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CHILDREN'S ATTITUDES TOWARD PEERS WITH DISABILITIES:

THE EFFECTS OF INCLUSION AND CONTACT

An Ed.S. Field Project

Presented to the

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of the Requirements for the Degree

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by

Melissa E. Hall

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CHILDREN'S ATTITUDES TOWARD PEERS WITH DISABILITIES:

THE EFFECTS OF INCLUSION AND CONTACT

Melissa E. Hall, Ed.S.

University of Nebraska, 2004

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Examining differences in attitudes is important in developing appropriate interventions to promote successful inclusion of children with disabilities into regular education classrooms. This study evaluated the effects of inclusion and contact on children's attitudes toward hypothetical peers with disabilities. One hundred children in the fourth and sixth grades were recruited from three inclusive schools in Nebraska and were administered the Peers Attitudes Toward the Handicapped Scale. The classroom teachers reported on the amount of time that the child(ren) with disabilities spent daily in the regular education classroom, which was broken down into the amount of time spent in social and academic activities. The results of this study revealed that: fourth graders had more positive attitudes toward peers with disabilities, in general, and peers with physical disabilities than did sixth graders; and children with more total and academic contact with peers with disabilities have less positive attitudes toward peers with physical and learning disabilities when grade was controlled than did children with less total and academic contact with peers with disabilities (meaning that as contact increases, positive attitudes decrease). School psychologists can play an important role as change agents in a school system to promote positive attitudes toward children with disabilities.

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CHILDREN'S ATTITUDES TOWARD PEERS WITH DISABILITIES:

THE EFFECTS OF INCLUSION AND CONTACT

Since the beginning of special education programs, parents, educators, other

professionals, and researchers have been concerned about the development and

implementation of school learning environments that are most appropriate for the

educational needs of children with disabilities. The enactment of the Education for All

Handicapped Children Act (EHA; P.L. 94-142), now known as the Individuals with

Disabilities Act (IDEA; P.L. 101-476), guarantees that all children, regardless of their

disability or perceived educability, are entitled to a free, appropriate education in their

least restrictive environment (National Association of State Boards of Education

[NASBE], 1992). In the United States, this position has resulted in an increasing

emphasis on the value of educating children with and without disabilities in general

education classrooms. It has also led to increased efforts to determine the extent to which

inclusive education programs differ from segregated education programs in the academic

and social attainments of children with disabilities (Wang & Baker, 1985-1986).

Since the enactment of the Education for All Handicapped Children Act (P.L. 94-

142) in 1975, a growing number of students with disabilities have been included in

regular education classrooms in the United States. Recent statistics indicate that 68% of

the special education students in the United States are included in regular education

classrooms for at least 40% of the school day (U.S. Department of Education, 1991).

Inclusion in preschool settings is particularly prevalent, with 75% of the preschool

classrooms having included at least one child with disabilities (Diamond, 1994). This trend for inclusion is expected to continue in the schools.

However, according to Ysseldyke and Algozzine (1984), the most important factor in the assessment process is the decision by a regular classroom teacher to refer a student for assessment and the extent to which a regular classroom teacher wants a student in or out of his or her classroom. Once a child is referred and assessed, there is a high probability that the child will be placed in a special education setting (Ysseldyke et al., 1983). In addition, very few students identified and placed in special education programs actually leave special education once they enter that system (Horn & Fuchs, 1987; NASBE, 1992).

With the advent of legislation that supports education for children with disabilities in the least restrictive environment, researchers have sought to differentiate inclusive schools from segregated schools in the academic and social accomplishments of children with disabilities. An important aspect to the success of inclusion programs is the extent to which children accept their peers with disabilities (Forin & Cole, 1994; Stainback & Stainback, 1990). Children without disabilities can either help or hinder the inclusion program depending on the structure of the interaction between the children with and without disabilities. They can assist the process by interacting with their peers with disabilities in a personal, accepting, supporting, caring, and friendly manner, along with functioning as role models, peer tutors, advocates, and friends. On the other hand, they can impede the process through prejudice, stereotyping, discrimination, rejection, hostility, teasing, harassment, and destructive forms of conflict (Putnam, Markovchick,

Johnson, & Johnson, 1996). Children's attitudes and perceptions toward their peers with disabilities have been shown to impact the social and emotional health, and future adaptation of children with disabilities (Gilmore & Farina, 1989; Roberts & Nayor, 1994).

Studying children's attitudes toward their peers with disabilities in inclusive schools is important to determine if there is a need to: (a) promote understanding, sensitivity, interest, and acceptance between children with and without disabilities; (b) encourage positive interaction between regular education children and special education children; and (c) prevent stereotyping, teasing, harassment, and destructive forms of conflict towards special education children. Children should be taught to value individual differences and similarities, along with internal characteristics of children. In addition, intervention planning may be necessary to prepare regular education classes for the inclusion of children with disabilities.

Although research evaluating the effects of inclusion on children's attitudes toward their peers with disabilities has increased with the advent of legislation that supports education for children with disabilities in the least restrictive environment, a void in research still exists. While some research has found social and academic benefits of integration for children with disabilities (Buysse & Bailey, 1993; Demchack & Drinkwater, 1992; Sloper & Tyler, 1992), research findings on children's acceptance of and attitudes towards their peers with disabilities in inclusive settings have been rather mixed.

Rapier, Adelson, Carey, and Croke (1972) investigated elementary school children's attitudes toward children with orthopedic disabilities. They found that through integrated school experiences, children without disabilities had developed a more positive attitude toward children with orthopedic disabilities. After integration, children without disabilities perceived children with orthopedic disabilities as being less weak, less in need of attention and help, and more capable of taking care of themselves. Maras and Brown (1996) investigated the temporal effects of intergroup contact on elementary school children's attitudes toward children with disabilities. They found that social orientations in the structured and planned contact group became significantly more positive over time, as compared to the control group with no contact. These findings suggest powerful implications of intergroup contact in the regular education classroom.

In contrast, Hastings and Graham (1995) evaluated the effects of integration schemes and frequency of contact on adolescents' perceptions toward peers with learning disabilities. They found that there was no effect associated with type of school, either integrated or nonintegrated, and children's emotional reactions or social distance measures toward young adolescents with learning disabilities. In general, adolescents reported negative stereotypes about peers with learning disabilities. In addition, Tripp, French, and Sherrill (1995) examined contact theory and children's attitudes toward peers with disabilities in physical education programs. They found no apparent differences in settings, either integrated (contact) or segregated (noncontact), on children's total attitude scores toward peers with disabilities in physical education settings.

According to Hastings and Graham (1995), future research on the influence of inclusion on children's attitudes toward their peers with disabilities should focus more on the amount, frequency, type, and nature of the interactions between the children with and without disabilities. Hastings and Graham suggest, at a minimum, that future researchers should measure the amount or frequency of types of contact (e.g., family, social, academic). Simply placing children with disabilities in the regular education classrooms may not foster positive attitudinal change. However, attitudes may be influenced by the amount or frequency of the types of contact (e.g. family, social, academic) and whether those interactions are positive or negative. Moreover, according to Maras and Brown (1996), little research on the effects of contact in inclusive settings and children's attitudes toward their peers with disabilities has focused on natural setting, tending to be mostly laboratory based. With this new knowledge, inclusive settings can be structured to encourage contact that promotes acceptance of children with disabilities. Therefore, the purpose of the present study is to evaluate the effects of inclusion and contact on fourth and sixth grade children's attitudes toward hypothetical peers with disabilities in a natural setting.

<div align="center">Literature Review</div>

Pull-out vs. Inclusive Schools

In the past, children with disabilities were often pulled out of their regular education classrooms and placed in special education classrooms or separate schools for children with disabilities. More recently, children with disabilities are being placed in their least restrictive environment, that is, the regular education classroom with their

appropriate age and grade peers; they also receive appropriate in-class support. The advent of legislation that supports education for children with disabilities in the general education classrooms fostered this inclusion movement (Marks, 1997).

