This negative condition plausibly had an adverse effect on Benett’s contact experiences.

Of the five other individuals in Benett’s group, Benett interacted mostly with Taniel and Dajuan throughout all phases of the study. There were very few interactions initiated either way with any of the females in the group. Benett’s interactions with Taniel were mostly unidirectional, that is, initiated by Benett more times than they were by Taniel. The data show that on most days when Dajuan was present, more interactions occurred between Benett and Dajuan than Benett and Taniel. Benett’s interactions with Dajuan were bi-directional, initiated by both individuals almost equally, and both Benett and Dajuan were labeled by the school as having learning disabilities. These data confirm the findings of previous social inclusion research in physical education that has found interactions between students with and without disabilities limited and unidirectional (Butler & Hodge, 2004; Place & Hodge, 2001). Although the students in this class were not segregated from the students without disabilities at any point during the study, the interactions between Benett and Dajuan were very high, more than with any other students in the group. This reflects a negative condition to contact experiences in this case. That is, these data suggest that equal status relationships were not developed between Benett and the students without disabilities in his group during the study.
Although the teacher facilitated the Adventure Education unit according to the criteria on the treatment integrity sheet, this type of relationship appeared not to occur between Benett and any other member of the group.

In this class, the intervention had to be terminated prematurely after only nine days of Adventure Education, and due to circumstances beyond the teacher’s control, many times she was not able to implement the intervention as she did in the other two classes. In this class, the teacher had an average of 84% for consistency of implementing the intervention. The one area where the teacher struggled in this class was with positive pinpointing during the lesson closure, which was at 44% for the unit. During the lessons, many times the teacher was focusing on behavior problems of different students in the class. Toward the end of the unit, the teacher mentioned that she did not want to continue because too many students were becoming off task and safety became an issue with the students’ use of the Adventure Education equipment (e.g. some of the students were tying each other up with the ropes). On many occasions, the teacher did not have time for a lesson closure because she was dealing with other issues in the class, or if she did have time to close the lesson, she had to discuss safety and appropriate behavior with the students instead of on what the students were supposed to be doing. Most lessons, the students had very few appropriate interactions with each other because they were not completing the activity as designed and were either talking about something else, or were using the equipment inappropriately. These conditions led to negative student behaviors during contact experiences in this case.

The teacher also mentioned that if the students could not interact with each other in an appropriate manner, she did not think it was safe to continue into the trust activities with
these students. Finally, on the last day of the intervention, Dajuan and Adonica got into a fight with each other and the teacher had to break the fight up and take Dajuan out of the gym. Once she left the gym, more fights began between students in other groups and the students started using the equipment as weapons (e.g. one student wrapped a rope around his fist and started punching other students). It was at this point that the Adventure Education unit was terminated due to increased instances of off task and dangerous behaviors of students in the class. This class was characterized by unfavorable contact conditions. In accord with contact theory, this leads to unfavorable attitudes and behaviors toward others.

**Research Question Two: What Effect did an Adventure Education Unit of Instruction Have on the Positive Interactions Between Students with Disabilities and Their Classmates Upon Implementation of the Unit in Their Physical Education Classes?**

Adventure Education facilitated an increase in positive interactions in one of the three observed classes in this study (Class one). Upon implementation of Adventure Education, positive interactions in Classes two and three decreased throughout the intervention. Contact theory was supported in Class One (favorable conditions leading to increased positive interactions) and in Classes Two and Three (unfavorable conditions leading to decreased positive interactions).

**Class one.** The data for both the positive interactions of Ignacio and his group appeared to increase toward the end of the intervention, and the mean was higher for positive interactions of both Ignacio and his group than during the baseline phase of the study. Both data sets followed an ascending trend throughout the intervention phase of the study; the mean positive interactions for Ignacio’s group were twice as high as that of
Ignacio initiated toward his group members. Although these numbers are statistically much higher during the intervention phase than they were in the baseline phase, positive interactions still averaged less than one interaction per lesson for both Ignacio and his group, so although encouraging, in a practical sense, these numbers may not be as significant as they were statistically.

The students were very successful with the tasks presented by the teacher, and when the students completed the activity successfully, they tended to cheer and give each other high fives and pats on the back. This plausibly could have made it easier for the teacher to encourage more positive interactions when she saw these interactions happening within each group already.

Since the positive interactions during the baseline phase were almost flat lined at zero, positive interactions were supposed to be heavily stressed throughout the intervention phase in both the introduction and closure of each lesson. In the introduction, the teacher was to remind the students of the importance of appropriate and positive interactions with their peers at the beginning of the lesson and then pinpoint any appropriate and/or positive interactions or behaviors she saw throughout the activities. The teacher reviewed positive and appropriate interactions for 85% of the intervention lessons and engaged in positive pinpointing for 77% of the lessons during the intervention. Although these numbers were not in the 90% range as desired, this did not appear to adversely affect the positive interactions of the students during the intervention. It may have been that the students in Ignacio’s group, as a result of their working together in favorable contact conditions, experienced success frequently and celebrated that success with each other.
Class two. The data for the positive interactions of Baron and his group show that these data decreased during the intervention from where they had initially been during the baseline phase of the study. In fact, trend lines indicated that the data path was ascending during baseline for both Baron and his group. Upon implementation of the intervention, for the first six days for Baron and the first five days for Baron’s group, there were no positive interactions at all. However, toward the middle of the intervention, positive interactions began to increase for both Baron and his group, following an ascending data path throughout the rest of this phase of the study.

The language (English) appeared not to be a barrier in positive interactions for Baron because he could have initiated positive interactions with his group members by giving high fives or saying “good job” which he had done on different occasions during the baseline phase. On the contrary, limited English proficiency could have been a barrier when the teacher was discussing the importance of interacting positively with group members and may not have affected Baron in the same way as it could have affected someone who speaks English as a first language. Also, on occasion, Baron did not know what to do once the teacher finished explaining the activity, because he did not understand her directions. Sometimes due to the novelty of the Adventure Education equipment in the gym, Baron would be off task and would not work with his group members and would cause frustration for them instead of encouraging positive interactions.

On occasion, Baron would use the equipment inappropriately (e.g. tying the rubber chickens into knots) and would exhibit inappropriate or unacceptable interactions toward other students in his group as well as with others in the class. These behaviors could
plausibly have contributed to the decreased positive interactions of Baron’s group initiated with Baron during the intervention as contact experiences were not always positive. Previous research has provided evidence that those individuals with emotional disturbances tend to exhibit behaviors that are negative and are less socially acceptable thus likely affecting their status among their peers (Cullinan & Sabornie, 2004; Farmer & Hollowell, 1994; Sabornie, Kauffman, Ellis, Marshall, & Elksnin, 1987; Schonert-Reichl 1993). This could have also affected the positive interactions of Baron’s group initiated toward Baron because their inappropriate interactions with him increased during this phase of the study and will be discussed below.

Class three. The data for Benett and his group show a trend similar to that of their appropriate interactions during the intervention. For both data sets, the mean for positive interactions decreased upon implementation of the intervention. In fact, the data were at zero every day except two during the intervention for both groups. During the study across all three phases, the only positive interactions that Benett initiated or received were with either Taniel or Dajuan. Most of the positive interactions were just between Benett and Taniel throughout the study. These positive interactions took the form of high fives, pats on the back, and/or Benett jumping into other students (bumping chests) to celebrate.

It was clear that the students in this class did not want to participate in Adventure Education by their negative comments and the arguing that occurred throughout the intervention. This could have contributed toward the decreased positive interactions between Benett and his group members during the intervention. Another factor that could have contributed to the decreased positive interactions for this group may have been that
many times they were not successful in completing the activities presented by the teacher. In some cases, the activities could have appeared impossible to the students so they did not try to complete them, the students were off task to begin with and did not try the activities, or they tried the activity one time and if they were not successful, they complained and/or engaged in off task activities. Such negative conditions would lead to unfavorable attitudes during contact experiences. In looking at the positive interactions before and after the intervention, both Benett and his group initiated higher rates of positive interactions with each other, thus furthering the postulation that for this group of students, the intents and purposes of the intervention were not realized. In addition, Benett’s group excelled in the competitive team sport activities that were observed for the baseline and follow up phases (i.e. handball, volleyball, and flag football) when compared to the other groups, so in being successful in these activities, these students tended to be more positive.

The teacher’s consistency at encouraging positive and appropriate interactions remained at 100% for the duration of the intervention, and the teacher also prompted the students to work together as a group 88% of the time. The teacher did this each lesson throughout the intervention even though student behaviors were widely off task and increasingly negative toward each other, other groups, and toward the teacher.

*Research Question Three: What Effect did an Adventure Education Unit of Instruction Have on the Inappropriate Interactions Between Students with Disabilities and Their Classmates Upon Implementation of the Unit in Their Physical Education Classes?*
Inappropriate interactions between the target students and their groups decreased during the Adventure Education unit for Ignacio’s group, Baron, Benett, and Benett’s group.

Class one. The data for Ignacio’s inappropriate interactions as well as for those of his group follow descending data paths throughout the intervention phase of the study. The mean for Ignacio’s inappropriate interactions was higher in this phase of the study, while the mean for his group was lower during this phase. Ignacio’s inappropriate interactions remained low (between zero and two) for all days except for two during the intervention, and the two days where he initiated more inappropriate interactions were high in number (15 on day one, 12 on day nine). On the last day of baseline, Lorenzo initiated many inappropriate interactions with Ignacio by calling him derogatory names as he was participating and this carried over into the first day of the intervention where a fight almost started between Ignacio and Lorenzo; both were calling each other names and were pushing each other. This contributed to the higher inappropriate interactions for both Ignacio and his group at the end of baseline (Ignacio’s group) and during the beginning of the intervention (Ignacio and his group).

It has been documented throughout the literature that individuals with learning disabilities tend to be less accepted socially by their peers without disabilities (Bryan, Wheeler, Felcan, & Henek, 1976; LaGreca & Mesibov, 1981; Siperstein, Bop, & Bak, 1978; Vaughn, Elbaum, & Schumm, 1996). This has been shown to be true in the literature especially for boys with learning disabilities (Bruininks, 1978). This lack of acceptance could be due to deficits in social skills or behavioral problems (Lane, Carter, Pierson, & Glaeser, 2006). These deficits and behavioral problems have been discussed
in the literature and it has been postulated that these can be overcome by teaching and reinforcing appropriate and positive social interactions to overcome the inappropriate or negative social interactions between students with learning disabilities and their peers (Schleien, Heyne, & Dattilo, 1995). These authors further asserted that teaching leisure and recreation skills to such students could be an effective way to encourage cooperation and appropriate interactions between students with and without disabilities.

Toward the end of the intervention in Ignacio’s class, inappropriate interactions decreased for both groups, although they were not at zero every day toward the end. The activities toward the end of the intervention became increasingly more difficult and required more cooperation between the individuals in Ignacio’s group as they engaged in trust and problem solving activities. These activities along with the teacher’s encouragement of positive and appropriate interactions among students could have contributed to the decreased inappropriate interactions toward the end of the intervention.

Class two. The data for the inappropriate interactions of Baron and his group appeared variable in the baseline phase for both data sets, and they also appeared variable in the intervention for Baron’s group. The data for Baron’s inappropriate interactions during the intervention show a stable trend, whereas the data for the inappropriate interactions of Baron’s group show an increasing trend throughout this phase of the study. As defined in IDEIA of 2004, individuals with emotional disturbances tend to exhibit inappropriate and/or unacceptable forms of behaviors, and they also have trouble developing interpersonal relationships with others, and this could have been one reason for the increased inappropriate interactions initiated toward Baron during this phase of the study. At times, he would make actions with the equipment that were not socially acceptable,
and at other times he would tell other students to say things in Spanish to the class (although what he told them to say was inappropriate), so the students in his group would respond to his actions. Finally, at times Baron would not follow the directions of the teacher (likely because he did not understand the directions) and the other students in his group appeared to become frustrated with him and would ask him if he was stupid and would yell at him instead of trying to explain the activity to him or asking Gregory to translate for them. This typified negative contact conditions leading to unfavorable attitudes and behaviors of his group members.

Interestingly, Schonert-Reichl (1993) reported that individuals with emotional disturbances tended to have lower quality relationships with others and less contact with friends. This is similar to what others have found (Cullinan & Sabornie, 2004; Farmer & Hollowell, 1994; Sabornie, Kauffman, Ellis, Marshall, & Elksnin, 1987) as well, indicating that individuals with emotional disturbances tend to be rejected more and accepted less than their peers without disabilities. This likely could have contributed to the increased number of inappropriate interactions initiated by Baron’s group toward him during the intervention.

Baron’s inappropriate interactions showed a 33% decrease from baseline to intervention indicating that he was interacting inappropriately less with his group members during the intervention, although he exhibited other behaviors (i.e. off task) that may have contributed to the increase in the inappropriate interactions of his group.

Class three. The data for the inappropriate interactions of Benett and his group appeared to be unstable during the baseline phase of the study. However, these behaviors followed an ascending trend throughout this phase for both data sets. Inappropriate
behaviors were targeted in this study to decrease them throughout the intervention, and this did happen for both Benett and his group. All the individuals in Benett’s group decreased their mean scores dramatically from a mean of 2.9 to a mean of 0.4 and Benett’s inappropriate interactions also decreased from a mean of 3.2 to 0.4.

Bryan et al. (1976) noted in their study that students with learning disabilities tended to receive many rejection statements and that the students with learning disabilities produced more competitive than considerate statements, although this did not appear to be the case during the intervention phase of this current study. It is likely that the inappropriate interactions decreased because Benett was not making competitive statements to his teammates as he had in the past when they were competing against other teams in handball and volleyball. In addition, most of the interactions during this phase of the study for both Benett and his group tended to be off task interactions more than any other type of interaction. It was during these interactions that students were not in a competitive setting where one could fail and the other could make fun of the failure of another, instead they were engaging in conversations that appeared to be enjoyable to them with very little of a competitive or negative nature to the conversations and/or interactions.
Research Question Four: What Effect did an Adventure Education Unit of Instruction Have on the Off Task Interactions Between Students with Disabilities and Their Classmates Upon Implementation of the Unit in Their Physical Education Classes?

Off task interactions during the Adventure Education unit decreased in Class one and increased in both Class two and Class three.

Class one. The data for the off task interactions of both Ignacio and his group appeared to be variable during the intervention, but a trend line indicated that the data path for Ignacio’s group was descending, while those of Ignacio followed a stable data path through this phase of the study. The means for both data groups were lower during the intervention than they had been in the baseline phase, thus indicating that there were fewer off task interactions during the intervention than in the baseline phase.

This decrease indicates that there was a functional relationship between the implementation of Adventure Education and the off task interactions of the students in Ignacio’s group. These data are encouraging and indicate that Adventure Education can cause a decrease in off task behaviors and interactions during the unit of instruction. This could be due to the novelty of the activities introduced to the students, where the students were engaged in the task because it was something new to them and it interested them. Another plausible explanation was that of the students’ success in completing the activities. Ignacio’s group had been successful in completing each of the assigned tasks during the intervention, and this success could have been a motivator to encourage the students to stay on task. Finally, the teacher was able to pinpoint positive and appropriate interactions between students and was also able to relay the information to the students in
an easier way because the students appeared to be paying attention to what the teacher was saying instead of holding their own conversations. These findings reflect favorable contact conditions in this class.

Class two. The data for both Baron and his group show increased amounts of off task interactions between Baron and his group members during the intervention. A trend line showed that these data followed a sharply ascending data path throughout this phase of the study. These results could be considered both good and bad in this study. On the one hand, when a teacher is talking or when students are engaging in activity, the students should be doing what they are told, whether listening or completing a task presented by the teacher. At times, when students were talking when the teacher was discussing the activities, this made it much harder for the teacher to ensure that the students understood what she was talking about. In addition, on many days throughout the intervention, the teacher shared the gymnasium with another teacher who let her students play basketball for most of those days. This made it very hard to hear the teacher at times and provided more opportunities for the students to become off task.

On the other hand, these data are encouraging in the sense that social interactions (appropriate and off task) between Baron and his group were increasing during this phase of the study. Although these interactions were mostly initiated by Baron and were not reciprocated on some occasions by the other students, these data do indicate increased interactions (even though they were off task) between the students.

