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The effectiveness of the Kids on the Block program in increasing children's knowledge of and attitudes toward individuals with disabilities.

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THE EFFECTIVENESS OF THE KIDS ON THE BLOCK PROGRAM IN INCREASING CHILDREN'S KNOWLEDGE OF AND ATTITUDES TOWARD INDIVIDUALS WITH DISABILITIES

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by

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EdS FIELD PROJECT ACCEPTANCE

Acceptance for the faculty of the Graduate College,
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THE EFFECTIVENESS OF THE KIDS ON THE BLOCK PROGRAM IN INCREASING CHILDREN'S KNOWLEDGE OF AND ATTITUDES TOWARD INDIVIDUALS WITH DISABILITIES

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University of Nebraska, 1998

Adviser: J. Michael Leibowitz

This study evaluated the effectiveness of a disabilities awareness program, the Kids on the Block, in increasing students' knowledge of and attitudes toward individuals with disabilities. Kids on the Block is a program used around the world to educate children about disabilities, and to teach them to appreciate and accept differences in others. The Kids on the Block troop is composed of nearly life-size puppets, with and without disabilities, who look and act like real children.

Seven hundred fifty-one second and fifth grade students drawn from three school districts in a large midwestern city participated in the study. Three hundred ninety-five of those students attended schools where children with disabilities were fully included with their regular education peers. Three hundred fifty-six of the students came from schools practicing integration, where individuals with disabilities were included with their regular education peers for part of the school day (typically lunch, recess, music. PE., and library).

Students in the treatment group (n=496) were administered three different surveys assessing their knowledge of and attitudes toward individuals with disabilities at three different time periods (1-2 days prior to viewing the Kids on the Block performance, 1-2 days following the performance, and 4 weeks post-performance). Peer ratings of

sociometric status were also obtained before the performance and four weeks following. Control subjects (n=255) completed all measures along the same time line.

The measures consisted of surveys asking students about their previous experience with persons with disabilities, their knowledge of disabilities, and their attitude toward, or willingness to interact in various situations with persons with disabilities.

Students in the treatment group showed significant improvement in both their knowledge of and attitudes toward individuals with disabilities; thus, indicating that the Kids on the Block program can effectively improve students' attitudes toward persons with disabilities, as well as increase their knowledge of disabilities. Improvements in scores on the measures were seen for both second and fifth grade students, and for both males and females. No changes occurred on the sociometric measures.

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Writing this, I feel I have finally reached the end of a journey, the path traveled having been filled with road blocks, adventure, and exquisite scenery. The number of people I met along the way, and to whom I owe a debt of gratitude, reminds me how long the journey was. I am looking forward to continuing life's journey and applying what I have learned along the way.

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Table of Contents

List of Tables

List of Appendices

Chapter 1

Introduction

Statement of the problem

Public attitudes toward are often the greatest barrier people with disabilities have to overcome. Attitudes toward individuals with disabilities has been an area of interest for many years (Antonak, 1988; Hannah, 1988; Horne, 1988; Yuker, 1988); however, with the passage of Public Law 94-142, the Education for All Handicapped Children Act of 1975, renamed the Individuals with Disabilities Education Act (IDEA) in 1990, it has become even more important to understand attitudes toward individuals with disabilities if we aim to enhance relationships between disabled and nondisabled persons.

The Education for All Handicapped Children Act of 1975, P.L. 94-142, mandated that all children were entitled to a free, public education in the least restrictive environment (LRE), based on individual needs. Through the Americans with Disabilities Act (ADA) (1991) and IDEA the public has become aware of the rights of disabled children, and the focus has shifted to inclusive education. While legal mandates can proclaim that children should be educated in the class that he or she would have attended were it not for a disability, they do not (and cannot) mandate that children with special needs be accepted by their teachers and peers, nor do they inform educators how to meet the emotional and psychological needs of those children. Worse yet, no provisions are made for guidance and preparation of the regular education children. Legislation cannot change attitudes; we need something more.

Very few programs exist today that address the challenge of changing regular education students' attitudes and behavior to provide an effective social and learning environment able to meet the needs of all children. Because stigmatization is frequently a problem for students with disabilities, the development of these kinds of programs is important, as is the evaluation of the effectiveness of these programs. One widely used, although little evaluated, program is the Kids on the Block (KOB). Kids on the Block is a professionally prepared, scripted puppet presentation using three- to four-foot-high puppets dressed in children's clothing to teach children about disabilities. Their mission is to portray "the world not as it is...the world as it should be" (Aiello, 1982, p.10). Aiello, the creator of the program, believes that puppets can explain about disabilities in a non-threatening way, and create a climate that allows children to freely ask questions (Aiello, 1982). Children are emotionally able to believe in the characters, with the puppets building "a bridge between the world of disability, and the world of non-disabled people" (Tortorella, 1993).

The present study is an attempt to evaluate the effectiveness of the Kids on the Block program in changing the attitudes of regular education students toward persons with disabilities, and modifying their interactions with their peers with disabilities. A quasi-experimental control-group study (Cook & Campbell, 1976) was used to compare the effects of the KOB intervention on a treatment group of second and fifth graders, compared with a control group of second and fifth graders.

Chapter 2

Review of Related Literature

Inclusive Education

Inclusion is not a new mandate, and it does not mean that every child must receive education in a regular classroom (Aefsky, 1995). Beginning in the 1970s with the passage of Public Law 94-142, and continuing today, local education agencies have been charged with the task of providing educational experiences for children with disabilities within the context of the least restrictive environment. As previously mentioned, this does not mean that every child *must* be educated in a regular classroom. If a particular child cannot learn in the regular classroom, then a decision for another appropriate placement must be made on an individual basis (Aefsky, 1995). However, the mandate of educating children within the least restrictive environment carries with it the *assumption* that such experiences will occur within the regular classroom (York & Vandercook, 1990). School systems across the United States are implementing with varying degrees of effectiveness the concepts of mainstreaming, integration, and inclusion.

Salisbury (1991) differentiates between systems which embrace the philosophy of inclusion and those systems which merely make attempts at integrating children with disabilities into the general education context. It should be noted that the terms mainstreaming, integration, and inclusion appeared in the professional literature successively as professionals' understanding of best practices in special education service

provision developed. The terms may, therefore, be viewed as existing on a philosophical continuum.

Whereas mainstreaming may have simply entailed placing the child with a disability in the same educational environment and "hoping for the best" (Watkinson & Muloin, 1988, p. 4), integration and inclusion differ qualitatively. Mere placement into a regular education setting does not necessarily result in increased integration or movement toward inclusion. Integration implies placement with children without disabilities, opportunities for social interaction, and social acceptability. Yet it also implies forced entry into a closed system, the mainstream. The child with a disability must still be "allowed" (Salisbury, 1991, p. 147) entry into the academic setting with regular education students.

Inclusion goes beyond simple placement into physical education, art, music, morning and lunch recess, and other nonacademics. It encompasses the objective of meeting the various needs of all children within the general education program. It involves "proper philosophical, administrative, and instructional supports" (Salisbury, 1991, p. 147) to ensure that children with diverse needs are "included in, not integrated into, age-appropriate mainstream environments" (Salisbury, 1991, p. 147). Learning is a social act, and friendships and support systems are unlikely to develop when students are physically or socially isolated from their peers (Putnam, 1993). Current practice, using an inclusive philosophy, supports placements of children with disabilities into settings

involving children without disabilities as a method of maximizing educational potential. Inclusion can be conceptualized as

> the full realization of the least restrictive environment mandate contained in Public Law (P.L.) 94-142, along with the provision in the Individuals with Disabilities Education Act (IDEA) which states that students with disabilities should be removed from the general education environment "only when the nature and severity of the disability is such that education in regular classes with the use of supplemental aids and services cannot be achieved satisfactorily" (Waldron, 1997).

It is thought that educational potential is maximized for children with disabilities when increases in interactions with nondisabled peers occur, thereby increasing self-esteem, social skills, and motivation due to placement in regular education and the friendships that are fostered (Wilkinson, 1996). In addition to improved social competence on the part of the child with a disability, there is the inherent benefit for the nondisabled children. Students involved in a focus group mentioned several benefits, including learning how to interact in a positive manner with students with disabilities, getting to know them better, and even coming "to realize that they are "cool" too" (York & Tundidor, 1995, p. 40). Enell (1982) reports unanimous expressions of acceptance by regular education students of their peers with disabilities, and states that the students' reactions were of "great enthusiasm" (Enell, 1982, p. 16).

The development of positive relationships and friendships, as well as improved attitudes toward individuals with disabilities in general, is the desired outcome of inclusion. "Schools are the place to teach acceptance of differences, and having young children learning about one another is the place to start fostering a caring world" (Aefsky, 1995, p. 61). There is evidence to support the belief that inclusion positively influences the attitudes of nondisabled peers (Higgs, 1975; Sheare, 1978), however there is also evidence to the contrary, indicating that inclusive placements may result in negative reactions and rejection (Goodman, Gottlieb, & Harrison, 1972).

Wilkinson (1996) argues that inclusion is an important goal, but one that cannot be accomplished without necessary supports. If a child is not provided with the support necessary for success, and begins to fall behind, stigmatization and labeling may occur, resulting in a self-fulfilling prophecy of social isolation and academic failure. Support services needed to ensure success may also include interventions to promote positive interactions with peers. Full interaction is important because the children with disabilities are already separated by the nature of their handicap (Wilkinson, 1996). "Special education is *not* a place. It is the provision of support services to help students learn!" (Aefsky, 1995, p. 13). The goal of inclusion and special education should be to foster growth, friendship, and positive interactions between the children with disabilities and the regular education children. Positive attitudes toward individuals with disabilities formed at an early age will aid them in their interactions throughout a lifetime.

Attitudes

Attitude is a hypothetical psychological construct. Louis Thurstone, in 1928, defined attitude as "the sum total of a man's inclinations and feelings, prejudice and bias, preconceived notions, ideas, fears, threats, and convictions about any specific topic (p. 531) (cited in Mueller, 1986, p. 3). Gordon Allport also provided a definition in 1935. He wrote, "An attitude is a mental or neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (cited in Rajecki, 1982).

Attitudes are based on four components: (1) beliefs, about what is true or judgments about probable relationships affect the way we feel about things, and are believed to be influenced by attitudes; (2) values, which are personal judgments about what is important, good, and desirable, are believed to cause attitudes (many values result in a single attitude); (3) affects, the feelings of attraction or repulsion that are experienced; and (4) behavior dispositions, which are predispositions to react in a particular way (Fishbein & Ajzin, 1975; Mueller, 1986). "That's attitude--evaluation; extent of liking or disliking; positive or negative feeling; and valuing or disvaluing of particular, specified objects" (Mueller, 1986, p. 7).