Pull-out Schools

 Downfalls of mainstreaming and "pull-out" programs. In the schools, children with disabilities are often mainstreamed into the regular classroom. Mainstreaming refers to assigning a child with disabilities to a general education classroom for part or all of the day. According to NASBE (1992), those children who are being pulled out of the classroom to receive special education services often receive fragmented education and feel like they do not belong in either general education or special education. The current division of regular education and special education inhibits communication and collaboration among the several kinds of teachers who serve a child with disabilities.

 In earlier grades, children with disabilities may never be perceived as belonging to the regular classroom because of the lack of time spent in the class. In addition, they may not have the opportunity to form relationships with their peers or to develop social skills. In secondary grades, students who have disabilities often do poorly in the regular classroom. Children with disabilities are often expected to keep up with the regular class without help, and teachers rarely receive assistance or instructional techniques for children with disabilities. Children with disabilities often have few expectations placed on them in the special education classroom and become dependent on the help of others. Students who are pulled out of their classrooms may also lose instructional time as they

pass in and out of regular education and special education classes. In addition, curriculum may vary across classes and may have little consistency between (NASBE, 1992).

Furthermore, special education service delivery practices (such as labeling, pull-out programs, and separate programs) may foster prejudice and discrimination against children with disabilities, along with the isolation of children with disabilities (Marks, 1997). According to Rothlisberg, Hill, and Damato (1992), being part of a pull-out program may serve to label children. Labels may affect acceptance of children with disabilities in the regular education classroom, result in lower expectations by peers, and serve to identify children in terms of their deficits. In addition, the effects of labeling and pull-out programs may have serious impact on the self-esteem of children with disabilities (Hastings, 1994).

Inclusive Schools

Inclusion works. In contrast to pull-out programs and the mainstreaming of the 1980s, inclusion means that students attend their home school and are placed in classrooms with their appropriate age and grade peers; they also receive appropriate in-class support (NASBE, 1992). The goal of inclusion is to include the child with disabilities in the regular education classroom for as much of the day as possible according to the child's individualized education plan. Adults (such as the regular and special education teachers and school psychologists) provide the child with an individualized education plan with appropriate in-class support that promotes the child's success in the regular education classroom, alongside the child's peers, in the home school (Marks, 1997).

Children with disabilities have the opportunity to interact with age-appropriate peers; and through observing and modeling these peers, children with disabilities are expected to acquire appropriate communication and social skills. The advanced complexity of the regular education class is expected to provide children with disabilities with a developmental push towards mastering advanced skills (Jenkins, Odom, & Speltz, 1989). Children in inclusive settings display increased social and verbal interactions (Goldstein & Kaczmarek, 1992), as well as increased cognitive levels of play (Guralnick & Groom, 1987). Inclusion allows students with disabilities to participate in all aspects of school life. Children with disabilities placed in inclusive settings also have a better sense of belonging (Heiman & Margalit, 1998). Children without disabilities, on the other hand, are provided with opportunities to promote the development of an appreciation for individual differences and a realistic awareness of children with disabilities (Derman-Sparks & the ABC Task Force, 1989; Ramsey, 1987).

Benefits of inclusion. Research on the social and academic functioning of children with disabilities in inclusive and segregated education settings has generally indicated improved student outcomes in social and academic skills of children with disabilities in inclusive settings (Buysse & Bailey, 1993; Demchack & Drinkwater, 1992; Mortweet et al., 1999; Sloper & Tyler, 1992). According to NASBE (1992), "studies have shown that the more time students spend in the general education program, the less socially isolated they are, the more likely they are to be affiliated with school or community groups, and the more likely they are to go on to post-secondary education" (p. 11).

Freeman and Alkin (2000) reviewed 36 studies on academic and social

functioning of children with mental retardation in elementary, junior high, and high

schools across different educational settings. The findings suggest that full integration

seems to be academically beneficial to children with disabilities. Moreover, according to

Salisbury, Gallucci, Palombaro, and Peck (1995), children without disabilities are not

disadvantaged by the inclusion of children with disabilities. Freeman and Alkin also

found that children with mental retardation in inclusive classrooms appeared to be more

socially competent and accepted than the children in part-time integrated and segregated

setting. Children with mental retardation in general education classrooms demonstrate

better social behaviors such as adjustment, interactions, maturity, and general social

competence, as judged by others.

Children with disabilities are not, however, as socially accepted and competent as

their peers without disabilities in regular education classrooms. Lower acceptance of

children with disabilities by their peers seems to be related to dissimilarity, and lower

social competence can be attributed to the fact that an individual's social competence was

rated by how others perceive the individual's social behavior (Freeman & Alkin, 2000).

Heiman and Margalit (1998) examined students with mild mental retardation in

inclusive and noninclusive education systems. Student self-reports and peer perception of

social status assessed the students' level of loneliness, depression, and social skills. The

findings supported that the placement of children with disabilities in inclusive classrooms

decreased their feelings of loneliness and depression and helped them improve their

social skills. Students with mild mental retardation in inclusive settings reported less

intense feelings of loneliness and depression than students with disabilities in noninclusive settings. Heiman and Margalit assumed that children with disabilities in inclusive settings, as compared to children with disabilities in noninclusive settings, have more opportunities for social interaction, and thus acquire better social skills by modeling the age-appropriate skills of their nondisabled peers.

Beckman and Kohl (1987) studied the social interactions of preschoolers with and without handicaps in integrated and segregated educational settings. Over time, they found an increase in social interactions for children with disabilities in integrated preschool settings. In their study on the effects of social integration on preschoolers with handicaps, Jenkins et al. (1989) found that social interaction activities produced more interactive play and social integration of handicapped and nonhandicapped children in the integrated preschool class. The findings of the previous studies suggest that the placement of children with disabilities in general education classrooms tends to improve their social skills, social competence, and academics.

Although numerous studies have shown the social and academic benefits of children with disabilities in inclusive settings, the findings that reflect acceptance of and attitudes toward children with disabilities in integrated versus nonintegrated schools have been rather mixed. Rapier et al. (1972) found that integrated school experience resulted in children without disabilities developing a more positive attitude toward children with orthopedic disabilities. Maras and Brown (1996) found social orientations in the structured and planned contact group became significantly more positive over time, as compared to the control group with no contact. In contrast, Hastings and Graham (1995)

found that type of school, either integrated or nonintegrated, did not significantly influence children's emotional reactions or social distance measures toward young adolescents' with learning disabilities. In addition, Tripp et al. (1995) found no differences in settings, either integrated (contact) or segregated (noncontact) on children's total attitude scores toward peers with disabilities.

Mixed findings in the research evaluating the effects of contact (which has been typically defined as integrated schools meaning contact and segregated schools meaning no contact) relevant to children's attitudes toward peers with disabilities suggest that simply placing children with disabilities into the regular education classroom with their appropriate age and grade peers does not guarantee peer acceptance and positive attitudinal change. Children without disabilities can either help the inclusive process through support or hinder the inclusive process through stereotyping. Although children without disabilities may have contact with children with disabilities, as may be the case in inclusive schools, this does not guarantee positive attitudinal change. Attitudes may not be determined by mere contact alone, but rather by the amount or frequency of the types of contact (e.g., family, social, academic) and whether those interactions are positive or negative.

Necessary instructions and educational interventions. Researchers have proposed necessary elements for successfully including children with disabilities in the regular education classroom. However, these areas of research are still in their infancy. According to Wang and Baker (1985-1986), the key to implementing an inclusive regular education program to accommodate students with special needs is that educators and

parents must redefine instruction. Wang and Baker suggest the following changes to instruction: (a) school environments should become more flexible and student-centered; (b) learning should be more flexible; (c) instruction should be based on student's individualized learning needs and achievement levels; and (d) students should have an individualized progress plan with continuous assessment of their progress.

According to the NASBE (1992), a variety of professionals should be available to work with the students, including general education teachers, special education teachers, occupational therapists, and speech therapists, as well as parents. The curriculum should also be more flexible. In addition, students should not be bound by age-specific curriculum, because they should be covering fewer subjects in greater depth to acquire a more complex understanding.