Off task interactions are not necessarily all bad, however. For example, on one occasion, Baron’s group had finished their activity and they were waiting for more instructions by the teacher. One of the students in Baron’s group was asking Baron
questions about himself and about how to say things in Spanish, and at times was asking Gregory to translate for him if Baron did not understand what was being asked. This type of off task interaction was not necessarily a bad thing, but based on the way this dependent variable was operationally defined in this study, this was an off task interaction nonetheless. Toward the end of this conversation, Baron told the student something to say in Spanish and told him to say it to the class, so this student did. However, Baron had told him to say something that was not appropriate to say to the class (profanity), and this student got into trouble because the teacher knew what the student had said. This type of behavior is something that is commonly seen in individuals with emotional disturbances or behavior disorders and has been documented throughout the literature (Cullinan & Sabornie, 2004; Farmer & Hollowell, 1994; Sabornie, Kauffman, Ellis, Marshall, & Elksnin, 1987; Schonert-Reichl 1993). These behaviors can contribute to lower peer acceptance of the individual (Farmer & Holowell, 1994), which was evidenced in the reaction of that student to Baron later in the lesson. He indicated that he was not going to talk to Baron anymore during the class period because Baron got him into trouble. This is an example of an unfavorable contact experience in this class.

Class three. The data for the off task interactions of Benett and his group appeared variable throughout the intervention phase of the study. When a trend line was added, the data paths for both groups show a descending trend line through the intervention phase. This indicated that although the means for the off task interactions were much higher for Benett and his group in this phase (the increase from baseline to intervention was 139.7% and 102%, respectively) they were following a descending data path.
Similar to the data of Class Two, the off task interactions of Benett and his group were higher during the intervention phase of the study, although the mean increase was much larger for Benett’s class. The increased off task interactions were initiated by both Benett and his group members, although Benett’s off task interactions were higher than those of his group. Benett’s group was not successful at completing the activities on many occasions during the intervention. This plausibly could have contributed to the increased off task interactions in this group, because when they were not successful a first time, they tended to not want to try a second time. Another possible reason for the increase in off task interactions could have been due to the large amount of students who had a learning disability or emotional disturbance in this class and specifically in Benett’s group (three of the six students).

Schumaker, Wildgen, and Sherman (1982) have indicated that individuals with learning disabilities tend to listen to initial instructions by their teachers and then attend less to content information. In the current study, this could be seen in Benett’s group as many times, Benett would listen for the first few moments the teacher started to talk but would then become off task either watching the other class in the gym or by talking with Taniel or Dajuan while the teacher was talking to the class and introducing the activities. This off task behavior in the introduction could also have contributed to Benett’s off task interactions during the intervention because when he was not listening to the instructions, he did not know what he was supposed to do during the activity. In addition, because he was usually talking to either Dajuan or Taniel during the introduction, they would not be listening either and would not know what to do when it came time to participate in
activity. As Dajuan and Taniel were the two individuals with whom Benett interacted the most, Benett did not ask the girls in his group what they were supposed to do.

Research Question Five: What Effect did an Adventure Education Unit of Instruction Have on the Maintenance of Social Interactions Between Students with Disabilities and Their Classmates After Completion of the Unit in Their Physical Education Classes?

With a few exceptions, social interactions between the target students and their groups (i.e. appropriate, positive, inappropriate, and off task interactions) tended to recover in the direction of baseline level following the Adventure Education unit.

Each class was observed for eight days following the end of the Adventure Education unit. In Ignacio and Baron’s classes, the next unit of instruction was basketball and the next unit in Benett’s class was flag football. It is important to mention that the researcher recorded each lesson unless the target student was absent or if the teacher was giving the students a test. In Ignacio and Baron’s classes, one of the eight days the teacher had dedicated to reviewing for a test (as a group) where they played “Jeopardy” and tried to answer the teacher’s questions as a group. Although the teacher told the classes that they needed to decide as a group what their answer would be, in many cases, only one or two students would decide on an answer, thus excluding Ignacio and Baron from the conversation. This resulted in fewer interactions on these days.

Class one. Following the Adventure Education unit of instruction, Ignacio and his group were observed for eight days during a basketball unit to determine maintenance of the appropriate and positive interactions between these students. Overall, Ignacio’s appropriate and positive interactions remained higher than they had been during both the baseline and intervention phases, which indicated that these types of interactions were
retained for Ignacio following the intervention in this class. Although the mean appropriate and positive interactions had decreased following the intervention, the means were still above where they had been in the baseline phase of this study. On the other hand, Ignacio’s inappropriate interactions had initially increased during the intervention and had then decreased during the eight day follow up. Ignacio’s inappropriate interactions during this phase of the study (mean 1.8 inappropriate interactions per lesson) had practically returned to baseline level (mean 1.7). The off task interactions of Ignacio followed a descending trend throughout the intervention, and although the mean for the follow up phase was only slightly higher than the intervention (the mean difference was 0.8), these data followed an ascending trend during this phase of the study.

The data for Ignacio’s group show an increase in both appropriate and positive interactions from where they had been during the baseline phase, although appropriate interactions had decreased from where they had been during the intervention. However, the mean for the positive interactions of Ignacio’s group were the same during the follow up as they had been during the intervention phase of the study, indicating that both appropriate and positive interactions had been retained following the intervention. In addition, the inappropriate and off task interactions of Ignacio’s group had continued to decrease from baseline to intervention and then to this phase of the study indicating that the students in Ignacio’s group tended to interact with him more positively and appropriately than inappropriately or in a situation that could have been considered off task.
Class two. Following the intervention, Baron’s appropriate, positive, and inappropriate interactions continued to decrease during the follow up phase of the study, while his off task interactions continued to increase. The data for Baron’s appropriate and positive interactions, although lower in this phase than they had been during the intervention, were following an ascending data path indicating that these interactions were following an ascending trend throughout the follow up phase of the study. In some cases, during this phase of the study, Baron was off task and did not work with his group, thus contributing to the lower amount of interactions he initiated. For example, the units of instruction following the intervention were basketball and flag football. At times Baron would be trying to play basketball with his group, but they tended to pass only to the higher skilled players in the group, and this frustrated Baron creating a negative contact environment for him. On occasion, he would tell the teacher they were not passing to him and she would discuss this with the group, but at other times, he would simply take a basketball and play by himself. In addition, some of the activities the teacher introduced were activities where the students did not work with their immediate groups, or were activities where less talking occurred (such as reviewing for a test). These factors likely contributed to the decreased amount of interaction initiated by Baron. When he was not working with his group, he tended to talk with another student in the class (who was not in his group) often, plausibly because this student also spoke Spanish as his first language.

Baron’s increased off task interactions follow an ascending trend throughout the intervention phase of the study. Once the intervention was finished, his off task interactions began to follow a descending trend although the mean for off task
interactions was higher at this point. This could be due to many reasons including nature of the activity, talking during the introduction or teacher instruction, or because it was nearing the end of the school year. Interesting to note was that although Baron’s appropriate and positive interactions decreased during the follow up phase, his inappropriate interactions decreased the most from baseline to follow up (95% decrease) and were occurring at a rate of 0.1 per lesson. This is encouraging because the literature has indicated that individuals with emotional disturbances are the ones who tend to exhibit inappropriate and/or unacceptable forms of behaviors toward other individuals (IDEIA, 2004). Baron’s data for inappropriate interactions show a marked decrease during this phase indicating that he was initiating less inappropriate interactions with his group members.

In Baron’s group, the follow up data show a decrease in appropriate and inappropriate interactions, and an increase in positive and off task interactions. The data for positive and appropriate interactions did follow an ascending trend throughout this phase of the study, indicating that they were beginning to increase during this phase. The appropriate interactions of Baron’s group had returned to almost where they had been during the baseline phase (in baseline the mean of appropriate interactions was 21.1, in the follow up phase the mean was 20.7 per lesson). This could be due to the fact that Baron was not interacting with his group as much as he had in the first two phases of the study, or plausibly because the teacher was not encouraging the students to interact with each other in an appropriate manner during the units of instruction following the intervention. However, the off task interactions for Baron’s group had increased by 94% from the baseline to follow up phase. This could be due to Baron’s increased off task interactions
with his group members. It could have been that his group members were simply responding to his initiated interactions during the lesson as the data of Baron’s group almost mirror the decreases and increases of Baron’s data during this phase. The one exception was that in Baron’s group, positive interactions had increased by 5% from baseline to follow up, whereas Baron’s positive interactions had decreased by 71% from baseline to follow up.

Class three. Benett’s interactions changed dramatically from intervention to follow up. During the follow up phase, the appropriate interactions had increased from the baseline phase by 35%, inappropriate interactions had decreased by 75% (although Benett did get into a fight on one occasion), and the off task interactions had decreased from the 149% increase seen during the intervention to an increase from baseline to follow up of 17%. In addition, Benett’s positive interactions had increased from the mean during the intervention, but showed a 21% decrease from baseline to follow up. In addition, Benett’s appropriate and positive interactions followed an ascending trend, while his inappropriate interactions remained almost stable with a slightly ascending trend, and his off task interactions followed a descending trend during this phase of the study.

For Benett’s group, all categories of interactions had decreased from the baseline to follow up phase. These data indicated that Benett’s peers were not interacting with him as much as they had been during the baseline phase of the study. Benett’s initiated interactions were higher than those of his group for most phases and dependent variables during this study. This shows that his group members were not initiating or responding to Benett’s initiated interactions many times throughout the lessons. On the days when
Dajuan was absent, the number of interactions decreased because most of Benett’s interactions during the study were with either Taniel or Dajuan. With this in mind, and in looking at the data, at times Benett’s initiated interactions were close in number to those of his group. Most of the interactions between Benett and his group members (i.e. Taniel and Dajuan) were multidirectional and bidirectional in nature. At times, Benett initiated more interactions than his group members, but in most cases his group members responded to his initiated interactions. It is encouraging to see that although the appropriate and positive interactions for Benett’s group were lower than their baseline level, they had begun to recover to baseline state following the end of the intervention and were following an ascending trend throughout this phase.

Discussion

Glass and Benshoff (2002) indicated that participation in a one day adventure education-based challenge course can develop cohesion among adolescents, which informed this current study where students worked in groups over multiple days to complete tasks assigned to them by the teacher in hopes of increasing social interactions between all students in the groups. The results of this study suggest that a fifteen day intervention in which Adventure Education activities were presented to middle school students who were placed in small groups could be a plausible way to increase interactions between students with and without disabilities in these classes. The results of this study should be interpreted cautiously, however, because a functional relationship between the independent and dependent variables was robust in only one of the three classes, thus indicating that there could have been other variables present that had an effect on the social interactions of the students in Classes Two and Three. Previous
research (i.e. Butler & Hodge, 2004; Place & Hodge, 2001; Ring & Travers, 2005) has suggested that for the most part, students with disabilities who are placed in inclusive classes tend to experience physical inclusion (where they are included in the GPE class) but that they also experience segregated inclusion (where the students with disabilities are grouped together) and social isolation (where students with disabilities do not interact with their peers without disabilities).

This study sought to increase the social interactions between students with learning disabilities and emotional disturbances and their peers without disabilities in each of the three observed classes. It was speculated in the current study that the social interactions between students with and without disabilities in these classes could be improved during the intervention if the teacher chose to focus on interactions between students and not on the outcome or product of the activity, such as which group completed the task first. The targeted students with disabilities were those individuals who were identified with learning disabilities (Ignacio and Benett) and emotional disturbances (Baron). The individuals with these specific disabilities were targeted due to what the extant literature has indicated; that is, individuals with learning disabilities and emotional disturbances tend to have social skill deficits, behavioral problems, exhibit inappropriate behaviors, experience more rejection by their peers without disabilities, and have problems with interpersonal relationships (Bryan, Wheeler, Felcan, & Henek, 1976; Farmer & Hollowell, 1994; LaGreca & Mesibov, 1981; Sabornie, Kauffman, Ellis, Marshall, & Elksnin, 1987; Schonert-Reichl 1993; Siperstein, Bop, & Bak, 1978; Vaughn, Elbaum, & Schumm, 1996).
In addition, Schumaker, Wildgen, and Sherman (1982) asserted that students with learning disabilities initiated more interactions toward their peers without disabilities than their peers initiated with them, and yet these individuals tend to be ignored more. This tended to be consistent with the results of this current study. In Ignacio’s group, this was true for all dependent variables except for that of inappropriate interactions where Ignacio’s group tended to exhibit more inappropriate interactions toward him than he initiated toward his group. The inappropriate interactions that were initiated during this study toward Ignacio support what has been found in the literature that has indicated that individuals with learning disabilities are rejected more (Bryan, Wheeler, Felcan, & Henek, 1976; Farmer & Hollowell, 1994; LaGreca & Mesibov, 1981; Siperstein et al., 1978; Vaughn et al., 1996). Similarly, the data for the appropriate interactions of Ignacio and his group indicate a similar pattern to what has been found in previous research indicating that individuals with learning disabilities tend to initiate interactions more and are also ignored more often (Schumaker et al., 1982).

Baron’s data were different in that Baron initially tended to interact appropriately more with his peers during the baseline phase, but during the intervention phase, his peers tended to initiate appropriate interactions with him more than he did with them. During the baseline phase, Baron initiated more positive interactions with his group, but in the following two phases, his group members initiated more positive interactions than he did. Finally, during baseline, Baron initiated more inappropriate interactions toward his peers, but during the intervention, they initiated more inappropriate interactions with him. It appears that Baron initiated more interactions with his group members than he did during the intervention phase of this study for every dependent variable except that of off task
interactions. It could be that Adventure Education presented novel activities to Baron in a
language (English) that he was still learning (he was originally from Puerto Rico) and
these two factors combined with the teacher’s sharing of the gym with another teacher
could have led Baron to become off task more during the intervention and may have also
exposed him to new words and activities that he did not understand. In addition, only on
occasion would Gregory explain to him in Spanish what they were supposed to do during
the activities in the intervention phase of the study. If Baron did not know what to do, he
tended to become off task easily which would frustrate the other students and may have
led to their increased inappropriate and decreased appropriate and positive interactions
initiated toward him during the intervention.

In Benett’s class, there were many students with various disabilities (14 of the 28
students in the class). These students tended to be the ones who were the most off task
during the intervention. This could have contributed to the increased off task interactions
and decreased positive and appropriate interactions during the intervention due to what
IDEIA (2004) has described as inappropriate behaviors and problems with the ability to
listen and think that are characteristic of individuals with emotional disturbances and
learning disabilities, respectively. The activities presented to the students during the
intervention were novel and at times appeared difficult for the students to complete.
Plausibly because the students with learning disabilities in Benett’s group (Benett,
Dajuan, and Heather) may not have understood the instructions or may not have paid
attention when the teacher was introducing the activities, thus contributing to off task
behaviors. On the last day of the intervention, there was a fight between Dajuan and
Adonica during the activities. Following the teacher’s removal of Dajuan from the gym,
she gathered Benett’s group together and had a discussion with them about the importance of working together as a group to be successful and had mentioned to the students that they worked together well during the volleyball, basketball, and handball units and that she wanted to see this happen again in the group during Adventure Education. One of the girls in the group told the teacher that they worked as a group better during the other units because they did not have to work together or talk to each other. The teacher had been advocating for appropriate and positive interactions every day during the unit and told the students numerous times that they needed to work together to be successful at completing the activities, but this encouragement did not seem to help.

During the intervention, the teacher closed most of her lessons with the components of Kolb et al.’s (2001) experiential learning cycle (i.e. “what”, “so what”, and “now what”?). On occasion, the teacher would run out of time at the end of the class and did not have time to allow the students to reflect using these components (i.e. Class Three). The teacher would wait for the students to stop talking and put the equipment down and would ask the students a series of questions to get them to think about the activities they had just completed and how these activities and what they learned from participating in these activities fit into their lives outside of their physical education class. Sometimes the students would answer her questions and would tie the learning experiences into their daily lives, and other times the students would not be able to answer her questions, especially on days when they were not successful in completing the activities. However, the teacher was able to recognize when the students were having a hard time answering
her questions, so she was able to lead them to discovering what they learned from both
the positive and negative experiences they had during the intervention in all three classes.