The attitude-behavior link

While it would seem obvious that there is some correlation between attitude and behavior, this has not been confirmed by research (Wicker, 1969). The attitude literature suggests that there is little correlation between attitudes and behavior (Fowler &

Wadsworth, 1991), however, "a number of researchers have suggested that predictability of behavior from attitude measures can be increased by focusing on *attitudinal objects more specific to the behaviors"* (Mueller, 1986, p. 68). Fishbein and Ajzen (1975) believe that behavior can be predicted from a person's intention to perform a behavior, and that the closer in time the measurement occurs to the behavior, the better the prediction. They also believe that predictions are better when both the attitude and behavior are very specific, and when the attitude is based on experience. For example, knowing someone personally who has a disability is more likely to affect one's attitudes and behavior toward others with disabilities than is reading about various disabilities (Kilburn, 1983).

Attitude measurement

The purpose of attitude measurement is to convert an observed behavior or response into a score that represents the attitude which presumably underlies the behavior (Antonak, 1988). A variety of measurement devices and methods have been developed to measure attitudes. Many scales are developed by individual researchers to answer a particular question. Most developers choose from among the several methods that have been in use for several decades.

Semantic differential scales were developed by Osgood and his associates, and were not originally designed for the purpose of attitude measurement, however, as a measure of attitudes this method is highly reliable, short, and quick to administer (Mueller, 1986; Rajecki, 1982). Pairs of opposite adjectives representing the dimension

to be measured serve as scale items. Subjects then rate their attitude along a continuum between the two adjectives (e.g., nuclear war--good _ _ _ _ _ _ _ bad). Numerical values can then be assigned to the position marked on the scale, and the subject's attitude can be quantified. A drawback of this type of scale is it is difficult to ask specific questions, respondents sometimes find it difficult to apply certain adjectives to some objects or attitudes, and it is usually clear what the scale is to measure so responses can be slanted to appear socially acceptable.

Louis Thurstone has been considered to be the father of attitude measurement (Mueller, 1986). He developed a recipe for producing attitude scales with items spaced at equal-appearing intervals. His procedure begins with developing a large number of scale items to measure the attitude of interest (usually based upon research, intuition, and judgment). These items are then sorted by 200-300 judges into eleven piles, with each pile representing equidistant degrees of the attitude in the judge's opinion, ranging from extremely unfavorable to extremely favorable (Rajecki, 1982). Scale values are then assigned by computing the median value assigned by the judges. Statements that have small dispersions are retained, and subjects check every statement with which they agree. The main drawback with this type of scale is the amount of work required to generate it, and when compared with the simpler Likert scale, it comes in second (Mueller, 1986).

In developing a Likert's summated rating scale, a large pool of items are collected that are assumed to measure the dimension of interest. These items are then given to the subjects whose attitudes are of interest. Scores are calculated, and then on

the basis of the total score subjects are assigned to either the top 25% who were most favorable, the 25% who were least favorable, and the 50% who were neither most or least favorable. It is believed that those with the strongest attitudes are the most knowledgeable about the area, and that if an item really reflects a person's attitude, it ought to discriminate between extreme groups. Likert scales usually have five categories ranging from strongly agree to strongly disagree, some have seven, and some even have four or six to eliminate the middle category; all of these are satisfactory (Mueller, 1986; Rajecki, 1982).

Additional measures include opinion surveys where the respondents express in writing their beliefs in answer to a list of questions. Interviews are similar, with the exception that the researchers interact directly and orally with the subjects. Ranking methods can be modified to be suitable for even very young children. Sociometric techniques offer typical choices for a situation, such as asking children who they would want to play with, and are designed to determine how a person intends to behave. In Guttman scaling, endorsing one item on the scale implies agreement with every item lower in the ordering. The person's score is a measure of their attitude.

There are other methods of attitude measurement, however the majority of the scales are based on the work of Osgood, Thurstone, and Likert. Reliability and validity of a measurement scale must always be taken into consideration, both in the development as well as in choosing an already available measure.

Attitudes toward individuals with disabilities

The attitudes of others toward individuals with disabilities are a major influence on the behavior of the persons with disabilities and play an important role in the success or failure of their inclusion in society. Ultimately, when the community in which a person with a disability lives learns to interact, accept, and communicate with persons with disabilities, the last barrier to integration will be removed, and opportunities available to persons with disabilities will increase dramatically.

The origin of negative attitudes toward individuals with disabilities

The origins of negative attitudes toward individuals with disabilities are multifaceted and difficult to study, although many have attempted to answer the question of "Why are attitudes toward persons with physical, emotional, mental, and social disabilities overtly or covertly negative?" (Livneh, 1988, p. 35). The source of negative attitudes have been placed along six dimensions: sociocultural-psychological, affective-cognitive, conscious-unconscious, past experience-present situation, internally originated-externally originated, and theoretical-empirical (Livneh, 1988). These are not categorically exclusive or independent.

The sociocultural-psychological dimension suggests that the origins of negative attitudes range from socially and culturally valued norms and customs to psychodynamic and developmental experiences. Examples of sociocultural contributing factors include society's emphasis on physique and beauty, health and athletics, achievement, productiveness, and employment, and the requirement of mourning for a loss of body

function or part. In contrast to the sociocultural factors, the psychodynamic factors stem from a more personal level. One source of negative attitude can be explained through the negative halo effect, or spread phenomenon, in which many unrelated negative attributes are generalized from a physical or mental characteristic. Another source may be the guilt-by-association in which a nondisabled person fears ostracism by others for associating with a person with a disability. Guilt feelings may also occur for being able-bodied, so the person does not associate with the individual with a disability as a protective measure.

The sources of negative attitudes from the perspective of the affective dimension involve anxiety and guilt, including references to aesthetic aversion at the sight of certain deformities, a threat to one's body image, and the fear that something similar might happen to oneself. The cognitive end involves worries and misconceptions regarding the nature of the impairment. Unfamiliarity can disrupt the social rules of interaction and lead to avoidance of the situation.

Conscious and unconscious sources of attitudes can lead to negative interactions with, or avoidance of, persons with a disability. Past experiences, such as child-rearing practices, and present situations, for example fear of ostracism, may also trigger negative attitudes toward persons with disabilities.

Internally originated attitudinal sources include characteristics of the individual, such as gender and age. Females express more favorable attitudes on psychometric measures, and people are more accepting at some ages than others. Socioeconomic

status, education level, and previous contact with persons with disabilities also influence attitudes. Externally originated sources of attitudes involve characteristics of the person with the disability, for example, prejudice-provoking behaviors such as being overdependent or withdrawing from social contact, or disability-connected factors, such as type of disability, degree of severity, and the body parts or functions affected by the disability.

The final dimension orders the origin of negative attitudes from those based on theory to those supported by research findings. A number of theoretical determinants include childhood experiences, developmental and psychodynamic mechanisms, and threats to body integrity. Empirical findings of attitudinal sources include correlational studies and ex-post-facto research designs.

Empirical studies

Research on the attitudes and acceptance of individuals with disabilities has been equivocal. Numerous studies have reported that individuals with disabilities are viewed negatively by their peers, and are seen as having fewer positive characteristics (Cohen, Nabors, & Pierce, 1994; Goodman, Gottlieb, & Harrison, 1972; Hanline & Murray, 1984; Horne, 1985); however, other studies have reported acceptance and positive attitudes toward individuals with disabilities (McHale & Simeonsson, 1980; Raab, Nordquist, Cunningham, & Bliem, 1986; Voeltz, 1980).

In an early study of young children's perceptions of orthopedic handicaps (Jones & Sisk, 1967), the researchers concluded that by the age of four children had formed a

negative perception about disabilities, indicating that a disability placed restrictions on one's life, and believing that the child with a disability was less likely to have fun.

Kennedy and Thurman (1982) studied the inclinations of nondisabled children to help their peers with disabilities. They found that young children would help children with a disability before they would help a peer without a disability. However, even though they were responding with helping behaviors, the authors reported that the nondisabled children were ascribing a negative status to the children with disabilities by referring to them as "babies." Their data suggest that attitudes toward the disabled begin to develop even before children enter school or have much experience with disabilities. Kennedy and Thurman believe that children come to school with attitudes and values regarding persons with disabilities, and suggest that parent training in the pre-school years may be the best way to foster positive attitudes and acceptance of those who are viewed as different.

Stainback and Stainback (1982) compared nondisabled students' perceptions of severely disabled students to their perceptions of those without disabilities, and found that those with severe disabilities were perceived as being significantly different and as having fewer positive characteristics. They did find, however, that females expressed significantly more positive feelings and interest for those with severe disabilities than did the males in their study. They concluded that educators should attempt to influence and educate nondisabled students to promote positive attitudes and acceptance toward their peers with disabilities.

A more recent study (Nabors & Keyes, 1995) looked at preschoolers' reasons for wanting to interact with same age peers either with or without disabilities. They used sociometry as an interview technique, documenting the number and types of positive and negative comments made by the children in the study. They found that the children made more positive comments toward children without disabilities, and also preferred to play with the nondisabled children, with significantly more "liking comments" made toward nondisabled children of the same gender. "Liking comments" about the children with disabilities were usually related to playing together during an activity, but not during situations requiring functional demands where limitations are more noticeable. Thus, it was recommended that cooperative activities be planned to promote acceptance of children with disabilities.

Shapiro and Margolis (1988) examined attitudes toward students with learning disabilities, and found that regular education peer attitudes toward learning disabled students "overwhelming indicates that those with learning disabilities have been perceived negatively" (p. 136). Regular classroom teachers also have a negative stereotype associated with the term "learning disabled" and behave more negatively toward learning disabled students than their regular education students.

A three-question forced choice roster rating sociometric questionnaire was used by Bender, Wyne, Stuck, and Bailey (1984) to measure the peer status of learning disabled, educable mentally handicapped, low achieving, and normally achieving children. The three questions were: "How often would you like to play with this person?" "How

often does this person misbehave?" and "How often does this person work hard in class?" Each child rated each classmate on a five-point scale for each of the questions. Children made no distinctions between learning disabled, educable mentally handicapped, or low achieving students, with all three groups having significantly lower peer status than the normally achieving students. They conclude that more research is needed to better understand social acceptance among the children with disabilities and those without disabilities in classroom settings, especially focusing on applying systematic classroom observation methods to the question of peer group dynamics.

Voeltz (1980) looked at the effects of age and experience on attitudes by administering an attitude survey to over 2300 elementary school children who had varying degrees of contact with disabled peers. The older students from the schools where they had the most contact with peers with disabilities had the most positive attitudes. In general, girls of any age were more likely to express an interest in interacting with a peer with a disability than were boys.