According to Mortweet et al. (1999), "to create a successful educational environment for students with disabilities in inclusive classrooms, the following instructional components are essential for maximizing academic and social achievement: (a) teacher-directed group formats, (b) high levels of student engagement, (c) student-teacher interactions, (d) appropriate pacing of lessons, (e) questioning and feedback, and (f) structured use of peers" (p. 525).

Gollnick and Chinn (1990) described the importance of teaching children to value internal characteristics of people, and to recognize and appreciate individual differences and similarities among individuals. Through modeling, feedback, and the use of multicultural curriculum, teachers and school psychologists should be activists of diversity and inclusion. Regular education teachers should be actively involved and

responsible for the learning of all of their students in the regular education classroom. Teachers and school psychologists should promote active participation, positive interactions, cooperative learning, and friendships between children with and without disabilities. These strategies are particularly important in inclusive settings to reduce negative attitudes toward children with disabilities (Marks, 1997).

Contact

Research that has specifically considered children's attitudes toward their peers with disabilities has suggested that negative attitudes and unrealistic perceptions by children toward their peers with disabilities are rooted in the lack of contact between these two groups. However, researchers suggest that mere contact may not be enough to support attitude change; structured activities to support contact between children with and without disabilities may be necessary (Hastings & Graham, 1995; Maras & Brown, 1996; Nabuzoka & Ronning, 1997). Further, research focusing on the psychological processes that support attitudes emerging from integrated school contact points toward integrated school contact having an effect on children's attitudes toward their peers with disabilities (Fortini, 1987; Hazzard, 1983).

One of the proposed benefits of integrating children with disabilities into the regular education classrooms is positive attitude change by their peers. This benefit of inclusion is supported by contact theory. Contact theory asserts that integration between diverse groups tend to support attitude change through the members of the majority group recognizing that their perceptions of the members of the minority group are inaccurate (Hastings & Graham, 1995; Tripp et al., 1995). According to Allport (1935), the

environment in which the contact takes place determines the direction of attitude change. Supporting environments tend to improve relations and foster positive attitude change, while nonsupporting environments tend to foster negative attitude change. Supporting environments involve contacts that create equal status, are rewarding to children with and without disabilities, embrace common goals that are higher in rank than group goals, persist over time, and are supported by the institution. Nonsupporting environments, on the other hand, involve contacts that create competition between groups, which are unpleasant, involuntary, burdened with tension, and occur among group members frustrated as a whole.

The Social Identity Theory, which was built on Allport's original thesis, asserts that contact between group members based on physical presence alone at an intergroup level may not lead to attitude change. However, contact between group members based on an interpersonal level may well lead to a breakdown in negative stereotypes and positive attitude change toward individuals with disabilities. Allport emphasized that the nature of contact was central to attitude change. A number of factors were identified, including the frequency and duration of contact, the individuals included in the contact situation, the relative status of the groups, and the role aspects (i.e., whether the activities are cooperative or competitive in nature) (Allport, 1954).

Researchers are beginning to pay more attention to the role of contact on children's attitudes toward their peers with disabilities. Maras and Brown (1996) examined the effects of structurally integrating children with learning disabilities into their mainstream school on their non-disabled peers' attitudes over time. The results

indicated powerful effects by contact in integrated classrooms for children with disabilities. The social orientation in the integrated classroom became significantly more positive over time, as compared to the nonintegrated classroom.

Nabuzoko and Ronning (1997) evaluated the effects of contact on the social acceptance of children with intellectual disabilities in an integrated school setting in Zambia. The results indicated that, while nondisabled boys who had been in contact with children with disabilities had more positive attitudes than the nondisabled boys who had no direct contact, nondisabled girls showed no effects of contact. However, among the children without disabilities who had no direct contact with the children with intellectual disabilities, nondisabled girls had more positive attitudes than nondisabled boys. These findings suggest that, while nondisabled boys initially may have more negative attitudes toward their peers with disabilities, direct contact and positive interactions may lend to more positive attitudes toward their peers with disabilities.

Attitudes

Definition. According to Kalat (1993), an attitude is a fairly stable and enduring predisposition to behave or react in a characteristic positive or negative way toward individuals, objects, events, or situations. Attitudes cannot be directly observed or measured. However, attitudes can be inferred through verbal and social behaviors, and through the use of attitude scales. Attitudes are generally formed from personal experiences or learned from socializing with others. An attitude has three components: affect, cognition, and behavior. The affective component is the way an individual feels about something. The cognitive component is what an individual thinks, knows, or

believes. It describes an individual's representations of objects or individuals and helps an individual to assimilate and accommodate to environmental inputs. The behavioral component is what an individual is likely to do (i.e., their actions).

According to Darrow and Johnson (1994), stereotyped attitudes result from the discrimination and generalization of an ethnic or social group. Because individuals' with disabilities are a minority population and are likely to have limited integration into the mainstream society, they are more susceptible to stereotypic attitudes. Stereotyped attitudes held about children with disabilities in turn influence their development, achievement, and concept of self and others (Marks, 1997).

Attitudes toward peers with disabilities. Attitudes, both general and stereotypic, toward individuals with disabilities are complicated, multifaceted, and, generally, negative (Antonak & Livneh, 1988). According to Wright (1983), when individuals without disabilities interact with individuals with disabilities, they tend to maintain more physical distance, end their conversations more quickly, sustain less eye contact, smile less, and show more signs of uneasiness and displeasure. Stereotypical views tend to support inadequate expectations for individuals with disabilities, which in turn foster difficulty for individuals with disabilities to become integrated fully into the mainstream society and to develop their sense of personal independence (Darrow & Johnson, 1994).

Children's interactions and experiences with their peers with disabilities are likely to influence their beliefs and expectations about what can be accomplished by a child with a disability. These cognitions will, in turn, become associated with affective responses; these two components, cognition and affect, will interact to influence

children's behavior toward their peers with disabilities (Diamond, Hestenes, Carpenter, & Innes, 1998). Through contact with children with disabilities, children without disabilities will most likely gain a deeper understanding and more accurate knowledge about children with disabilities. This may be associated with affective responses, either positive or negative, depending on the interactions. Therefore, it could be expected that a positive attitude change would more likely occur through an inclusive setting with structured activities that promote positive interactions and collaborative contact than through an inclusive setting in a nonsupporting and competitive environment (Diamond et al., 1998).

Putnam et al. (1996) investigated cooperative versus competitive contact on peer acceptance of children with learning disabilities in the regular education classroom. The results indicated that children without disabilities who worked in cooperative learning groups with children with disabilities were more likely to perceive their peers with disabilities as more desirable work partners over time. Positive changes in peer ratings for both children with and without disabilities were more likely in the cooperative-learning groups than in the competitive-learning groups. The perceptions of children without disabilities toward their peers with disabilities in the competitive-learning groups tended to be more fixed and rigid over time, suggesting that the longer the competitive learning conditions are used, the more likely that children with disabilities will be perceived in a stereotypical manner by their peers without disabilities.

Attitudes and behavior. According to Ajzen (1988), beliefs guide attitudes, attitudes direct behavioral intentions, which in turn predict behavior. In addition, attitudes are better predictors of individuals' overall behavior than they are of specific behavior

(Ajzen & Fishbein, 1980). Roberts and Lindsell (1997) examined primary school children's attitudes and behavioral intentions toward peers with physical disabilities. The results of the study support that the attitudes of primary school children toward their peers with physical disabilities included in the regular education classroom were significant predictors of the children's behavioral intentions to befriend or interact with a peer with a physical disability. Children who reported positive attitudes toward peers with physical disabilities were more likely to indicate that they would engage in a higher level of social interaction and friendship behavior toward a peer with a physical disability. On the other hand, children who reported negative attitudes toward peers with physical disabilities were more likely to indicate that they would engage in a lower level of social interaction and friendship behavior toward a peer with a physical disability. In addition, contact with children with physical disabilities in the regular education classroom was associated with more positive attitudes of children without disabilities.