Also interesting was the fact that the later the intervention was introduced, the less
positive results were seen. For example, in Ignacio’s class, appropriate and positive
interactions increased from the baseline mean for both the intervention and maintenance
phases of the study, while the inappropriate and off task interactions tended to decrease
indicating a functional relationship between the introduction of the intervention and a
change in the amount of interactions between the students. In Baron’s group, these
changes were not as predictable. In Baron’s case, his inappropriate, appropriate, and
positive interactions decreased during the intervention and decreased even more during
the maintenance phase while his off task interactions followed an opposite trend,
increasing throughout the study. The data of Baron’s group also follow an unpredictable
path throughout the study where the inappropriate, appropriate, and off task interactions
increased during the intervention while the positive interactions decreased. During the
maintenance phase, the positive and off task interactions tended to increase while the
other two categories of interactions (appropriate and inappropriate) showed a decrease
from intervention to maintenance. In Benett’s class, for both Benett and his group,
appropriate, inappropriate, and positive interactions decreased during the intervention,
while the off task interactions increased greatly. When the intervention was terminated,
positive, appropriate, and inappropriate interactions began to increase during the
maintenance phase of the study, and the off task interactions decreased. In this class, it
appears that a culture of competition had been developed where the group worked
together well in more competitive games as evidenced during the basketball and other
team sport related units. This culture had been developed throughout the first four months
the group had been formed in which the group had been very successful in competing
against other teams, but when this group had to work together in activities that were not
competitive, they became frustrated and did not work together well.

The sequencing of content is very important in Adventure Education. As previously
mentioned, it is necessary to teach the activities in a manner that focuses first on
developing group cohesion to help groups learn to work together, what has been termed
the “forming” stage of group development where group members become acquainted
with each other, learn to communicate together, and start to build trust and respect for
each other (Neill, 2004; Tuckman, 1965). The group development literature that has been
tied to adventure based activities indicates that the next stage in group development is
called “storming.” In this stage, group members tend to become hostile toward each
other, compete against each other, fight, and are dissatisfied with their group members.
This characterizes Benett’s group during the Adventure Education unit. At this time, the
group members were in conflict most of the time with each other and did not work
together to complete the tasks assigned by the teacher. It appears as though Benett’s
group did not move past this stage in group development during the intervention. It is for
this reason that the sequencing of content is so important in Adventure Education
activities. Tuckman (1965) mentions that the “storming” stage is very important in trust
building within a group, however, in Adventure Education, it is also important not to
move on to the next topic (such as moving from cooperation to trust activities) until the
group moves out of this stage. If a group cannot work together, it is important not to
move on to the next topic because the group dynamics have not developed to where they
need to be in order for the group to be successful. For the purposes of this study, the Adventure Education activities were kept the same in each group throughout the intervention phase, but Class Three needed more time in the communication and cooperation activities than the other groups as this class took more time in the storming phase than did the other two classes. The third stage in group development is called “norming” where openness toward other group members is evident (Tuckman, 1965) and an agreement is reached on how the group will work together (Neill, 2004). The fourth stage discussed by Tuckman (1965) was “performing” where the group attempts to complete the tasks as assigned while working together. This was more evident in Class One and to some extent Class Two where the groups moved into stage four and worked together as a group without conflict.

The teacher had mentioned that she felt it was more beneficial for her to implement Adventure Education at the beginning of the year or semester when she first began teaching the students before they had developed strong ties (i.e. relationships) to only one or two individuals in the class or within their groups. During this study for all three classes, the students with disabilities tended not to increase their interactions with different individuals. That is, Ignacio and Baron interacted the most with other individuals in their group who spoke Spanish as their first language, and this tended to be the trend throughout the study. Benett tended to interact the most with Taniel and Dajuan (when Dajuan was not absent) throughout all phases of the study. On occasion, the targeted students (Ignacio, Baron, and Benett) would interact with other students in the group, but overall it appeared that they tended to interact more with the students who were the most like them. It appears as though Ignacio and Baron could have been
marginalized from their English speaking group members because they spoke Spanish as their first language and not necessarily because they had a disability. If the teacher had been bilingual, this could have affected the implementation of the intervention. If the teacher had been able to speak Spanish and the other languages that students spoke in the class (such as Somali), the students (especially Baron) may have been able to better understand what they were supposed to be doing to successfully complete the activities.

**Theoretical Framework and Discussion**

This study sought to use Adventure Education to support Allport’s (1954) contact theory by providing activities for individuals where they experienced equal status contact, shared common goals, cooperated as a group, and engaged in these experiences in an environment that supported and facilitated the contact (or interactions) between group members. Although there are no published studies in physical education using Adventure Education as an intervention to improve social inclusion of individuals with disabilities in GPE, ample evidence suggests that by effective facilitation and encouragement by the teacher, social interactions between individuals can increase. There is a strong literature foundation and theoretical basis (Allport, 1954) to posit that social inclusion can improve through the use of an Adventure Education unit of instruction in GPE classes. It was believed that in this study, if certain favorable components were present, contact theory could be used as a theoretical foundation to explain the social interactions that occurred between the students with and without disabilities in each class.

This theory posits that if four favorable conditions are present, contact between individuals can increase and produce positive attitudes between individuals (Allport, 1954). Table 5.1 reiterates the components of Allport’s contact theory and the
connections between these components and how each component was addressed during the Adventure Education unit in this study. During the intervention, each component was addressed and built into the Adventure Education unit. The teacher implemented activities that involved each group member, who was an important part of completing the task. The students could not complete the tasks without utilizing each member in some way during the activity, thus creating a situation where all students had to be involved in the activities. Also during the unit, cooperative activities were introduced that required each member of the group to work together to achieve the common goals of the activities. Finally, an environment that encouraged appropriate and positive social interactions between group members was fostered by the teacher through the use of facilitation and debriefing techniques as a part of the activities.

Each of these four components was present in each class throughout the intervention (refer to Table 1.1). However, because these components (both favorable and unfavorable) were present, the findings of this study are explainable in the tenets of Allport’s contact theory. When looking at the interactions of the group members of the target students, it appears as though these students with disabilities were socially included in their GPE classes because for two of the three classes, appropriate and positive interactions did increase, partially supporting contact theory. In addition, present also in Class Two and more so in Class Three were unfavorable conditions such as tension among group members and when the group members were frustrated with each other and/or the activity. According to contact theory, unfavorable conditions may lead to negative attitudes and interactions between individuals (Allport, 1954), which was evident at times in Class Two and often in Class Three. When data were coded, each
individual student in the group was coded for his or her interactions with the target student (Ignacio, Baron, or Benett). However, as there were high rates of student absence within each group, the group members within each class were collapsed into one to avoid missing data points (e.g. in Ignacio’s class, Ignacio and his group were coded separately as two entities). In looking at the individual data for each class, the same individuals tended to interact with the target students throughout the entire study. In Ignacio’s class, Lorenzo and Enrique interacted with Ignacio the most. For Baron, the individual who interacted with him the most was Gregory, and in Benett’s group, Dajuan and Taniel were the individuals who interacted with him the most. This remained consistent throughout the study with the exceptions when these individuals were absent from school or class.

Allport (1954) postulated that attitudes and interactions between individuals who were different (i.e. of different ethnicities) can be improved through structured contact between such individuals with the four favorable components of contact theory as mentioned above. Adventure Education in this study helped foster ascending trends of appropriate and positive interactions in two of the three classes, thus partially supporting contact theory. Although such interactions did increase in this study, contact did not change the amount of interactions that occurred between certain students in the target groups (e.g. between boys and girls). Interestingly, it appears that although the four favorable components were a part of this study, there appear to have been other factors that may have had a strong influence on the nature and amount of interactions that occurred between students, such as unfavorable components of the environment that led to unfavorable contact experiences. These factors include, but were not limited to,
differences in gender, language, culture, and disability status as well as the unfavorable components of tension laden environments and frustration between group members. These factors appeared to have had a mediating effect on the interactions that occurred between the students in this study.

**Procedural Limitations**

This study was limited to a 15 day unit of Adventure Education in three urban middle school GPE classes. In this study, social interactions between small groups of six to seven students in three classes were observed. These interactions included appropriate, positive, off task, and inappropriate interactions initiated by the target students (students with disabilities) and those interactions of the group members with the targeted students. The targeted students in this study were labeled with learning disabilities (Benett and Ignacio) and emotional disturbances (Baron) by the school and did not include students with other types of disabilities (i.e. intellectual or physical disabilities).

Only three students with disabilities were targeted for this study due to the amount of available students with disabilities (Class Two), the number of students who returned consent forms (Class One), and the amount of absences of some students (Class Three). In addition, videotaping multiple students at one time in each class was not feasible because the researcher was the only individual who was available for recording the classes and had to move the camera based on where the target groups were located in the gymnasium. At times, the activities required the students to move throughout the gymnasium, making it hard for the researcher to feasibly tape more than one group in each class.
Social interactions were coded from videotaped class sessions and included only interactions between the target students and their group members. Although on occasion social interactions between the target students and students in other groups did occur throughout the study, these interactions were not coded during this study. Each videotaped class session focused specifically on the social interactions of the target group for the three classes. In addition, students within the target groups wore a wireless microphone to capture the social interactions between the students. At times throughout the study, the wireless microphone malfunctioned and caused a loss of data on the videotapes (two days per class).

Another limitation of watching videotaped data in this study was that at times, the students moved to an area of the gym where the video camera could not tape them causing a few instances where the researcher could not see or hear the students. When interactions occurred between the students at these times, these data were not coded because it was not possible to determine who the students were talking to. In this school, the physical education teacher had to share the gymnasium with another teacher, contributing to extra noise on the videotapes and at times making it hard to hear the interactions of the students who were not wearing the microphone.

Data collection for this study commenced in January, and as such, there were several days where the schools were closed due to cold weather, snow, and holidays that contributed to an increased number between days of data collection and could have affected the results of this study. Similarly, spring break occurred in the middle of this study and could also have affected the social interactions between students.
Finally, during the intervention, the nature of some of the activities did not require that students specifically talk or interact with each other. For example, during the activity called “Line up”, students were not allowed to talk to each other. They were allowed to make gestures toward each other, but talking was not allowed for successful completion of the activity. This could have contributed to decreased numbers of interactions between students during this specific activity which in turn would have affected the mean of the social interactions during the intervention phase of the study. When the teacher was implementing the Adventure Education unit, treatment integrity (i.e. consistency in delivering the unit) measured only whether or not teacher engaged in certain behaviors, not the number of times she engaged in the behavior each lesson. If the teacher had engaged in certain behaviors from the treatment integrity sheet more frequently, this could have more positively affected the social interactions that occurred between the students in this study. The teacher was considered effective at implementing and facilitating Adventure Education lessons in her GPE classes, and the outcomes of the intervention were satisfactory in increasing the social interactions between students during the lessons. However, at times the teacher did not have 100% for all behaviors as specified on the treatment integrity sheet, and this could have had an effect on the results of the study. In some classes and/or behaviors, treatment integrity was low (e.g. 44% for teacher behavior number five). In this case, treatment integrity was low in Class Three because student behaviors became an increasing concern of the teacher and she had to focus on other issues (such as fighting) that decreased her class time and did not allow for a closure in that class.
Implications for Teachers

There is a need to further explore the use of Adventure Education to increase social interactions between students with and without disabilities in GPE settings. In this study, the teacher implemented an Adventure Education unit of instruction after one or more units of instruction into the semester she started working with these students when she would have normally introduced Adventure Education activities at the beginning of the year versus later in the year. The teacher mentioned that it was more beneficial (for her setting) to implement Adventure Education as the first unit of instruction when she starts with a new group of students because it teaches the students important skills they can use in their everyday life, but more importantly, these skills reach the students before strong friendships are made between small groups of individuals and teaches them to interact with all students in their groups as well as in their class. Finally, in the case of this study, Adventure Education taught the students the importance of interacting with all students, even those with disabilities (as evidenced by the students’ answers on the student social validity sheets) and the value that positive and appropriate interactions can have in building healthy relationships with others, lending support to contact theory.

This study shows in some classes that certain behaviors can be increased when special focus is placed on reinforcing these behaviors (i.e. appropriate and positive interactions) rather than on competition between groups and winning games. These behaviors may not be retained following Adventure Education as certain behaviors tended to decrease in some classes when they were not reinforced during the eight day maintenance phase (i.e. appropriate and positive interactions) while others may increase (off task or inappropriate interactions).
It is also important that the teacher gauge student behavior during the Adventure Education unit and that a logical pattern be followed in introducing activities. In this study, the teacher introduced activities in the following categories: (a) communication, (b) cooperation, (c) trust, and (d) problem solving. This order was chosen because the trust and problem solving activities were the hardest activities for the groups to complete. If students cannot get through the communication and cooperation activities without fighting and interacting inappropriately with each other and/or exhibiting off task behaviors, trust activities should not be introduced. Trust activities require trust in the person or people a student is working with; if there is little or no trust between the students, either the activity will not work, or someone may get hurt. In addition, problem solving activities should not be introduced if students cannot communicate, cooperate, and trust each other to work together to solve a problem. These activities were the hardest for the groups to complete, and at times provided a source of frustration when the groups were not successful resulting in negative contact experiences, so it is important that the teacher gauge student behavior and if behaviors start to become increasingly negative or off task, the teacher should debrief with the students and talk about the way they are feeling to help them through the task. At no time did the teacher tell the students how to complete the activities or solve the problems, but when the groups started to become frustrated, the teacher would relate these frustrations to frustrations they would face in their daily lives and would help them to complete the activity by providing hints, but never gave them the solutions. It is also important to keep students accountable for group
rules developed at the beginning of the unit as well as the skills gained throughout each portion of the unit so that they continue to interact appropriately and positively with each other as well as follow the rules they set as a group.

Finally, the context of the school is important to take into consideration when implementing Adventure Education into GPE classes. This study was conducted in an urban middle school setting, and the results were robust in only one of the three classes, providing limited support for implementing Adventure Education into this type of school context. There are many factors that could have enhanced or detracted from the desired results of the study such as, but not limited to: student behavioral tendencies related to their student disability classifications, student demographics/diversity of the classroom, students who were English language learners, time of the school year, school factors (such as end of the year testing), among others. These results should be taken cautiously but future studies can and should explore Adventure Education in other school communities (i.e. rural, urban, and suburban schools) to determine the effects of Adventure Education in such settings.

**Implications for Researchers**

In the social inclusion literature, students with disabilities in GPE classes have tended to experience social isolation in which their peers without disabilities tended not to socially interact with such students (Butler & Hodge, 2004; Goodwin & Watkinson, 2000; Place & Hodge, 2001). Although limited research has been done on the social interactions between students with and without disabilities in GPE classes, a need exists for interventions that combat the social isolation that students with disabilities tend
experience. This study sought to extend the current literature base in this area by employing an intervention using Adventure Education to increase the social interactions between students with and without disabilities in GPE classes.

This study contributes to the literature in providing a feasible way to implement a unit of instruction that can have a positive effect on the social interactions between students with and without disabilities in a way that is meaningful both to the teachers and students. The completed student social validity questionnaires indicate that the students tended to believe it was important to interact with all students in their class, regardless of whether the students had a disability or if they spoke a different language. Although the students’ answers tended to range in answering whether they liked to participate in Adventure Education and whether they would have liked to participate in another Adventure Education unit of instruction, the students in Classes 1 and 2 tended to respond positively to the importance of interacting with others and that both they and their group members had increased the amount of times they interacted with each other.

The teacher in this study felt that Adventure Education was an important unit of instruction that should be taught early on with students before strong ties between students are developed. This was one thing the teacher mentioned she would have done differently in this study which was to implement Adventure Education early on in the year so that the students could learn to work together and cooperate because positive social interactions between students was important, although hard to “force” students to interact with each other.

Adventure Education has been used in various settings to determine self efficacy, self esteem, perceptions of individuals with disabilities, group cohesion, and attitudes toward
individuals with disabilities (Cross, 2002; Ewert & Heywood, 1991; Gillett, Thomas, Skok, & McLaughlin, 1991; Glass & Benshoff, 2002; Marsh, Richards, & Barnes, 1986a). This study is the first to code social interactions between students with and without disabilities to determine the feasibility of Adventure Education in increasing positive and appropriate social interactions between students. The results of this study are explainable in contact theory under both favorable (Class One) and unfavorable (Class Three) conditions. These results show that when Adventure Education is taught by an effective facilitator, social interactions between students with and without disabilities can increase under favorable contact conditions.

**Recommendations for Future Research**

This study is the first to explore the use of Adventure Education as a tool to increase social interactions between students with and without disabilities in GPE classes. In this study, appropriate, positive, off task, and inappropriate social interactions between students in targeted groups were coded daily using a multiple baseline across participants design. Due to the nature of the design, a period of time prior to the commencement of the intervention was necessary to measure behaviors as part of a baseline to determine the rates students were interacting. Future research on social interactions in Adventure Education should try to explore the use of Adventure Education at the beginning of a school year versus in the middle of the year. This could help determine the effectiveness of using this intervention early on versus later in the year after students have already formed their close relationships with others. This could also help the students learn to work together and cooperate as a team first so the students could use these skills in later units of instruction.
Future research should also target students with different disabilities such as physical or intellectual disabilities in different settings (i.e. high school, suburban schools) to determine the effectiveness of Adventure Education in settings other than the one used in this study. In addition, dependent variables different than the ones focused on during this study could be explored to investigate the effects of Adventure Education on these variables. For example, fair play interactions could be examined such as helpful interactions between students (i.e. one student explaining the activity to another). This could further break down the category of “appropriate interactions” that was used as one of the dependent variables in this study.