Hazzard (1983) assessed children's experience with, knowledge of, and attitude toward individuals with disabilities, as well as attempted to clarify the relationship between these dimensions and age, gender, and previous experience with persons with a disability persons. She found that knowledge was not significantly correlated with previous experience or gender, although knowledge did increase with age. The children viewed persons with disabilities as different, helpless, distressed, and deserving of pity. Children were more accepting of disabled children in school activities than they were in

more personal activities, such as having friends over to their house. Significant sex effects were found with regard to attitudes, with the girls giving more positive ratings than the boys.

Studies of attitude change

Prior to 1970 little research had been devoted to modifying attitudes toward persons with disabilities (Wetstein-Kroft & Vargo, 1984). In 1971, Kutner claimed that "changing beliefs and attitudes about the disabled is spoken of much, but little has been done to help understand how change might be brought about" (cited in Wetstein-Kroft & Vargo, 1980). Since that time, many studies have been published which have attempted to evaluate the effectiveness of various techniques to modify attitudes toward persons with disabilities. The most common techniques include contact with disabled persons, information/education, disability simulations, and combinations of the three. Other techniques that have been tried include cooperative classroom experiences, group discussions, social skills training, role playing, peer tutoring, bibliotherapy, games, media presentations, and modification of classroom environments. For a review of these less researched methods see Horne (1985 &1988).

Research has shown that the provision of information alone and its effect on attitudes toward individuals with disabilities is ineffective (Fichten, 1988). Gottlieb (1980) reports one of the few studies in which information led to attitude change, however, his study also included a group discussion following the presentation of information. Third graders were provided information on mental retardation through

videotapes and group discussions, leading to more positive attitudes. Other studies have not reported positive findings (Westervelt, Brantley, & Ware, 1983; Westervelt & McKinney, 1980). Most studies investigating the effects of information on attitudes toward individuals with disabilities have used it in combination with other techniques.

Studies of contact alone have also resulted in contradictory findings. One study reported that after exposure to orthopedically handicapped children in their school building, third-, fourth-, and fifth-graders responded more positively toward the children with disabilities (Rapier, Adelson, Carey, & Croke, 1972). However, another study demonstrated that mainstreaming educable mentally retarded children resulted in more rejection than for those who remained segregated (Goodman, Gottlieb, & Harrison, 1972).

Disability simulations have also been used in an attempt to modify attitudes toward individuals with disabilities. The reasoning behind disability simulations is that if nondisabled people are exposed to the day-to-day obstacles of a person with disabilities, they will gain insight from the experience, resulting in better understanding and positive attitude change. Results of disability simulations are also inconsistent. Wilson (1974) reported a positive attitude change using deafness simulations, however, Kriger (1992) warns that there are ethical considerations in disability simulations, and negative consequences may result if simulations are not used correctly.

Studies using a combination of techniques have generally reported more positive results. Rees, Spreen, and Harnadek (1991) replicated a 1977 study by Spreen to

determine whether a shift in attitudes toward disabled persons had occurred in the thirteen years since the original study. Their participants were exposed to three hours per week of information on mental retardation, as well as 60 hours of direct contact with persons with mental retardation over the course of a school year. A semantic differential technique was used to assess their change in attitudes over the course of the study. The authors reported an improvement in students' attitudes, as well as a positive shift over the thirteen year period.

Information, disability simulations, direct contact, and games were used in a study by Kilburn (1983) as part of the Better Understanding of Handicapped Children program. She reports that the program had a significant positive impact on students' attitudes toward persons with disabilities.

Clunies-Ross and O'Meara (1989) evaluated the effects of a program on attitudes of fourth-grade students toward children with disabilities. Their program utilized the presentation of information, direct contact, disability simulations, and group work in four 90-minute sessions over the course of two weeks. Two experimental groups (one was from a school with integrated students, the other group was not) and two control groups completed the Peer Attitudes Toward the Handicapped Scale (PATHS) (Bagel & Greene, 1981, cited in Clunies-Ross & O'Meara, 1989) as the measure of attitude change. The children in the experimental groups displayed significantly more positive attitudes than the control group, even at a three-month post-test. The children in the

experimental group from the school which included peers with disabilities indicated even more positive attitudes than the children in the other experimental group.

The Attitudes Toward Disabled Persons Scale was used to measure undergraduate rehabilitation students' change in attitude as a result of a course called "The Handicapping Experience" (Barrett & Pullo, 1993). Students were exposed to information, direct contact, and disability simulations. The authors reported a positive influence in the attitudes towards individuals with disabilities.

Many studies have been conducted dealing with attitudes toward persons with disabilities. As is clear from the previously mentioned studies, they have yielded discrepant results. Some studies resulted in positive changes, some in negative changes, and some in no change. Negative attitudes toward individuals with disabilities still represent a significant barrier to those individuals; preventing them from fully participating in society. It is essential that we find a way to facilitate positive attitudes and interactions between individuals with disabilities and those without. One program designed to do just that is the Kids on the Block.

The Kids on the Block

The Kids on the Block (Aiello, 1988) are a group of disabled and nondisabled puppets designed to teach children about a variety of disabilities as well as to teach acceptance and appreciation of differences. They were developed 20 years ago in direct response to P.L. 94-142. Their creator, Barbara Aiello, developed the first character, Mark Riley, to aid the transition of one of her students in special education to regular

education. The student, Anthony, a 12-year-old with cerebral palsy, had been prepared academically to attend a regular education program. However, after only five weeks in the regular education program, Anthony went back to his special education teacher and informed her that he would not go back to his "regular" classroom because "Nobody will play with me, nobody will talk to me, and nobody will even eat next to me in the lunchroom" (Aiello, 1988, p. 224). As a result, Mark Riley was born. Mark was made to look and sound like Anthony, and even had a special wheelchair. The puppet talked to the children about cerebral palsy, about using a wheelchair, and about his favorite things to do. The children began to ask questions.

Aiello realized that children have learned that in our society it is not polite to stare or ask about disabilities, but in the context of a puppet show this was acceptable. The puppets created a safe environment in which the children could learn about disabilities. She discovered that when children are given an opportunity to experience differences in a nonthreatening and comfortable atmosphere they can relax and learn. "Jean Piaget calls this "the teachable moment," that near-magical point in time when an educational tool has sparked interest and creativity and enabled children to comfortably explore and adopt new, more productive behaviors" (Aiello, 1988). This is what the Kids on the Block hopes to accomplish.

Several different scripts are performed during a typical appearance of Kids on the Block. Each script focuses on a different disability or difference. Characters also include nondisabled puppets who can express some of the fears and concerns that many

people have regarding disabilities. Programs typically run for an hour, with plenty of time for questions and answers. The program performers like the audience to contain different age levels so that the younger children can benefit from questions asked by slightly older children (Personal communication, Michael Hagedorn, Director KOB at UNMC, January 2, 1997).

There are over 1600 Kids on the Block Programs around the world, with 35 specially designed programs and over 42 puppets representing a variety of different issues. The programs are updated regularly to ensure that the most up-to-date information in provided. Each program is thoroughly researched in cooperation with the national organization representing that issue, and has the stamp of approval from the appropriate organization.

Very few research studies have examined the effectiveness of the Kids on the Block program (Pendzick, 1983; Powell, 1985); only one of which has resulted in a publication (Baker, Rude, Sasso, & Weishahn, 1994). Pendzick (1983) reported a positive (although nonsignificant) shift in the attitudes of third grade girls toward individuals with disabilities as a result of the Kids on the Block intervention, as measured by the Attitude Towards Disabled Children. She concluded that "the Kids on the Block alone, is not the most effective teaching methodology for attitude change toward the disabled," but felt that some of the outcomes were influenced by design flaws, and that the intervention deserves further research (Personal communication, Caroline Penzick, Educational Specialist, Helen Hayes Hospital, N.Y., September 19, 1996).

Powell (1985) examined the effects of the Kids on the Block intervention with third, fourth, and fifth grade students. He compared pre-test and post-test scores using the Severely Handicapped Perception Inventory (SHPI), which consists of five sections: knowledge of severely handicapped peers, experiences, characteristics, feelings toward their severely handicapped peers, and interest in them. Powell concluded that attitudes were improved toward the disabled regarding all but interest in the disabled as measured by the SHPI. Students with disabled family members had more positive attitudes regarding knowledge of and experience with the disabled; in addition, students attending integrated schools showed more positive attitudes regarding experience with and characteristics of the disabled.

A more recent study (Baker, et al., 1994) compared the impact of Kids on the Block with another commercially developed program designed to increase peer understanding and acceptance of elementary school-aged disabled students, the Better Understanding of Disabled Youth (BUDY) program. The BUDY program is a multimedia kit containing lesson plans, filmstrips, posters, and books for use in the classroom. The Acceptance Scale was used to measure changes in second, fourth, and sixth graders' attitudes toward the disabled. No significant differences were found for either of the experimental groups on change scores for the total scale, so each question was analyzed separately. The results of this analysis indicated that second graders responded more favorably to the Kids on the Block program, six graders favored the BUDY program, and fourth graders showed no preference. The authors concluded that

Kids on the Block may be more effective with younger children, but also recommended that the programs be investigated further due to the small amount of change observed in their study.

The present study attempted to evaluate the effectiveness of the Kids on the Block program with second and fifth graders. The following questions were addressed:

1. Did the Kids on the Block program improve the attitudes of second and fifth grade students toward individuals with disabilities as measured by the Children's Social Distance from Handicapped Persons Scale?

2. Did the Kids on the Block program improve second and fifth graders' knowledge of disabilities as measured by the Children's Knowledge about Handicapped Persons Scale?

3. Were any effects maintained over a 4 week period?

4. Did students change their reported behavior as indicated on sociogram measures?

5. Did the Kids on the Block program sensitize children to what a disability is and increase their awareness of persons they may know with a disability?

Hypotheses:

The following null hypotheses were tested in this study.

1. There will be no significant differences between the pre-, post-, and follow-up scores on any of the measures for those children exposed to Kids on the Block and those children not exposed to Kids on the Block.

2. There will be no significant differences on the measures between males and females.

3. There will be no significant differences on the measures between second and fifth grade students.

4. There will be no significant differences between children attending an inclusive school and those attending a noninclusive school.

Chapter 3

Methods

Subjects

Subjects participating in the study were second and fifth grade students selected from local schools in a large midwestern city. Two small districts were chosen because of their efforts to include students with disabilities within the regular classrooms. Students are educated with their peers, and supports are provided in the classroom as necessary. The third district is not considered an inclusive district, and was therefore selected to provide the noninclusive comparison. The noninclusive district participates in integration, in which students with identified disabilities are included with their peers to the greatest extent possible, usually for specials (such as art, music, and physical education), lunch and recess, and some academics. The rest of their instruction occurs in pull-out rooms. Some children are placed in self-contained classrooms and have limited interaction with their peers.

One of the inclusive urban districts serves 4,700 students (573 in special education), the other, a suburban district, serves 2,188 students (295 in special education). The noninclusive district, a large urban district, serves 43,609 students (5,916 in special education). The racial breakdown of the schools can be found in Table 1.

