THE ATTITUDE CHANGE OF SECOND-GRADE PEER TUTORS WORKING WITH STUDENTS WITH SEVERE DISABILITIES THROUGH LABAN'S MOVEMENT ANALYSIS

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ABSTRACT

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The attitudes of peers toward students with disabilities are important when developing successful inclusion programs (Rosenbaum, Armstrong, & King, 1986; Slininger, Sherrill, & Jankowski, 2000). The Contact Theory proposed that interaction with students with disabilities could produce a change in the attitudes of non-disabled peers (Slininger et al., 2000; Tripp, French, & Sherrill, 1995). Previous research found that direct contact within a structured context had positive benefits on the attitudes of peers (Esposito & Reed, 1986; Slininger et al., 2000; Tripp et al., 1995). However, the research is not clear about when attitudes begin to change and what types of programs cause the most change. The purpose of this study was to examine the change in attitudes of second-grade students as they interacted with students with disabilities through a movement program based on the Laban Movement Analysis. Second-grade students (n=69) took a pretest and posttest on the Acceptance Scale (Voeltz, 1980), an attitude measure for lower elementary students. The treatment group (n=35) participated in an eight week peer tutoring program based on the Laban Analysis with students with severe disabilities during physical education classes. The control group (n=34) participated in physical education classes as normal. The results indicated that students who participated

in the peer tutoring program had a higher mean acceptance score than students who received no intervention ($p = .150$). In addition, students in the treatment group showed a strong trend toward a positive change in attitude from the pretest to the posttest ($p = .051$). While results were not statistically significant, a strong positive trend suggested that the peer tutoring program caused improvements in the attitude scores of students in the treatment group. Future research should investigate the benefits of using the Laban Analysis in peer tutoring programs. More research should also be conducted with students who are younger than age nine.

INTRODUCTION

The *Policies Governing Services for Children with Disabilities* (2007) in North Carolina mandates that all students with disabilities will have equal access to physical education in public schools. This policy includes opportunities for physical fitness, individual and group activities, and adaptations for participation. In addition, Individualized Education Plans (IEPs) emphasize the lifetime nature of physical activity. By age sixteen, a transitional policy must be in place to help students move from school-based activities to fitness activities in the community (Folsom-Meek, Nearing, & Bock, 2007). The need for fitness continues throughout a lifetime, but learning healthy habits begins at a young age. Therefore, educators should encourage physical development for all students, including those with disabilities.

One method of incorporating movement for students with disabilities is through the Laban Movement Analysis. Rudolf Laban (1963) emphasized the importance of learning through movement. According to Laban, movement classes should offer structure that allows students to learn spontaneously. The three main elements of movement are body, space, and effort, and endless movement combinations can be put together from these elements. Classes based on Laban focus on exploring different movement possibilities. The teacher structures the class so that individuals can move at their own pace of learning (Jobling, Virji-Babul, & Nichols, 2006).

Movement classes based on the Laban framework can be beneficial for students with disabilities. Students are allowed to explore movements at their own pace, and the format allows for modifications due to physical impairments (Jobling et al., 2006). Each student can be successful at his own level. Boswell (1991) found that creative movement

classes helped students with disabilities improve in physical skills such as balance. Personal exploration also helps students to grow in imagination and creativity (Jay, 1991). The development of both physical and problem solving skills teaches students to overcome limitations.

Including Students with Disabilities

Public School Setting.

Some students with disabilities have the opportunity to participate in physical education classes in the public school setting. When these students are included in movement classes, the structure can have many different formats. Movement teachers have a wide variety of experiences in working with students with disabilities (Ryan, 2007). The differences between classes can cause students with disabilities to be served inconsistently. In addition, many school systems have different policies for including these students. United States and North Carolina public law specifies that all students should be served in the Least Restrictive Environment (LRE). For physical education classes, students may be included in general classes or attend separate adapted classes with other students with disabilities (*Policies*, 2007). The goal of the LRE is to serve a child in the highest level where he can function successfully.

Even though law focuses on including students, educators often practice exclusion. Complete exclusion occurs when students with disabilities are separated from other students for all of instruction. Functional exclusion takes place when a student is separated to serve specific needs that cannot be met within regular education settings (Tripp, Rizzo, & Webbert, 2007). These philosophies can result in two different scenarios for a movement class. If students are functionally excluded, they will only be

separated for specific needs. A high functioning child with a disability might participate in movement classes with able-bodied students. On the other hand, students who are completely excluded are always served in a self-contained special education classroom. They will attend movement classes as a self-contained group (Ryan, 2007). Therefore, movement teachers need to be prepared to serve students with disabilities in a variety of settings.

Medical and Individual Differences Models.

Two different models address the inclusion of students with disabilities. The Medical Model, the more traditional viewpoint, focuses on the medical constraints of a disability (Sherrill, 2004). A focus on medical limitations often results in complete exclusion. For example, the concept of albeism occurs when students with disabilities are compared to their able-bodied peers. Several conclusions might be drawn from these comparisons. First, teachers might assume that the student with the disability must make adaptations in order to participate with peers. Some teachers even mistakenly think that the disability is an individual problem that can be fixed through interventions. This viewpoint does not consider the student's strengths and creative ideas. Other teachers might provide too much support instead of allowing the student to develop new skills (Goodwin, 2004). These perspectives may occur when the focus is on a student's disability.

While the Medical Model emphasizes the disability, the Individual Differences Model considers the whole picture of the child. The Individual Differences Model focuses on the strengths and weaknesses of each student, while taking into account the fact that the student has a disability (Sherrill, 2004). Every student, with or without

disabilities, has strengths and weaknesses (Tripp et al., 2007). The Individual Model of instruction builds on the strengths of a child and supports the areas of weakness. Areas of strength provide opportunities for inclusion, while a child might be pulled out for special services in areas of weakness. The goal of this model is to ensure that all children learn and grow. Many researchers agree that understanding individual strengths is one key to helping children experience success (Goodwin, 2004; Menear & Davis, 2007; Ryan, 2007; Stran & Hardin, 2002; Tripp et al., 2007; Zhang, & Griffin, 2007). In order to keep the focus on the individual, each student with a disability has an IEP (*Policies*, 2007). These plans outline goals and objectives for the child's specific needs, and they ensure that strategies are consistent (Zhang & Griffin, 2007). Teachers should be familiar with IEPs as they learn the strengths and weaknesses of each student.

Interaction between Students with Disabilities and Peer Tutors

Peer Tutors.

Peer tutoring is one strategy for including students with disabilities in movement classes (Lieberman, Arndt, & Daggett, 2007; Zhang & Griffin, 2007). Peer tutoring occurs when one child has a position of leadership in order to instruct another child. An able-bodied student may be paired with a student with disabilities. Tutoring can be unidirectional when one student instructs the other or bidirectional when both students teach each other (Temple & Lynnes, 2008). Lieberman et al. (2007) explained that peer tutoring has the potential to meet the needs of all involved. In physical education classes, both disabled and able-bodied students need to be challenged, encouraged, and praised (Davis, 1998). Peer tutors are also an inexpensive method of providing support for students with disabilities. The extra support allows the teacher to focus on individuals

and to provide assistance as needed (Davis, 1998; Wiskochil, Lieberman, Houston-Wilson, & Petersen, 2007). Peer tutoring can be a beneficial strategy for including students with disabilities in classes with non-disabled peers.

A favorable tutoring experience is beneficial for students with disabilities and tends to produce positive attitudes for able-bodied students. However, an unfavorable experience can increase difficulty for the student with disabilities and foster negative attitudes for peers (Tripp et al., 1995). Slininger, Sherrill, and Jankowski (2000) explained that unfavorable experiences might include situations where able-bodied students put down or avoid students with disabilities. In other classes, teachers may treat students differently based on ability. These types of situations can increase negative or stereotypical attitudes toward students with disabilities. Houston-Wilson, Dunn, van der Mars, and McCubbin (1997) also noted that physical education classes are often too large and that little adaptive equipment is available. This format causes students with disabilities to be overlooked and to spend little time engaged in activity. Teachers must plan for inclusion in order to make peer tutoring experiences successful.

Several suggestions have been made about the design of effective peer tutoring programs. First, able-bodied students must have close contact with the students with disabilities (Tripp et al., 1995). The contact should be structured instead of casual or left to the student's choice. Teachers should structure the contact time by giving students specific roles that reinforce interaction between disabled and able-bodied students (Esposito & Reed, 1986). The teacher should also encourage cooperative rather than competitive interaction between students. Each student should have equal status, and the class must share common goals (Slininger et al., 2000). In addition, peer tutors are more

effective if they receive training before working with students with disabilities. Training may include disability awareness, methods of communication, or instructions on how to use adaptive equipment. Training may also address individual cues, methods for feedback, analysis of tasks, and physical assistance (Houston-Wilson et al., 1997; Temple & Lynnes, 2008; Wiskochil et al., 2007). Finally, the teacher must be prepared to include the students with disabilities, and support personnel must be willing to assist the teacher (Slininger et al., 2000). Inclusion can be a negative experience if there is not adequate preparation.

Attitudes of peer tutors.

The attitudes of peers toward non-disabled students are important for successful inclusion (Rosenbaum, Armstrong, & King, 1986; Slininger et al., 2000). Negative attitudes from peers and teachers can create barriers for students with disabilities (Antonak & Livneh, 2000; Findler, Vilchinsky, & Werner, 2007). Attitudes are the building blocks of behavior, and a person's attitude is very difficult to change (Slininger et al., 2000). Current research focuses on the multidimensional nature of attitudes toward students with disabilities (Antonak & Livneh, 2000; Esposito & Reed, 1986; Findler et al., 2007; Hazzard, 1983; Rosenbaum et al., 1986). Hazzard (1983) found that children's behaviors were a combination of knowledge and attitudes toward persons with disabilities. Knowledge and attitude were not significantly correlated, suggesting that both components influenced behavior differently. Findler et al. (2007) divided attitude measures into the cognitive domain of ideas and perceptions, the affective domain of emotional feelings, and the behavioral domain of actions. All the domains should be assessed in order to gain a complete picture of a person's attitude.