Adventure Education could also be taught in conjunction with a unit on social skills. Instead of telling the students they needed to interact positively with each other, a teacher could teach students more about what appropriate interactions are, why they are important, and how to use these skills in physical education as well as in their everyday lives. In addition, future research could also explore different Adventure Education activities and/or concepts such as the use of a full value contract focusing on group norms but also on social interactions with others (Panicucci, 2002). Also, the concept of challenge by choice (Panicucci, 2002) could be explored where students have the opportunity to choose the level of challenge in each activity they do to help the students feel comfortable while participating in the activities.

In addition, further research could be done using multiple cameras and microphones in each class to attempt to observe more than one group of students per class and to avoid missed data points due to equipment malfunctioning. Future research should also explore the possibilities of analyzing data in different ways such as developing a sociogram prior
to the start of the intervention to determine which students are and are not interacting with the targeted students. During the intervention, the students who did not interact with the target students could be followed and their interactions could be coded to determine the efficacy of Adventure Education in increasing social interactions between these students in addition to the interactions of the group with the target student.

**Conclusion**

The purpose of this study was to increase the social interactions between students with and without disabilities. This study used Adventure Education as a means to encourage positive and appropriate social interaction, create common goals for each group to complete, develop intergroup cooperation, and equal status relationships through facilitation by a teacher trained to implement Adventure Education. The results of this study show that through effective facilitation of Adventure Education activities by encouraging students to interact and reinforcing appropriate and positive social interactions, these types of interactions between students can increase in some cases, but not all. Although the Adventure Education unit was not effective in all three classes studied, it is important to note that Adventure Education can and should be modified to fit the needs of each class to better facilitate a positive experience for all involved.

The results of this study show that although at times the teacher did not meet 100% of the requirements on the treatment integrity sheet each day, she adapted and modified each activity and strategy to fit the needs of each class in order to address safety concerns and student behavior as warranted. The teacher felt that Adventure Education provided a feasible means to increase interactions between students in her classes, although she preferred to implement this unit at the beginning of the school year. The students tended
to indicate that it was important to interact with all other students in their class, even if these individuals spoke a different language than they did, or if these individuals had disabilities. In addition, most students indicated that felt they had increased the number of times they interacted with other students in their groups, and that other students interacted with them more as well. In the cases where appropriate and positive social interactions did not increase as expected, there could have been other factors that may have affected the social interactions in these classes (i.e. Class Two and Class Three). It appears that the nature of the students in the class, the context of the school, and having a common bond (such as speaking the same language or being of the same gender) were strong influences on the nature and amount of interactions the students engaged in during their physical education classes.

Previous social inclusion research has shown that students with disabilities tend not to be included socially by their peers without disabilities, indicating a need for interventions that facilitate the development of equal status relationships between students with and without disabilities in GPE classes (Ammah & Hodge, 2006; Butler & Hodge, 2004; Goodwin, 2001; Goodwin & Watkinson, 2000; Hodge et al., 2004; Place & Hodge, 2001). Adventure Education provides a feasible means to develop and promote such relationships between students, which in turn increase the likelihood of bidirectional and multidirectional interactions occurring in physical education. Although further research is warranted in determining how best to increase social interactions between students with and without disabilities in GPE, this study provides some evidence that social interactions can increase through effective facilitation and the creation of an environment that encourages appropriate and positive contact interactions between students.
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APPENDIX A

ANALYSIS OF INCLUSION PRACTICES IN PHYSICAL EDUCATION FORM S-STUDENT VERSION REVISED

FROM HODGE, AMMAH, CASEBOLT, LAMASTER, & O'SULLIVAN (2000)
OCCURRENCE OF SPECIFIC STUDENT INITIATED INTERACTIONS

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Scoring: each interaction behavior emitted during a class period is coded as observed according to the appropriate behavioral category labels below. For example, if the student without disability provides feedback (at any time within the time interval observed) to a peer with disability, place the code “A” in the box. Every two lines equals one five minute time period. **Record one mark within each box.**

**Key Interactions**

**A: Appropriate interactions:** These behaviors can be verbal or non-verbal in nature and include behaviors that are not positive in nature, but are neutral in affect.

**P: Positive appropriate interactions:** These behaviors can be verbal or non-verbal in nature, and are positive in affect.

**I: Inappropriate interactions:** Inappropriate behaviors consist of verbal or non-verbal incidents where a student with or without a disability exhibits negative behavior toward a peer.

**O: Off task interactions:** Off task interactions consist of any verbal or non-verbal interactions that occur between students when the students are not supposed to be interacting [e.g. when the teacher is talking], or when the interactions are not related to the activity.
OCCURRENCE OF SPECIFIC STUDENT INITIATED BEHAVIORS

DEMOGRAPHIC DATA SHEET

Student name _____________________
School ____________________
Grade ____________________
Age [in years] ______________

Gender
1= Male
2= Female

Ethnicity
1 = African American/Black
2 = Asian/Pacific American
3 = Hispanic
4 = Native American
5 = White, non-Hispanic
6 = other, please specify ______________

Language
What is your first language? ____________________________

Were you born with a disability or acquired it later?
1 = born with disability;
2 = acquired disability
3 = no disability

If you acquired your disability later after birth; how old were you when you acquired a disability? ______________

How long have you been a part of this "gym" class with your peers?

What type of relationships do you have with other students in gym class?

What type of activities or sports do you like best?

When do you get to play in your favorite activities or sports?

Where do you get to play in your favorite activities or sports?
Student Pseudonym________________________
Date ______________________
Activity ______________________ Start ________ Stop ________
Observer ______________________

Description of Student
_______________________________________________________________
_______________________________________________________________
_______________________________________________________________
_______________________________________________________________

General Comments (consider - lesson objective(s), critical incidents)
________________________________________________________________
________________________________________________________________
________________________________________________________________

Summary of Data: Appropriate Student Behaviors
<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
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Summary of Data: Positive Appropriate Student Behaviors
<table>
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<tr>
<th>Frequency</th>
<th>Percent</th>
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Summary of Data: Inappropriate Student Behaviors
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<th>Frequency</th>
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Summary of Data: Off Task Student Behaviors
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<th>Frequency</th>
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Specific comments
________________________________________________________________
________________________________________________________________
Introduction

The Columbus Public School District’s Curriculum Guide for Physical Education grades 6 & 7 communicates the combined vision of teachers, coordinators, administrators and higher level educators. Middle school physical education specifically addresses outcomes that emphasize competence in individual and lifetime activities that promote engagement, strategic play, and social interaction. The Grade Level Indicators, (GLIs) for grades 6 & 7 were constructed to align to the national standards for physical education developed by the National Association for Sports and Physical Education (NASPE) and National Health Standards. In addition, this document supports the Ohio Graduation Test (OGT) by integrating cross curricular content material with physical education grade level indicators.

The purpose of this curriculum guide is to provide teachers and administrators with age appropriate guidelines and rubrics to assess student achievement and document student progress in middle school physical education. This document expresses the collaborative work developed by the following teachers who served on the writing team.
The five year plan will provide Columbus Public’s physical education teachers with state of the art equipment and vital staff development to help our students develop a passion and commitment towards becoming healthy and fit for a lifetime.

The Columbus Public Schools Physical Education 6&7 and 8-12 curriculum guide is aligned with the national standards created by the National Association for Sports and Physical Education. The following six standards are the driving force of this document and should be evident in teacher’s planning and daily lessons. The grade level indicators have been written with specific goals in mind but allow teachers the flexibility to plan lessons accordingly to meet the needs of their students, building space, and access to equipment.

Standard 1: Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

Standard 2: Demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities.

Standard 3: Participates regularly in physical activity.

Standard 4: Achieves and maintains a health-enhancing level of physical activity.

Standard 5: Exhibits responsible personal and social behavior that respects self and others in physical activity settings.

Standard 6: Values physical activity for health enjoyment, challenge, self-expression, and/or social interaction.

Assessment - The writing committee has created a four level rubric for each grade level indicator for every NASPE standard in middle school physical education. The committee has also provided each teacher with a pre-fabricated Microsoft Excel grade book document. This document may be downloaded for use on your personal digital assistant, school computer work station, laptop, or home computer.

In addition, the committee thought long and hard on the issue of dress and participation in physical education. We realize that many programs across the district use or require some type of uniform in their program. As a proper hygiene practice the committee agrees that students need to come to class prepared for activity, meaning they dress appropriately in active wear. The committee recommends that teachers record dress and use it as one component of the final grade. The committee recommends that dress should not represent more than 10% of a final grade in a grading period. The committee recommends this because the content of Physical Education is not what you wear, but what you do. The four level rubrics should be used to assess a student’s dress grade over a nine or eighteen week physical education course.
As a mathematical example the following would apply:

A student participates in a daily physical education class over a period of eighteen weeks totaling 90 days. If this student has five or fewer dress cuts he/she would receive a rubric score of 4. If this student had between 6 and 10 dress cuts he/she would receive a rubric score of 3, between 11 and 15 a score of 2, and lower than 15 would equal a score of 1.

The committee encourages all teachers to follow the GLI’s and create a program that actively engages all students through vigorous age appropriate participation and grades accordingly to performance and cognitive recognition of suitable subject matter. Participation is now incorporated into the grade level indicator as student’s progress through the desired levels of assessment.

There may also be certain instances when students are unable to meet even the lowest level rubric due to special needs. Students who have been properly diagnosed by a physician with such diseases or ailments such as: overweight, asthma, pregnancy, allergies, or diabetes may have particular restrictions from participation. Students who fall into these categories may require alternative assessment to demonstrate proficiency in physical education. In addition, teachers with students who have IEP’s must follow, by law, the guidelines prescribed within the individual’s educational plan. Furthermore, the committee has provided a generic health form each student must fill out at the beginning of a student’s nine or eighteen week physical education course. This health information sheet should also be given to new students who transfer into your program during the course of a semester or nine week grading period. The intent is for teachers to know their students and their disabilities in the case of an emergency situation.

**Middle School Physical Education**

This course is directed to middle school physical education students. Physical education teachers and their students will focus on three main objectives: for students to participate in moderate to vigorous physical activity, to be competent and literate participants, and to learn to be socially responsible during physical activity. It is the understanding of the committee that a middle school student in a Columbus Public Schools physical education class has developed certain prerequisite skills needed to be proficient in middle school physical education. It is the committee’s expectation that elementary students have experienced introductory skills consisting of both convergent movement skills and divergent movement themes. In addition, rhythmic activities as well as stunts and tumbling have been taught to students at this level. In elementary grades, lead up games and cooperative activities have been taught to teach students the concepts of fair play, cooperation, and good sportsmanship to prepare students for an appropriate middle school physical education experience. During elementary school, students should have had experiences associated with personal fitness, cooperative activities, and team sports.
Delivery of Instruction – The committee understands that each school is unique in regards to size of enrollment, scheduling concerns, and equipment issues. It is the committee’s recommendation that the average units of instruction taught should last 15 days. The research indicates that a student’s learning is enhanced when engaged in larger units of instruction. The same research shows that the teacher becomes more effective in the art of teaching when they teach fewer units a year opposed to multiple units with less days of instruction over a long period of time. To meet the different needs of students, the focus is not on what is taught but how it is taught. Simply put, different models of instruction should be used to deliver knowledge of results for our students. In addition to the direct instructional model similar to the skills based approach; teachers should use the sport education model as well as the tactical approach model to deliver instruction to their classes. Student assessment occurs over the course of a lesson or unit opposed to waiting till the end of a unit for final evaluation of skills and knowledge.

Objectives

Social Responsibility - By defining social responsibility:
1) Following class rules and procedures
2) Using appropriate etiquette for the activity
3) Practicing physical skills in a safe manner
4) Behaving Responsibility
5) Interacting with others in a positive manner
6) Developing with skills of teamwork and cooperation

Social responsibilities are taught and do not occur by chance, and should be taught just as a lay-up is taught in basketball and reinforced throughout the school year. In selecting content or activities that meet this value, the focus should be on what is being taught and how it is being taught.

Moderate to Vigorous Activity - Physical Education lessons can be classified into three types of activity level: inactive, moderate, and vigorous. Examples of Physical Education lessons that are inactive have students sitting and listening to a teacher or waiting for an opportunity to perform. Examples of Physical Education lessons that are moderate involve students walking or performing sit-ups. Examples of Physical Education lessons that are vigorous involve students running or performing high intensity aerobics. Some sports by their structure involve inactivity, for example bowling versus basketball. In using these examples to determine what is taught, it is expected for Physical Educators to choose activities that involve moderate to vigorous activity. According to the Center for Disease Control, people should be involved in moderate to vigorous activity for 30 minutes or more everyday.

Competent and Literate Participant – Competent students know and use the techniques and tactics of the physical activity in such a way that they can play the game in the company of others. Literate students know the rules, the history, and the present day context of the physical activity in such a way that it serves to strengthen their knowledge and appreciation of the physical activity. There are many ways to obtain this goal, but the way it is to be avoided is by performing skill practice for a few days then a
tournament where the teacher only serves as a referee. In selecting content or activities that meet this value, the focus should be on what is being taught and how it is being taught.

**Rationale for Physical Activity Choice Categories**

Middle school students are at an age when their hormones and growth plates are in a rapid transformation. Research has indicated that proper nutrition and physical activity can have a positive effect on the growth and development of a young adolescent. Furthermore, appropriate levels of physical activity have been proven to combat diseases such as diabetes, high blood pressure, high cholesterol, and obesity in children, adolescent youth, and adults. To a large degree, we as physical educators must “Walk the Talk”. In some instances, leading by example, we might be the best role model in the school to promote a healthy lifestyle related to diet and exercise.

The reasons for the three activity choice categories are to provide the learner with experiences that promote moderate to vigorous levels of activity throughout the curriculum. The committee agrees that volleyball, bowling, ping pong and archery are all sports, however, the majority of time spent moving to increase heart rates to appropriate levels for these students is very minimal. The primary goal or objective of this curriculum is intended to keep students successfully active throughout the entire semester.

The committee also recommends teaching at least one 15 day unit from each of the three activity choice categories totaling 3 out of the six semester choices. Each CPS Physical education teacher will then choose three additional units from any or all categories to meet their needs relating to program goals, student population, and equipment and facility issues.

<table>
<thead>
<tr>
<th>Middle School Physical Activities Choice Categories</th>
<th>Team Activities</th>
<th>Rhythmic Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-level Initiatives</td>
<td>Team Handball</td>
<td>Aerobic Dance</td>
</tr>
<tr>
<td>Adventure Education</td>
<td>Badminton</td>
<td>Dance Dance</td>
</tr>
<tr>
<td>Adventure Racing</td>
<td>Ultimate Frisbee</td>
<td>Revolution</td>
</tr>
<tr>
<td>Orienteering</td>
<td>Floor Hockey</td>
<td>Line Dancing</td>
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<td></td>
<td>Tag (Flag) Rugby</td>
<td>Geofitness</td>
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<td></td>
<td>Pickle Ball</td>
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<td></td>
<td>Soccer</td>
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<td></td>
<td>Field Hockey</td>
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<td></td>
<td>Basketball</td>
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**Cooperative Activities** – Experiences that encourage students to learn the process of working and cooperating with others to obtain a common goal. Included are communicating effectively, accepting individual differences, cooperative problem-solving, and working within the framework of the conditions given. Cooperative activities can be accomplished in both small and large groups. Cooperative activities can be taught solely as an existing unit with the intent that the concepts learned by students...
will transfer over and apply to all middle school physical education activities. In addition, a cooperative activities unit should progress sequentially through communication, cooperation, trust, and problem-solving activities. Teachers should start out slow with manageable low level initiatives that build student confidence and mutual respect for others before attempting more difficult activities. The most important aspect of cooperative learning is that teachers become skilled in the art of debriefing. Debriefing is a small group discussion about what occurred and how a specific task was achieved. In addition, the role that each student carried out in the successfullness of the task is of equal importance.

**Rhythmic Movement Activities** – Any type of physical activity that is designed to assist students in becoming competent and confident in recognizing and moving in rhythm. Students have the ability to move to an internal rhythm and an external beat. Going along with the middle school objectives, it is believed that rhythmic movement activities can accomplish these goals by providing students the skills needed to develop balance and spatial awareness.