Table 1:

	Racial Classification of Students (%)		
	Noninclusive District	Inclusive #1	Inclusive #2
African American	30.70	.40	2.20
Asian American	1.30	.80	2.30
Caucasian American	57.60	96.50	93.60
Hispanic American	8.70	2.00	1.60
Native American	1.70	.30	.30

Six schools from the inclusive districts and six schools from the noninclusive district were selected to participate in the study. Seven hundred and fifty-one students completed all stages of the study and were included in the analyses. The total N=751 was composed of 496 treatment subjects and 255 control subjects. There were approximately equal numbers of males (n=384) and females (n=366), as well as second graders (n=399) and fifth graders (n=352). Three hundred and ninety-five subjects from the inclusive districts and 356 from the noninclusive district were included in the analyses. The subject population consisted of students from 54 intact classrooms who had parental permission. One hundred and three subjects were omitted from the data analysis because they had been absent on one or more of the test administration days, or because they had been absent for the KOB performance.

All schools in the inclusive districts who had not viewed the KOB program during the 1996-97 school year were invited to participate. These schools were then

matched as closely as possible with schools from the noninclusive district on the numbers of free and reduced lunches provided to students in the schools. The official poverty line is used to determine whether students are eligible for subsidized meals, thus, this served as a measure of socioeconomic status of the subject population. It should be noted that school records are not 100% accurate, and not all eligible students apply for the subsidy, making this a rough estimate of socioeconomic status (Entwisle & Astone, 1994).

Table 2:

% Free and Reduced Lunches by School						
School #	1	2	3	4	5	6
Inclusive	38	29	42	32	18	14
Noninclusive	38	29	47	35	24	13

Subjects were assigned a special code to maintain anonymity yet provide the ability to match subjects at the pre-test, post-test, and follow-up. This increased the statistical power to detect effects. Information on the racial makeup of the subjects was not coded, and is not available, however, all 2nd and 5th grade students in all three districts were invited to participate, thus the racial makeup of the subject population is expected to mirror that of the individual schools.

Procedures

Informed consent was obtained from parents (see Appendix A), and the participating children also provided child assent (see Appendix B). Forty-seven percent of parental permissions forms were returned. 100% of the children who had parental consent gave their assent at the time of the pre-test. Five fifth grade boys at one of the inclusive schools revoked their assent at the time of the follow-up survey, and were not included in the study. Two teachers at one of the noninclusive schools were uncomfortable with the sociogram measure, and did not allow their students to respond to the sociogram questions. Thus, that information is unavailable for those two classrooms. Only students who had completed all three measures at all three test sessions were included in the analyses.

Pretest measures were administered 1-2 days prior to the intervention (the KOB performance) in the treatment schools. The post-test was administered 1-2 days following the intervention. Follow-up measures were administered four weeks (+/- 1 day) following the Kids on the Block program. Students in the control schools completed all three measures along the same time line, however, they viewed the KOB program after the follow-up measures were collected.

Schools viewed different performances of the Kids on the Block program, however the same scripts were used with the same performers at each school. School principals were asked to select the scripts they felt their students would most benefit

from. These suggestions were then taken into consideration when selecting the scripts to be presented for the study. Each school viewed a performance on physical disabilities, learning disabilities, and mental handicaps (See Appendix C).

Measures

Students completed three measures at pre-, post-, and follow-up. Only subjects completing all measures for all sessions were included in the analyses. Sociometry was also used at the time of the pre-test and follow-up. Children did not respond to sociogram questions at the time of the post-test mainly due to teacher concerns about the amount of time required to complete the measure. The measures used are as follows:

Experience with Handicapped Persons Scale. This scale is a seven-item multiple-choice questionnaire developed by Hazzard (1983), and used to assess the extent to which a child knows anyone who is disabled, either personally or through television, movies, or books (See Appendix D). Reliability and validity data are unavailable for this scale (A. Hazzard, personal communication, February 3, 1997).

Children's Knowledge about Handicapped Persons Scale. This is a 25-item true-false scale to assess children's beliefs concerning persons with disabilities (See Appendix E). Items are scored 0 (incorrect), 1 (not sure), or 2 (correct). Scores can range from 0 to 50. Computed split-half reliability of the scale was .63 (Spearman-Brown corrected), and test-retest reliability was .79 (Hazzard, 1983). As a validity check, 25 adults with knowledge of and experience with individuals with disabilities completed the scale. Seven of these adults were themselves disabled. On four of the 25

items the respondents only agreed between 60% and 80% on the correct answer (Hazzard, 1983).

Children's Social Distance from Handicapped Persons Scale. This is a 10-item scale to assess how close a child is willing to get to disabled peers (See Appendix F). Items to questions are scored 0 (no), 1 (maybe no), 2 (maybe yes), and 3 (yes). Scores can range from 0 to 30, with higher scores indicating more positive attitudes. Split-half reliability was .78, and test-retest reliability was reported as .75 (Hazzard, 1983).

All of the measures were read to the children by trained research assistants (see Appendix G for a procedural checklist). Research assistants were instructed in proper administration of the scales and how to respond to questions from the children without providing them with additional information. Students were informed of the importance of accuracy and honesty is their responses. Issues of confidentiality and anonymity were also discussed to prevent students from responding in a socially acceptable or biased manner. The completion of the measures was also monitored to ensure that students were circling the responses corresponding to the question just read. Second graders had a difficult time moving across the page to circle a response, thus it was necessary to revise the surveys after the pretest at the first school. Lines were drawn to the correct response selections, making it much easier for children to follow.

There was a great deal of confusion experienced by many of the students, especially second graders, while completing the Who I Know questionnaire. Many students marked that they knew someone with a handicap or disability, but problems

arose if they knew more than one person (see Appendix D for an example of the questionnaire). Students were instructed to think of one person while responding to the questions. Several students also appeared to be unsure of what a handicap or disability is as evidenced by their responses (e.g., student marked the 'other' box, and wrote in "She let a dresser fall on her." Several students marked the 'other' box and wrote in, "Really old."). Because of the confusion occurring on this measure, only the first question, "Do you know someone who is handicapped?" was analyzed, and any future studies should consider revising and simplifying this measure.

Sociometric Assessment:

Sociometric assessment using the peer nomination technique was used as a measure of peer acceptance of the students with disabilities (see Appendix H). Sociometry is one of most widely used measures of peer acceptance (Brockman, 1988). Busk, Ford, and Schulman (1973) found that sociometric ratings are fairly stable, especially over short periods of time. Correlation coefficients for a four week period (the time frame employed in this study) were .80. The longer the time interval, the less stability of the response, although it does not drop off significantly until 7-8 months. They also found a trend toward greater stability with increasing age, possibly due to the fact that friendships become more established with increasing age (Busk, Ford, & Schilman, 1973).

Positive and negative criteria were included in the sociogram measure to best tap the children's attitudes toward their peers with disabilities. Although there may be

ethical concerns related to the use of negative peer nominations, the negative question helps to distinguish between children who are actively disliked (rejected) from those who are neither liked nor disliked (neglected) (Juvonen, 1997). Extreme caution was used to ensure that no negative repercussions resulted from participation in the sociogram measure. Children were instructed beforehand not to discuss their responses with anyone because this might result in hurt feelings. They were also informed about confidentiality so they would feel more comfortable in responding honestly. The four sociogram questions were then individually administered to children away from the rest of the classroom. After answering the questions they were again cautioned regarding discussion of their responses. Many of the classroom teachers also talked to their students about this issue.

Behavioral Assessment:

Behavioral observations of students considered to have severe or multiple disabilities were conducted in the students' classrooms in the inclusive districts. Students who were observed in their classrooms met the American Association on Mental Retardation's (AAMR) definition of severe functional limitations. Thus, they were students who required "extensive" or "pervasive" support in at least three of ten functional skill areas. These areas include communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work (see Appendix I for a description of these functional criteria). Only two students with disabilities in the inclusive district were determined to have met the AAMR

definition of severe and functional limitations and required extensive or pervasive support in at least three of the ten areas. One student was a fifth grade female with Down syndrome, and the other student was a second grade male with Developmental Aphasia. Both students received paraprofessional support in their regular classroom throughout portions of the day.

Observational data was collected using the Social Contact Assessment Form (SCAF; Kennedy & Itkonen, 1994). The SCAF is an event recording system for measuring social contacts and interactions between students with disabilities and their regular education peers. Interactions are defined as "a student and one or more peers engaged with each other with [sic] the context of an activity" (Kennedy & Itkonen, 1994, p. 3). Information is gathered regarding the individual with whom a student has had a social contact, the time of day and setting of the social contact, the activity they engaged in, and the perceived quality of the interaction. The quality of the interaction is scored from 1 (bad) to 4 (great). "Great" interactions are defined as those that the child would be anxious to repeat, and "bad" interactions are those children would be likely to avoid. Reported interobserver agreement is 94% (range 60% to 100%) for complete agreement regarding a social contact (time, person, setting, and activity). Total interobserver agreement estimates for perceived quality of social contacts is reported to be 79% (range 50% to 100%) (Kennedy & Itkonen, 1994). Descriptions of the observational data collected on the two students is provided in Appendix J.

Chapter 4

Results

A 3 Test (pre-test vs. post-test vs. follow-up) x 2 Group (experimental vs. control) x 2 Inclusion (Inclusive vs. Noninclusive) x 2 Grade (2nd vs. 5th) MANOVA was conducted using the Knowledge Scale and the Social Distance Scale as independent measures (preliminary analyses indicated no significant effect for gender, thus it was eliminated in this analysis, thereby reducing the number of factors and simplifying the design). Results indicated a statistically significant main effect for Grade (Second vs. Fifth), $F_{2,222}=359$, $p<.001$, Wilks=.755. Follow- up univariate F-tests indicated statistically significant effects on both independent variables. Results from the Knowledge Scale were statistically significant, $F_{2,2223}=702$, $p<.001$. Results from the Social Distance Scale were also statistically significant, $F_{2,2223}=21.8$, $p<.001$. Mean ratings and standard deviations for second and fifth grades students on the Social Distance scale are presented in Table 3 and for the Knowledge scale are presented in Table 4. The results indicate no statistically significant difference between pre-, post-, and follow-up tests on the Knowledge and Social Distance Scales between second and fifth grade students. The main effects indicate an overall statistically significant difference between second and fifth grade students averaging across pre-, post-, and follow-up tests. On average, fifth grade students had higher average ratings on the Knowledge and Social Distance Scales than second grade students.