Peer acceptance. According to Fujiki, Brinton, Hart, and Fitzgerald (1999), peer acceptance reflects the degree to which peers would like to play and work with each other; it is an interaction of attitudes and behaviors. Siperstein, Bak, and O'Keefe (1988) investigated children's attitudes and social acceptance toward peers with intellectual disabilities in a laboratory setting. The results indicated a significant positive interaction between children's attitudes and social acceptance of a peer with an intellectual disability. Children who displayed positive attitudes toward peers with physical disabilities in the laboratory were more accepting toward a peer with an intellectual disability. On the other hand, children who displayed negative attitudes toward peers with

physical disabilities in the laboratory were less accepting toward a peer with an intellectual disability.

Why study attitudes? Peers' attitudes and perceptions toward children with disabilities have been shown to affect the social and emotional health and overall long-term adjustment of children with disabilities (Gilmore & Farina, 1989; Roberts & Nayor, 1994). As stated previously, stereotyped attitudes held about children with disabilities are influential to their development, achievement, and concept of their self and others (Marks, 1997). Often, stereotypical views support limited expectations for individuals with disabilities, which in turn leads to difficulty for individuals with disabilities to become fully included into the mainstream society and to develop their sense of personal autonomy (Darrow & Johnson, 1994). In addition, an important aspect to the success of inclusion programs is the extent to which children accept their peers with disabilities (Forin & Cole, 1994; Stainback & Stainback, 1990).

Studying the interactions between children with and without disabilities is important to the understanding of both positive attitudes (i.e., interaction and acceptance) and negative attitudes (i.e., avoidance and rejection) toward children with disabilities (Yuker, 1965). Evaluating the factors of positive and negative attitudes and perceptions can also provide the necessary information and background for initiating change procedures and assessing the effects of interventions (Siller, 1984). In addition, studying children's attitudes toward their peers with disabilities is important in determining whether there is a need to educate children with and without disabilities to appreciate individual differences (such as disabilities).

Middle Childhood

During middle childhood, children's friendships increase in both number and stability. The overall goal of social relationships shift from a focus on playful interactions to a concern about peer acceptance (Gottman, 1986). Social relationships become based more on egalitarian expectations. During middle childhood, children begin to see friends as individuals with whom they share both good times and bad times. As their social skills develop, they also become more cooperative and less aggressive (Rubin, 1980).

In middle childhood, the status of peer acceptance and rejection has been found to be relatively stable. Putnam et al. (1996) examined peer acceptance of children in grades fifth through eighth toward peers with learning disabilities in cooperative and competitive learning conditions. The results indicate that the students' peer ratings were generally stable for both their regular education classmates and their special education classmates. However, positive ratings for both regular and special education classmates occurred more frequently in the cooperative learning condition, as compared to the competitive learning condition. In addition, Wylie (1975) found that younger children tend to have more positive attitudes than older children toward their peers' with disabilities.

According to Hartup (1984), research on peer acceptance of middle childhood supports three conclusions: (a) sociocultural conditions (i.e., social class) are associated with peer acceptance and influence whether a child is going to be included or excluded; (b) personal characteristics (e.g., physical beauty, supportiveness, and success in sports and academics) are positively associated with peer acceptance; and (c) children's social reputations are based on their social status and peer acceptance.

As early as six months, children begin to perceive skin color differences, and as early as their preschool years, children begin to perceive physical and behavioral differences in their peers. However, children cannot conceptualize and recognize emotionally-disturbed children until much later, namely around age eight (Lewis, 1993; Marks, 1997). Research in the area of social cognition and attitude development emphasize three developmental changes that distinguish younger children from older children. These three developmental changes are: a shift from describing others in concrete terms to abstract terms; a shift toward beginning to conceptualize intragroup differences and intergroup similarities (e.g., to recognize that children from the same cultural background may have quite different family situations); and a shift toward recognizing that certain key cues are central to group membership (e.g., ethnicity) (Katz, 1982; Schneider, 1991).

Gender

Findings regarding whether or not gender differences exist in children's attitudes toward their peers with disabilities are inconsistent. As mentioned previously, Nabuzoko and Ronning (1997) evaluated the effects of contact on the social acceptance of children with intellectual disabilities in an integrated school setting in Zambia and found gender differences in children's attitudes. While nondisabled boys who had been in contact with children with disabilities had more positive attitudes than the nondisabled boys who had no direct contact, nondisabled girls showed no exposure to contact effects. However, among the children without disabilities who had no direct contact with the children with

intellectual disabilities, nondisabled girls had more positive attitudes than nondisabled boys.

Hastings and Graham (1995) investigated the effects of integration schemes and frequency of contact on adolescents' perceptions of young people with learning disabilities. The results indicated that females were more positive than males toward young people with learning disabilities on the interpersonal measures of emotional reactions and social distance. Hastings and Graham suggest a number of possible explanations for this finding, including: (a) females are generally more interpersonal in nature; (b) females are more inclined to respond in a socially desirable manner; and (c) gender stereotyping promotes more accepting attitudes in females.

Williams, Hall, Branecki, and Kelly-Vance (2001) evaluated children's attitudes toward peers with disabilities in rural and urban schools during middle childhood. The results indicated no differences between peers attitudes toward children with disabilities in rural versus urban schools. In addition, although rural children did report more contact with children with disabilities than urban children, the degree of contact did not appear to influence attitude. However, results did indicate that females and fourth graders rated the hypothetical peers as more positive than males and sixth graders, respectively.

Conversely, Clunies-Ross and Thomas (1986) found no gender differences in their study examining children's attitudes toward peers with disabilities in Australia. The Peer Attitudes Toward the Handicapped Scale (PATHS; Bagley & Greene, 1981) was administered to Australian primary school children. These scores were then compared to the American standardized sample. The sixth grade Australian scores obtained matched

closely with the sixth grade American standardized sample. However, gender differences were not evident in the scores.

Conclusion

At the heart of special education programs is the development and implementation of school learning environments that are most appropriate for the educational needs of children with disabilities. Since the enactment of the Education for All Handicapped Children Act (P.L. 94-142) and the Individuals with Disabilities Act (P.L. 101-476), researchers have increasingly sought to ascertain the magnitude to which integrated programs differ from segregated programs in the academic and social attainments of children with disabilities. In addition, researchers have provided increasing efforts to determine the extent to which the attitudes of children toward their peers with disabilities differ in inclusive education programs versus pull-out education programs. However, a void still exists in this area of research.

An important aspect to the success of inclusion programs is the extent to which children form positive attitudes towards their peers with disabilities (Forin & Cole, 1994; Stainback & Stainback, 1990). Children without disabilities can either help or hinder the inclusion program depending on the structure of the interaction between the children with and without disabilities. Simply placing children with disabilities in the regular education classrooms does not guarantee acceptance, understanding, and attitude change by children without disabilities. Therefore, examining the effects of inclusion and contact on children's attitudes toward their peers with disabilities is important in filling the void in

research and developing appropriate interventions to promote successful inclusion of children with disabilities into the regular education classroom.

The Present Study

Research examining the effects of inclusion and contact on children's attitudes toward their peers with disabilities is necessary for providing school learning environments that are most appropriate for the educational needs of children with disabilities. An important aspect to the success of inclusion programs is the extent to which children form positive attitudes towards their peers with disabilities (Forin & Cole, 1994; Stainback & Stainback, 1990). However, research in this area is still in the beginning stages. The Maras and Brown (1996) study, which examined the longitudinal effects of contact on children's attitudes toward disabilities, and the Hastings and Graham (1995) study, which considered the effects of integration schemes and frequency of contact, served as a basis for this study.

This study evaluated the effects of inclusion and contact on children's attitudes toward hypothetical peers with disabilities. One hundred children in the fourth and sixth grades were administered the Peers Attitudes Toward the Handicapped Scale (PATHS; Bagley & Greene, 1981) and a cover sheet during the middle of either their fourth or sixth year. The classroom teachers reported on the amount of time that the child(ren) with disabilities spent daily in the regular education classroom. This time was then broken down into academic and social contact. The participants were recruited from three inclusive schools from the midwestern state of Nebraska.

The present study considered peer contact (amount and type, either social or academic), along with the participants' grade and gender. The following questions were addressed in this study: (1) does peer contact influence children's attitudes toward peers with disabilities during middle childhood; and (2) do attitudes toward children with disabilities differ between gender and grade?