**Team Activities** – Skill development, practice time, and sportsmanship are emphasized in these types of physical activities. Lead-up and modified versions of the activities as well as the game itself are utilized. Small short sided games with rules tailored to teach concepts of off-ball positioning as well as offensive and defensive tactics are necessary in order to make team activities successful. Examples of tailored rules in short sided games may include: the size of boundaries, the number of participants involved, methods of scoring, and teaching sportsmanship by awarding personal and team responsibility points.

**NASPE Standards Relating to CPS Middle School Curriculum**

**Standard 1**

Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

The intent of this standard is the development of the physical skills needed to enjoy participation in physical activities. In the primary years, students develop maturity and versatility in the use of fundamental motor skills (e.g., running, skipping, throwing, striking) that are further refined, confined, and varied during the middle school years. In the high school years, these motor skills, now involved into specialized skills (e.g., move to an open space, passing to a moving target, catching with a glove, or use of a specific tactic), are used increasingly complex movement environments through the middle school years. On the basis of interest and ability, high school students select a few activities for regular participation within which more advanced skills are mastered. In preparation for adulthood, students acquire the skills to participate in a wide variety of leisure and work-related physical activities.
**Student expectations**

Middle School students are in the process of developing, refining, and extending gross and fine motor skills. They possess motor movement patterns needed to be successful in both personal sport related activities as well as strength conditioning desired for daily work related behaviors. Developing these skills in middle school will allow students to perform a variety of physical activities and to achieve a degree of success that make activities enjoyable for a lifetime.

**Standard 2**

Demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities.

The intent of this standard is the facilitation of learners’ ability to use cognitive information to understand motor skill acquisition and performance. It enhances the ability to use the mind to control or direct one’s performance. This includes the application of concepts from disciplines such as motor learning and development, sport psychology and sociology, biomechanics and exercise physiology. It includes, for example, increasing force production through the summation of forces, knowing the effects of anxiety on performance, and understanding the principle of specificity of training. In middle school knowledge of these concepts and principles and of how to apply them enhances the likelihood of independent learning and therefore more regular and effective participation in physical activity. In high school, emphasis is placed on students’ independently and routinely using a wide variety of increasingly complex concepts. By graduation, the student has developed sufficient knowledge and ability to independently use his/her knowledge to acquire new skills while continuing to refine existing ones.

**Student expectations**

Middle school students are being introduced to the scientific principles of force production, absorption of the force of an object, and the swing arc of an implement to increase the speed of an object, etc. When students begin to understand these basic principles then students will develop into better sports performers.

**Standard 3**

Participates regularly in physical activity.

The intent of this standard is the establishment of patterns of regular participation in meaningful physical activity. This standard connects what is done in the physical education class with the lives of students outside of the classroom. Students make use of the skills and knowledge learned in physical education class as they engage in regular physical activity outside of the physical education class.
Student expectations

Middle school students fully recognize and understand the significance of physical activity in the maintenance of a healthy lifestyle and possess the skills, knowledge, interest, and desire to maintain an active lifestyle. They willingly participate in physical activities on a regular basis that contribute to the attainment of and maintenance of personal physical activity goals. They independently apply appropriate training principles to their own physical activity and can utilize pertinent scientific principles to enhance their participation in a specific activity or sport.

Standard 4

Achieves and maintains a health-enhancing level of physical fitness.

The intent of this standard is the development of students’ knowledge, skills, and willingness to accept responsibility for personal fitness, leading to an active, healthy lifestyle. Students develop higher levels of basic fitness and physical competence as needed for many work situations and active leisure participation. Health-related fitness components include cardiovascular endurance, muscular strength and endurance, flexibility, and body composition.

Student expectations

Middle school students need to be taught how to take responsibility for their personal health and wellness activities. Teachers should use creative techniques such as fitness logs, wellness journals, and pedometer conversions to teach students responsible behaviors needed for high school and beyond. They will demonstrate responsibility for their own health-related fitness status by participating in moderate to vigorous physical activities on a regular basis.

Standard 5

Exhibits responsible personal and social behavior that respects self and others in physical activity settings.

The intent of this standard is the achievement of self-initiated behaviors that promote personal and group success in activity settings. These include safe practices, adherence to rules and procedures, etiquette, cooperation and teamwork, ethical behavior, and positive social interactions. The key to this standard is developing respect for individual similarities and differences through positive interaction among participants in physical activity. Similarities and differences include characteristics of culture, ethnicity, motor performance, disabilities, physical characteristics (e.g., strength, size, shape), gender, age, race, and socioeconomic status. Middle school students initiate responsible behavior, function independently and responsibly, positively influence the behavior of other people, avoid and resolve conflicts, recognize the value of diversity in physical activity, and
develop strategies for inclusion of others. High school students begin to understand how adult work, family roles and responsibilities affect their decisions about physical activity and how physical activity, preferences, and opportunities change over time.

**Student expectations**

Middle school students are in the process of mastering techniques used to initiate responsible personal and social behavior, function independently, and positively influence the behavior of others in physical activity setting while in one of the three activity choice categories. Students demonstrated leadership by holding themselves and others responsible for following safe practices, rules, procedures, and etiquette in all physical activity settings. Students are able to respond to potentially explosive interactions with others by mediating and settling conflicts. Students synthesize and evaluate knowledge regarding the role of physical activity over their life span, recognizing the influence of age, disability, gender, race, ethnicity, socioeconomic status, and culture.

**Standard 6**

Values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction.

The intent of this standard is the development of an awareness of the intrinsic values and benefits of participation in physical activity that provides personal meaning. Physical activity provides opportunities for self-expression and social interaction and can be enjoyment, challenging, and fun. As a result of these intrinsic benefits of participation, students will begin to actively pursue life-long physical activities that meet their own needs.

**Student expectations**

By learning about and engaging in health related fitness components, middle school students should feel more comfortable with their new interests and their physiques, thus once again enjoying movement for the sheer pleasure of moving. They should enjoy the challenge of working hard to better their skills, and they should feel satisfaction when they are successful in improving, especially while pursuing personal goals. They should be able to explain why participation in these activities are enjoyable and desirable.
A Cooperative activities unit should progress sequentially through communication, cooperative, trust and problem solving activities.

<table>
<thead>
<tr>
<th>Standard</th>
<th>GLIs</th>
<th>Assessment</th>
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<tbody>
<tr>
<td><strong>Standard 5</strong>&lt;br&gt;Exhibits responsible personal and social behavior that respects self and others in physical activity settings.</td>
<td>1. Students will behave in a manner that creates an emotionally safe environment with a score of 3 or above.  a. During cooperation and trust activities, students will voice comments or suggestions when appropriate.  b. During cooperation activities, students will provide positive encouragement (put ups) to all group members.  c. During cooperation and trust activities, when students receive assistance from other group members they do so without a confrontation. (verbal or physical)  d. During trust activities, students will engage as a contributing group member, by demonstrating their non-confrontational participation.</td>
<td>Responsible person and social behavior Rubric Example 4 = The student <strong>Consistently Demonstrates</strong> complimenting a group member’s achievement. 3 = The student <strong>Frequently Demonstrates</strong> complimenting a group member’s achievement. 2 = The student <strong>Inconsistently Demonstrates</strong> complimenting a group member’s achievement. 1 = The student <strong>Unsuccessfully Demonstrates</strong> complimenting a group member’s achievement.</td>
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<tr>
<td></td>
<td>2. Students will actively listen to others with a score of 3 or above.  a. During communication, cooperation, trust, and problem solving activities, students will follow the directions from the instructor.  b. During communication, cooperation, trust, and problem solving activities, students will listen to suggestions from others.</td>
<td>Responsible person and social behavior Rubric Example 4 = The student <strong>Consistently Demonstrates</strong> active listening to ideas and strategies of other group members. 3 = The student <strong>Frequently Demonstrates</strong> active listening to ideas and strategies of other group members. 2 = The student <strong>Inconsistently Demonstrates</strong> active listening to ideas and strategies of other group members. 1 = The student <strong>Unsuccessfully Demonstrates</strong> active listening to ideas and strategies of other group members.</td>
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<tr>
<td>Standard</td>
<td>GLIs</td>
<td>Assessment</td>
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<td>3.</td>
<td>Students will accept responsibility from both success and failure with a score of 3 or above.</td>
<td>Responsible person and social behavior Rubric Example 4 = The student <strong>Consistently Demonstrates</strong> celebrating success with group members and classmates. 3 = The student <strong>Frequently Demonstrates</strong> celebrating success with group members and classmates. 2 = The student <strong>Inconsistently Demonstrates</strong> celebrating success with group members and classmates. 1 = The student <strong>Unsuccessfully Demonstrates</strong> celebrating success with group members and classmates.</td>
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<tr>
<td></td>
<td>a. During trust and problem solving activities, students will celebrate accomplishments appropriately avoiding put downs and showboating.</td>
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<td></td>
<td>b. During trust and problem solving activities, when confronted with failure the group accepts responsibility among group members without put downs of individual members.</td>
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<table>
<thead>
<tr>
<th>Standard</th>
<th>GLIs</th>
<th>Assessment</th>
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<tbody>
<tr>
<td><strong>Standard 6</strong></td>
<td>Value physical activity for health, enjoyment, challenge, self-expression, and/or social interaction.</td>
<td>Values Rubric Example 4 = The student <strong>Consistently Identifies</strong> the importance safety when performing activities. 3 = The student <strong>Frequently Identifies</strong> the importance safety when performing activities. 2 = The student <strong>Inconsistently Identifies</strong> the importance safety when performing activities. 1 = The student <strong>Unsuccessfully Identifies</strong> the importance safety when performing activities.</td>
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<tr>
<td>1.</td>
<td>Students will demonstrate a physically safe environment with a score of 3 or above.</td>
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<tr>
<td></td>
<td>a. During trust and problem solving activities, students will appropriately spot other students.</td>
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<td></td>
<td>b. During trust and problem solving, students will keep their head above their feet.</td>
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<tr>
<td></td>
<td>c. During communication, cooperation, trust and problem solving activities, students will use all equipment in a safe and appropriate manner.</td>
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<th>Standard</th>
<th>GLIs</th>
<th>Assessment</th>
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<tbody>
<tr>
<td>2.</td>
<td>Students will give verbal assistance such as prompts, put ups, and specific directions when necessary with a score of 3 or above.</td>
<td>Values Rubric Example 4 = The student <strong>Consistently Demonstrates</strong> appropriate language when addressing others. 3 = The student <strong>Frequently Demonstrates</strong> appropriate language when addressing others. 2 = The student <strong>Inconsistently Demonstrates</strong> appropriate language when addressing others. 1 = The student <strong>Unsuccessfully Demonstrates</strong> appropriate language when addressing others.</td>
</tr>
<tr>
<td></td>
<td>a. During communication cooperation activities, students will appropriately coach others.</td>
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<td></td>
<td>b. During communication, cooperation, trust, and problem solving activities, students will appropriately restate goals to others when</td>
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</table>
3. Students will work together to achieve a common goal with a score of 3 or above.
   a. During communication, cooperation, trust, and problem solving activities, students will attempt a variety of solutions to the problem.

4. Students will understand how to apply concepts to their everyday lives with a score of 3 or above.
   a. Students will describe on an exit slip the concepts of cooperation, communication, trust, and problem solving.

<table>
<thead>
<tr>
<th>Standard</th>
<th>GLIs</th>
<th>Assessment</th>
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</table>
| 3.       | Students will work together to achieve a common goal with a score of 3 or above. | **Values Rubric Example**
|          | a. During communication, cooperation, trust, and problem solving activities, students will attempt a variety of solutions to the problem. | 4 = The student **Consistently Demonstrates** problem solving techniques.
|          |                                                | 3 = The student **Frequently Demonstrates** problem solving techniques.
|          |                                                | 2 = The student **Inconsistently Demonstrates** problem solving techniques.
|          |                                                | 1 = The student **Unsuccessfully Demonstrates** problem solving techniques.
| 4.       | Students will understand how to apply concepts to their everyday lives with a score of 3 or above. | **Values Rubric Example**
|          | a. Students will describe on an exit slip the concepts of cooperation, communication, trust, and problem solving. | 4 = The student **Consistently Identifies** the importance of the core concepts with a score of 15 out of 20 on the written assessment.
|          |                                                | 3 = The student **Frequently Identifies** the importance of the core concepts with a score of 10 out of 20.
|          |                                                | 2 = The student **Inconsistently Identifies** the importance of the core concepts with a score of 5 out of 20.
|          |                                                | 1 = The student **Unsuccessfully Identifies** the importance of the core concepts with a score of 0 out of 20.
APPENDIX C

ADVENTURE EDUCATION UNIT PLAN
# Adventure Education

## Unit Plan

<table>
<thead>
<tr>
<th>Core concepts</th>
<th>Sample activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication (4 days)</td>
<td>- Develop group “norms”</td>
</tr>
<tr>
<td></td>
<td>- Group juggle</td>
</tr>
<tr>
<td></td>
<td>- Human Bingo</td>
</tr>
<tr>
<td></td>
<td>- “Have you ever”</td>
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<tr>
<td></td>
<td>- “What do you have in common”</td>
</tr>
<tr>
<td></td>
<td>- Line ups</td>
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<tr>
<td></td>
<td>- Animal sounds</td>
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<td></td>
<td>- 2 truths and a lie</td>
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<tr>
<td>Cooperation (4 days)</td>
<td>- Hula hoop</td>
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<tr>
<td></td>
<td>- Zoom</td>
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<tr>
<td></td>
<td>- Keep it up</td>
</tr>
<tr>
<td></td>
<td>- Everybody up</td>
</tr>
<tr>
<td></td>
<td>- Almost infinite circle</td>
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APPENDIX D

DESCRIPTION OF ADVENTURE EDUCATION ACTIVITIES
Communication activities:

1. **Develop Group Norms:** In this activity, students are first placed into their permanent groups of seven to eight students and were then asked to work as a group to develop three rules/norms that as a group they will follow for the duration of the unit.

2. **Have You Ever?** (modified from Panicucci, 2002) Students gather in a large circle; place a spot marker at the feet of each student, with one individual in the center of the circle (no spot marker, so there should be one more person than spots). The person standing in the middle will say: “My name is ____. Have you ever _____?” When they ask “Have you ever?” they need to say something that they have done such as gone to the mall or played a certain sport. If the students around the circle could answer the question as “yes” then they move to another spot around the circle (not the spot next to them), if their answer is no, they stay in their spot. The person who ends up without a spot will go to the middle and start the process again. If the same person keeps ending up in the middle, the teacher can make a rule that an individual cannot be in the middle more than once and if they end up in the middle they can pick someone else who has not been in the middle yet.

3. **What do we have in common?** In their groups, students are asked to think of five things they as a group have in common with each other. The group will write these on a poster and will share their answers with the class. Groups should not write answers that are obvious, such as “we are all wearing clothes” or “we all have hair”.

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4. **Group Juggle:** (Panicucci, 2002, www.wilderdom.com) Standing in a circle, students work with their small groups. Give one ball/rubber chicken to a student and ask student to throw it to another person in the group, who throws it to another person, and so on until everyone has had a chance to catch the object. When the last person receives the object, he/she passes it back to the first person, who starts the pattern over again. The students need to remember who they received the object from and who they throw it to as it will be the same person each time. Students should be encouraged to say the person’s name before they throw the object to them. Variations can include more objects being thrown at one time, increasing the speed/accuracy of the throws, or completing the activity as an entire class.

5. **Two truths and a lie:** In this activity, students will need paper and a pencil. In their small groups, students are to write down three statements about themselves, two that are true and one that is a lie (they cannot tell their groups which is the lie at this point). The truths should not be things that are obvious (such as “I have brown eyes”) and the lie should not be something that is unbelievable (such as “I have red hair” if their hair is brown). In their groups, students say the three statements trying to make each sound as believable as possible. The group members will try to guess which statements are true and which is a lie. Groups can then send one or two individuals to share their statements to the entire class to guess.

6. **Line up:** (Frank, 2004) In their groups, students will be asked to line up according to their birth date (month and day) in order without talking or
writing. Students should be encouraged to be creative in finding ways to communicate with each other that does not require talking or writing. This can also be done as a whole class activity.