Table 3: Average Social Distance Scale Ratings for Grade Level Main Effect

Grade	M	(SD)
Second	23.18	(7.19)
Fifth	24.35	(5.98)

Table 4: Average Knowledge Scale Ratings for Grade Level Main Effect

Grade	M	(SD)
Second	25.88	(6.49)
Fifth	33.86	(6.64)

Results indicated a statistically significant main effect for Inclusion (Inclusive vs. Noninclusive), $F_{2,222}=10.62$, $p<.001$, Wilks=.99. Follow- up univariate F-tests indicated statistically significant effects on both independent variables. Results from the Knowledge Scale were statistically significant, $F_{2,2223}=20.5$, $p<.001$. Results from the Social Distance Scale were not statistically significant. Mean ratings and standard deviations for inclusive versus noninclusive students on the Knowledge scale are presented in Table 5. This result indicates no statistically significant difference between pretest, posttest, and follow-up on the Knowledge and Social Distance Scales between students in inclusive schools and students in noninclusive schools. The main effect does indicate an overall statistically significant difference between inclusive schools and noninclusive schools averaging across pretest, posttest, and follow-up on the Knowledge

Scale. On average, students in the noninclusive schools had higher average ratings on the Knowledge Scales than students in the inclusive schools.

Table 5: Average Knowledge Scale Ratings for Inclusive versus Noninclusive Main Effect

Inclusion Status	M	(SD)
Inclusive	29.19	(6.55)
Noninclusive	30.55	(6.32)

Results of the MANOVA indicated a statistically significant Group x Test interaction effect, $F_{4,4444}=4.4$, $p<.01$, Wilks= .992. Follow-up univariate F-tests indicated statistically significant effects on both independent variables. Results from the Knowledge Scale were statistically significant, $F_{2,2223}=7.99$, $p<.001$. Results from the Social Distance Scale were also statistically significant, $F_{2,2223}=3.12$, $p<.04$. Table 6 presents experimental versus control group means and standard deviations on the Knowledge Scale at pretest, posttest, and follow-up. Table 7 presents experimental versus control group means and standard deviations on the Social Distance Scale at pretest, posttest, and follow-up. Each of these results indicates a statistically significant increase in scale ratings between pretest, posttest, and follow-up for the experimental group compared to no effect for the control group.

Table 6: Average Knowledge Scale Ratings for Group X Test Interaction

	Pre-test M(SD)	Post-test M(SD)	Follow-up M(SD)
Group			
Experimental	28.2(6.19)	32.0(7.02)	32.2(6.70)
Control	28.1(6.42)	29.2(6.50)	29.5(6.58)

Table 7: Average Social Distance Scale Ratings for Group X Test Interaction

	Pre-test M(SD)	Post-test M(SD)	Follow-up M(SD)
Group			
Experimental	23.7(6.12)	24.5(6.55)	24.2(6.52)
Control	23.8(6.22)	23.1(6.54)	22.6(7.26)

A chi square analysis was performed on each of the four sociograms collected from students at pretest and follow-up. The goal of the analyses was to determine if there was a relationship between the frequency that students identified a preference for spending time with a peer with a disability with group membership (experimental vs. control) and time (pretest vs. follow-up). Sociograms 1, 2, and 3 were rated in a positive direction; Who would you most like to 1) sit next to, 2) play with at recess, and 3) study with. Sociogram 4 was rated in the opposite direction, that is, 4) who would

you least like to spend time with. Results of the chi square analysis on each of the four sociograms indicated no statistically significant relationship between group and time. In other words, the KOB intervention had no apparent effect on changing student preferences or intentions for spending time with a peer with a disability. Tables 8 through 11 show frequencies and percentages of student responses for each of the four sociograms.

Table 8: Frequencies and percentages for student response to Sociogram 1 - Who would you most like to sit next to?

	Pretest				Follow-Up			
	Experimental		Control		Experimental		Control	
	f	(%)	f	(%)	f	(%)	f	(%)
Yes	49	(19.1)	14	(11.7)	56	(21.5)	12	(10.0)
No	207	(80.9)	106	(88.3)	204	(78.5)	108	(90.0)

Table 9: Frequencies and percentages for student response to Sociogram 2 - Who would you most like to play with at recess?

	Pretest				Follow-Up			
	Experimental		Control		Experimental		Control	
	f	(%)	f	(%)	f	(%)	f	(%)
Yes	57	(22.3)	12	(10.0)	48	(18.5)	11	(9.2)
No	199	(77.7)	108	(90.0)	211	(81.5)	109	(90.8)

Table 10: Frequencies and percentages for student response to Sociogram 3 - Who would you most like to study with?

	Pretest				Follow-Up			
	Experimental		Control		Experimental		Control	
	f	(%)	f	(%)	f	(%)	f	(%)
Yes	40	(15.6)	7	(5.8)	47	(18.1)	8	(6.7)
No	216	(84.4)	113	(94.2)	213	(81.9)	112	(93.3)

Table 11: Frequencies and percentages for student response to Sociogram 4 - Who would you least like to spend time with?

	Pretest				Follow-Up			
	Experimental		Control		Experimental		Control	
	f	(%)	f	(%)	f	(%)	f	(%)
Yes	116	(45.3)	39	(32.5)	105	(40.5)	42	(35.0)
No	140	(54.7)	81	(67.5)	154	(59.4)	78	(65.0)

A chi square analysis was also performed comparing the frequency of students who answered yes versus no on item one from the Who I Know scale (e.g., Do you know someone with a handicap?) over time (pretest v. posttest vs. follow-up) between groups (experimental vs. control). There was a statistically significant relationship in the experimental group between the response (yes vs. no) and time (pretest vs. posttest vs. follow-up), $X^2 = 10.23$, $p<.001$. The frequencies and percentages of experimental

The results indicate that the proportion of 'yes' responses to the question, "Do you know someone who is handicapped?" increased over time. There was no statistically significant relationship in the control group between response (yes versus no) and time (pretest, posttest, and follow-up).

Table 12: Responses of Experimental Group Students to the Question - Do you know someone with a handicap?

	Pretest		Posttest		Follow-Up	
	f	%	f	%	f	%
Yes	393	79.0	422	85.0	432	87.0
No	103	21.0	74	15.0	64	13.0

In order to explore the relationship between student responses on the Knowledge Scale with responses on the Social Distance Scale a regression analysis was performed using the Knowledge Scale score as the predictor and the Social Distance scale as the dependent variable. There was a statistically significant positive linear relationship between Knowledge Scale ratings as a predictor of Social Distance Scale ratings. Statistics from the regression equation, which was statistically significant, are presented in Table 13. The index of correlation between Knowledge Scale ratings and Social Distance Scale ratings was Multiple R = .35. The index of the amount of variance in the

Table 13: Regression Equation Statistics for Knowledge Scale as a Predictor of Social Distance.

Variable	B	SE B	Beta	T	p <
Knowledge	.299342	.016654	.3541619	17.974	.0000
(Constant)	14.741818	.514081		28.676	.0000

Chapter 5

Summary and Discussion

The purpose of this study was to examine the effectiveness of the Kids on the Block program in increasing children's knowledge about disabilities (as measured by the Knowledge Scale) and their attitudes toward individuals with disabilities (as measured by their responses on the Social Distance Scale and Sociogram measures). Second and fifth grade students from school districts practicing full inclusion and a district practicing integration were included in the study. Schools in the inclusive districts were matched for SES with schools from the noninclusive district on the number of free and reduced lunches provided to children.

The dependent measures obtained on all participating students were surveys assessing whether or not students knew someone with a disability, their knowledge of disabilities, their willingness to interact with persons with disabilities, and peer ratings of sociometric status. Peer ratings were obtained on intact classrooms. These measures were analyzed to determine whether or not the Kids on the Block program had an effect on children's knowledge and awareness of, attitude toward, and reported behavior toward individuals with disabilities.

Discussion of Hypotheses

The first null hypothesis of no differences between pre-, post-, and follow-up measures was rejected. Significant differences were found for the experimental group

group. Initially, only 393 of treatment children responded that they knew someone with a disability. After viewing the KOB program, the number of students in that group who responded positively to the question, "Do you know someone with a handicap?" increased to 422 at post-test, and 432 at follow-up. No changes occurred across pre-, post-, and follow-up for children in the control group. It is possible that viewing the KOB performance sensitized the children to what a disability is, resulting in the realization that they knew someone with a disability. Another possibility is that some of the children (most likely the second graders) were including the KOB puppets as 'someone' they knew when responding to that question at the time of the post-test and follow-up. Yet another possibility for the increase in 'yes' responses is that responding to the Knowledge of Handicapped Persons Scale increased their awareness of what a handicap or disability is, resulting in the increase in their responses, although control group subjects did not increase in the number of 'yes' responses. Children completed the Who I Know measure before the Knowledge Scale, however, they were free to go back and change responses. It is also possible that the children met someone with a disability the evening of the program, or in the four weeks following the program.

Significant differences across time occurred for the treatment group on the Knowledge of Handicapped Persons Scale, but not for the control group. Immediate post-test effects for the treatment group were evident and were maintained at follow-up. While practice effects are possible anytime a measure is readministered within a short time period, no significant increases were seen in the control group. Both second and

fifth grade students in the treatment group significantly increased the amount of knowledge they had about disabilities as evidenced by their responses on this measure. This increase in knowledge occurred for children in the inclusive districts as well as for children in the noninclusive district. These results support the conclusion that the KOB program is effective in improving knowledge about disabilities in second and fifth grade students.

Significant differences across time also occurred on the Social Distance from Handicapped Persons Scale. Treatment and control were identical at the time of the pre-test. Control subjects' responses did not change over the course of the study, however, students in the treatment group significantly improved their attitude toward individuals with disabilities as measured on the Social Distance Scale. There were no differences between the students from the inclusive districts and noninclusive district in their attitude toward individuals with disabilities.

Outcomes on the sociogram measure did not change over the course of the study. Peer nominations collected at pre-test were not significantly different from those collected at follow-up. Somewhat discouraging results were obtained. On the positively worded questions (Who would you most like to:... sit next to in class? ...play with at recess? ...study with?), at both pre-test and follow-up, children with disabilities were selected significantly less than their nondisabled peers. On the negatively worded question (Who would you least like to spend time with?), the reverse occurred, and the children with disabilities were selected significantly more than their nondisabled peers.

Control group subjects from both inclusive and noninclusive schools identified fewer children with disabilities on the positive questions than the children in the treatment group. They also identified more of the children with disabilities on the negatively worded question than the treatment subjects did. Treatment and control subjects appeared identical at the time of pre-test on every other measure, and it is unclear as to why these differences occurred for the sociometric peer ratings. One plausible explanation is the much smaller sample size in the control group. No significant differences occurred between the inclusive and noninclusive schools on the sociogram measure, and there were no gender differences.