It was hypothesized that children with more contact in inclusive settings would have more accepting attitudes toward peers with disabilities than children with less contact in inclusive settings. Previous research by Maras and Brown (1996) found that social orientations in the structured and planned contact group became significantly more positive over time, as compared to the control group with no contact. In addition, previous research by Rapier et al. (1972) found that children without disabilities had developed a more positive attitude toward children with orthopedic disabilities through integrated school experiences. The effects of social and academic contact on children's attitudes toward peers with disabilities were exploratory in nature. Based on previous research by Hastings and Graham (1995), it was hypothesized that females would have more positive attitudes than males, and based on previous research by Wylie (1975), it was hypothesized that students in the fourth grade would have more positive attitudes than students in the sixth grade.

<div align="center">Method</div>

Participants

The participants in the study consisted of 100 children (both boys and girls) in the fourth and sixth grades. Table 1 displays how many minutes of contact the participants

spent with a child (or children) with disabilities on a typical day; Table 2 displays

minutes of contact by grade. The participants were recruited from three inclusive schools

in Nebraska. The participants were not asked to identify whether they themselves had a

disability.

The schools were matched according to the special education delivery model of

inclusion. The inclusive schools included children with disabilities in the regular

education classrooms with their appropriate age and grade peers; they received

appropriate in-class support, such as individual and small group instruction, peer tutoring,

cooperative learning groups, Individualized Education Plan consideration with

instruction, and repeated review and drill.

Materials

Peers Attitudes Toward the Handicapped Scale. The children in this study

completed the PATHS, a 30-item instrument composed of scenarios that illustrate

behaviors seen in hypothetical school-aged children with either physical, learning, or

behavioral disabilities, which is intended for use in school settings to measure the

attitudes of children ages nine to sixteen years old (grades four to eight) toward their

peers with disabilities (Clunies-Ross & Thomas, 1986; Tripp et al., 1995). Although the

scale is intended for the readability level of fourth grade and below (Bagley & Greene,

1981), Clunies-Ross and Thomas suggest that the entire instrument be read aloud to

children in the fourth grade. The PATHS was read aloud to all of the children in the

present study by the primary researcher.

After reading silently along with the examiner, who was reading the scenarios out loud, the children were asked to circle the number that best describes where the child should be placed for his or her education. The children responded on a five point Likert-type scale, ranging from most accepting attitude (*in my group*) toward a child with a disability to least receptive attitude (*at home*) toward a child with a disability. The following is an example item:

Item 3. Jimmy is crippled and needs to sit in a special wheel chair in class. He's smart and learns all the work. Jimmy has trouble moving around and needs special help.

This student should work:

5 - in my group.

4 - in another group.

3 - in no group.

2 - outside of class.

1 - at home.

PATHS provides scores on three subscales (i.e., physical, learning, and behavioral), as well as a total score. The physical disabilities subscale illustrates disabilities that are physiological in nature (e.g., blindness, deafness, asthma, and cerebral palsy). The learning disabilities subscale illustrates difficulties in areas such as study skills and reading fluency. The behavioral disabilities subscale illustrates serious emotional and psychological problems (e.g., aggression and noncompliance). The individual items are scored on a scale of one to five, with *in my group* equal to five

points, *in another group* equal to four points, *in no group* equal to three points, *outside of class* equal to two points, and *at home* equal to one point. The values of the 30 individual items are totaled, with the highest score possible being 150 and the lowest score possible being 30. A higher score is indicative of a more positive attitude toward peers with disabilities.

According to the authors of PATHS, the scale was standardized on 756 children ages nine to sixteen years old (grades four to eight) (as cited in Clunies-Ross & Thomas, 1986; Tripp et al., 1995). The internal consistency of the total scale was quite high (odd-even, split-half coefficient of 0.89). In addition, the stability of the total score was acceptable (test-retest coefficient of 0.75 with a four week period between tests) (Clunies-Ross & Thomas; Roberts & Lindsell, 1997). Furthermore, according to reports by Bagley and Greene, the PATHS showed good construct and factorial validity (Roberts & Lindsell, 1997).

Based on a study by Williams, Hall, Branecki, and Kelly-Vance (2001), six vignettes concerning hypothetical peers without disabilities were added to the original PATHS. These six vignettes included two items in each of the three categories of disabilities addressed, namely physical, learning, and behavioral.

Cover Sheet. The children participating in the present study were also asked to circle their grade level, either *fourth or sixth*, and their gender, either *male* or *female*, on a cover sheet following the PATHS scale.

Teacher Report of Peer Contact. The regular education classroom teachers reported on the amount of time the child(ren) with disabilities spent daily with the regular

education classroom. This time was broken down into the amount of time spent with the regular education classroom in social and academic activities.

Procedure

A cover letter, accompanied by a parental consent form, was sent home with each child in the targeted classrooms. A follow-up telephone reminder to the school principals occurred approximately one day prior to data collection. Only the children who returned signed parental consent forms were allowed to participate. The remaining children were asked to work on an activity worksheet, designed for the fourth through sixth grade level, with a trained assistant. The questionnaire packets were distributed by the primary researcher. The children were initially asked to sign an assent form. To account for children's readability differences, the children were read aloud the directions and entire questionnaire, and then asked to respond to the questions honestly and to the best of their abilities. The questionnaires were collected by the primary researcher upon completion. Both activities, the questionnaires and the activity worksheets, took no longer then 30 minutes for completion. While the children were either completing their questionnaire packets or working on their activity worksheets, the classroom teachers was asked to report on the amount of social and academic contact. The PATHS, the cover sheet, and the teacher report of amount of peer contact were administered during the middle of either the fourth or sixth year.

Results

The means and standard deviations of total contact, social contact, academic contact, and PATHS scores (Physical Subscale, Learning Subscale, Behavioral Subscale,

Without Disabilities Items, and Total Scales) for fourth and sixth graders are reported in Table 3. The scores for girls and boys were combined because preliminary data analyses provided no evidence of gender differences. The means and standard deviations of the contact and PATHS variables suggest that there were grade and contact differences in children's attitudes toward peers with disabilities. When compared to sixth graders, fourth graders appear to have more social contact, less academic contact, and overall less total contact with children with disabilities. In addition, when compared to sixth graders, fourth graders appear to have more positive attitudes toward children with disabilities.

Independent samples t-tests were conducted to determine whether these differences between grades were statistically significant. The difference between grades in total contact was not significant, t (98) = -1.87, p = .06. Thus, fourth and sixth graders did not differ in the overall amount of time they spent daily with a child (or children) with a disability. However, the differences between grades in social and academic contact were significant, t (98) = 4.69, p = .00; t (98) = -2.60, p = .01, respectively. Thus, fourth and sixth graders differed in the amount of social and academic time they spent daily with a child (or children) with a disability, with fourth graders spending more social time and less academic time than sixth graders.

The differences between grades in attitudes toward children with learning disabilities and attitudes toward children with behavioral disabilities were not significant, t (98) = 1.72, p = .09; t (98) = .84, p = .41, respectively. Thus, fourth and sixth graders did not differ in their attitudes toward peers with learning and behavioral disabilities on the PATHS. However, there were significant differences between grades in attitudes

toward children with physical disabilities and attitudes toward children with disabilities, in general, t (98) = 2.18, p = .03; t (98) = 1.97, p = .05, respectively, such that fourth graders had more positive attitudes than did sixth graders. Refer to Table 3 for means and standard deviations of contact and attitude measures for fourth and sixth graders.

Table 4 displays the correlations between contact and PATHS variables for fourth and sixth graders separately. These correlations indicate that in the fourth grade, the more social contact that children had with peers with disabilities, the more their academic contact. However, in the sixth grade, the more social contact that children had with peers with disabilities, the less their academic contact. The correlations also indicate that the PATHS measures of children's attitudes toward peers with disabilities, in general, learning disabilities, physical disabilities, and behavioral disabilities were positively related. This pattern was similar for fourth and sixth graders.