Cooperation activities:

1. **Almost infinite circle:** Each group of students is given a 100’ rope that has knots (not slip knots) in the rope that are about arm’s length apart from each other. The group must spread out along the rope. Once they are in place, one of their hands becomes “glued” to the rope and cannot move or slide from that spot on the rope, while the other hand is free to move and work on the rope to get the knots untied. The object of this activity is to get all the knots out of the rope without moving the hand that is glued to the rope. Students will become frustrated and may try to cheat in this activity, so facilitator may need to provide hints. To complete this activity, students will need to loosen all the knots and move the knots toward the end of the rope. As a knot gets closer to each student, that student will have to step through the loop made by the knot to move it past them.

2. **Helium Stick:** ([www.wilderdom.com](http://www.wilderdom.com)) Students will stand in a circle facing each other, with their arms held out in front of them, palms facing the sky. The teacher will lay the stick or hula hoop on their fingertips and get the students to adjust the height of their hands until the stick is level. The object is to lower the stick to the ground without dropping it. Each person must keep their hands in contact with the stick and cannot pinch or grab the stick to bring it down; it has to rest on top of their fingers.
3. **Hula hoop**: Students will stand in a circle with their group holding hands with the person next to them. It may be necessary to discuss the idea that it is okay to hold hands with the person next to you, and that it does not mean you “like” them etc. depending on the age of the students. The teacher will place a hula hoop through the arms of one student by having them break hold of the person’s hand next to them for a moment, and then they will rejoin hands. The object is to move the hoop around the circle without letting go of the hand of the person next to you. Students will need to work together to get the hoop around the circle. Variations can include adding another hoop, or adding another hoop that has to move in the direction opposite of the first hoop. In the variation where the hoops move in opposite directions, the students will have to work together to figure out how to get the hoops to go past each other so they keep going in their correct direction.

4. **Human Knot**: ([www.wilderdom.com](http://www.wilderdom.com)) This activity requires close contact with group members and holding of hands, so it is important to discuss that with the students prior to starting the activity. Students need to stand shoulder to shoulder in a circle facing the center of the circle. Students will each outstretch one arm into the middle of the circle and grab the hand of another group member. They will then do this with their other hand as well. The object of this activity is to untie the “human knot” without letting go of hands to get back to a regular circle.

5. **Almost Infinite Circle in Reverse**: In this activity, each group is given a 100’ rope (this time with no knots in it) and is asked to put one knot in the rope between each person in the group.
6. **River Challenge:** This activity can be done from side to side in the gym; it may be too challenging to go the entire length of the gym. Each group is located in one area on the sideline of the basketball court. The object is for them to get their team across the gym to the other side of the basketball court without touching the water in the “river” (gym floor). Each team is given one rope (100’ long), one scooter, one cone, and one hula hoop. They have to use this equipment to get their team across the river without falling in. If they complete this task easily, ask them to complete it again but doing it differently the second time, or without throwing or sending things across the river without people on them (some students may push the scooter across the river back to their group once they cross).

**Trust activities:**

Note: it may be necessary to discuss safety issues in many of these activities as students will be blindfolded and will be depending on other students to help them maneuver through areas and activities. Safety can become a concern if students do not pay attention to the person who is blindfolded or if they give poor directions, or of the students who are wearing blindfolds attempt to maneuver the activity area without direction from a partner who can see.

1. **Mine Field:** ([www.wilderdom.com](http://www.wilderdom.com)) Set up an area that students will have to maneuver through that is littered with “mines” such as balls, beanbags, cones, and bowling pins. In this activity, one student will be blindfolded and a partner will tell the student who is blindfolded where to step without entering the mine field or touching him/her. The object is to get the individual with the blindfold across the
2. **Obstacle Course:** This activity is similar to Mine Field, but this time the teacher can spread equipment throughout the playing area that partners will have to maneuver through. This time the individual without a blindfold is allowed to go through with their partner and can guide them both verbally and physically. The area can be set up so the students have to crawl under ropes, walk through rope paths, go across “lily pads” (hula hoops) through bowling pins, etc.

3. **Trust Relay:** In this activity, students will be lined up at one end of the gym in their groups. The gym floor will be divided into “roads” by ropes so the groups stay in their own areas. The road should extend straight from one end of the gym to the other. The object of this activity is to get the team to the other side of the gym using one “driver”. Each group will have one blindfold and one scooter. The team will go down the road with one person (who is blindfolded) on the scooter at a time. The “driver” is the individual who pushes the person in the “car” (scooter) down the road. The teacher should emphasize things such as following a speed limit, staying on the road, keeping your hands on the “wheel” (person’s shoulders) and not crashing the car at the end of the road.

4. **River Crossing:** In this activity, each group will try to get across the “river” (gym floor) using only carpet squares to go across the “river”. They cannot step off the squares into the water or leave the squares to float in the water because the current of the river (the teacher) will take them away. Each group should have one less square than people in their group to start. If this is too hard, the teacher can give
them another square, if it is too easy the teacher can take a square away. Some groups may send half their group down and then come back for the rest, the teacher can ask them to complete the task a second time sending the entire group down the river at once.

Problem solving activities:

1. **Pot of Gold:** ([www.wilderdom.com](http://www.wilderdom.com); adaptation of activity called “Toxic Waste”) This activity is set up using the 100’ rope divided into half and then made into a circle about 8’ in diameter. In the center of the circle is a bucket (that has two lips/pour spouts) with something in it to weigh it down. This is the pot of gold, and it is sitting on a pedestal in the middle of a lava lake. If the students step into the lava, they will die, and if their equipment or the bucket touches the lava, it will melt. The object is for the students to work together to get the pot of gold out of the center of the lava lake without the gold spilling out or without any of their equipment touching the lava lake. The groups should be given three to four short (about 15’ in length) ropes to use as their equipment to get the pot of gold to safety. The easiest way to be successful in this activity is for them to hook the bucket from both sides with the rope, lift the bucket and move it to the side of the rope (see figure A.1).
2. **Mission Impossible:** In this activity, each group is given a poly spot and one scooter to start. The object is to get the entire group to the other side of the gym/activity area without touching the ground unless they are standing in a base, hoop, or poly spot. To begin, one individual from each group is allowed to collect as many hoops and poly spots as possible and then they return to their group. The bases are stationary, and only one group can be in a particular base at a time; there cannot be members of different groups in the same base at one time. Students cannot walk with the hoop around their waist or slide the hoop/poly spots to cross to the other side, they must work together to cross to the other side. The groups are given a few minutes to plan out their strategy, and then can begin the activity (see figure A.2).
3. **Marble Pass:** Also called “pipeline” by Panicucci (2002), the teacher will create a zone that the groups will have to work through; at the end of the zone is a bucket. The zone can be any length specified by the teacher. Equipment used for this activity consists of one marble per group, pieces of PVC pipe, cut into different lengths (about 6 inches to one foot long) with elbows and “t” pieces attached to some of the pipes. Students are to put the pieces of the PVC pipe together and try to get the marble into the bucket without touching the marble with their hands, without the marble falling on the floor, and without students touching the pipes of other individuals in their groups. Variations to this activity can include (but are not limited to): the marble cannot stop moving inside the pipes (students have to move to the other end of the line once the marble passes
through their pipe), the marble cannot move backward, if the marble is in one person’s pipe, that person cannot move his/her feet, pipes are not allowed to touch each other or be linked to each other (Panicucci, 2002). If the marble falls to the floor or if any rules are broken, the group must go back to the start of the pipeline.

4. **Tarp Flip:** In this activity, a tarp is folded into fourths (can be more or less depending on the number of individuals in the groups). All individuals must have both feet on the tarp, and cannot step off the tarp onto the floor at any time. The object of this activity is for each group to end up standing on the opposite side of the tarp (tarp will be flipped). The students can unfold the tarp and flip it that way, or they can try to flip the tarp without unfolding it, but they need to figure out how to complete the task as a group without help.
APPENDIX E

INSTITUTIONAL REVIEW BOARD

STUDENT ASSENT FORM
The Ohio State University Assent to Participate in Research

Study Title: The Effects of Adventure Education on the Social Interactions of Students with Disabilities in General Physical Education

Researcher: Samuel R. Hodge, PhD

Sponsor: Not applicable

- You are being asked to be in a research study. Studies are done to find better ways to treat people or to understand things better.
- This form will tell you about the study to help you decide whether or not you want to participate.
- You should ask any questions you have before making up your mind. You can think about it and discuss it with your family or friends before you decide.
- It is okay to say “No” if you don’t want to be in the study. If you say “Yes” you can change your mind and quit being in the study at any time without getting in trouble.
- If you decide you want to be in the study, an adult (usually a parent) will also need to give permission for you to be in the study.

1. What is this study about?
The purpose of this study is to see how your participation in an Adventure Education unit affects the way you interact with other students in your class. You may have a microphone on so that the person who is observing you can hear the things you say to your classmates and your actions will be videotaped to see how you interact with others.

2. **What will I need to do if I am in this study?**

You will be asked to fill out two forms and to participate in your regular physical education activities. You will also be asked to complete a demographic questionnaire indicating your age, gender, ethnicity, information about your disability if applicable (if you were born with the disability, at what age the disability was acquired), and specific information about interactions between you and other students in your physical education class and the activities and sports that you like to participate in. At the completion of the study, you will also be asked to complete a questionnaire where you indicate your feelings about participating in an Adventure Education unit of instruction and thoughts about the importance of interacting with others during the physical education classes.

You will be observed and videotaped during the study, but you will not be asked to do anything else other than participate as you normally would in your physical education class. You may also be asked to wear a wireless microphone so that I can hear what your group says to each other while you are participating in activities.

3. **How long will I be in the study?**

You will be in this study for about ten weeks in your physical education classes.

4. **Can I stop being in the study?**

You may stop being in the study at any time.

5. **What bad things might happen to me if I am in the study?**

Nothing bad will happen to you as a result of this study.

6. **What good things might happen to me if I am in the study?**

It is expected that by participating in this unit of instruction, you will learn to interact with your peers appropriately and that the social interactions between students with and without disabilities in your class will increase throughout and beyond the unit.

7. **Will I be given anything for being in this study?**

No.
8. Who can I talk to about the study?

For questions about the study you may contact Samuel R. Hodge at (hodge.14@osu.edu) or Bethany L. Hersman at (heydinger.15@osu.edu).

To discuss other study-related questions with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

Signing the assent form

I have read (or someone has read to me) this form. I have had a chance to ask questions before making up my mind. I want to be in this research study.

______________________________    __________________________
Signature or printed name of subject    Date and time

Investigator/Research Staff

I have explained the research to the participant before requesting the signature above. There are no blanks in this document. A copy of this form has been given to the participant or his/her representative.

______________________________    __________________________
Printed name of person obtaining assent    Signature of person obtaining assent

______________________________    __________________________
Investigator/Research Staff

AM/PM

Date and time

This form must be accompanied by an IRB approved parental permission form signed by a parent/guardian.
APPENDIX F

INSTITUTIONAL REVIEW BOARD

PARENTAL CONSENT FORM
The Ohio State University Parental Permission
For Child’s Participation in Research

Study Title: The Effects of Adventure Education on the Social Interactions of Students with Disabilities in General Physical Education

Researcher: Samuel R. Hodge, PhD

This is a parental permission form for research participation. It contains important information about this study and what to expect if you permit your child to participate.

Your child’s participation is voluntary.

Please consider the information carefully. Feel free to discuss the study with your friends and family and to ask questions before making your decision whether or not to permit your child to participate. If you permit your child to participate, you will be asked to sign this form and will receive a copy of the form.

Purpose:

The purpose of this study is to examine the effects of an Adventure Education unit of instruction on the social interactions between students with and without disabilities in their physical education classes.

Procedures/Tasks:
Your child will be asked to participate in an Adventure Education unit as part of collecting data for this study while the social interactions between your child and other students will be measured using Hodge et. al. (2000) Analysis of Inclusion Practices in Physical Education Form S- Student version revised (AIPE-SR) as a part of collecting data for this study. For data collection purposes only, your child will be videotaped and may be wearing a wireless microphone to record social interactions between students during the activities they engage in during their physical education classes each day for the duration of the study. There will be no information liking your child’s name to any data, and the videotapes will be destroyed following the completion of the study. For this study, the verbal and non-verbal interactions between students in your child’s physical education class will also be audio-taped to aid in determining the type of interactions that occur between the students.

Your child will also be asked to complete a demographic questionnaire indicating his/her age, gender, ethnicity, information about his/her disability (if he/she was born with the disability, at what age the disability was acquired), and specific information about interactions between students in their physical education class and the activities and sports that your child likes to participate in. At the completion of the study, your child will also be asked to complete a questionnaire where they indicate their feelings about participating in an Adventure Education unit of instruction and their thoughts about the importance of interacting with others during the physical education classes.

**Duration:**

Your child may leave the study at any time. If you or your child decides to stop participation in the study, there will be no penalty and neither you nor your child will lose any benefits to which you are otherwise entitled. Your decision will not affect your future relationship with The Ohio State University. This study will last approximately ten weeks.

**Risks and Benefits:**

It is expected that by participating in this unit of instruction, students will interact with each other appropriately and that the social interactions between students with and without disabilities will increase throughout and beyond the unit; there are no risks to participation in this study.

**Confidentiality:**

Efforts will be made to keep your child’s study-related information confidential. However, there may be circumstances where this information must be released. For example, personal information regarding your child’s participation in this study may be disclosed if required by state law. Also, your child’s records may be reviewed by the following groups (as applicable to the research):
• Office for Human Research Protections or other federal, state, or international regulatory agencies;
• The Ohio State University Institutional Review Board or Office of Responsible Research Practices;
• The sponsor, if any, or agency (including the Food and Drug Administration for FDA-regulated research) supporting the study.

Incentives:

There are no incentives to participation in this study.

Participant Rights:

You or your child may refuse to participate in this study without penalty or loss of benefits to which you are otherwise entitled. If you or your child is a student or employee at Ohio State, your decision will not affect your grades or employment status.

If you and your child choose to participate in the study, you may discontinue participation at any time without penalty or loss of benefits. By signing this form, you do not give up any personal legal rights your child may have as a participant in this study.

An Institutional Review Board responsible for human subjects research at The Ohio State University reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

Contacts and Questions:

For questions, concerns, or complaints about the study you may contact Samuel R. Hodge at (hodge.14@osu.edu) or Bethany L. Hersman at (heydinger.15@osu.edu).

For questions about your child’s rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

If your child is injured as a result of participating in this study or for questions about a study-related injury, you may contact Samuel R. Hodge (hodge.14@osu.edu) or Bethany L. Hersman (heydinger.15@osu.edu).
Signing the parental permission form

I have read (or someone has read to me) this form and I am aware that I am being asked to provide permission for my child to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to permit my child to participate in this study.

I am not giving up any legal rights by signing this form. I will be given a copy of this form.

I will allow my child to be videotaped during this study and understand that the videotapes will be used for data coding purposes only

(please circle one): YES    NO

I will allow my child to be audiotaped during this study and understand that the audio taping will be used for data coding purposes only.

(please circle one): YES    NO

Printed name of subject

Printed name of person authorized to provide permission for subject

Signature of person authorized to provide permission for subject

Relationship to the subject

Date and time

Investigator/Research Staff

I have explained the research to the participant or his/her representative before requesting the signature(s) above. There are no blanks in this document. A copy of this form has been given to the participant or his/her representative.

Printed name of person obtaining consent

Signature of person obtaining consent

Date and time
APPENDIX G

INSTITUTIONAL REVIEW BOARD

TEACHER CONSENT FORM
The Ohio State University Consent to Participate in Research

Study Title: The Effects of Adventure Education on the Social Interactions of Students with Disabilities in General Physical Education

Researcher: Samuel R. Hodge, PhD

Sponsor: Not applicable

This is a consent form for research participation. It contains important information about this study and what to expect if you decide to participate.

Your participation is voluntary.

Please consider the information carefully. Feel free to ask questions before making your decision whether or not to participate. If you decide to participate, you will be asked to sign this form and will receive a copy of the form.

Purpose:

The purpose of this study is to examine the effects of an Adventure Education unit of instruction on the social interactions between students with and without disabilities in their physical education classes.

Procedures/Tasks:

Your will be asked to teach an Adventure Education unit as part of collecting data for this study while the social interactions between your students will be measured using Hodge et. al. (2000) Analysis of Inclusion Practices in Physical Education Form S- Student
version revised (AIPE-SR) as a part of collecting data for this study. For data collection purposes only, your students will be videotaped during the activities you teach during their physical education classes each day for the duration of the study. There will be no information linking your name to any data, and the videotapes will be destroyed following the completion of the study. For this study, the verbal and non-verbal interactions between students in your physical education class will also be audio-taped to aid in determining the type of interactions that occur between you and your classmates.