The null hypothesis of no significant differences on any of the measures between males and females was retained. Gender differences were not expected on the Knowledge Scale or the Who I Know scale, however, several studies (Hazzard, 1983; Pendzick, 1983; Stainback & Stainback, 1982; Voeltz, 1980) have reported gender differences in attitudes toward individuals with disabilities. These studies typically report more positive attitudes and more helping behaviors by females. No gender differences were found in this study on any of the measures for any of the groups. Many of the studies reporting gender differences were completed prior to or not long after the passage of P.L. 94-142, thus, children in these studies had had little exposure to children with disabilities. The children in the present study have grown up with peers with disabilities, and have had many opportunities for interaction, which might affect the

attitudes and behavior of both the males and females in the study. Further research will be necessary to address this issue.

The third null hypothesis of no differences between second and fifth grade students was rejected. Fifth grade students scored significantly higher on both the Knowledge Scale and the Social Distance Scale at all three test times. Fifth graders also scored higher initially on the Knowledge Scale, indicating that knowledge increases with age due to more interactions and opportunities to gain knowledge . Social Distance Scale scores were higher for fifth graders, as well. Regression analyses indicated a positive linear relationship between knowledge and attitude. Students with higher knowledge scores on the Knowledge of Handicapped Persons Scale also had higher scores on the Social Distance Scale. This relationship held true for second graders as well as fifth graders. Thus, the more knowledge children had about various disabilities, the more accepting they were of individuals with disabilities, and the more they reported a willingness to interact with those individuals. While the provision of information alone has not been effective in changing attitudes (Fichten, 1988; Westervelt, Brantley, & Ware, 1983; Westervelt & McKinney, 1980), in this study, children with higher knowledge scores, and therefore more information about disabilities, had more positive attitudes toward individuals with disabilities. It is likely that these children obtained their information and knowledge through interactions with children with disabilities in their schools and communities, thus their past experiences in addition to their knowledge gained from those experiences may be influencing their attitudes.

The fourth null hypothesis of no significant differences between children attending an inclusive school and those attending a noninclusive school was rejected. Students in the six noninclusive schools scored significantly higher on the Knowledge of Handicapped Persons Scale than students attending the six inclusive schools. While the inclusive and noninclusive districts serve essentially the same percentage of students with disabilities (12-13.5%), the noninclusive district serves a significantly larger population of students with disabilities (N=5,916 vs. N=868), thus, students in the noninclusive district are exposed to a greater number of children with disabilities. Students in the noninclusive district also benefit from experiencing a greater variety of students with disabilities, as well as students with more severe disabilities. This diversity in the noninclusive district may have led to higher scores on the Knowledge Scale for the children in those schools.

No differences were found between the students attending the inclusive schools and those attending the noninclusive schools on the Social Distance from Handicapped Persons Scale, Who I Know, or on the peer ratings of the sociometry. A previously reported study (Powell, 1985) indicated more positive attitudes by students attending inclusive schools. Observations of the practices of the participating schools made during data collection suggest that differences between the inclusive and noninclusive school districts may not be that discrepant. Children in the inclusive districts leave the regular education classroom for some activities, and there are some children in the noninclusive schools who remain in their regular education classrooms for the majority of the day.

Those students spending the majority of their academic time in a resource room are still with their peers for opening activities, lunch, recess, closing activities, music, art, library, and physical education. Thus, there are substantial opportunities available for interactions with their regular education peers.

General Discussion

The results of this study indicate that the Kids on the Block program can effectively improve students' attitudes toward persons with disabilities, as well as increase their knowledge of disabilities. While differences in this study were statistically significant on the knowledge and attitude measures, what is important in the area of attitudes toward individuals with disabilities is not the statistical significance, but the clinical or practical significance of the change. Students increased their knowledge by several points on the Knowledge Scale, indicating that they gained information from the KOB presentation, and as previously discussed, increased knowledge was positively correlated with more positive attitudes on the Social Distance Scale.

Student responses on the Social Distance Scale, however, only increased (became more positive) by one point. A change smaller than on the Knowledge Scale was to be expected, given that attitudes are relatively stable and resistant to change (Antonak & Livneh, 1988). One could argue that, although the effect was statistically significant, is it really significant from the standpoint of the child with a disability who wants to be accepted by his or her peers? Even if students' responses on the attitude

measure had increased to what might be considered practically significant, what we want to change are not student attitudes as measured by a paper and pencil test, but behaviors.

Responses to questions on a survey are easier to change than behavior itself. This was evident in the nonsignificant results on the sociogram measures. Friendships are already established, especially by the time children are in fifth grade, making change more difficult as students get older. Kennedy and Thurman (1982) found that the behavior of children toward individuals with disabilities began to develop during the preschool years. Thus, they believe that parent training during children's formative years is the best way to foster positive attitudes.

The burden of building and maintaining relationships with peers with disabilities should not fall solely on the regular education children. Often times the children with disabilities are lacking in social skills and could benefit from training in that area. The regular education children could also benefit from training and information about disabilities. Students in a study examining attitudes toward their peers with disabilities (Kyle & Davies, 1991), expressed a need to interact socially with these peers, but also stated an unawareness of how to do this. The Kids on the Block program is an effective way to provide this information.

Strengths of the Present Study

One strength of the present study is the large number of schools, classrooms, and students involved in the study. Seven hundred fifty-one students from 54 classrooms selected from twelve schools in three districts completed the study. The large number of

classrooms decreases the possibility of classroom as a confounding variable. Another strength of the present study is that it was conducted in the actual school environment, which may increase the validity of the findings.

The measures selected for the study are also a strength, and were useful for evaluating the effectiveness of the KOB program. Every question on the Knowledge Scale was addressed either in the skits or during the question and answer period of the program, with the exception of two questions regarding deafness. The KOB performers discussed the terms handicapped and disabled, retardation and mentally handicapped, deaf and hearing impaired, and blind and visually impaired. The children watching the performances asked many questions, and received answers appropriate for grade school children. The Knowledge Scale adequately tapped the information presented during the KOB performance.

The questions on the Social Distance from Handicapped Persons Scale targeted areas of interest and importance to children. The questions also covered activities that ranged from requiring very little interaction (e.g., It would be okay if a handicapped kid went to my school.), to those that were more personal (e.g., It would be okay if a handicapped kid slept over at my house.) and those that involved being seen in public with a person with a disability (e.g., It would be okay if a handicapped went to the movies with me). These questions involved an action, a target of the action, and a context of the action, three qualities identified by Azjen and Fishbein (1977) as important in the measurement of attitudes and behavior. Azjen (1982) concluded that "single

actions can best be predicted from measures of attitude that represent an evaluative predisposition to perform or not perform the particular behavior under consideration (p. 11)." The questions on the Social Distance from Handicapped Persons Scale are very relevant to the measurement of attitudes held by grade school children about individuals with disabilities.

While both measures were appropriate for this particular study, future users may wish to change or reword several questions. It is believed that when children are responding to these questions they are thinking of a child their own age, or of the person they identified on the Who I Know measure, which may influence their responses. For example, the question "Blind kids can go places by themselves," may be answered incorrectly by a second grader who is not allowed to go places without an adult. Responses to the question, "It would be okay if a handicapped kid borrowed my bike," can also be interpreted in several ways. If a child responds with "no" it could be because he/she is concerned about the safety of the child, it could be that the child's parents have instructed him/her never to let anyone ride the bike, or it could be that the child does not allow anyone to ride his bike. Social Distance Scale questions regarding the acceptability of a child with a disability coming to the nondisabled home also require caution during interpretation. It is likely that when children think of a disability they think of physical disabilities and wheel chairs. Thus, their responses to the questions may reflect accessibility issues of their home, rather than their attitude toward children with disabilities. The question, "Handicapped kids don't have many friends" should be

reworded in any future studies as it posed a problem for many students. Responses to individual questions were not analyzed for the purposes of this study, however, they are likely to provide interesting results.

Limitations of the Present Study

One limitation of the present study concerns the time period between post-test and follow-up. Unfortunately, the study began during the latter part of the school year which prohibited using a longer time period between post-test and follow-up. Future studies should extend the time period in order to identify the stability of attitude change.

A second limitation of the study is the lack of random assignment to treatment groups due to the quasi-experimental design and use of intact classrooms. Also, as this study was completed in an urban/suburban, midwestern city, results of this study may not generalize to rural schools or to schools in other geographic areas. Another limitation is the large number of students excluded from the study due to lack of parental permission. It is unknown if permission was not granted because of parental beliefs and values about the subject area, or if permission forms were simply misplaced or never made it home.

Conclusions and Areas for Future Research

This study suggests that Kids on the Block is an effective and easily implemented program to improve student attitudes towards individuals with disabilities and increase their knowledge about disabilities. Having students participate in a Kids on the Block performance could improve the quality of interactions between the students with disabilities and their nondisabled regular education peers, thereby improving their

educational experience and the quality of the learning environment for all students by reducing stigmatization and labeling.

Some studies have shown behavior to be more predictive of attitude than attitude is predictive of behavior (Antonak & Livneh, 1988; Persinger & Hartman, 1997). Future research measuring attitudes toward individuals with disabilities may want to take a qualitative approach and examine behaviors in more detail. Behavioral observations of interactions between children with disabilities and their regular education peers could provide much useful information.

Future studies evaluating the effectiveness of the Kids on the Block program should consider qualitative interviews with the children to provide additional information about why students chose particular ratings. In addition, consumer rating scales completed by the children could provide important information regarding the students' perception of the program. The present study only involved two grade levels. Future studies may want to include more grades to determine if KOB is more effective at certain ages. Lastly, KOB is only an hour long presentation - if we really want to make an impact and change attitudes and behaviors, KOB should probably be combined with other disabilities awareness programs. York & Vandercook (1992) found that providing teachers with information about what to expect from the children with disabilities facilitated inclusion efforts in their classrooms. Teacher variables were not included in the present study, and classroom differences were not analyzed, however, future research

should consider teacher attitudes toward students with disabilities and their effect on attitudes and behavior of the children in their classrooms.

Implications for Educators

Educators are well aware of the impact friendships and acceptance by peers have on children's academic, social, and emotional development. The results of this study would suggest that students' knowledge of and attitudes toward individuals with disabilities can be improved through a simple, hour-long awareness program. Increases in knowledge were found to correlate with more positive attitudes toward those with disabilities, having significant implications for educators.

While changes as a result of the Kids on the Block intervention were small (although statistically significant), one must keep in mind that the program was only one hour out of the children's lives. Thus, it is encouraging to see even small changes occur. Teachers, however, are in a position to make a significant impact on the attitudes and behaviors of their students. If one hour can make a difference, think what can be done over the course of a school year! By providing children with information about disabilities, and demonstrating a positive and accepting attitude, teachers can instill in their students a sense of acceptance that will hopefully carry over into their interactions with others.

While one might think that a longer, more intense intervention would be ideal, it is not necessary. Incorporating disability awareness activities into the regular curriculum is one way to provide students with information that can lead to important discussions.