Assessment of attitudes toward students with disabilities may be difficult. Since behavior is a combination of attitude and knowledge, different domains must be assessed separately (Antonak & Livneh, 2000). However, the domains might have different scores for the same person. For example, Findler et al. (2007) found that most participants scored higher in the affective and cognitive domains than the behavioral domains. Differences were reported between attitude and actual behavior toward a person with a disability. One possible cause of this difference was that the participants did not understand their attitudes. A person might also misrepresent his attitude when he knows he is being measured (Meyer, Gouvier, Duke, & Advokat, 2001).

When measuring attitudes of children, researchers must consider several additional variables. Hazzard (1983) found that knowledge about peers with disabilities increased with age. However, attitudes were not highly correlated with knowledge about disabilities. Attitudes were related to gender and to previous experience with a student with a disability. Girls tended to score higher on affective domains than boys, but boys tended to experience more change through peer tutoring programs (Hazzard, 1983; Slininger et al., 2000). The effects of previous experience with students with disabilities also influences attitude. The Contact Theory proposes that interaction with students with disabilities can produce a change in the attitudes of non-disabled peers (Slininger et al., 2000; Tripp et al., 1995). The type and amount of change depends on several variables, such as the type of contact, the specific disabilities, and the support provided during interactions (Hazzard, 1983; Slininger et al., 2000; Tripp et al., 1995).

Experience with people with disabilities may positively influence the attitudes of non-disabled peers, but research is not clear about what type of contact is beneficial

(Hazzard, 1983; Meyer et al., 2001). Slininger et al. (2000) found that peers' attitude scores increased, indicating a more positive attitude, after physical education classes in both structured contact and non-structured contact formats. However, a study by Tripp et al. (1995) tested students who were involved in either an inclusive physical education setting or a setting with no contact with students with disabilities. The study found that students in the integrated setting had a lower attitude toward students with physical disabilities and a higher attitude toward students with behavioral disabilities than students in the non-contact program. Children are often more aware of physical disabilities than emotional or mental disabilities (Esposito & Reed, 1986). In some circumstances, contact may not create positive attitudes toward students with physical disabilities. Furthermore, Hazzard (1983) found that increased knowledge about students with disabilities did not necessarily correspond to an attitude change. Knowledge increased with age, but attitude was related to other factors such as cultural stereotypes (Antonak & Livneh, 2000).

Research is not clear about when attitudes begin to change and what types of programs cause the most change. Esposito and Reed (1986) found that direct contact within a structured context has more lasting benefits than non-structured contact with students with disabilities. However, programs with structured contact have many different formats. The purpose of this study is to examine the change in attitudes of second-grade students as they interact with students with disabilities through a movement program based on Laban's Movement Analysis. The researcher hypothesizes that structured contact with students with disabilities will result in significant differences between the control and treatment groups as reflected on the posttest. Furthermore, the

researcher hypothesizes that there will be significant differences between the mean acceptance score of the treatment group on the pretest and posttest.

METHOD

Participants

Participants included 69 second-graders, 15 students with disabilities from Cullowhee Valley Elementary School, and 31 physical education majors from the Physical Education for the Exceptional Child class at Western Carolina University. The second-grade students attended physical education classes twice a week for forty-minutes. The second-graders were assigned to two groups, one of 34 and one of 35 students. Groups were based on previously established school schedules. One group attended physical education classes on Monday and Wednesday, and the other group on Tuesday and Thursday. The control group did not have interaction with students with disabilities during physical education classes. The experimental group of students served as peer tutors for the students with disabilities during physical education class time. All second- grade participants' parents signed an informed consent form prior to data collection.

The fifteen students with disabilities ranged in age from five to fourteen. All of the students had severe cognitive disabilities. Some of the students had physical and visual impairments, and some required the use of mobility assistance such as walkers and wheel chairs. The students with disabilities were divided into two self-contained classes based on the severity of their disability. Classes were self-contained for most of the day, but they attended lunch with the regular school population. During physical education classes, the students with disabilities were "buddies" with second-grade peer tutors.

The physical education majors from Western Carolina University were juniors and seniors enrolled in a Physical Education for the Exceptional Child class. As part of

the class, all majors attended lectures twice a week. During lectures, the professor discussed the history of adapted physical education, public laws, and terminology related to disabled students. In addition to lectures, the majors were required to attend sessions at the elementary school for eight weeks. The majors received training on interacting with students with disabilities and second-grade peer tutors prior to the sessions at the elementary school. They were also trained in activities relating to Laban's Movement Analysis. Each major was partnered with another major from the college adapted course. The set of partners was assigned to a student with disability and then grouped with second-grade peer tutors at the elementary school. One of the majors worked with the group at the elementary school on Monday and the other on Wednesday. The professor attended all sessions at the elementary school.

During the sessions at the elementary school, the majors were present as assistants for the second-grade peer tutors. Majors encouraged interaction between the peer tutors and buddies during activities. They also assisted with physical needs such as moving students with disabilities from walkers to wheel-chairs. After each session, the majors turned in written reflections. These entries helped the professor identify and address any concerns that arose during teaching sessions. The professor also gave feedback to the majors as a group directly after each session.

Procedures

Both the control group and the experimental group of second-grade students attended physical education classes at the elementary school twice a week for forty minutes. The sessions took place over an eight week period. The control group of second-graders attended classes on Tuesdays and Thursdays. A licensed physical

education teacher instructed all classes according to the second-grade physical education curriculum.

The experimental group of second-grade students was assigned to be peer tutors for the students with disabilities. The peer tutor group attended physical education classes on Mondays and Wednesdays along with the fifteen students with severe disabilities and the majors from Western Carolina University. The physical education teacher and the principal investigator led activities based on the physical education curriculum. The lessons focused on Laban's movement analysis. The peer tutors were grouped with a "buddy" with special needs and one of the majors. Four peer tutors were grouped with a buddy with special needs because there were more peer tutors than buddies. Two of the peer tutors worked with the buddy on Monday and the other two worked with the buddy on Wednesday. The peer tutors helped their buddies modify and complete activities during the physical education classes with the assistance of the majors. When the peer tutors were not directly involved with a buddy, they participated individually in the activities under the supervision of the physical education teacher and investigator.

Attitude Measures

The dependent measure of the study was the second-grade students' attitudes as measured on the Acceptance Scale (Voeltz, 1980). This scale was modified from the upper elementary version for use with lower elementary students from kindergarten to second-grade (Antonak & Livneh, 1988). During the initial study using the scale, students who volunteered to be buddies for students with disabilities had a higher score on the Acceptance Scale, indicating a more positive attitude, than the scores of the

general sample of participants. The scale was also pilot tested on a separate sample of students, and the test-retest stability was + .68. Reliability was indicated by a Spearman-Brown corrected split-half measure of + .82 and an estimation of +.77 for the alpha coefficient (Voeltz, 1980).

The Acceptance Scale consisted of 22 questions that were read aloud to the second-grade students as a class by the principal investigator. Each second-grade student marked his own responses on a three point, Likert-type scale. Some of the terminology from the original Voeltz (1980) scale was modified to reflect wording and phrases that the participants in the study would understand. The investigator consulted with a teacher in the school setting to discuss suitable phrasing. Question 7 was changed from the original wording, "I have a friend who is retarded," to read "I have a friend who is mentally retarded." The teacher indicated that the second-graders would understand that "mentally retarded" referred to students with disabilities. On question 9 which was originally "I say hello to kids who are retarded," the phrase was changed to "retarded or stupid." Question 14 was originally worded, "It's not nice to call someone 'mental.'" In order to be consistent with question 9, the word "mental" was modified to read "retarded or stupid." In addition, question 20, "I sometimes call other kids names like 'dummy,'" was modified to read "dummy or stupid."

The response sheet was adapted to include smiley and frowny faces that accompanied the responses of no, yes, and maybe. Students circled the response that best reflected their feelings about the question. The first two questions were not related to attitude measurement, but were designed to ensure that the second-graders understood the method of response. Question 1 was "At school we eat lunch in the cafeteria," and

question 2 was “Santa Claus wears a blue suit.” All participants should have answered the first question “yes” and the second question “no.” The scores of any participants who answered the first two questions incorrectly were not included because the researcher assumed that the students did not understand the method of response. The college students supervised the second-graders to ensure that they responded to and completed all questions.

The items of the scale were scored as 0 for a no or negative response, 1 for a response of maybe, and 2 for a yes or positive response. The scores from items 3 through 22 were added to generate a total acceptance score for each student. The highest possible acceptance score was 40 and the lowest possible score was 0. A high score indicated a positive attitude, while a low score indicated a negative attitude. All second-grade students completed a pretest and a posttest using this instrument.

RESULTS

Mean acceptance scores were calculated for students in the control group and treatment groups on both the pretest and posttest. As previously established, question 1 and question 2 were not included in the total acceptance score. They were intended to ensure that the participants could follow the answering procedures. Three students answered the first two questions incorrectly; hence their scores were not included in the final analysis as established a priori. The remaining acceptance scores were analyzed using a two-tailed independent t-test to compare the means of the two groups (see Table 1 and Figure 1). Due to an error in data collection, no information was available from the pretest regarding individual students, gender, or class assignments. Therefore, scores could not be paired for analysis after the posttest. However, information was collected during the posttest related to gender and class groupings (see Figure 2 and Figure 3). Scores were analyzed based on gender and class for the posttest only.