At the end of the Adventure Education unit, you will be asked to complete a social validity questionnaire that indicates how you felt about teaching the unit and whether or not you feel Adventure Education is important for your students. Finally, we want to know how easy or hard it was for you to implement this unit of instruction compared to other units you teach during the school year.

**Duration:**

You may leave the study at any time. If you decide to stop participating in the study, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled. Your decision will not affect your future relationship with The Ohio State University. This study will last approximately ten weeks.

**Risks and Benefits:**

It is expected that by participating in this unit of instruction, your students will interact with each other appropriately and that the social interactions between students with and without disabilities will increase throughout and beyond the unit; there are no risks to participation in this study.

**Confidentiality:**

Efforts will be made to keep your study-related information confidential. However, there may be circumstances where this information must be released. For example, personal information regarding your participation in this study may be disclosed if required by state law. Also, your records may be reviewed by the following groups (as applicable to the research):

- Office for Human Research Protections or other federal, state, or international regulatory agencies;
- The Ohio State University Institutional Review Board or Office of Responsible Research Practices;
- The sponsor, if any, or agency (including the Food and Drug Administration for FDA-regulated research) supporting the study.
Incentives:

There are no incentives for participation.

Participant Rights:

You may refuse to participate in this study without penalty or loss of benefits to which you are otherwise entitled. If you are a student or employee at Ohio State, your decision will not affect your grades or employment status.

If you choose to participate in the study, you may discontinue participation at any time without penalty or loss of benefits. By signing this form, you do not give up any personal legal rights you may have as a participant in this study.

An Institutional Review Board responsible for human subjects research at The Ohio State University reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

Contacts and Questions:

For questions, concerns, or complaints about the study you may contact Samuel R. Hodge at (hodge.14@osu.edu) or Bethany L. Hersman at (heydinger.15@osu.edu).

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

If you are injured as a result of participating in this study or for questions about a study-related injury, you may contact Samuel R. Hodge (hodge.14@osu.edu) or Bethany L. Hersman (heydinger.15@osu.edu).
Signing the consent form

I have read (or someone has read to me) this form and I am aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this study.

I am not giving up any legal rights by signing this form. I will be given a copy of this form.

It is okay if I am videotaped as a part of this study (please circle one)  YES    NO

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Investigator/Research Staff

I have explained the research to the participant or his/her representative before requesting the signature(s) above. There are no blanks in this document. A copy of this form has been given to the participant or his/her representative.

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APPENDIX H

COLUMBUS PUBLIC SCHOOLS

PRINCIPAL CONSENT FORM
August 6, 2007

Dear Administrator:

This letter serves as an introduction to Dr. Samuel Hodge, Associate Professor & Assistant Dean from Ohio State University. Dr. Hodge’s proposed research: *The effects of an adventure education unit on the social interactions between students with and without disabilities in a general physical education setting*, has been reviewed and approved by the Research Proposal Review Committee.

This letter does not obligate you to participate in the study. Rather, it is an introduction and official notification that Dr. Hodge has followed established procedures and has been granted permission to solicit subjects to participate in the study.

If you agree to allow the researcher to conduct research in your building, please sign below. The researcher must then fax this letter to the Department of Evaluation Services at 365-5160. This must be completed before the researcher contacts any potential subjects in your building. If you have any questions or concerns, please call my office.

Sincerely,

Saundra G. Brennan

Saundra G. Brennan, Ed.D.
Director, Evaluation Services
APPENDIX I

OBSERVER TRAINING: WRITTEN TEST
Observer Training Test
Key interactions

Name: ________________________
Date: __________________

Define and give three examples of each of the following terms as used in this study:

a. Appropriate interactions:

b. Positive appropriate interactions:

c. Inappropriate interactions:

d. Off task interactions:

Determine in which category you would code the following social interactions:

1. A student gives a high five to another student in his/her group:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

2. Two students are talking to one another while the teacher is talking to the class:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

3. The target student is calling for another student in his/her group to pass the ball to him/her:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

4. The target student is asking another student in his/her group where he/she lives:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction
5. The target student is laughing to him/herself:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

6. The target student is discussing who he/she will be working with for an activity:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

7. Target student kicks another student (not in same group) on purpose (not an accident related to game play):
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

8. Target student bumps into another student and says “sorry” or “my bad”:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

9. Target student pushes another student:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

10. Student A’s ball rolls over to Student B. Student A asks for the ball back. Student B grabs the ball and throws it across the gym without saying anything.

    Student A’s interaction would best be described as:
    a. Appropriate interaction
    b. Positive appropriate interaction
    c. Inappropriate interaction
    d. Off task interaction
    e. Would not code the interaction
Student B’s interaction would best be described as:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

11. Student is talking to him/herself while another student is sitting beside him/her:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

12. The target student is talking to a student in a different group about the activity:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

13. Target student says “Come on” trying to get another student to start play:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

14. Student calls another student (not target student) in his/her group a bad name:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

15. Student calls a student in another group a bad name:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

16. Student laughs at another student in his/her group:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction
17. Target student gives a thumbs up to another player in his/her group:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

18. Target student is talking to the teacher:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

19. Target student is telling another student in his/her group (during a game) that another student cannot catch the ball:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

20. The target student swears to him/herself:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

21. Another student in target student’s group asks him/her to race:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

22. Target student tells other students in his/her group to hurry up and sit down:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

23. During team practice, target student tells another student in his/her group “She likes you”:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction
24. Student is talking to the microphone as if it were a person:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

25. Student is singing to another player in his/her group:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

26. Student is asking for the ball from a player in another group:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

27. Students are discussing with target student who will be goalie while the teacher is describing the activity:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

28. Target student tells another student in his/her group “you cheated”
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

29. Target student shakes his/her head “yes” in response to a question asked by a group member:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction
30. A student guides target student (they are in the same group) over to the area in which he/she is supposed to stand:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

31. When the students are filling out their information sheets at the end of the day, the target student asks to borrow a pencil from another group member:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

32. Target student is telling students in his/her group to run or go when it is their turn to do so:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

33. A student is telling target student (both are in the same group) that he/she will never be able to score a goal:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

34. Target student responds to another student in his/her group “Okay, I will”:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

35. A student from a different group slaps target student on the back when he/she runs by:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction
36. When the students are practicing a task, target student calls another student in his/her group an idiot:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

37. Following the interaction initiated in #36, the other student says to the target student “whatever”:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

38. Following the teacher’s explanation of an activity, the target student asks another student in his/her group what the teacher asked them to do:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

39. When the groups are working on their exit ticket for the day, the target student asks another student in his/her group if he can copy the names down from the group:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction

40. Target student is whistling to another student in his/her group so the student will pass him/her the ball:
   a. Appropriate interaction
   b. Positive appropriate interaction
   c. Inappropriate interaction
   d. Off task interaction
   e. Would not code the interaction
APPENDIX J

TREATMENT INTEGRITY CHECKLIST
## Treatment integrity checklist

**Date:** _____________  
**Class:** _______________

<table>
<thead>
<tr>
<th>Teacher Behavior</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of appropriate and positive interaction during introduction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide specific prompts/cues to encourage students to interact during lesson (e.g. Are you working together to help each other?)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide feedback based on interactions observed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive pinpointing during closure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Followed list of activities in unit plan</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX K

STUDENT SOCIAL VALIDITY QUESTIONNAIRE
Student social validity questions (English version)

Directions: Answer each statement as honest as possible by placing a checkmark in the appropriate box that best tells how you feel about the statement.

1 = No  
2 = Maybe  
3 = Kind of  
4 = Yes

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>I liked participating in the Adventure Education unit in my gym class.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is important to work together by communicating with my teammates.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I interacted a lot with my teammates during the Adventure Education unit.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is important to interact with ALL of my teammates no matter what.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I increased the number of times I interacted with my teammates during the Adventure Education unit.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would like to participate in another Adventure Education unit.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My teammates interacted with me more during the Adventure Education unit than they did before we started this unit in class.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adventure Education has helped me in my physical education class.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is important to interact with every student in my class even if they speak another language than me or if they have a disability.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Preguntas de Educación de Aventura (Spanish version)**

Instrucciones: contesta cada frase la más sincero posible. Marca una “X” en el encasillado que mejor represente como tú te sientes al leer las siguientes frases.


<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Me gustó participar en la unidad de Educación de Aventura durante mi clase de educación física.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Es importante trabajar en conjunto y comunicarme con mis compañeros de equipo.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yo interactué muchas veces con mis compañeros de equipo durante la unidad de Educación de Aventura.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Es importante que yo interactúe todos los días con alguna ó con todas las personas en mi grupo sin importar cual sea el motivo.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yo aumenté el número de veces en que interactué con los miembros de mi grupo durante la unidad de Educación de Aventura.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Me gustaría participar en otra unidad de Educación de Aventura.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mi grupo interactuó conmigo mucho más durante la unidad de Educación de Aventura que antes de comenzar la unidad.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>La unidad de educación de aventura me ha ayudado en la clase de educación física.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Es importante relacionarse y comunicarse con cada estudiante en mi clase sin importar si hablan un idioma diferente al mió o si tienen alguna discapacidad.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Student Answers to Social Validity Questionnaire

#### Class One

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>I liked participating in the Adventure Education unit in my gym class.</td>
<td>Enrique</td>
<td>Tashawna, Lorenzo</td>
<td>Ignacio, Maurice, De’Asia, Deion</td>
<td></td>
</tr>
<tr>
<td>It is important to work together by communicating with my teammates.</td>
<td>Maurice</td>
<td></td>
<td>Ignacio, Tashawna, De’Asia, Lorenzo, Enrique, Deion</td>
<td></td>
</tr>
<tr>
<td>I interacted a lot with my teammates during the Adventure Education unit.</td>
<td></td>
<td>Ignacio, Maurice, Tashawna, De’Asia, Lorenzo, Enrique, Deion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is important to interact with ALL of my teammates no matter what.</td>
<td>Maurice, Tashawna</td>
<td>Ignacio, Maurice, De’Asia, Lorenzo, Enrique, Deion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I increased the number of times I interacted with my teammates during the Adventure Education unit.</td>
<td>Enrique, Tashawna</td>
<td>Lorenzo, Ignacio</td>
<td>Maurice, De’Asia, Deion</td>
<td></td>
</tr>
<tr>
<td>I would like to participate in another Adventure Education unit.</td>
<td>Ignacio, Enrique, Lorenzo, Tashawna</td>
<td>Maurice</td>
<td>De’Asia, Deion</td>
<td></td>
</tr>
<tr>
<td>My teammates interacted with me more during the Adventure Education unit than they did before we started this unit in class.</td>
<td>Enrique, Ignacio</td>
<td>Maurice, Lorenzo, Tashawna, Deion</td>
<td>De’Asia</td>
<td></td>
</tr>
<tr>
<td>Adventure Education has helped me in my physical education class.</td>
<td>Lorenzo, Enrique</td>
<td>Tashawna, Maurice</td>
<td>De’Asia, Ignacio</td>
<td></td>
</tr>
<tr>
<td>It is important to interact with every student in my class even if they speak another language than me or if they have a disability.</td>
<td></td>
<td></td>
<td></td>
<td>De’Asia, Tashawna, Maurice, Lorenzo, Enrique, Ignacio, Deion</td>
</tr>
</tbody>
</table>

329
# Student Answers to Social Validity Questionnaire

## Class Two

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>I liked participating in the Adventure Education unit in my gym class.</td>
<td>Baron Gregory</td>
<td>Radwan Reuben</td>
<td>Jerome Ayesha</td>
<td>Satasia</td>
</tr>
<tr>
<td>It is important to work together by communicating with my teammates.</td>
<td>Baron</td>
<td></td>
<td>Radwan Jerome</td>
<td>Reuben Ayesha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reuben</td>
<td>Gregory</td>
<td>Satasia</td>
</tr>
<tr>
<td>I interacted a lot with my teammates during the Adventure Education unit.</td>
<td>Radwan Reuben</td>
<td>Baron Gregory</td>
<td>Jerome Ayesha</td>
<td>Satasia</td>
</tr>
<tr>
<td>It is important to interact with ALL of my teammates no matter what.</td>
<td>Ayesha</td>
<td></td>
<td>Bar Reuben</td>
<td>Gregory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gregory</td>
<td></td>
<td>Satasia</td>
</tr>
<tr>
<td>I increased the number of times I interacted with my teammates during the Adventure Education unit.</td>
<td>Baron Gregory</td>
<td></td>
<td>Radwan Reuben</td>
<td>Ayesha Satasia</td>
</tr>
<tr>
<td>I would like to participate in another Adventure Education unit.</td>
<td>Radwan Reuben</td>
<td>Baron</td>
<td>Jerome Ayesha</td>
<td>Satasia</td>
</tr>
<tr>
<td>My teammates interacted with me more during the Adventure Education unit than they did before we started this unit in class.</td>
<td>Baron</td>
<td>Radwan Reuben</td>
<td>Ayesha Satasia</td>
<td></td>
</tr>
<tr>
<td>Adventure Education has helped me in my physical education class.</td>
<td>Radwan Reuben</td>
<td>Baron</td>
<td></td>
<td>Satasia</td>
</tr>
<tr>
<td>It is important to interact with every student in my class even if they speak another language than me or if they have a disability.</td>
<td>Radwan Reuben</td>
<td></td>
<td>Bar Reuben</td>
<td>Gregory Satasia</td>
</tr>
</tbody>
</table>

330
## Student Answers to Social Validity Questionnaire

### Class Three

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>I liked participating in the Adventure Education unit in my gym class.</td>
<td>Heather</td>
<td>Dajuan</td>
<td>Adonica</td>
<td>La’Mya</td>
</tr>
<tr>
<td>It is important to work together by communicating with my teammates.</td>
<td>Heather</td>
<td>Adonica</td>
<td>Benett</td>
<td>Taniel</td>
</tr>
<tr>
<td>I interacted a lot with my teammates during the Adventure Education unit.</td>
<td>Heather</td>
<td>Dajuan</td>
<td>Benett</td>
<td>Adonica</td>
</tr>
<tr>
<td>It is important to interact with ALL of my teammates no matter what.</td>
<td>Heather</td>
<td>Adonica</td>
<td>Benett</td>
<td>Taniel</td>
</tr>
<tr>
<td>I increased the number of times I interacted with my teammates during the Adventure Education unit.</td>
<td>Heather</td>
<td>Adonica</td>
<td>Benett</td>
<td>Taniel</td>
</tr>
<tr>
<td>I would like to participate in another Adventure Education unit.</td>
<td>Heather</td>
<td>Dajuan</td>
<td>La’Mya</td>
<td>Adonica</td>
</tr>
<tr>
<td>My teammates interacted with me more during the Adventure Education unit than they did before we started this unit in class.</td>
<td>Dajuan</td>
<td>Adonica</td>
<td>La’Mya</td>
<td>Heather</td>
</tr>
<tr>
<td>Adventure Education has helped me in my physical education class.</td>
<td>Heather</td>
<td>La’Mya</td>
<td>Benett</td>
<td>Taniel</td>
</tr>
<tr>
<td>It is important to interact with every student in my class even if they speak another language than me or if they have a disability.</td>
<td>La’Mya</td>
<td>Benett</td>
<td>Taniel</td>
<td>Adonica</td>
</tr>
</tbody>
</table>
APPENDIX L

STUDENT EXIT TICKET ANSWERS
Answers to Exit Tickets Class One.

Exit ticket one: Explain one of your group rules and why it is important:

Ignacio: “No fighting, no calling names, follow all directions” (Actual rules were “no name calling”, “no playing around”, and “quit interfering in other groups”).

Lorenzo: “Not causin [cussing]; because they might be a fight because of causin to other”

Tashawna: “Don’t call people names. Many people get too competitive in games and should calm down”

Exit ticket two: Explain what your group had to do to accomplish the group juggle:

Enrique: “Work as a group, follow all direction comunicate”

Tashawna: “We had to work together to make a pattern and pay attention”

Maurice: “And my team was good to”

Lorenzo: “To communicate with others to throw”

De’Asia: “They remember who they threw it to. The new which way she had to throw it”

Exit ticket three: Which type of communication is better, positive or negative? Why?

De’Asia: Positive “Because people wont get frustrated”

Ignacio: Negative: “Because today we did not have a good time to but at last we were doing”

Lorenzo: Positive: “You learned to get a long with other people”

Tashawna: Positive: “Positive is better because if you say negative things people aren’t going to want to work with you.”