For example, reading a story about an individual with a disability, discussing disabilities during health or science lectures, viewing a movie, or creative disability awareness activities can easily be incorporated into the curriculum. It is also important to respond openly and honestly to children's' questions as they arise. Often the best teaching opportunities are not planned.

Simply providing information to students has been shown to be ineffective in improving attitudes toward individuals with disabilities (Fichten, 1988; Westervelt & McKinney, 1980; Westervelt, et al., 1983), however, these studies were conducted many years ago. Children today have had many more opportunities for interaction with peers with disabilities, and as the present study has shown, may be more responsive to information as a result of interactions with individuals with disabilities within their classrooms. Thus, it is essential that we continue to foster acceptance and positive attitudes within the classroom at very early ages, with the hope that this acceptance will carry over into children's' interactions with all persons, both in the classroom and outside of the classroom.

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Appendix A

IRB # 253-97

PARENTAL INFORMED CONSENT FORM

THE EFFECTIVENESS OF THE KIDS ON THE BLOCK PROGRAM IN INCREASING CHILDREN'S KNOWLEDGE OF AND ATTITUDES TOWARD INDIVIDUALS WITH DISABILITIES

Dear Parent:

You are invited to permit your child to participate in a research project to determine the effectiveness of a disabilities awareness program, the Kids on the Block. Kids on the Block is a program used around the world to educate children about disabilities, and to teach them to appreciate and accept differences in others. The Kids on the Block troop is composed of disabled and nondisabled nearly life-size puppets who look and act like real children. The following information is provided in order to help you to make an informed decision whether or not to allow your child to participate.

Your child is eligible to participate in this study because your child attends one of the schools selected to participate in the study. Your child would be one of about 1400 children from schools in the greater Omaha area chosen from regular education classrooms to participate.

Your child will be asked to complete a series of three measures which assess children's experience with, knowledge of, and attitudes toward individuals with disabilities. These measures will be completed at three different times. It will require about 15 minutes to complete these measures. Students who take part in the study will be given time to complete the measures in school. Children's interactions with peers in the classroom will also be observed for three half hour sessions.

There is essentially no risk involved in taking part in this study. Some students may experience slight psychological discomfort in answering survey questions about their feelings concerning individuals with disabilities. It is hoped that the information gained from this study will contribute to the effectiveness of the Kids on the Block program, and will increase our knowledge of how to best prepare children for their interactions with individuals with disabilities. No information obtained in this study could be identified with you or your child. Number codes rather than names will be used to maintain information, and all data will be kept strictly confidential.

Participation in this study is voluntary. If you decide for your child to participate, you are free to withdraw your consent and to stop participation at any time. Your decision whether or not to take part will not affect your relationship with your child's school or the University of Nebraska. Your decision will not result in any loss of benefits to which you are otherwise entitled.

If you have any questions, please feel free to ask one of the investigators listed below. If you have any additional questions concerning your child's rights, you may contact the University of Nebraska Institutional Review Board (IRB), telephone (402) 559-6463.

YOU ARE VOLUNTARILY MAKING A DECISION WHETHER OR NOT TO ALLOW YOUR CHILD/LEGAL WARD TO PARTICIPATE. YOUR SIGNATURE INDICATES THAT HAVING READ THE INFORMATION PROVIDED ABOVE, YOU HAVE DECIDED TO PERMIT YOUR CHILD/LEGAL WARD TO PARTICIPATE.

IF YOU GIVE YOUR CONSENT FOR YOUR CHILD TO PARTICIPATE, PLEASE SIGN AND RETURN THIS FORM AS SOON AS POSSIBLE.

_____

Signature Date

_____ _____

Relationship to Student Child's name

INVESTIGATORS

Jean M. Schumacher, M.A. 398-1314, 554-2592
J. Michael Leibowitz, Ph.D. 559-5702

Appendix B

IRB # 253-97

STUDENT ASSENT FORM

THE EFFECTIVENESS OF THE KIDS ON THE BLOCK PROGRAM IN INCREASING CHILDREN'S KNOWLEDGE OF AND ATTITUDES TOWARD INDIVIDUALS WITH DISABILITIES

1. We would like to invite you to take part in this research study about how well a program called Kids on the Block works in teaching kids about people with disabilities or handicaps.

2. We would like you to talk this over with your parents before you decide whether or not to take part. We will also ask your parents to give their permission for you to participate in this study.

3. In this study we will try to find out how your feelings about people with handicaps changes after you see the puppet show called Kids on the Block.

4. You will be asked to fill out some questionnaires about what you know about people with handicaps, how you feel about them, and if you know anyone with a handicap. You will fill these out three different times.

5. It will take you about 15 minutes to fill out the forms, and you will be given time to do this at school. There is no grade for this, and no one will see your answers. You will not put your name on these papers.

6. The information we get from this study will help the people who work with the Kids on the Block puppets make changes so they can teach you about people with disabilities in the best way.

7. If you decide to participate, you are free to stop at any time. Your decision will not affect anything at school.

8. If you have any questions now or later, we will be happy to answer them.

YOU ARE MAKING A DECISION WHETHER OR NOT TO BE IN THIS STUDY. SIGNING THIS FORM MEANS THAT YOU HAVE DECIDED TO TAKE PART AND HAVE READ ALL THAT IS ON THIS FORM. YOU AND YOUR PARENTS WILL BE GIVEN A COPY OF THIS FORM TO KEEP.

Signature of Student	Date
Signature of Investigator	Date

INVESTIGATORS

Jean Schumacher, M.A. 554-2592
J. Michael Leibowitz, Ph.D., Advisor 559-5702

Appendix C

Script 1: CAMPERS

SYNOPSIS: Mark is looking at the map planning a camping trip. When Renaldo arrives, Mark doesn't want to tell him about the trip because he thinks that Renaldo will be unable to go.

CHARACTERS: Mark and Renaldo

PROPS: Large road map

MARK: (pointing to map on his lap) Here it is! This is the place and they got a big lake here too.

RENALDO: (approaches and listens) Hi Mark. What do you have there? A map? A newspaper?

MARK: (tries to hide the map behind his chair) Oh oh.

RENALDO: What are you doing? Did you put the map away?

MARK: Oh, it's no use, Renaldo. You're gonna find out anyway. Some of us are going camping.

RENALDO: Wow! Neat! I love camping. I hope it doesn't rain for you. And if you go up by the lake make sure you climb Hanging Rock. It's enormous and you can see all the way to the top!

MARK: You've been there? You've been camping?

RENALDO: Sure. Lots of times. I could go camping with my eyes closed!

MARK: Oh, Renaldo, I'm really sorry. We are all really sorry.

RENALDO: About what?

MARK: Well, Melody, Jimmy, Brenda, Shawn, and --me too--We didn't ask you to go camping with us.

RENALDO: Why not?

MARK: We didn't think a blind person could go camping!

RENALDO: Seeing is believing!

MARK: What do you mean?

RENALDO: Let me show you... Here I am now... on the trail...

MARK: And I know. My cruiser here will be a big bush that's in your way. Ready?

RENALDO: Wait, your wheelchair is gonna be a bush? I'd like to see this! OK, here I go along the trail.

RENALDO MOVES HIS WHITE CANE BACK AND FORTH IN FRONT OF HIM AS HE MOVES CLOSER TO MARK'S CHAIR. HE REACHES IT AND TOUCHES THE TIRE ON THE BOTTOM.

RENALDO: Ooops! There's something in my way!

MARK: It's me!

RENALDO: Must be some kind of talking bush!

MARK: Now what are you gonna do? A big bush in the woods is real different from a curb on the street!

RENALDO: I have a special hiking cane when I go camping. I use it like my white cane to feel. Here are the roots. (he touches the bottom of the wheel) And here are the branches (he touches the spokes) and here (he touches the handles on the chair) are long branches sticking out. I better walk around those! (and does it)

MARK: Wow!

RENALDO: And here... hmmmm... (he touches Mark's helmet) is a kid sitting right in the middle of the bush!

MARK: You didn't miss anything!

RENALDO: Yeah, and after we hike to the campground then it's time to eat! I love to cook when I'm out camping!

MARK: You do? But you can't! I mean, you'd get hurt, wouldn't you?

RENALDO: No. My scout leader is teaching me how to light a fire safely. I work slowly and listen carefully. When I use a camping stove, I make sure a grown-up is close by -- and you should too, Mark. We can always ask for help.

MARK: Wow! Double Wow! But I don't know, Renaldo; camping's just not like at home. I mean what if you put orange juice on the pancakes instead of milk?

RENALDO: Oh, yuk! That would be really gross!

MARK: Yeah, but how could you tell the difference?

RENALDO: Well, if the milk is in a carton and the orange juice is in a bottle, that's easy.

MARK: It is?

RENALDO: Sure. I'd just feel the different shapes. A bottle feels a lot different from a carton.

MARK: No good, Renaldo. My dad always puts all the liquid stuff into special camping bottles and the bottles all look the same!

RENALDO: Then you might make a mistake too. We could always open the bottles. You could look inside and I could smell to see what's in there.

MARK: Or we could put labels on the bottles!

RENALDO: Yours in print and mine in Braille!

MARK: Neat! OK. That problem's solved. But there's an even bigger one!

RENALDO: A bigger problem? What now?

MARK: Well, after dinner, and after the singing and marshmallows, and after we get inside our sleeping bags...

RENALDO: Then what?

MARK: It's all really quiet. And there we are, all alone in the deep dark woods. See, Mel, Brenda, Shawn, Jimmy, they get real nervous...

RENALDO: Don't worry. I can help all of you. And you'll be really glad I came along.

MARK: Why?

RENALDO: I'll be the only one not scared of the dark!!!

MARK: (to the audience) There were a lot of things that Renaldo can do that surprised me!

RENALDO: Maybe they want to ask me something about what I do and what it feels like to be blind.

Script 2: AT THE VET'S

SYNOPSIS: When Brenda Dubrowski arrives at the Valley Animal Hospital to pick up her dog, Muffy, she is surprised to learn that the veterinarian's assistant is a person who has Downs syndrome. Convinced Ellen Jane cannot help Muffy, Brenda tries to do Ellen Jane's job. Ellen Jane demonstrates to Brenda that people with Down syndrome can do many things.

ELLEN JANE: Boy, this place sure is a mess. There's a cat hair. There's a dog hair. (jokingly) There's even a turtle hair! (laughs, Brenda enters) Hi, can I help you?

BRENDA: Hi, my name is Brenda Dubrowski and I'm here to pick up my dog, Muffy. Oh, are you the veterinarian who took care of her?

ELLEN JANE: No, I'm not the vet... I'm her, uh...assistant. I help Dr. Rogers take care of the animals.

BRENDA: (reflective) Oh, I get it! But I bet you want to be the veterinarian some day.

ELLEN JANE: Well, maybe, but I really like being an assistant and anyway you have to go to school for a really long time to be a vet. And it takes me a long time to learn things.