Table 1: Mean acceptance Scores by Treatment Group and Pre/ Post Test

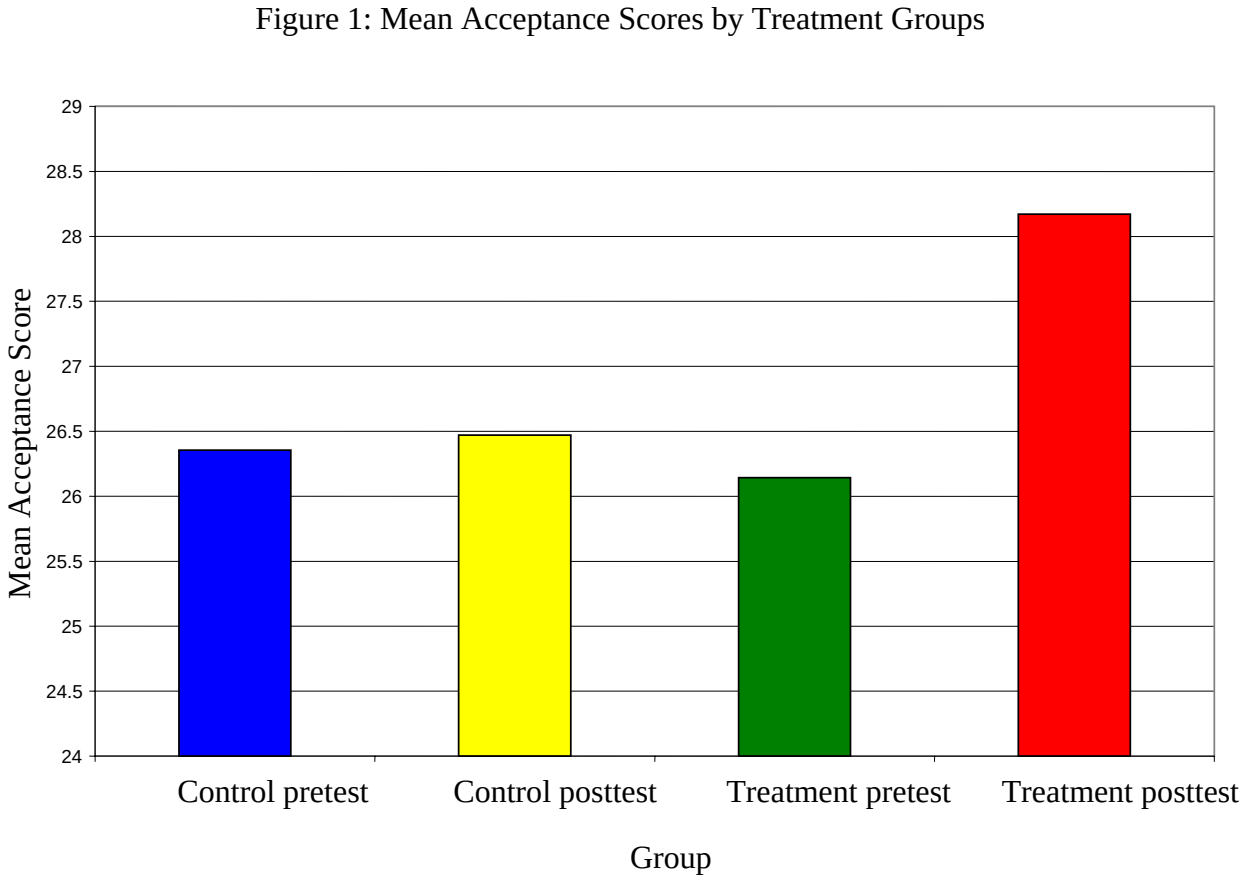
Mean Acceptance Scores by Treatment Group and Pre/ Post Test

		Pretest	Posttest
Treatment Condition	N	Mean (sd)	Mean (sd)
Control	34	26.35 (4.29)	26.47 (5.37)
Treatment	35	26.14 (4.28)	28.17 (4.28)

Treatment Pre/ Post: $p = .051$

As shown on Table 1, the mean acceptance score on the pretest for the control group was 26.35 and for the treatment group was 26.14. When acceptance scores were calculated, “yes” or positive responses were given a score of 2, “no” or negative responses were given a score of 0, and maybe responses were given a score of 1. Forty was the highest possible acceptance score, and 0 was the lowest possible score. The participants in this study had a mean acceptance score of approximately 26, which meant that the average student would have answered most of the questions with “maybe” responses and a few of the questions with “yes” responses. The participants had a fairly high mean acceptance score before treatment. The mean acceptance score of the treatment group after the posttest was 28.17. This score indicated that the treatment group answered “yes” or with positive responses more frequently after intervention.

Figure 1: Mean Acceptance Scores by Treatment Group



As seen on Figure 1, the mean scores of the control (26.35) and treatment (26.14) groups were not significantly different ($p = .842$) on the pretest. The groups did not have pre-existing differences before treatment sessions. Between the pretest and posttest, the control group attended physical education classes as normal while the treatment group received eight weeks of intervention. Research indicated that contact with students with disabilities was needed for a change in attitude (Hazzard, 1983; Slininger et al., 2000; Tripp et al., 1995). With no contact, the control group's mean score was expected to remain the same. Figure 1 shows that the mean acceptance score of the control group

was 26.35 on the pretest and 26.47 on the posttest (p = .924). As anticipated, there was no change in the mean acceptance score for the control group between the pretest and the posttest.

Figure 1 also shows that the mean score of the treatment group (28.17) was higher than the mean of the control group (26.47) on the posttest (p = .150)**.** Since the groups were equivalent before testing, the mean acceptance score of the treatment group changed in comparison to the control group. The change was not statistically significant, but the results showed evidence of a higher acceptance score after treatment. Perhaps most importantly, the mean acceptance score of the treatment group on the posttest (28.17) was higher than the mean score on the pretest (26.14) as seen in Figure 1. This result also indicated a positive change in attitude after the treatment (p = .051). The change was not statistically significant, but it approached significance and strongly suggested that the intervention facilitated a positive change in acceptance scores in the treatment group.

Figure 2: Mean Acceptance Score by Gender and Treatment

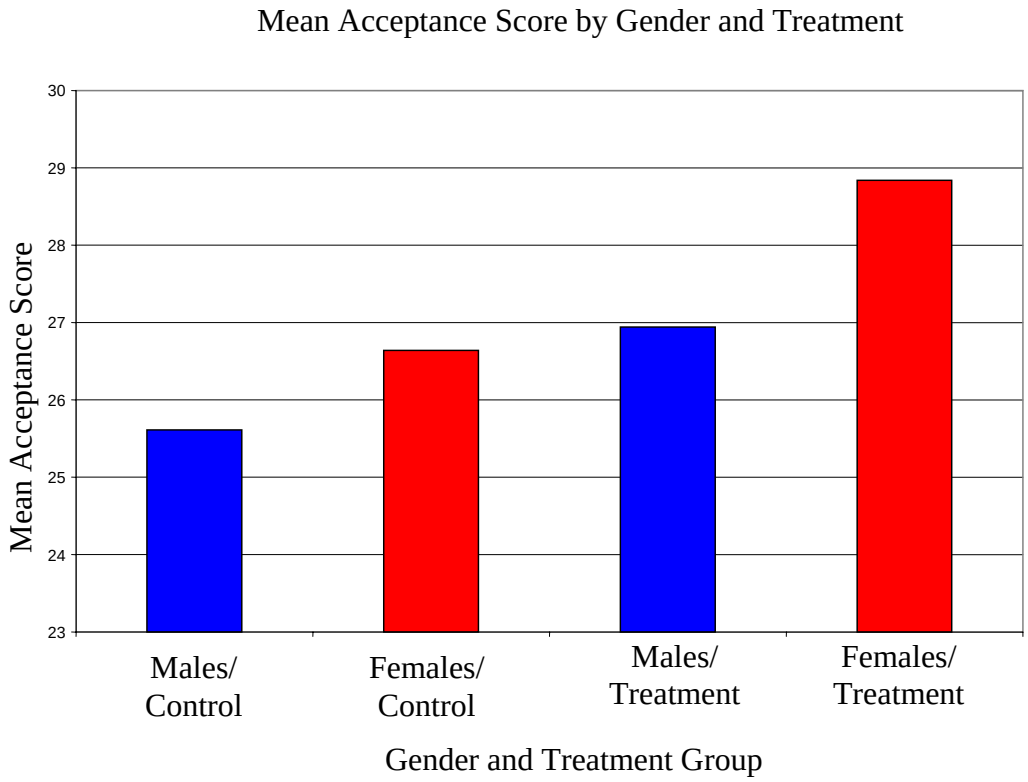


Figure 2 shows that females and males in the treatment group had higher mean acceptance scores than their counterparts in the control group on the posttest. In addition, females had higher mean scores than males in the control (females 26.64, males 25.61) and treatment groups (females 28.84, males 26.94). Data regarding gender were not collected on the pretest, so no conclusions can be drawn. However, this result was consistent with previous findings that females had more positive attitudes toward students with disabilities (Hazzard, 1983; Slininger et al., 2000). In addition, Figure 2 shows that the males of the treatment group (26.94) had a higher mean score than the females of the control group (26.64) on the posttest. Even though data from the pretest were not available, this finding suggested that the males improved through the treatment program.