More important, the correlations in Table 4 indicate that less contact was associated with more positive attitudes toward peers with learning disabilities in the fourth grade. Similarly, less academic contact was associated with more positive attitudes toward peers with learning disabilities. No significant correlations were found between contact and PATHS variables among sixth graders.

Multiple regressions were conducted to determine whether the correlations between contact and attitudes for fourth graders were significantly different from those for sixth graders. None of the interactions testing these differences was significant (all ps > .10). Thus, the relationships between contact and attitudes for fourth graders were not

significantly different from the relationships between contact and attitudes for sixth graders.

Multiple regressions were also conducted to determine whether grade significantly predicted attitudes when contact was controlled and whether contact significantly predicted attitudes when grade was controlled. Five significant effects emerged. Total contact was a significant predictor of children's attitudes toward peers with learning disabilities when grade was controlled, $t (97) = -2.04$, $p < .05$, with greater contact being associated with less positive attitudes toward peers with learning disabilities. Academic contact was a significant predictor of children's attitudes toward peers with learning disabilities when grade was controlled, $t (97) = -2.04$, $p < .05$; again greater academic contact was associated with less positive attitudes toward peers with learning disabilities. Total contact was a significant predictor of children's attitudes toward peers with physical disabilities when grade was controlled, $t (97) = -1.95$, $p = .05$, with greater contact being associated with less positive attitudes toward peers with physical disabilities. Academic contact was a significant predictor of children's attitudes toward peers with physical disabilities when grade was controlled, $t (97) = -1.97$, $p = .05$, with greater academic contact being associated with less positive attitudes toward peers with physical disabilities. In sum, greater contact was associated with less positive attitudes toward children who had learning disabilities or physical disabilities. These relationships appear to have been due primarily to academic contact rather than social contact, since there was significance for only academic contact. Finally, grade was a significant predictor of children's attitudes toward peers with physical disabilities when

social contact was controlled, t (97) = -2.15, p < .05, such that fourth graders had more positive attitudes than did sixth graders.

Discussion

Inclusion is becoming an increasingly common practice in the schools and, hence, requires heightened sensitivity to related issues, such as children's attitudes toward peers with disabilities. The purpose of the present study was to: (1) assess whether peer contact influences children's attitudes toward peers with disabilities during middle childhood; (2) evaluate whether attitudes toward children with disabilities differ as a function of gender and grade; and (3) contribute to the existing literature by considering the amount and type of contact (either social or academic), by differentiating between disability categories, and by conducting the study in a naturalistic environment.

The analyses revealed several effects of interest. First, fourth and sixth graders differed in the amount of social and academic contact they had with children who had disabilities. Fourth graders had more social contact and less academic contact than did sixth graders. Fourth and sixth graders also differed in their attitudes toward peers with disabilities, in general, and toward peers with physical disabilities. Specifically, fourth graders had more positive attitudes toward peers with disabilities in general and peers with physical disabilities than did sixth graders. This finding supports the hypothesis that students from the fourth grade would have more positive attitudes toward peers with disabilities. In addition, these findings are consistent with the Wylie (1975) study that found younger children tend to have more positive attitudes than older children toward their peers' with disabilities.

In the present study, fourth graders appear to accept disabling conditions, specifically physically disabling conditions, more readily than sixth graders. It is not clear why this variation occurred. However, one possible explanation is that the students in the sixth grade are more concerned about having socially accepted peers in their group than students in the fourth grade. In addition, according to Hartup (1984), personal characteristics (e.g., physical beauty, supportiveness, and success in sports and academics) are positively associated with peer acceptance during middle childhood. Sixth graders may be more concerned with physical conditions than fourth graders, and therefore have more negative attitudes toward peers with physically disabling conditions. Another possible explanation is that the students in the sixth grade simply did not identify with the students with disabilities as readily as the students in the fourth grade. Finally, the sixth graders may classify themselves as belonging to a particular peer group or clique and that they, themselves, did not belong in a group with peers with disabilities.

Furthermore, when social contact was controlled, data analyses revealed that fourth graders have more positive attitudes toward peers with physical disabilities than sixth graders. Again, consistent with the Wylie (1975) study and supporting the hypothesis that students from the fourth grade would have more positive attitudes toward peers with disabilities.

Contrary to the hypothesis that children with more contact with children with disabilities would have more positive attitudes than children with less contact, children with more total and academic contact were found to have less positive attitudes toward peers with physical and learning disabilities when grade was controlled. This means that

as contact increases, positive attitudes decrease. These findings contradict previous research by Maras and Brown (1996) that found social orientations in the structured and planned contact group became significantly more positive over time, as compared to the control group with no contact. In addition, Rapier et al. (1972) found children without disabilities had developed a more positive attitude toward children with orthopedic disabilities through integrated school experiences.

The academic and behavioral ecology of the classroom may play an important role in the attitudes of peers towards children with disabilities. One possible reason for a decrease in positive attitudes as the amount of contact increases is that contact alone is not enough to promote positive attitudes toward peers with disabilities. Children in inclusive classrooms can either help or hinder the inclusion program depending on the structure of the interaction between the children with and without disabilities. The inclusion process may be impeded through stereotyping, discrimination, rejection, hostility, and teasing by children, and/or parents, teachers, and administrators and staff (Putnam et al., 1996). Therefore, simply placing children with disabilities in the regular education classrooms does not guarantee acceptance, understanding, and attitude change by children without disabilities. The nature of the peer interactions has been found to be important, as indicated in the study by Putnam et al. (1996) that found that collaborative contact, as opposed to competitive contact, between children with and without disabilities positively influences children's attitudes toward peers with disabilities.

Results of the present study indicate that there is not a difference in students' attitudes toward peers with disabilities between girls and boys. This finding is

contradictory to the hypothesis that girls have more positive attitudes toward peers with disabilities than boys. Previous research regarding whether or not gender differences exist in children's attitudes toward their peers with disabilities is inconsistent. The findings from the present study are contrary to the Hastings and Graham (1995) study which found that females were more positive than males toward young people with learning disabilities on the interpersonal measures of emotional reactions and social distance and consistent with the Clunies-Ross and Thomas (1986) study which found no gender differences in their study examining children's attitudes toward peers with disabilities.

In discussing the different categories of the PATHS scale (physical, learning, and behavioral) used in the present study, it is important to also note that there was a difference among the means of the three scales on children's responses. Children's attitudes toward peers with physical disabilities were more positive than attitudes toward either learning or behavioral disabilities. In addition, children rated peers with learning disabilities more positively than peers with behavioral disabilities. Thus, there was a difference between the three categories of disabilities, indicating a possible hierarchy, which supports previous research by Tripp et al. (1995).

One possible reason for the preceding finding is that in the mass media our society does not portray all disabilities in the same light. Media may portray physical disabilities as more favorable than learning disabilities or behavioral disabilities. Numerous accounts depicting individuals with physical disabilities overcoming great obstacles have been broadcasted on public television in recent years. Another possible reason is that children may shy away from interacting with children with behavioral

disabilities because of a fear of getting in trouble due to their interactions with children with behavioral problems. A final reason for the differences in attitudes may well be that children falsely believe that their peers with behavioral and learning disabilities have control over their problems, unlike their peers with physical disabilities.

Regardless of the reason, children need to be not only educated about children with disabilities in general, but about the various types of disabilities. Future research should further explore attitudinal differences as a function of disability categories. In order to directly compare the three subscales on the PATHS for statistical significance, standardization of the scores on the PATHS subscales would be necessary.

The present study offers insight into the inconsistency that has been found in attitudes between contact, grade, and gender. Despite some differences found in the present study, children's attitudes toward peers with disabilities, as indicates by the PATHS, tended to be in the middle to lower end of the five-point Likert scale. This indicates that children have more negative or neutral attitudes toward peers with disabilities. In fact, several responses were recorded that placed the hypothetical peers with disabilities in the scenarios working at home and not coming to school. Moreover, there was a difference in means between children's attitudes toward peers with disabilities and peers without disabilities. However, children's responses to the hypothetical peers with disabilities in the questionnaire may not be a true indication of how these children actually interact with their peers with disabilities in their classroom. The children in the study may have not identified with the hypothetical peers in the vignettes, but may have identified with the children with disabilities in their classroom

and formed relationships that led to understanding and acceptance. In addition, the disabilities of the children in the classrooms may not be as apparent or emphasized as the hypothetical peers in the vignettes.