Enrique: Positive: “Positive because you dont have any probleam or noting”
Exit ticket four: Give an example of how you communicated positively with someone in your group.

Could not find student papers for answers to this statement.

Exit ticket five: Why is positive communication important for good cooperation with your group members?

Enrique: “Because now one get’s mad. Ebryone is happy and you work good”

Ignacio: Did not answer question

De’Asia: “So you could get done faster and so it can be funner”

Lorenzo: “Because that way we get over with our activities faster and easier”

Deion: “So you can no what to do and understand”

Maurice: “And my team was good to go in gym”

Tashawna: “Positive communication is important for good cooperation because if you are mad to people (teammates) they won’t want to work with you or cooperate.”

Exit ticket six: Why is cooperation important when working with a group?

Enrique: “dont get mad, dont scream”

Tashawna: “Cooperation is important when working with a group because if you don’t cooperate nobody is going to want to work with you.”

Maurice: “The team what to haerd” [The team worked hard]

Deion: “So you can get your work done”

Lorenzo: “To get your work done faster”

Ignacio: “We did some good and bad”

Exit ticket eight: How do you know if you trust someone?
Lorenzo: “I don’t know”
Deion: “Because you have been friends with them or if you know them”
Maurice: “My team was good in gym”
Tashawna: “You can know if trust someone if they help you. 9 times out of 10 if they succeed, you trust them.
Enrique: “If there your friends [friends]”

Exit ticket nine: How does positive communication build trust?
Enrique: “You comunicate with your frieds [friends] and start nowing [knowing] them better”
De’Asia: “Because if they tell you then you will start to trust them”
Maurice: “My team was good in gym to”
Deion: “Because once u make it far and succed it builds more troes [trust]”
Lorenzo: “By comunicating with others that you can’t trust that well”

Exit ticket ten: How do you know if someone trusts you?
Ignacio: “I trusted my friends a lot and I cras [crashed] I hop my insrhens [insurance] can pay for it.”
Lorenzo: “They didn’t heart [hurt] you when you where blind folding. Or they did not crash you”
Deion: “Because they will agree with you all the time”
Maurice: “My team was exeating [exciting] in gym today”
Tashawna: “You know if someone truts you if they depend on you for important or nonimportant things.”
De’Asia: “You know because they’ll let you do the game”
Enrique: “They let you help them or help them”

*Exit ticket eleven: Give an example of positive communication that you used with your group.*

Enrique: “Saying good job not screaming at each other and working together”

De’Asia: “We said good job to each other”

Ignacio: “We work as a team”

Lorenzo: “Congratulate the other people in your group”

Deion: “Good job calm talking hustle”

Maurice: “My group was good in gym today”

Tashawna: “We said positive things to each other.”

*Exit ticket twelve: What was your team’s strategy for retrieving your pot of gold?*

Tashawna: “We had to separate the ropes than swing one on the side of the bucket than the other and pull up and forward.”

Maurice: “My team was good in pot of the gold and what use team work”

Lorenzo: “Devide the rope in to two ropes and throw both ropes”

Ignacio: “We hav”

De’Asia: Have 2 ropes and everybody go to another side.”

Enrique: “We use 2 rope we put on rope in one side and on in the other then we pull the bucket up and takes to side”

*Exit ticket thirteen: How did positive communication help your team be successful?*

Enrique: “We did not figth or scream at each other we did wat we hade to”

De’Asia: “We got there on 3rd place”

Ignacio: “I was not a good it was but they did not catch me”
Maurice: “My team was good in Mission Impossible”

Tashawna: “It helped everybody participate, follow directions and get to the end of the jym fast and safe”

Deion: “So we can be successful in getting across. You have to have good communication with your group.

Lorenzo: “It helped by with positive communication we all understand each other and god our selves to the other side”

*Exit ticket fourteen: What was your group’s biggest challenge during Marble Pass?*

Lorenzo: “Our biggest challenge as a group was the hall activity”

Tashawna: “Our biggest challenge was putting the sticks together.”

Maurice: “My team was krew in Marble Pass”

Ignacio: “You had to put the tobbes [tubes] together”

De’Asia: “When we had to untactch [un-attach] and go with the marble”

Enrique: “the last thing working as a hole class”

*Exit ticket fifteen: What have you learned during the Adventure Education unit?*

Enrique: “I learr to work as a group, to dont give up, to trust in people and other thigs [things]”

De’Asia: “I learn communitcation is very good and also that if you cooroperate a lot can come to you from that”

Ignacio: Did not fill out exit ticket (left it blank in folder)

Maurice: “My team was good in because”

Tashawna: “That communication, thinking hard and team work goes far.”

Deion: “Have good communication always stay focus and have balance”
Lorenzo: “don’t give up. Trust other people. Comunication.”

Answers to Exit Tickets Class Two

Exit ticket one: Explain one of your group rules and why it is important:

Gregory: “Do teamwork and don’t put down and learn and have fun”

Ayesha: “So that way we won’t hurt each other.”

Radwan: “Teamwork so we won’t argue”

Reuben: “to learn because so you will know a lot what your are doing”

Jerome: “Do teamwork because it gives us a better chance of winning”

Satasia: “No put downs because if we want to have team work we can’t put down”

Exit ticket two: Explain what your group had to do to accomplish the group juggle:

Gregory: “Had to untie the rope”

Ayesha: “It was easier with my group and not the class”

Radwan: “Communicate”

Reuben: “We help and told people good job”

Satasia: “We had to have team work.”

Exit ticket three: Which type of communication is better, positive or negative? Why?

Gregory: “Positive”

Ayesha: “by say good job and that good because you don’t want to put anybody down.”

Radwan: “Positive because you can complete the pattern”

Jerome: “Positive communication is better because it increases the team’s confidence”

Reuben: “to say good job [job] instead of bad job”
Satasia: “positive because we will work better with our team”

Exit ticket four: Give an example of how you communicated positively with someone in your group.

Gregory: “Do teamwork”

Ayesha: “Say good and positive things to one another”

Radwan: “Talk to each other”

Jerome: “I gave good comments”

Reuben: “tell them good job [job] and tell them nicely:

Exit ticket five: Why is positive communication important for good cooperation with your group members?

Gregory: “We could not do it because it was hard”

Ayesha: “There was no positive communication”

Radwan: “Didn’t have positive communication”

Reuben: “This was stupid today and we was supposed to play basketball”

Exit ticket six: Why is cooperation important when working with a group?

Gregory: “So you can use team work”

Ayesha: “Saying positive thing to one another”

Radwan: “So you can get the job done”

Jerome: “It helps team courage”

Reuben: “Because without them you could not do it and you need them to do a group project”

Exit ticket eight: How do you know if you trust someone?

Gregory: “Because I don’t know”
Ayesha: “They will give u the right directions”

Radwan: “If they tell you the right stuff”

Jerome: “You can trust someone if you really know him”

Reuben: “I know when they do something and they tell if it is wrong or right if I do something hard”

Satasia: “If they show a good example”

*Exit ticket nine: How does positive communication build trust?*

Ayesha: “Because u can tell people the right stuff”

Radwan: “By listening”

Jerome: “It encourages the whole team”

Reuben: “by listning”

Satasia: “trust your team mats [mates]”

*Exit ticket ten: How do you know if someone trusts you?*

Gregory: “If he is your friend you can trusts him or he can trust you.”

Ayesha: “You will know because they tell you the right things”

Radwan: “If they say it”

Jerome: “To earn trust from someone else, you must help them”

Reuben: “they will tell you something that they never told anybody before”

Satasia: “You have to trust them so they can trust you.”

*Exit ticket eleven: Give an example of positive communication that you used with your group.*

Gregory: “Team work”

Ayesha: Good job, nice jod [job], great”
Radwan: “Talk positive talk”

Jerome: “Tell everyone good job”

Reuben: “‘Great job’ and another is a pat on the back”

Satasia: “Do not say mean things when your team do something wrong”

*Exit ticket twelve: What was your team’s strategy for retrieving your pot of gold?*

Gregory: “Do team work”

Ayesha: “To take 2 ropes and put it on the sides of the boal [bowl] and pick it up”

Radwan: did not complete exit ticket

Jerome: “We use two ropes, surrounded the bucket, pick it up and took it home”

Reuben: “to communicate [communicate] and to listen”

Satasia: “Team work and giving each other hints and strategys”

*Exit ticket thirteen: How did positive communication help your team be successful?*

Ayesha: “I said good job, nice smoth [smooth]”

Radwan: “We use instruction”

Jerome: “It help us communicate”

Reuben: “so you can get finish with what you are doing”

Satasia: “Now we know that we can trust our team”

*Exit ticket fourteen: What was your group’s biggest challenge during Marble Pass?*

Ayesha: “Trying to keep marble in the tubes”

Radwan: did not complete exit ticket

Jerome: “Trying to get the marble in the bucket”

Reuben: did not complete exit ticket

Satasia: “When we had to keep tring [trying] to get the marble down the pipes”
Exit ticket fifteen: What have you learned during the Adventure Education unit?

Gregory: “Nothing”
Ayesha: “That you can do a lot of thing if you try”
Radwan: “To work well with other people”
Jerome: “I learned to trust the members of the group.”
Reuben: “to communicate and to work with your other teammates”
Satasia: “I learned that you have to communicate with our teammates so they can understand what to do”

Spanish Exit Tickets Class Two (Baron)

Exit ticket one: Explica una de las reglas de tu grupo y porque esa regla es importante:

B: “Me gusta el grupo” [I like the group]

Exit ticket two: Explica que tuvo que hacer tu grupo para completar la actividad de “Group Juggle.”

B: “me guste” [I liked it]

Exit ticket three: ¿Qué tipo de comunicación es mejor: positive o negativa? ¿Por qué?

B: “Me gusto mucho” [I liked it a lot]

Exit ticket four: Escribe un ejemplo de cómo tú te comunicaste de manera positiva con alguien en tu grupo.

B: “No me gusto tanto” [I did not like it that much]

Exit ticket five: ¿Porque es la comunicación positiva importante para la buena cooperación con tu grupo?

B: “no me gusto tanto” [I did not like it that much]
Exit ticket six: Why is cooperation important when working with a group? (teacher lost the Spanish version of the exit ticket so she asked another student who spoke Spanish to help him answer the question)

B: “no good”

Exit ticket eight: ¿Cómo sabes que tu trust alguien? (researcher absent that day, teacher typed up exit ticket but did not check spelling because she does not speak Spanish)

B: “no entiendo” [I do not understand]

Exit ticket nine: Escribe como comunicación positiva construye confianza.

B: “me gusto”

Exit ticket ten: ¿Cómo sabes si alguien confía en ti?

B: “lo confió en la gente si me tratan bien” [I trust the people if they treat me well]

Exit ticket eleven: Dame un ejemplo de una forma de comunicación positiva que tu usas con tu grupo. (ejemplo: “bien hecho”)

B: “me gusto” [I liked it]

Exit ticket twelve: ¿Cómo la comunicación positiva ayuda a tu grupo a ser exitoso?

B: “no me gusto mucho” [I really did not like it]

Exit ticket thirteen: student was absent, did not complete an exit ticket for that activity.

Exit ticket fourteen: ¿Cuál fue el mayor reto de tu grupo en la actividad de “Marble Pass”?

B: “Me gusto mucho” [I liked it a lot]

Exit ticket fifteen: ¿Qué aprendiste durante la unidad de educación de aventura? (ej. La importancia de comunicación positiva con tu grupo...)

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B: “Yo creo que me gusto bastante” [I think I liked it alot]

Answers to exit tickets Class Three

Explain one of your group rules and why it is important:

B: did not answer

T: did not answer

A: “To cooperate [cooperate] with others, it’s important because if u don’t cooperate with others b/c u will get in fights”

Explain what your group had to do to accomplish the group juggle:

L: “we had to get at least three turkeys in game while juggling”

B: did not answer

T: did not answer

Which type of communication is better, positive or negative? Explain why.

L: “Positive because it makes a positive attitude and behavere.”

B: did not answer

T: “Positive because you can try”

A: “Negative because some ppl need the negative and positive b/c some ppl need positive communication”

Give an example of how you communicated positively:

L: “we did hand motion”

B: did not answer

H: “we didn’t”

T: “when you say something good”

D: did not answer
Why is positive communication important for good cooperation with your group members?

L: “It is important because positive communication makes a positive attitude.”

B: did not answer

D: “Because you won’t get through actives”

A: “Positive communication is important because it teaches you from having fights and arguments”

Why is working with others important to complete an activity?

T: “It help”

A: “So you can get it accomplished on time”

What was your group’s strategy for retrieving your pot of gold?

L: “Tie all the ropes and put it over the gold a pull it out”

T: “Because it was in the middle of the lava”

A: “We didn’t get to do it because of a team consveratia [conversation]”
APPENDIX M

TEACHER SOCIAL VALIDITY QUESTIONNAIRE
Teacher Social Validity Questions

1. Do you think Adventure Education is a feasible way to improve social interactions between all students? Please explain:

Teacher answer: Adventure Education is a great way to improve social interactions between all students because the students are put in groups and must interact with each other to accomplish the goal. The groups are comprised of students from all backgrounds and abilities. Unlike sports teams where one person can be a super star, Adventure Education challenges incorporate all members either physically, mentally or verbally. In order to meet with success, the group must include all members, like in River Crossing where all members must cross the river. The most powerful statement about the value of Adventure Education came from a sixth grader who stated “We are a lot better since Adventure Education because we are working together, and not yelling at each other anymore”.

2. Did you feel comfortable implementing Adventure Education in your classes?
   a. Yes
   b. No

Why?

Teacher answer: I think that writing the middle school curriculum has made me more comfortable implementing Adventure Education units. Being familiar with the activities and the value of it helps me to feel confident teaching. I have also taught others how to teach it, which gives me a different perspective.
3. Do you think emphasizing social interactions between students is a good way to help students with disabilities become more included with their peers without disabilities? Please explain:

Teacher answer: Yes, students need to be able to interact with students who are different than they are. Unfortunately, the students do not always understand the value of this. Students with disabilities sometimes have different strengths than others and sometimes they perform in a leadership role. Unfortunately, it is hard to “force” students to interact with others, therefore during the unit I try to make it happen naturally.

4. Did emphasizing and reinforcing social interactions between students take too much time from your instruction?

a. Yes

b. No

Why?

Teacher answer: With most classes, I only have to emphasize it a few times in the beginning because the groups start working together. I think it helps when the unit is taught in the beginning, before the students develop a history with each other. If they have had conflicts, it is sometimes hard to get them to move past it. It was frustrating that I had a class not finish the unit, but I feel that one factor that contributed to this was the unit being taught very late in the year and right after testing. Some students have the idea that school is over after testing.
5. **Do you think emphasizing social interactions is something that should be included in physical education classes? Please explain:**

Teacher answer: *Yes, I absolutely feel that social interactions should be addressed in Physical education classes. Sports are the perfect place for students to learn how to deal with others who are different or less skilled. I don’t feel that classroom teachers have the time to address social interaction because they are so pressured by “THE TEST”. I also feel that parents in today’s society are too busy to teach skills that students need to cope with others in the world. Social interaction is a necessary part of life regardless of your future plans.*

6. **Is there any part of this teaching strategy that you would change or exclude? Please explain:**

Teacher answer: *I think Adventure Education is most effective when it is taught at the beginning of the semester. Appropriate social interaction should be established before any sports units. The most difficult aspect of the unit is the Trust activities because middle school students sometimes have an issue with trusting others.*

7. **Were there any differences in the students’ social interactions before, during, and after the Adventure Education unit? Please explain your observations:**

Teacher answer: *The students spent a lot of time off task and arguing. There were days when we had to stop activity because they were arguing so much. After Adventure Education, they are a more cohesive group and there is more accountability for each member of the group. They also seem to speak to each
other in a more polite manner. They seem to help each other out a lot more instead of only be concerned for themselves.

8. Would you use Adventure Education again focusing on social interactions between students? Please explain:

Teacher answer: I would use Adventure Education again because I think it is so valuable for the students to practice the social interaction skills. I think the best scenario is to implement the unit in the beginning of the semester, because it develops better group dynamics. I see less discipline problems and off task behavior when the students realize that they have to work as a group to accomplish a goal.

9. Comments:
Appropriate Interactions

Ignacio

Baron

Benett

Lesson
Appropriate Interactions

Ignacio's Group

Baron's Group

Benett's Group

Lesson

Appropriate Interactions

Baseline

Intervention

Retention

Lesson

Lesson

Lesson

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Positive Interactions

Ignacio

Baron

Benett

Lesson