Figure 3: Mean Acceptance Score by Class

Figure 3: Mean Acceptance Score by Class

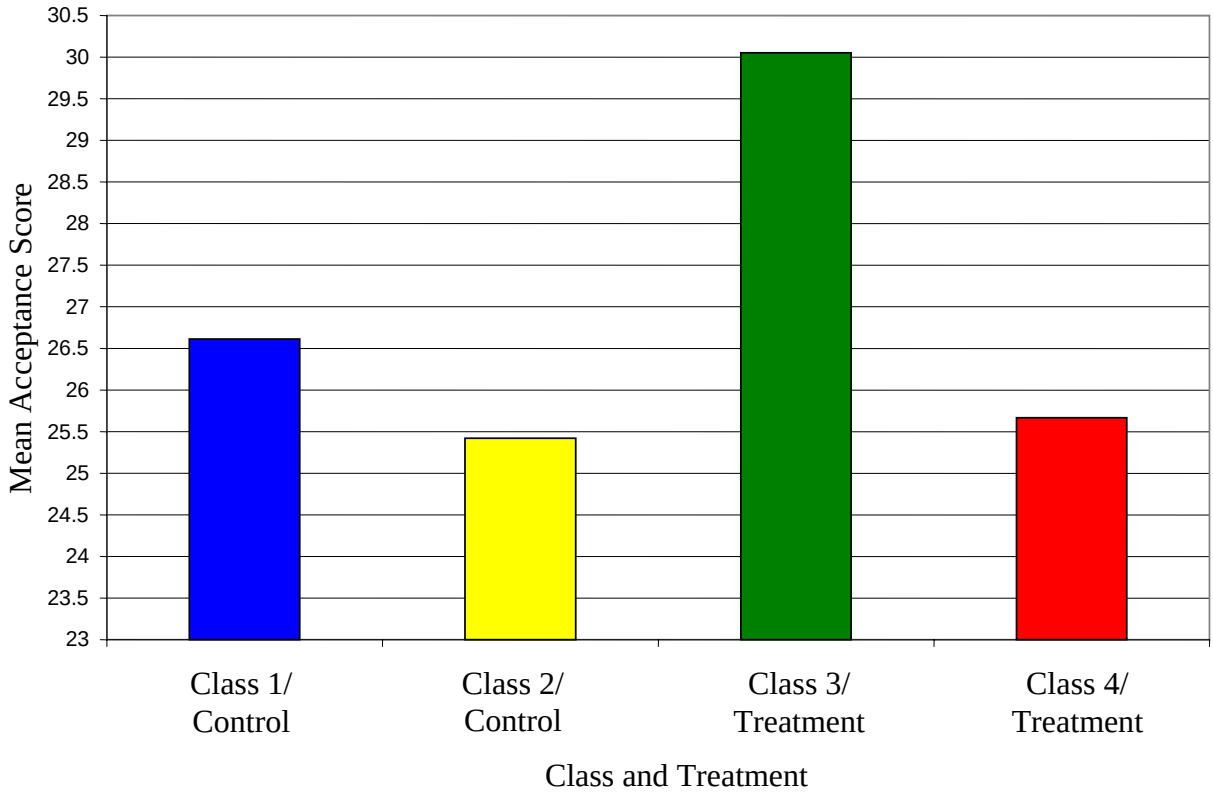


Figure 3 shows the differences between mean acceptance scores by class. The mean score of Class 1 was 26.61 and the mean score of Class 2 was 25.42. For the experimental group, Class 3 mean was 30.05 and Class 4 mean was 25.67. No conclusions can be drawn from this finding since data were not coded by class during pretesting. However, it is important to note that Class 3 from the treatment group had the highest mean acceptance score, while Class 2 from the control group had the lowest mean acceptance score. These results were consistent with expectations that the treatment group would have higher mean scores than the control group.

DISCUSSION

The students in the treatment group participated in eight weeks of structured contact with students with disabilities. Slininger et al. (2000) found that contact with students with disabilities in the context of physical education classes was beneficial for the attitudes of non-disabled peers. Other studies found that attitude scores increased for students in contact with peers with disabilities when compared to those not in contact (Hazzard, 1983; Meyer et al., 2001). Based on these findings, it was hypothesized that the mean score of the treatment group would be significantly higher than the mean score of the control group after intervention. While the results were not statistically significant, some support for this hypothesis was evident. As seen on Table 1 and Figure 1, the mean score of the treatment group on the posttest was 28.17 and the mean score of the control group was 26.47 ($\underline{p} = .150$). There were no significant differences between groups before treatment, but the treatment group had a higher score after intervention.

It was also hypothesized that the mean acceptance score of the treatment group would increase from the pretest to the posttest. As seen on Table 1 and Figure 1, the pretest mean of the treatment group was 26.03 and the posttest mean was 27.92 ($\underline{p} =.051$). While the results were not statistically significant, a strong trend indicated a positive attitude change for students in the treatment group. This trend supported the hypothesis that students in the treatment group would have a positive shift in attitude after working with students with disabilities in a structured setting.

An analysis of the posttest by gender revealed that the males and females of the treatment group had higher mean acceptance scores than the corresponding gender in the

control group (see Figure 2). This finding is not surprising since the treatment group had higher mean scores than the control group on the posttest. Figure 2 also shows that males had a lower mean acceptance score than females in both the control and treatment groups. Since gender was not coded on the pretest, no conclusions can be drawn from this analysis. However, this result was consistent with previous findings that females scored higher on attitude measures than males (Hazzard, 1983; Slininger et al., 2000). Furthermore, the males of the treatment group (26.94) scored higher than the females in the control group (26.64). Past research found that males showed a greater improvement on attitude measures through contact programs than females (Slininger et al., 2000). The amount of growth from pretest to posttest cannot be documented in this study. However, the results suggest that the treatment was beneficial for the acceptance scores of the males. Future study should analyze the effects of treatment on attitude by gender.

Figure 3 shows that the mean acceptance scores on the posttest varied by class. In the control group, Class 1 mean score was 26.61 and Class 2 mean score was 25.42. For the experimental group, Class 3 mean score was 30.05 and Class 4 mean score was 25.67. No explanation can be made regarding the larger mean score for Class 3 since data were not coded by class on the pretest. Class 3 may have had a higher mean acceptance score during pretesting, may have benefited more from the treatment, or may have been affected by an extraneous variable. More information would be needed to determine the cause of this difference.

A strong positive trend in the mean acceptance score of the treatment group supported the hypothesis that a structured program of interaction based on Laban's movement analysis would be beneficial for the attitudes of the participants in this study.

This finding was consistent with the Contact Theory, which proposed that contact with students with disabilities could facilitate a positive change in the attitudes of non-disabled peers (Slininger et al., 2000; Tripp et al., 1995). In addition, the results were consistent with other findings that structured interaction created positive changes in attitude (Esposito & Reed, 1986; Slininger et al., 2000). However, most attitude research has been conducted on children ages nine and above. Little information is available regarding students below age nine (Vignes, Coley, Grandjean, Godeau, & Arnaud, 2008). Attitudes and knowledge are the building blocks of behavior (Hazzard, 1983). Since attitudes are very difficult to change, it would be beneficial to understand the time period when attitudes begin to form and the factors that influence attitude development. Intervention programs could be designed to target young children before negative attitudes and perceptions begin to develop. In addition to this study, more research needs to be conducted with younger children.

In order to facilitate this research, the development of a more current scale directed at measuring the attitudes of young children is recommended. For the purposes of this study, the original wording of the Acceptance Scale was modified to reflect current terminology. The Acceptance Scale is one of the few scales modified to work with students in lower elementary school. However, the scale was designed to measure overall acceptance toward peers who are different, including those with disabilities (Voeltz, 1980). While the focus was on students with disabilities, other aspects of acceptance may have been measured as well. For example, question 17, “I have a best friend,” and question 21, “I like being the way I am,” reflect a child’s acceptance of friendships and self-worth. Question 4, “I don’t play with kids who look different,”

could also relate to attitudes toward peers from different cultural backgrounds or races. These aspects probably influence acceptance of peers with disabilities, but they may relate to broader issues of acceptance as well. It is recommended that future research focus on the development of an updated scale that specifically measures the attitudes children younger than age nine toward peers with disabilities.

It is also suggested that this study be replicated with a longer time frame and a larger sample of students. The limited time frame of eight weeks may not have allowed sufficient opportunity for attitude development. Since attitudes are complex and difficult to change, a longer treatment period would be beneficial (Hazzard, 1983; Slininger et al., 2000). In addition, the small sample size of the treatment group (n = 35) might have made attitudes changes difficult to detect. A larger sample size would be valuable, in addition to a sample of students from different schools. Finally, little research has been conducted about the type of structured contact that creates positive attitude changes. The Laban movement analysis was the method chosen to structure the contact for this study. The Laban analysis was found to be a beneficial method that facilitated various paces of learning. Further research should be conducted using the Laban analysis in order to investigate its use in facilitating attitude changes toward students with disabilities.

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APPENDIX A: ACCEPTANCE SCALE

Questions will be read aloud to second-grade students by the investigator. Second-grade students, please circle a face that shows the way you feel about each question. Do not write your name!

1. At school, we eat lunch in the cafeteria.	 Yes	 Maybe	 No
2. Santa Claus wears a blue suit.	 Yes	 Maybe	 No
3. I could be good friends with a kid who can't talk yet.	 Yes	 Maybe	 No
4. I don't play with kids who look different.	 Yes	 Maybe	 No
5. I sometimes pick on other kids.	 Yes	 Maybe	 No
6. I would like to push a handicapped kid in a wheelchair.	 Yes	 Maybe	 No
7. I have a friend who is mentally retarded.	 Yes	 Maybe	 No
8. I don't like to play with a kid who is different.	 Yes	 Maybe	 No
9. I say hello to kids who are retarded or stupid.	 Yes	 Maybe	 No
10. I like to play with the special ed kids.	 Yes	 Maybe	 No

11. I only play with one or two best friends.	 Yes	 Maybe	 No
12. I am sometimes mean to other kids.	 Yes	 Maybe	 No
13. I have a friend who is in a wheelchair.	 Yes	 Maybe	 No
14. It's not nice to call someone retarded or stupid.	 Yes	 Maybe	 No
15. It is hard for me to make new friends.	 Yes	 Maybe	 No
16. I wouldn't spend my recess with a handicapped kid.	 Yes	 Maybe	 No
17. I have a best friend.	 Yes	 Maybe	 No
18. I would like to be friends with a handicapped kid.	 Yes	 Maybe	 No
19. I have helped someone in a wheelchair.	 Yes	 Maybe	 No
20. I sometimes call kids names like "dummy" or "stupid."	 Yes	 Maybe	 No
21. I like being the way I am.	 Yes	 Maybe	 No
22. I sometimes play with kids from other rooms at recess.	 Yes	 Maybe	 No

APPENDIX B: PARENT CONSENT FORM

Permission Form for WCU Physical Education Graduate Study

Dear Parents and Guardians,

My name is Heidi Turlington, and I am a graduate student in the Physical Education department at Western Carolina University. As part of my master's thesis, I am conducting a research study about physical education with second-graders and students with disabilities. I would like permission for your child to participate in this study from late January until April. Following is a summary of the experience:

- Second-grade students will attend regularly scheduled physical education classes with Mrs. Brown. On Monday and Wednesday from 12:30 to 1:10, students with disabilities from Mrs. West's class will also attend the physical education classes.
- Second-graders with physical education during this time will be assigned a buddy with special needs. All other second-graders will have physical education class as normal.
- Physical education majors from Western Carolina will attend the Monday and Wednesday classes. A WCU student will be paired with a second-grader and a student with special needs as an assistant and teacher.
- A short survey will be given to second-grade students in January and April to examine their views of the experience.
- Results will be anonymous and no names will be included in the study.