Overall, the findings suggest that contact and grade alone can significantly predict children's attitudes toward peers with disabilities. However, although the effects of grade are consistent with the results found by Wylie (1975), the effects of contact are contrary to the results found by Maras and Brown (1996) and Rapier et al. (1972). These studies both found that positive attitudinal change was due to direct contact with peers with disabilities. The present study presents more current information on the topic, along with providing a clearer understanding on an area of research that is fueled with mixed findings on the effects of contact on children's attitudes toward peers with disabilities. Future research should further examine the role that amount and type of contact plays in attitudes toward peers with disabilities, along with whether the contact is positive or negative in nature.

School psychologists can play an important role in changing children's attitudes toward peers with disabilities by promoting understanding and acceptance between children with and without disabilities, encouraging positive interaction between regular education children and special education children, and prevent stereotyping towards special education children. School psychologists can directly teach students to value individual differences and similarities, along with internal characteristics of children. Through modeling, feedback, and the use of a multicultural curriculum, school psychologists can be activists of diversity and inclusion. School psychologists can also

collaborate with teachers, administrators, parents, and others involved in the education of children on ways to best promote more positive attitudes toward children with disabilities. In addition, intervention planning may be necessary to prepare regular education classes for the inclusion of children with disabilities. Inclusion is becoming increasingly more common in the 21st century, and school psychologists can play an important role in making this transition a positive one for all involved.

When generalizing the results of the present study, limitations of the study need to be considered. In particular, the present study had an uneven sample size, with more fourth graders than sixth graders, and was based on questionnaires. Future studies should employ a larger and more even sample of students and consider utilizing alternative and/or additional methodologies to assess children's attitudes toward peers with disabilities. Also, because the present study was conducted within a limited geographic area, it is important to determine whether the findings of this study generalize to other locations. In addition, because the study was conducted in inclusive schools, both children with and without disabilities were included in the study. Although this should not have significantly impacted the results, future research may want to determine which students do and do not have a disability, and if they do have a disability, what category (learning, physical, or behavioral). Finally, future research should further explore the demographics of the inclusive classroom, such as the number of children with a disability and the number of children within each disability category.

In conclusion, the present study is a further step towards assessing the effects that contact, grade, and gender have on children's attitudes toward hypothetical peers with

disabilities. Assessing children's attitudes toward peers with disabilities is important in determining which services are important to the integration of children with disabilities into the regular education classroom. Results of this study suggest that grade and contact influence children's attitudes toward peers with disabilities. Although inclusion is becoming increasingly popular, and thus children without disabilities are having more contact with children with disabilities, this does not mean that children will have more positive attitudes toward peers with disabilities. School psychologists can play an important role as change agents in a school system to promote positive attitudes toward children with disabilities.

References

Ajzen, I. (1988). *Attitudes, personality and behaviour*. Milton Keynes, UK: Open

University Press.

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social

behaviour*. Englewood Cliffs, NJ: Prentice Hall.

Allport, G. W. (1935). Attitudes. In C. Murchison (Ed.), *Handbook of social psychology*

(pp. 802-827). Worcester, MA: Clark University Press.

Allport, G. W. (1954). *The nature of prejudice*. Reading, MA: Addison-Wesley.

Antonak, R. F., & Livneh, H. (1988). *The measurement of attitudes toward people with

disabilities: Methods, psychometrics and scales*. Springfield, IL: Charles C

Thomas.

Bagley, M., & Green, J. (1981). *Peer attitudes toward the handicapped scale*. Austin,

TX: PRO-ED.

Beckman, P. J., & Kohl, F. L. (1987). Interactions of preschoolers with and without

handicaps in integrated and segregated settings: A longitudinal study. *Mental

Retardation, 25* (1), 5-11.

Buysse, V., & Bailey, D. B. (1993). Behavioral and developmental outcomes in young

children with disabilities in integrated and segregated settings: A review of

comparative studies. *Journal of Special Education, 26*, 434-461.

Clunies-Ross, G., & Thomas, M. (1986). Use of the Peer Attitudes Toward the

Handicapped Scale in Australia: Grade differences in the scores of primary school

students. *Australia and New Zealand Journal of Developmental Disabilities, 12*

(4), 257-261.

Darrow, A. A., & Johnson, C. M. (1994). Junior and senior high school music students' attitudes toward individuals with a disability. *Journal of Music Therapy, 31* (4), 266-279.

Demchack, M., & Drinkwater, S. (1992). Preschoolers with severe disabilities: The case against segregation. *Topics in Early Childhood Special Education, 11* (4), 70-83.

Derman-Sparks, L., & the ABC Task Force (1989). *Anti-bias curriculum: Tools for empowering young children.* Washington, DC: National Association for the Education of Young People.

Diamond, K. (1994). Evaluating preschool children's sensitivity to developmental differences in their peers. *Topics in Early Childhood Special Education, 14,* 49-63.

Diamond, K. E., Hestenes, L. L., Carpenter, E. S., & Innes, F. K. (1998). Relationships between enrollment in an inclusive class and preschool children's ideas about people with disabilities. *Topics in Early Childhood Special Education, 17* (4), 520-536.

Forin, C., & Cole, P. (1994). Attributions of the social acceptance and integration of children with mild intellectual disability. *Australia and New Zealand Journal of Developmental Disabilities, 20,* 11-23.

Fortini, M. E. (1987). Attitudes and behavior toward students with handicaps by their nonhandicapped peers. *American Journal of Mental Deficiency, 91,* 78-84.

Freeman, S. F. N., & Alkin, M. C. (2000). Academic and social attainments of children

with mental retardation in general education and special education settings. *Remedial & Special Education, 21* (1), 3-18.

Fujiki, M., Brinton, B., Hart, C. H., & Fitzgerald, A. H. (1999). Peer acceptance and friendship in children with specific language impairment. *Topics in Language Disorders, 19* (2), 34-48.

Gilmore, J. L., & Farina, A. (1989). The social reception of mainstreamed children in the regular classroom. *Journal of Mental Deficiency Research, 33,* 301-311.

Goldstein, H., & Kaczmarek, L. (1992). Promoting communicative interaction among children in integrated intervention settings. In S. Warren & J. Reichle (Eds.), *Causes and effects in communication and language intervention* (pp. 88-111). Baltimore: Paul Brookes.

Gollnick, D. M., & Chinn, P. C. (1990). *Multicultural education in a pluralistic society.* Columbus, OH: Charles E. Merrill.

Gottman, J. M. (1986). The world of coordinated play: Same- and cross-sex friendship in young children. In J. M. Gottman & J. G. Parker (Eds.), *Conversations of friends* (pp. 139-191). New York: Cambridge University Press.

Guralnick, M. (1990). Social competence and early intervention. *Journal of Early Intervention, 14,* 3-14.

Guralnick, M. J., & Groom, J. M. (1987). The peer relations of mildly delayed and nonhandicapped preschool children in mainstreamed playgroups. *Child Development, 58,* 1556-1572.

Hartup, W. W. (1984). The peer context in middle childhood. In W.A. Collins (Ed.),

Development during middle childhood (pp. 240-282). Washington, DC: National

Academy Press.

Hastings, R. (1994). On "good" terms: Labeling people with mental retardation. *Mental*

Retardation, 32, 363-365.

Hastings, R. P., & Graham, S. (1995). Adolescents' perceptions of young people with

severe learning disabilities: The effects of integration schemes and frequency of

contact. *Educational Psychology, 15* (2), 149-159.

Hazzard, A. (1983). Children's experience with, knowledge of and attitudes toward

disabled peers. *Journal of Special Education, 17,* 131-139.

Heiman, T., & Margalit, M. (1998). Loneliness, depression, and social skills among

students with mild mental retardation in different educational settings. *Journal of*

Special Education, 32 (3), 154-164.