Mrs. Brown and Dr. Bob Beaudet, the Physical Education department head at WCU, will be present during all classes. There are no risks associated with this study beyond those normally associated with participation in physical education classes. The results may help clarify the best methods for including students with disabilities in physical education. If your child is exempt from the study, participation in physical education class will not be affected.

I would appreciate your willingness for your second-grader to participate in this study. Please feel free to contact me or Dr. Bob Beaudet if you have further questions about the nature of the study. You may also contact the chair of the WCU Institutional Review Board at 828-227-3177 for questions about research policy at Western. Thank you for your time!

Heidi Turlington
Graduate Student, WCU
hlturlington@email.wcu.edu
828-227-7360

Dr. Bob Beaudet
Interim Department Head
Health, Physical Education, and Recreation
828-227-3543

Please check the appropriate statement and return to your child's teacher.

_____ My child has permission to participate in this study.

_____ I would prefer for my child to be exempt from the survey and from being a buddy for a student with disabilities. I understand that my child will not be excluded from physical education activities.

_____ (Name of second-grade student)

_____ (Parent/Guardian Signature) _____ (Date)

APPENDIX C: REVIEW OF LITERATURE

Introduction

The *Policies Governing Services for Children with Disabilities* (2007) in North Carolina mandates that all students with disabilities will have equal access to physical education in public schools. This policy includes opportunities for physical fitness, individual and group activities, and adaptations for participation. In addition, Individualized Education Plans (IEPs) emphasize the lifetime nature of physical activity. By age sixteen, a transitional policy must be in place to help students move from school-based activities to fitness activities in the community (Folsom-Meek et al., 2007). The need for fitness continues throughout a lifetime, but learning healthy habits begins at a young age. Therefore, educators should encourage physical development for all students, including those with disabilities.

Dance is one activity that may help students work toward physical goals (Winnick, 2005). Dance is included as part of many physical education classes, and some schools offer separate dance classes as well. In the North Carolina Standard Course of Study (NC SCS), dance has a curriculum for kindergarten through twelfth grade students (NC SCS, 2004). Dance is a fun alternative for learning basic physical skills, and the activities require minimal equipment. In elementary school dance classes, many of the learning goals are based on Rudolf Laban's theories. Laban (1963) emphasized the importance of learning through movement. Dance classes offer structure that allows students to explore and discover through the elements of movement. This form of exploration is often called "creative movement" (Boswell, 1991). Creative movement classes can be a beneficial method of learning for children with disabilities. The structure

accommodates different styles of movement, facilitates various paces of learning, and promotes personal exploration (Jobling et al., 2006). Many of the goals included in the NC SCS for dance are based on Laban's framework of movement (NC SCS, 2004). However, the curriculum does not offer goals for students with disabilities.

Benefits of Dance

A dance program can help students with disabilities meet both functional and expressive goals (Bartenieff & Lewis, 1980). Functional goals include fitness aspects such as stamina, strength, coordination, and increased flexibility (Dunphy & Scott, 2003). Movement can also be utilized to identify and express emotions. Stinson (1988) suggested that children need to investigate movements that occur in their bodies and in the world around them. Dance is a good way to learn about the expressive "magic" in life, and creativity sets dance apart from other movement programs. However, Stinson noted that every class must adapt to the functional needs of children in order to meet expressive goals. In order to develop these skills, many movement programs identify motor, cognitive, and affective goals (Clark, 2007).

Motor Development.

Structural constraints are a normal part of development that are based on unique body structure and ability level (Menear & Davis, 2007). However, body limitations are often exaggerated for children with severe disabilities. For example, children who are visually impaired may experience delays in mobility, locomotion, and object control (O'Connell, Lieberman, & Peterson, 2006). Children with disabilities such as spina bifida might be confined to wheel chairs or other adaptive devices (Goodwin, Krohn, & Kuhnle, 2004). Children with Down's syndrome may have trouble controlling

movements and precise actions. These children often treat sequences of movement as a series of smaller tasks that must be completed separately (Jobling et al., 2006). During dance activities, students practice controlling movement and completing sequential patterns.

Students also practice adapting to new movement situations in a comfortable setting through dance classes (Jobling, 1999). For example, Goodwin et al. (2004) explained that wheel chair dance strengthened existing movement patterns and motivated new movement possibilities. Wheel chair dance also helped students gain muscle strength, flexibility, and balance. In addition, dance classes provide students with a chance to observe and pattern movements after a teacher's example. Dance classes are especially beneficial for students with disabilities because the format accommodates different movement styles and learning paces (Jobling et al., 2006). For example, children with visual impairments may benefit from an opportunity to learn by touch. A visually impaired student can receive physical guidance or participate in tactile modeling with an instructor (O'Connell et al., 2006). A student who has physical impairments can adapt dance movements to his ability level. Once the student is able to complete a skill successfully, he can try new challenges at his own speed.

Dance experiences focus on a range of movement skills and provide a variety of opportunities for motor growth. Studies have documented the increase of spatial awareness and muscular coordination through dance training (Lasseter, Privette, Brown, & Duer, 1989; Ritter & Low, 1996). These motor skills are beneficial in the dance studio and in everyday situations. Body awareness is another skill that is strengthened as a child learns about his body's strengths and weaknesses (Jobling et al., 2006). As a child

recognizes his movement capabilities, he develops the ability to overcome limits (Jay, 1991). For example, a student with impaired mobility might not feel secure without the assistance of a walker. However, dancers can complete movements without a walker on the floor or with a partner. Goodwin et al. (2004) found that dancers in wheel chairs gained strength and balance skills that allowed advanced motor abilities. These students began to view the chair as part of their body instead of a limit.

Balance is another area of weakness for many children with disabilities. Jobling (1999) found that children with Down's syndrome experienced difficulties in combining visual and kinesthetic information to maintain balance. Even though each child had different types of motor impairments, balance was a persistent problem for many. Boswell (1991) also found that mentally retarded children struggled with balance. Many different motor activities are affected if a child has weak balance skills. Several studies have addressed the connection between dance and balance for students with disabilities (Boswell, 1991; Couper, 1981; Ritter & Low, 1996). For example, Boswell (1991) compared the balance of mentally retarded children participating in two different movement programs. The study found balance improvements for both groups. A study by Couper (1981) investigated balance for students with learning disabilities. Balance gains were documented for participants in a creative movement program and an occupational therapy program. Chin (1988; as cited by Ritter & Low, 1996) also reported balance benefits for developmentally delayed children who participated in dance.

Cognitive Development.

Physical growth promotes cognitive growth. Loman (1998) explained that movement comes before spoken word. During the first years of life, a child's motor

growth and cognitive growth cannot be separated. Most of an infant's movements are a result of reflexes. As the child grows, he gradually learns to control movements voluntarily (Payne & Isaacs, 2005). However, students with disabilities often experience delays in motor development (Jobling, 1999; O'Connell et al., 2006). Since cognitive growth and motor growth are connected, dance can create a beneficial learning environment. In particular, dance helps students understand the relationships between their bodies, the space, and the effort required for movement (Laban, 1963). Awareness of body parts and actions can help students learn new movement possibilities. As a student explores his relationship to the space, he develops a vocabulary of direction words. Effort exploration allows students to experience concepts such as heaviness, lightness, flow, and timing of body movements (Jobling et al., 2006). These "elements" of dance can be translated outside of the dance studio. For example, quick responses can be problematic for children who have poor balance or who use assistive devices such as wheel chairs (Goodwin et al., 2004; Jobling, 1999). Exploring special concepts helps students to respond to changes in their environment.

During movement explorations, children develop a language to talk about movement experiences (Jobling et al., 2006). Children with disabilities often communicate through movement. In addition, movement can be a comfortable learning tool for children because the "language" of movement is understood by all children (Stran & Hardin, 2002). Jobling et al. (2006) found that dance classes encouraged students to communicate as they interacted with the instructor and other dancers. If a student with a disability could not verbalize his thoughts, he could still express an opinion through movement. Non-verbal communication skills are especially beneficial

for students who experience difficulty with verbal expression (Lasseter et al., 1989). In addition, Jay (1991) explained that students with disabilities needed a chance to communicate what they learned and to be successful. Movement can be an assessment tool for these students, and the students will appreciate the ability to communicate in a new manner.

Increased cognitive awareness can also motivate creative thinking abilities. Jay (1991) discussed the connection between creativity and aesthetic experiences. Aesthetic experiences include activities that stimulate sensory and emotional responses. As an aesthetic experience, dance helps students to increase their imaginations. Dance also encourages students to engage in problem solving situations (Boswell, 1991). For example, students who participated in wheel chair dance used problem solving skills to move their chairs through the space with other wheel chairs. They learned that the chairs were a tool for expressing creativity and freedom (Goodwin, 2004; Stran & Hardin, 2002). During the problem solving process, students found new ways to manipulate chairs and used the chairs to express emotions.

Affective Development.

Students with disabilities often experience frustrations that may be expressed through behavior (O'Connell et al., 2006). For example, some students might lack motivation to try new activities when peers laugh at their attempts. Other students may feel a lack of confidence to try new movements, so they watch classmates before moving. Some students with disabilities feel that they are being compared to their peers who are "normal" (Lieberman et al., 2007). All of these situations can cause a student with a disability to display behavioral or motivational difficulties. Menear and Davis (2007)

called these difficulties “functional constraints.” Dance can help students overcome functional constraints by creating a safe environment to experience movement.

Another benefit of dance class is that there is no “right answer” for movement. Dance provides an opportunity for students to experience physical challenges and to overcome them successfully (Menear & Davis, 2007). Completing a challenge enhances self-confidence and inspires a child to try challenges in the future. Jay (1991) also found that dance allows students to move beyond their limitations. For example, students who participated in wheel chair dance experienced a sense of accomplishment as they overcame constraints (Goodwin et al., 2004). In addition to accomplishment, dance can provide leadership opportunities for students with disabilities. Many of these students have either avoided leadership roles or have not been selected because of their disabilities. However, dancers of all ability levels can be placed in leadership such as leading warm-ups, holding key positions during dance formations, or remembering and calling out movements (Lieberman et al., 2007). These opportunities build confidence and self-esteem.

In some dance classes, students with disabilities are included in classes with non-disabled peers. Students are encouraged to communicate and interact with each other in new ways during these classes (Jobling et al., 2006). Dancers must move with and around others in the space, and every member of the class must contribute to the dance. This social interaction provides an opportunity for affective development (Couper, 1981). In other movement classes, students with disabilities are grouped with those who have similar disabilities. This type of experience can be particularly beneficial to students who feel singled out because of their disabilities. For example, students with spinal bifida

who participated in a wheel chair dance program appreciated the group's unconditional acceptance (Goodwin et al., 2004). Dancers learned from being around other students with similar constraints, and they worked as a team to overcome limitations.

Finally, dance is a fun way to work on motor, cognitive, and affective goals. Many students with disabilities need to improve functional skills, but drills and repetitions can become boring. Dance uses creativity and personal exploration to make simple movement enjoyable (Couper, 1981; Jobling et al., 2006). Students also feel a sense of belonging and importance when they are a successful part of a group (Tripp et al., 2007). One participant in a wheel chair dance program reported that the opportunity to dance was a "dream come true" (Goodwin et al., 2004). Students with many types of disabilities can enjoy the opportunity to learn through movement experiences.

Including Students with Disabilities

Dance and Movement Therapy.

An alternative approach to dance is called dance and movement therapy. Movements are the basis of dance therapy, just as words are the foundation of verbal therapy. Dance therapists analyze movements in order to assist patients with psychological and physical problems (Lasseter et al., 1989; Ritter & Low, 1996). Couper (1981) explained that dance therapy is different than traditional dance. Dance therapists consider dance to be a non-verbal form of communication. Since movement is connected to emotion, physical movements provide a window into psychological aspects. Bartenieff and Lewis (1980) compared a dance therapist to a catalyst. Therapists create a movement environment where a patient feels comfortable relating and growing. Once a

patient is comfortable, he develops movement skills to express and cope with psychological difficulties.

Dance therapy is beneficial for a wide range of physical, psychological, and emotional disorders. The American Dance Therapy Association (ADTA) was formed in 1966 to support the practices of dance and movement therapists (ADTA, 2008). Dance therapists have worked successfully with many patients, including those with disabilities. Some of the goals and practices overlap with the goals of a public school setting. For example, Loman (1998) discussed the fact that children with disabilities often have a limited ability to communicate. Dance offers a language of movement that is beneficial for students who have difficulty with verbal communication. In addition, the goals of dance and movement therapy sessions include resocialization with peers, non-verbal creative expression, body awareness and enhanced self-esteem, muscular coordination, and enjoyment and relaxation (Lasseter et al., 1989; Ritter & Low, 1996). These goals are similar to traditional dance programs.

Most dance therapists work with individual patients or in small group settings. The therapist is able to observe and analyze the movement patterns of each patient in detail when there are fewer participants. These observations are used to design a program for the patients' specific needs (Couper, 1981; Lasseter et al., 1989). For example, Loman (1998) used a tool called the Kestenberg Movement Profile, which was beneficial because the categories were not based on age level. The therapy sessions were designed to work at the child's current ability level, and the goal was to continue moving through the developmental levels. This tool works well for students in a small group

because the goals are very specific. However, many of the principles of dance therapy can be applied to larger group settings as well.

Public School Setting.

Some students with disabilities have the opportunity to participate in dance classes in the public school setting. When these students are included in movement classes, the structure can have several different formats. Movement teachers have a wide variety of experiences in working with students with disabilities (Ryan, 2007). The differences between classes can cause students with disabilities to be served inconsistently. In addition, many school systems have different policies for including these students. United States and North Carolina public law specifies that all students should be served in the Least Restrictive Environment (LRE). For physical education and dance classes, students may be included in general classes or attend separate adapted classes with other students with disabilities (*Policies*, 2007). The goal of the LRE is to serve a child in the highest level where he can function successfully.

Even though law focuses on including students, educators often practice exclusion. Complete exclusion occurs when students with disabilities are separated from other students for all of instruction. Functional exclusion takes place when a student is separated to serve specific needs that cannot be met within regular education settings (Tripp et al., 2007). These philosophies can result in two different scenarios for a movement class. If students are functionally excluded, they will only be separated for specific needs. A high functioning child might participate in dance class with regular education students. On the other hand, students who are completely excluded are always served in a self-contained special education classroom. They will attend dance class as a

self-contained group (Ryan, 2007). Therefore, movement teachers need to be prepared to serve students with disabilities in a variety of settings.

Medical and Individual Differences Models.

Two different models address the inclusion of students with disabilities. The Medical Model, the more traditional viewpoint, focuses on the medical constraints of a disability (Sherrill, 2004). A focus on medical limitations often results in complete exclusion. For example, the concept of albeism occurs when students with disabilities are compared to their able-bodied peers. Several conclusions might be drawn from these comparisons. First, teachers might assume that the student with the disability must make adaptations in order to participate with peers. Some teachers even mistakenly think that the disability is an individual problem that can be fixed through interventions. This viewpoint does not consider the student's strengths and creative ideas. Other teachers might provide too much support instead of allowing the student to develop new skills (Goodwin, 2004). These perspectives may occur when the focus is on a student's disability.

While the Medical Model emphasizes the disability, the Individual Differences Model considers the whole picture of the child. The Individual Differences Model focuses on the strengths and weaknesses of each student, while taking into account the fact that the student has a disability (Sherrill, 2004). Every student, with or without disabilities, has strengths and weaknesses (Tripp et al., 2007). The Individual Model of instruction builds on the strengths of a child and supports the areas of weakness. Areas of strength provide opportunities for inclusion, while a child might be pulled out for special services in areas of weakness. The goal of this model is to ensure that all children

learn and grow. Many researchers agree that understanding individual strengths is one key to helping children experience success (Goodwin, 2004; Menear & Davis, 2007; Ryan, 2007; Stran & Hardin, 2002; Tripp et al., 2007; Zhang, & Griffin, 2007). In order to keep the focus on the individual, each student with a disability has an IEP (*Policies*, 2007). These plans outline goals and objectives for the child's specific needs, and they ensure that strategies are consistent (Zhang & Griffin, 2007). Teachers should be familiar with IEPs as they learn the strengths and weaknesses of each student.

The Laban Analysis and Creative Movement

One framework for helping students reach individual goals during movement classes is the Laban Analysis. Rudolf Laban (1963) emphasized the importance of learning through movement. He suggested that dance is one area where the relationship between effort, movement, and learning is preserved throughout life. The amount of effort given to a movement influences the amount of learning. During this process, movements can be broken down into many different categories (Laban, 1966). The three main elements of movement are body, space, and effort (Jobling et al., 2006). These elements and their subcategories are the basis for learning in creative dance classes. Endless movement combinations can be put together from this framework (Laban, 1963).

Many dance programs for young children are based on Laban's framework. These "creative movement" classes focus on exploring different movement possibilities (Jobling et al., 2006). According to Laban, dance classes should offer structure that allows students to learn spontaneously. Instead of focusing on a particular style of dance, the goal of the Laban Analysis is to explore a range of movements from all elements (Laban, 1963). During class, the teacher structures the time while individuals move at

their own pace of learning (Jobling et al., 2006). The NC SCS for dance (2004) is based on the Laban framework. The curriculum has eight goals, and the first is dedicated to understanding Laban's elements of movement. In the NC SCS, the elements of dance include body, space, time, and energy.

Laban for Students with Disabilities.

Creative movement classes based on the Laban framework can be beneficial for students with disabilities. Students are allowed to explore movements at their own pace, and the classes allow for modifications due to physical impairments (Jobling et al., 2006). Each student can be successful at his own level. Boswell (1991) found that creative movement classes helped students with disabilities improve in physical skills such as balance. Personal exploration also helps students to grow in imagination and creativity (Jay, 1991). The development of both physical and problem solving skills teaches students to overcome limitations. When implementing a Laban-based program, Jobling et al. (2006) recommended that each student should develop an understanding of body, space, and effort. In addition, classes should facilitate the development of verbal language related to movement, allow time to explore movements, and encourage communication with other class members. These strategies help students apply the Laban framework to a movement setting.

Body, Space, and Effort.

The first category of Laban's analysis is the body, which includes body parts, range of motion, and actions. The concept of the body also relates to the impulse or starting point of movements (Laban, 1963). A body part can be active or passive by leading, participating, or actively holding during a movement. The body also determines

placement, and different postures allow the body to move as a unit or in disconnected pieces (Dell, 1977). Exploring body movements gives students a concept of their movement capabilities. Furthermore, this understanding helps students to control movements more effectively. Many children with disabilities experience physical limitations. For example, children in wheel chairs often feel that the chair limits movements. Movement exploration is a freeing experience for these students because it removes some constraints (Goodwin et al., 2004). Stran and Hardin (2002) reported that children who participated in wheel chair dance learned to view the chair as an extension of their body. In addition, a child who is blind or who has hearing impairments often relies on the senses of touch and movement to provide extra support (O'Connell et al., 2006). Dance provides an opportunity for these students to strengthen their sense of physical control.