Horn, E., & Fuchs, D. (1987). Using adaptive behavior in assessment and intervention:

An overview. *Journal of Special Education, 21* (1), 11-26.

Jenkins, J. R., Odom, S. L., & Speltz, M. L. (1989). Effects of social integration on

preschool children with handicaps. *Exceptional Children, 55* (5), 420-428.

Kalat, J. W. (1993). *Introduction to psychology* (3rd ed.). Pacific Grove, CA:

Brooks/Cole.

Katz, P. A. (1982). Development of children's racial awareness and inter-group attitudes.

In L. G. Katz (Eds.), *Current topics in early childhood education* (pp. 17-54).

Norwood, NJ: Ablex.

Lewis, A. (1993). Primary school children's understanding of learning disabilities.

Educational Psychology, 13 (2), 133-145.

Maras, P., & Brown, R. (1996). Effects of contact on children's attitudes toward

disability: A longitudinal study. *Journal of Applied Social Psychology, 26* (23),

2113-2134.

Marks, S. B. (1997). Reducing prejudice against children with disabilities in inclusive

settings. *International Journal of Disability, Development, and Education, 44* (2),

117-131.

Mortweet, S. L., Utley, C. A., Walker, D., Dawson, H. L., Delquadri, J. C., Reddy, S. S.,

Greenwood, C. R., Hamilton, S., & Ledford, D. (1999). Classwide peer tutoring:

Teaching students with mild mental retardation in inclusive classrooms.

Exceptional Children, 64 (4), 524-536.

Nabuzoka, D., & Ronning, J. A. (1997). Social acceptance of children with intellectual

disabilities in an integrated school setting in Zambia: A pilot study. *International*

Journal of Disability, Development and Education, 44 (2), 105-115.

National Association of State Boards of Education. (1992, October). *Winners all: A call*

for inclusive schools. Alexandria, VI: NASBE.

Putnam, J., Markovchick, K., Johnson, D. W., & Johnson, R. T. (1996). Cooperative

learning and peer acceptance of students with learning disabilities. *Journal of*

Social Psychology, 136 (6), 741-752.

Ramsey, P. G. (1987). *Teaching and learning in a diverse world: Multicultural education*

for young children. New York: Teachers College Press.

Rapier, J., Adelson, R., Carey, R., & Croke, K. (1972). Changes in children's attitudes

toward the physically handicapped. *Exceptional Children, 39*, 219-223.

Roberts, C. M., & Lindsell, J. S. (1997). Children's attitudes and behavioral intentions towards peers with disabilities. *Development and Education, 44* (2), 133-145.

Roberts, C., & Nayor, F. (1994). Loneliness and causal attributions about peer rejection in integrated students with mild intellectual disabilities. In P. T. Slee & K. Rigby (Eds.), *Children's peer relations: Conference proceedings* (pp. 305-316). Adelaide: University of South Australia, Institute of Social Research.

Rothlisberg, B. A., Hill, R., & Damato, R. C. (1992). *Social acceptance of mentally retarded children by nondisabled peers*. Muncie, IN: Ball State University, Department of Educational Psychology. (ERIC Document Reproduction Service No. ED 358 970)

Rubin, Z. (1980). *Children's friendships*. Cambridge, MA: Harvard University Press.

Salisbury, C. L., Gallucci, C. L., Palombaro, M. M., & Peck, C. (1995). Strategies that promote social relations among elementary students with and without severe disabilities in inclusive schools. *Exceptional Children, 62,* 125-137.

Schneider, D. J. (1991). Social cognition. *Annual Review of Psychology, 42*, 527-561.

Siller, J. (1984). Attitudes toward the physically disabled, In R. L. Jones (Ed.), *Attitudes and attitude change in special education: Theory and practice* (pp. 184-205). Reston, VA: Council for Exceptional Children.

Siperstein, G. N., Bak, J. J., & O'Keefe, P. (1988). Relationship between children's attitudes toward and their social acceptance of mentally retarded peers. *American Journal on Mental Retardation, 93*, 24-27.

Sloper, T., & Tyler, S. (1992). Integration of children with learning disabilities in

mainstream schools: Evaluation of a pilot study. *Educational and Child*

Psychology, 9 (4), 34-45.

Stainback, S. B., & Stainback, W. C. (1990). *Support networks for inclusive schooling:*

Independent integrated education. Baltimore: Paul H. Brookes.

Tripp, A., French, R., & Sherrill, C. (1995). Contact theory and attitudes of children in

physical education programs toward peers with disabilities. *Adapted Physical*

Activity Quarterly, 12, 323-332.

U.S. Department of Education. (1991). *Thirteenth annual report to the Congress on the*

implementation of the Education of the Handicapped Act (1988). Washington,

DC: Government Printing Office.

Wang, M. C., & Baker, E. T. (1985-1986). Mainstreaming programs: Design features and

effects. *Journal of Special education, 19* (4), 503-521.

Williams, A., Hall, M., Branecki, K., & Kelly-Vance, L. (2001). *Children's attitudes*

toward disabled persons: A comparison of rural and urban schools. Unpublished

manuscript, University of Nebraska at Omaha.

Wright, B. A. (1983). *Physical disability - A psychosocial approach* (2nd ed.). New

York: Harper and Row.

Wylie, R. E. (1975). Attitudes of children toward their handicapped peers. *Childhood*

Education, 52, 171-173.

Ysseldyke, J. E., & Algozzine, B. (1984). *Introduction to special education.* Boston, MA:

Houghton Mifflin.

Ysseldyke, J. E., Thurlow, M. L., Graden, J. L., Wesson, C., Algozzine, B., & Deno, S.

L. (1983). Generalizations from five years of research on assessment and decision

making. *Exceptional Education Quarterly, 4* (1), 75-94.

Yuker, H. E. (1965). Attitudes as determinants of behavior. *Journal of Rehabilitation, 31*,

15-16.

Table 1

Total Number of Minutes of Contact Per Day by Participants

Contact	Social	Academic		Number of Participants
180	60	120		12
350	60	290		5
350	75	275		5
350	80	270		13
400	80	320		7
410	60	350		36
410	80	330		17
410	90	320		5
			Total	100

Table 2

Total Number of Minutes of Contact Per Day by Grade of Participants

Grade Participants	Contact	Social	Academic	Number of
Fourth	180	60	120	12
	350	80	270	13
	400	80	320	7
	410	60	350	17
	410	80	330	17
	410	90	320	5
			Total	71
Sixth				
	350	60	290	5
	350	75	275	5
	410	60	350	19
			Total	29

Table 3

Means and Standard Deviations of Contact and PATHS for 4th and 6th Graders

	Fourth		Sixth	
	Mean	**SD**	**Mean**	**SD**
Contact measures				
Total contact	359.15	84.41	389.31	29.02
Social	72.54	10.79	62.59	5.77
Academic	286.62	80.21	326.72	32.96
PATHS attitude measures				
Physical	3.93	.89	3.52	.79
Learning	3.48	.89	3.16	.81
Behavioral	2.64	.81	2.48	.92
Without disabilities	4.64	.53	4.84	.33
Total scale				
with disabilities	3.44	.74	3.12	.75
Total scale				
with & without disabilities	3.64	.65	3.41	.63

Table 4

Correlations Between Contact and PATHS for Fourth and Sixth Graders

	1	2	3	4	5	6	7
Fourth (N = 71)							
1. Contact		.44**	.99**	-.20	-.26*	-.23	.02
2. Social		-	.33**	.01	-.03	-.04	.17
3. Academic			-	-.21	-.27*	-.23	.00
4. Disabled					.92**	.89**	.75**
5. Learning						.75**	.61**
6. Physical							.46**
7. Behavioral							-
Sixth (N = 29)							
1. Contact	-	-.63**	.99**	.12	.19	-.03	.19
2. Social			-.73**	-.17	-.22	-.08	-.17
3. Academic				.13	.20	-.01	.20
4. Disabled					.94**	.91**	.84**
5. Learning					-	.81**	.72**
6. Physical							.60**
7. Behavioral							

* = p < .05 (2-tailed); ** = p < .01(2-tailed).