The element of space refers to a person's relationship to the environment. Laban (1966) explained that the body is surrounded by a kinesphere, or the immediate circle occupied by the body. Inside the kinesphere, a person can move on a high, medium, or low level. Movement can take place to the right and left, in front and behind, or on diagonals. Any combination of these directions can be used to produce movement. In addition to moving inside the kinesphere, locomotor movements can be used to travel through the space through straight, curvey, or zig-zag pathways. Locomotor movements require an awareness of the surroundings, such as any objects or people. A dancer can respond to changes in the space by adapting and changing movements (Joyce, 1994). The element of space requires awareness of self and awareness of surroundings. A dancer must learn to control his own movements and to relate to other dancers. In the

process, students with disabilities learn physical strategies to respond to environmental demands that constantly change.

The third element of Laban's analysis is effort, which relates to the quality of movement. The basic effort actions consist of movement combinations of space, weight, and time. For example, space can be used with direct or indirect effort, weight can be strong or light, and time can be sudden or sustained. These three categories can be combined into nine different effort actions. For example, a movement that is strong, sudden, and direct is called a punch, while a movement that is strong, sudden, and indirect is called a slash (Bartenieff & Lewis, 1980). Combinations of effort words can also relate to emotions. The body is closely tied to emotion, and many emotions are reflected in body language (Ritter & Low, 1996). An angry movement might be a punch or a slash, while a sad movement might be a float or a glide. An understanding of effort can provide students with a non-verbal language to express feelings (Lasseter et al., 1989). In addition, effort actions teach students about the flow of movement and the control of movement quality. During creative movement, a child has an opportunity to explore actions that are challenging. For example, children with Down's syndrome often have a jerky movement quality, which would be considered indirect in the effort action analysis (Jobling et al., 2006). The opposite quality would be direct. A child with Down's syndrome could learn by exploring direct movements with strong or light, sudden or sustained characteristics.

Students with Disabilities in Movement Classes

Teaching can be a challenging task because students have a wide variety of needs and abilities. Menear and Davis (2007) explained that learning is an interaction between

many different variables, such as the environment where instruction takes place, the individual learners, and the goals. Based on this theory, children have different needs for learning in each setting. A movement classroom requires different strategies than a traditional learning environment. In addition, all children have different strengths and weaknesses. Two students with a similar disability will have different levels of physical capability (Jobling, 1999). Therefore, a student cannot be stereotyped or labeled because of a disability. Menear and Davis (2007) found that students have different physical and functional constraints, or abilities, behaviors, and attitudes that affect performance. All types of constraints require modifications in order for students to be successful (Zhang & Griffin, 2007). A teacher's goal is to balance the different needs in order to promote learning. Since learning is a complex process, a teacher must consider many practical aspects of the classroom.

Class Size.

When teaching students with disabilities, a small class size is ideal because teachers can observe specific needs more thoroughly (Couper, 1981; Menear & Davis, 2007). Smaller classes also help students to focus since there are fewer distractions. A case study by Lasseter et al. (1989) used dance therapy to treat one child with multiple disabilities. The program was specifically designed for the child's needs, and she improved in motor and affective goals through the sessions. O'Connell et al. (2006) also noted benefits of individual instruction for students who were visually impaired or blind. Children with all types of disabilities can benefit from the increased attention and the focus on specific needs during small group settings. However, most public school settings serve a large number of students. Students with disabilities are either included in

regular education classes or attend dance classes in separate self-contained classes (Ryan, 2007). A teacher may find it challenging to attend to individual needs while managing a large class. Tripp et al. (2007) recommended that students with disabilities be included in natural proportion, with no more than one or two students per class. In addition, the teacher must have a strategy in place for accommodating the needs of these students.

Class Environment and Procedures.

Environmental concerns such as the set up of the room and the availability of equipment must be considered before class begins (Menear & Davis, 2007). For example, if the room contains physical obstacles like chairs and desks, a child with a wheel chair may have difficulty with movement. Teachers should provide an environment with the fewest number of restrictions and obstacles as possible. In addition, Tripp et al. (2007) recommended that any special accommodations should be portable and follow the student. This policy helps the teacher handle equipment needs quickly and ensures that appropriate modifications are always available for the child.

Once students enter class, the classroom procedures and management techniques influence the success of the students (Clark, 2007). Children with disabilities often desire structure, so they benefit from a consistent classroom routine. The lessons should follow a set progression that includes an introduction and closure. When a teacher introduces a change, a verbal warning about the change can prevent confusion (Clark, 2007; Jobling et al., 2006). In addition, the teacher should be prepared to give undivided attention to the students. The lesson and any materials can be pre-set in order to prevent lag time during class. Once students arrive, the teacher should greet the class and follow established transitional procedures. Ground rules and signals can be established for working in the

space and with any materials (Clark, 2007). Clear organizational and transitional procedures ensure that the class flows smoothly and minimizes disruptions.

Content and Learning Needs.

Instructing students with many different ability levels is challenging in any classroom. This challenge might be exaggerated when students with disabilities are included in regular education classes (Menear & Davis, 2007). A classroom should be able to accommodate different movement styles and different paces of learning. Therefore, the teacher needs to be aware of the learning needs of each child in the classroom (Jobling et al., 2006). When selecting tasks and performance goals, teachers should make sure that all students are challenged. However, the tasks should not be so challenging that students cannot be safe and successful (Menear & Davis, 2007; Ryan, 2007; Stran & Hardin, 2002). If goals are too difficult, the students could become frustrated or experience physical injury. On the other hand, students are not motivated to learn when tasks are too simple. Modifications for students with disabilities should not affect the other students in the class (Stran & Hardin, 2002). Classmates might feel resentful or lose motivation if the whole class must change for one student.

The types of tasks and the learning goals are another important aspect of class. Specific tasks should be both achievable and challenging for each student (Menear & Davis, 2007; Ryan, 2007). When designing activities, Goodwin et al. (2004) found that teachers should focus on a goal instead of focusing on the limitations of the child. For example, a student learning to dance with a wheel chair can focus on moving the wheel chair in multiple directions. This objective helps the child view the wheel chair as an extension of the body that assists in accomplishing physical goals (Stran & Hardin,

2002). Every goal should be designed to benefit the child's motor, cognitive, and affective needs.

In order to accommodate the needs of a class, Joyce (1994) suggested that teachers follow a progression of activities. The warm-up introduces the concept, and the next activities develop concepts from the warm-up. The goals become increasingly more challenging throughout class, which allows students to build on previous knowledge. All students learn skills at their ability levels, even if they cannot complete the most difficult tasks. Stran and Hardin (2002) followed a progression to teach dance to children with ambulatory disabilities. Class began with seated hand dances that did not need to be modified for any of the students. Next, creative dances were used to express mood and emotion, and class finished with partner dances. This progression allowed all students to participate, and each child was able to modify activities according to his ability level without affecting peers.

Since many students with disabilities are visual learners, they may enjoy tasks that involve visual and tactile stimulation (Zhang & Griffin, 2007). Creative dance classes often utilize props such as ribbon sticks, scarves, balls, and parachutes to explore different movement concepts (Clark, 2007). Props can be a good basis for movement exploration for students with disabilities because they stimulate the senses. Manipulating a prop also teaches students to grasp and hold objects, to relate to the space through an outside source, and to move in different spatial patterns. Students who experience functional limitations in body movements can often move a prop without constraints. In addition, a student who has trouble maintaining attention will often become focused when holding a colorful object (Bartenieff & Lewis, 1980). One method for using props

is to give students movement problems (Boswell, 1991). For example, a dancer might be asked to place a scarf over, under, and around the body, or to move a ribbon stick as far away from his center as possible. Students practice creative problem solving skills and learn new movement patterns through these explorations. In particular, Bartenieff and Lewis (1980) found that hoops helped students learn about spatial and directional concepts, and balls of different sizes and weights helped students develop a concept of effort and space. Most students enjoy the visual and tactile stimulation that occurs during prop exploration.

Behavior Management.

Classroom management is an important skill for teachers because an unruly class prevents effective teaching (Clark, 2007; Lavay, French, & Henderson, 2007). IEP teams often set up behavioral management plans for students with disabilities. These plans provide consistent management strategies across learning situations, and teachers should be familiar with the strategies (Zhang & Griffin, 2007). However, behavioral strategies for a movement class may be different than strategies for other types of classes. The interaction between peers and the relationship to the environment are much different than in a traditional setting (Clark, 2007). Effective classroom management strategies can regulate some misbehavior in these classes. For example, the teacher's tone of voice sets the tone for the class. Since students often mimic the reaction of the teacher, a firm and calm voice is more effective than a frantic or unsure tone. Teachers should also give clear and concise directions that include a demonstration when possible. Demonstrations can prevent confusion and clarify expectations. Students can also be given choices during the class. For example, the teacher can ask a child to choose a partner instead of

telling him to participate (Zhang & Griffin, 2007). The student is more likely to participate willingly when he has a sense of control over his actions.

Even though behavior problems can be minimized by good management strategies, they will not be eliminated. Dance and other classes in the arts are a good place for students to learn about behavioral management. Gair (1980) suggested that artistic disciplines help students develop attention and focus on a task. The arts also help students feel successful and build self-esteem. Many students enjoy artistic expression, so they are less likely to misbehave. When students have behavioral difficulties, Lavay et al. (2007) explained that there are different management strategies based on the causes of students' actions. Behavioral modification strategies focus on rewards and punishments for specific behaviors, while psychodynamic tactics seek to understand the underlying psychological causes of the behavior. Biophysical factors relate to the overall picture of the student and his biological needs. For example, certain medications may influence behavior. Additionally, many students with disabilities have a time delay when responding to directions. These students may require extra processing time or need to watch other students before beginning the activity. In these cases, a teacher can allow appropriate wait time instead of assuming that a student is not participating (Zhang & Griffin, 2007). A clear understanding of the cause of behavior leads to a more appropriate solution.

If a student has consistent difficulty with behavior, the teacher should develop a plan that causes as little interruption to instruction as possible. Lavay et al. (2007) explained that the first step in creating a behavior intervention plan is to identify the behavior. After analyzing the behavior, the teacher can develop and implement a specific

plan. It is important to allow enough time for the plan to be effective. Behavior plans will not be successful if they are discarded before long-term changes can take place. Lastly, the teacher must evaluate and make sure the plan is effective for the student. No single plan will cause the same results for all students, and the plan might work differently for the same student in different circumstances. Therefore, the strategy must connect to the individual student's behaviors and be flexible for changes (Lavay et al., 2007, Zhang & Griffin, 2007). If a plan is not effective, the teacher should reevaluate and try a new strategy.

Another management strategy is to connect activities to the students' interests. Instead of constantly trying to stop misbehavior, the teacher can incorporate a behavior as a learning tool (Zhang & Griffin, 2007). For example, if a student enjoys looking in the mirror, the teacher can develop activities that involve using the mirror. Reflections are a good tool for body part identification and awareness of self and others, and distraction is eliminated when the mirror is used as a learning tool. However, teachers should remember that some misbehavior must be stopped immediately. Children with disabilities occasionally show aggressive or socially harmful actions that must be stopped to ensure that all students are safe (Stran & Hardin, 2002; Zhang & Griffin, 2007). In general, identifying student interests helps a teacher focus on the big picture of behavior management. In addition, the teacher can set goals that are appropriate, challenging, and appealing for the student (Menear & Davis, 2007). The teacher should use these insights to design a creative movement class that allows all students to have fun, be safe, and feel successful.

Interaction between Students with Disabilities and Peer Tutors

Peer Tutors.

Peer tutoring is one strategy for including students with disabilities in movement classes (Lieberman et al., 2007; Zhang & Griffin, 2007). Peer tutoring occurs when one child has a position of leadership in order to instruct another child. Tutoring may be unidirectional when one student instructs the other or bidirectional when both students teach each other (Temple & Lynnes, 2008). Lieberman et al. (2007) explained that peer tutoring has the potential to meet the needs of all involved. In physical education classes, both disabled and able-bodied students need to be challenged, encouraged, and praised (Davis, 1998). Peer tutors are also an inexpensive method of providing support for students with disabilities. The extra support allows the teacher to focus on individuals and to provide assistance as needed (Davis, 1998; Wiskochil et al., 2007). Peer tutoring can be a beneficial strategy for including students with disabilities in classes with non-disabled peers.

A favorable tutoring experience is beneficial for students with disabilities and tends to produce positive attitudes for able-bodied students. However, an unfavorable experience can increase difficulty for the student with disabilities and foster negative attitudes for peers (Tripp et al., 1995). Slininger, Sherrill, and Jankowski (2000) explained that unfavorable experiences might include situations where able-bodied students put down or avoid students with disabilities. In other classes, the teachers may treat students differently based on ability. These types of situations can increase negative or stereotypical attitudes toward students with disabilities. Houston-Wilson et al. (1997) also noted that physical education classes are often too large and that little adaptive

equipment is available. This format causes students with disabilities to be overlooked and to spend little time engaged in physical activity. Teachers must plan for inclusion in order to make peer tutoring experiences successful.

Several suggestions have been made about the design of effective peer tutoring programs. First, able-bodied students must have close contact with the students with disabilities (Tripp et al., 1995). The contact should be structured instead of casual or left to the student's choice. Teachers should structure the contact time by giving students specific roles that reinforce interaction between disabled and able-bodied students (Esposito & Reed, 1986). The teacher should also encourage cooperative rather than competitive interaction between students. Each student should have equal status, and the class must share common goals (Slininger et al., 2000). In addition, peer tutors are more effective if they receive training before working with students with disabilities. Training may include disability awareness, methods of communication, or instructions on how to use adaptive equipment. Training may also address individual cues, methods for feedback, analysis of tasks, and physical assistance (Houston-Wilson et al., 1997; Temple & Lynnes, 2008; Wiskochil et al., 2007). Finally, the teacher must be prepared to include the students with disabilities, and support personnel must be willing to assist the teacher (Slininger et al., 2000). Inclusion can be a negative experience if there is not adequate preparation.

Effects for students with disabilities.

In a program utilizing trained peer tutors, there are cognitive, physical, and affective benefits for students with disabilities. Cognitive benefits result from the increased time engaged in learning when students work with peer tutors (Temple &

Lynnes, 2008; Wiskochil et al., 2007). In addition, several studies have documented that increased time on task is beneficial for motor growth (Houston-Wilson et al., 1997; Temple & Lynnes, 2008; Ward & Ayvazo, 2006). A trained peer tutor can help a student modify activities. For example, the tutor might help the student understand how to perform motor tasks, which will increase activity level (Houston-Wilson et al., 1997; Temple & Lynnes, 2008). Ward and Ayvazo (2006) found that students with disabilities had a higher percentage of correct performances and increased scores on motor tests through the use of peer tutors. Lastly, the students with disabilities can meet affective goals through the increased social interaction with peers (Temple & Lynnes, 2008; Zhang & Griffin, 2007). A peer tutor can model acceptable ways to cooperate with a group. Cooperation also encourages students with and without disabilities to establish friendships (Houston-Wilson et al., 1997; Ward & Ayvazo, 2006). A class of positive and supportive peers can be motivating for a child with disabilities (Houston-Wilson et al., 1997).

Attitudes of peer tutors.

The attitudes of peers toward non-disabled students are important for successful inclusion (Rosenbaum et al., 1986; Slininger et al., 2000). Negative attitudes from peers and teachers can create barriers for students with disabilities (Antonak & Livneh, 2000; Findler et al., 2007). Attitudes are the building blocks of behavior, and a person's attitude is very difficult to change (Slininger et al., 2000). Current research focuses on the multidimensional nature of attitudes toward students with disabilities (Antonak & Livneh, 2000; Esposito & Reed, 1986; Findler et al., 2007; Hazzard, 1983; Rosenbaum et al., 1986). Hazzard (1983) found that children's behaviors were a combination of

knowledge and attitudes toward disabled persons. Knowledge and attitude were not significantly correlated, suggesting that both components influenced behavior differently. Findler et al. (2007) divided attitude measures into the cognitive domain of ideas and perceptions, the affective domain of emotional feelings, and the behavioral domain of actions. All the domains should be assessed in order to gain a complete picture of a person's attitude.

Assessment of attitudes toward students with disabilities may be difficult. Since behavior is a combination of attitude and knowledge, different domains must be assessed separately (Antonak & Livneh, 2000). However, the domains might have different scores for the same person. For example, Findler et al. (2007) found that most participants scored higher in the affective and cognitive domains than the behavioral domains. Differences were reported between attitude and actual behavior toward a person with a disability. One possible cause of this difference was that the participants did not understand their attitudes. A person might also misrepresent his attitude when he knows he is being measured (Meyer et al., 2001). Since attitude scores might be measured incorrectly, Antonak and Livneh (2000) suggested the use of indirect measures to assess a person's attitude. Indirect methods utilize resources that are not reported by the participant, such as disguised procedures or physiological signs. The use of indirect measures may increase the validity of the study, but their time-consuming and costly nature makes these measures difficult to complete. In addition, the results may not generalize to a population outside of the limited setting where measurement took place.

When measuring attitudes of children, researchers must consider several additional variables. Hazzard (1983) found that knowledge about peers with disabilities

increased with age. However, attitudes were not highly correlated with knowledge about disabilities. Attitudes were related to gender and to previous experience with a student with a disability. Girls tended to score higher on affective domains than boys, but boys tended to experience more change through peer tutoring programs (Hazzard, 1983; Slininger et al., 2000). The effects of previous experience with students with disabilities also influences attitude. The Contact Theory proposes that interaction with students with disabilities can produce a change in the attitudes of non-disabled peers (Slininger et al., 2000; Tripp et al., 1995). The type and amount of change depends on several variables, such as the type of contact, the specific disabilities, and the support provided during interactions (Hazzard, 1983; Slininger et al., 2000; Tripp et al., 1995).

Experience with people with disabilities may positively influence the attitudes of non-disabled peers, but research is not clear about what type of contact is beneficial (Hazzard, 1983; Meyer et al., 2001). Slininger et al. (2000) found that peers' attitude scores increased, indicating a more positive attitude, after physical education classes in both structured contact and non-structured contact formats. However, a study by Tripp et al. (1995) tested students who were involved in either an inclusive physical education setting or a setting with no contact with students with disabilities. The study found that students in the integrated setting had a lower attitude toward students with physical disabilities and a higher attitude toward students with behavioral disabilities than students in the non-contact program. Children are often more aware of physical disabilities than emotional or mental disabilities (Esposito & Reed, 1986). In some circumstances, contact may not create positive attitudes toward students with physical disabilities. Furthermore, Hazzard (1983) found that increased knowledge about students with

disabilities did not necessarily correspond to an attitude change. Knowledge increased with age, but attitude was related to other factors such as stereotypes in the culture (Antonak & Livneh, 2000).

Research is not clear about when attitudes begin to change and what types of programs cause the most change. A substantial body of research exists for children in upper elementary and beyond. However, there has been limited research on lower elementary aged children when their attitudes are forming. Future research should examine the influence of age on attitude formation in children. As attitudes are developing and changing, Esposito and Reed (1986) found that direct contact within a structured context has more lasting benefits than non-structured contact with students with disabilities. However, programs with structured contact have many different formats. Future research should also focus on the types of structured programs that affect the attitudes of able-bodied students working with students with disabilities.

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