BRENDA: Well, why does it take you a long time to learn?

ELLEN JANE: Oh, because I have Down syndrome.

BRENDA: Down syndrome? What's that?

ELLEN JANE: Well, Down syndrome is something I was born with. And part of having Down syndrome is having mental retardation. That's the part that makes me learn slow. But you wait right here 'cause I'm the person who is supposed to get your dog. (she exits)

BRENDA: (addresses audience) Wow! I never met a person who has uh...Down syndrome before. Hmmmm...sure hope my dog's okay.

Ellen Jane returns and places Muffy on top of the table.

ELLEN JANE: Here's Muffy now.

BRENDA: (makes a fuss over Muffy) Oh...Muffy (repeatedly kisses the dog) I missed you so much!

ELLEN JANE: You sure do like that dog!

BRENDA: (exaggerated) I love her!

ELLEN JANE: Well, Dr. Rogers says Muffy's gonna be just fine expect for that little problem with her ears.

BRENDA: Her ears! Oh, what's wrong with her EARS?

ELLEN JANE: Oh, Muffy has little uh...infec...uh...infection, but don't you worry. I have this special medicine and now I'm gonna show you how to put the medicine in Muffy's ears! (takes medicine tube out of her front pocket) First, you...

BRENDA: Oh, you can't do it. You have Down syndrome. You'd better give that medicine to me. (takes medicine from Ellen Jane) Brenda tries to show Ellen Jane by roughly pulling at Muffy's ear. Muffy barks, scratches Brenda, and she drops the tube on the table.

BRENDA: (very dramatically) Oh no, she scratched me! Bad dog! (she blows on her hand)

ELLEN JANE: (petting Muffy) There, there, Muffy. You're not a bad dog... you're just a little bit scared. (jokingly to the audience) And we all know why, don't we?!! (she pets Muffy and gently lifts her ear, and demonstrates the correct way to put the medicine in) There, there, Muffy, this won't hurt a bit. Now lift her ear real gentle like this (Muffy makes a happy sound) See, that's how you do it. She's gonna be just fine.

BRENDA: (surprised) Yeah... I see... She is! Say, do you work here all the time?

ELLEN JANE: Well, when I'm not in school I work here... three afternoons a week. I've got this job coach at school and he helped me get this job because he knows how much I love animals.

BRENDA: Well, what kind of stuff do you do at the animal hospital?

ELLEN JANE: Well, let me see. I do all kinds of stuff. I feed the animals and... oh get this! I'm the person who cleans out their cages! PEEEEEEEE YOOOO!!!!!! And I help Dr. Rogers put medicine in animals' ears.

BRENDA: You do?

ELLEN JANE: Yup, I put medicine in cats' ears and dogs' ears and once Dr. Rogers and me went out to a farm and you know what I did?

BRENDA: No, what did you do?

ELLEN JANE: (stands proud) Me, Ellen Jane Peterson, put medicine in a cow's ear!

BRENDA: In a COW'S EAR!! WOW!!! I didn't know people with Down syndrome could do so many things!

ELLEN JANE: Sure Brenda, I can do lots of things. The only difference is that it takes me longer to learn things.

BRENDA: Oh! But what do you do when you're not working?

ELLEN JANE: Well, I guess I'm like anyone else my age. I go to high school and I like to hang out with my friends and there's this one boy I really like! (laughs) I've got big plans and stuff... for when I get older, just like everybody else. Now you take Muffy home and don't forget to put this medicine in her ears two times a day!

BRENDA: I won't forget, Ellen Jane.... I only hope I can do it as well as you.

ELLEN JANE: (gets closer to Brenda) You'll do just fine, Brenda, if you remember one little thing.

BRENDA: What's that?

ELLEN JANE: It just takes a little while to learn how!

BRENDA: You know, Ellen Jane, I have a lot of questions for you...

ELLEN JANE: Maybe some of the kids here want to ask me something about what it is like having Down syndrome. If you do just raise your hand.

Script 3: LUNCHTIME

SYNOPSIS: As Jennifer and Brenda eat lunch, Brenda asks how having a learning disability and having mental retardation are different. Jennifer explains the differences and the similarities as well.

BRENDA: Hey, let's sit here. This looks like a good spot!

JENNIFER: Yeah, it's great that Mr. Beame let us eat lunch outside today.

BRENDA: What do you have there?

JENNIFER: Oh, the usual stuff...

BRENDA: (lifting the lunch box lid) OOOOO, Gross! My mom has no imagination when it comes to kids' lunches.

JENNIFER: (head in bag) Oh Brenda. (pause) Hey, how's your dog? Ellen Jane told me Muffy was sick.

BRENDA: You know Ellen Jane? Ellen Jane Peterson?

JENNIFER: Yeah. She's the assistant at the animal hospital. She was really nice to me when my pet turtle died.

BRENDA: Yeah, she is nice. She took really good care of Muffy. Hey... did you know that Ellen Jane has Down syndrome?

JENNIFER: Uh huh... Hey look, my mom gave me homemade cookies. Yum!!!

BRENDA: Well, did you know that she has mental retardation and that's the reason she learns slowly?

JENNIFER: Yup! (she looks in her bag again) Hey, do you want a cookie? They are really good!

BRENDA: No thanks, I'm cutting down on sweets. Uh Jen, can I ask you something?

JENNIFER: Sure!

BRENDA: Well, how is having Down syndrome different from... you know... what you've got?

JENNIFER: Oh, you want to know how having mental retardation is different from having a learning disability?

BRENDA: Yeah. If you don't mind me saying so, Jennifer, it seems like the same thing to me.

JENNIFER: Well, I used to think that too, so I asked my mom and dad about it.

BRENDA: Well, what did they say?

JENNIFER: They told me that learning disabilities and mental retardation are two different things.

BRENDA: They are?

JENNIFER: Uh huh, see I have a learning disability. That means I learn differently from most kids. I learn some things quickly, like math, but I have trouble learning other things, like reading. It doesn't mean I can't learn, I just need to be taught in a different way.

BRENDA: Oh, that's why you work with Ms. Ricci, the resource teacher at school.

JENNIFER: Yeah. Ms. Ricci teaches me the way I learn best! Ellen Jane is different from me because she learns *everything* slowly, like doing school work, doing the laundry, or making a sandwich. It takes her longer and there may be some things that are just too hard for Ellen Jane to learn.

BRENDA: Oh, so that's how you're different.

JENNIFER: Yeah, but we're alike too.

BRENDA: How are you alike?

JENNIFER: Well, we both like to tell jokes and we both like animals. And we both have feelings just like, you know, everybody.

BRENDA: Yeah, I guess we're all really alike on the inside!

JENNIFER: Yeah, we're alike because we all have feelings. But it is the differences that make life interesting. I mean imagine how boring the world would be if everyone was the same. YUK!

BRENDA: Yeah. (she pauses, gasps, looks around) Hey Jen, did you notice we're the only ones out here? (looks at watch) Oh no! We're late for math and I'm having so much trouble with division!

JENNIFER: Oh, don't worry, I can help you with division after school! Come on, let's go!

Appendix D

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WHO I KNOW

1. Do you know someone who is handicapped?

   Yes No

2. What is that person's handicap?

   ☐ Blind ☐ Deaf ☐ In a wheel-chair or on crutches ☐ Retarded ☐ Other (write it down) _____

3. Who is this person?

   ☐ A person in my family ☐ A friend ☐ A person whom I have seen or talked to

4. Do you like this person?

   ☐ Not at all ☐ A little ☐ Some ☐ A lot

---

5. Have you read a story or seen a movie or TV show about someone who is handicapped?

☐ Story or book ☐ TV show ☐ Movie ☐ No

6. What was the person's handicap?

☐ Blind ☐ Deaf ☐ In a wheel-chair or on crutches ☐ Retarded ☐ Other (write it down) _____

7. Did you like this person?

☐ Not at all ☐ A little ☐ Some ☐ A lot

Appendix E

KNOWLEDGE SCALE

1. Most handicapped kids worry a lot.	Yes	No	Not sure
2. Most handicapped kids have to do jobs at home, like taking out the garbage.	Yes	No	Not sure
3. Parents of handicapped kids don't usually let them go outside by themselves.	Yes	No	Not sure
4. Blind kids need help with just about everything they do.	Yes	No	Not sure
5. Most retarded kids can learn to ride a bike.	Yes	No	Not sure
6. Handicapped kids don't have many friends.	Yes	No	Not sure
7. Some handicapped kids can play sports with other kids.	Yes	No	Not sure
8. Deaf kids have a lot of trouble learning math.	Yes	No	Not sure
9. A person in a wheelchair could be a doctor or a teacher.	Yes	No	Not sure

10. All handicapped people were born that way.	Yes	No	Not sure
11. Kids who have handicaps are sad most of the time.	Yes	No	Not sure
12. A blind kid can go places by himself.	Yes	No	Not sure
13. Handicapped kids usually have brothers or sisters who are not handicapped.	Yes	No	Not sure
14. Most handicaps go away or get better when kids grow up.	Yes	No	Not sure
15. Most retarded kids cannot talk.	Yes	No	Not sure
16. A person in a wheel chair or on crutches usually stays close to home.	Yes	No	Not sure
17. It is harder for a blind person to get around than for someone who can see.	Yes	No	Not sure
18. Handicapped kids are more polite and well-behaved than other kids.	Yes	No	Not sure
19. A handicapped person can help other people.	Yes	No	Not sure
20. You can catch many handicaps by being too close to handicapped kids.	Yes	No	Not sure

21. Deaf kids do not speak as clearly as other kids.	Yes	No	Not sure
22. Handicapped people often act very different from other people.	Yes	No	Not sure
23. Handicapped kids want people to give them special treatment.	Yes	No	Not sure
24. Most retarded kids look funny.	Yes	No	Not sure

Appendix F

SOCIAL DISTANCE SCALE

1. It would be okay if a handicapped kid was in my art and music class.	Yes	Maybe-yes	Maybe-no	No
2. It would be okay if a handicapped kid slept over at my house.	Yes	Maybe-yes	Maybe-no	No
3. It would be okay if a handicapped kid borrowed my bike.	Yes	Maybe-yes	Maybe-no	No
4. It would be okay if a handicapped kid went to my school.	Yes	Maybe-yes	Maybe-no	No
5. It would be okay if a handicapped kid was in my favorite club.	Yes	Maybe-yes	Maybe-no	No
6. It would be okay if a handicapped kid ate lunch at my table.	Yes	Maybe-yes	Maybe-no	No
7. It would be okay if a handicapped kid was invited to my birthday party.	Yes	Maybe-yes	Maybe-no	No
8. It would be okay if a handicapped kid ate lunch at my house.	Yes	Maybe-yes	Maybe-no	No
9. It would be okay if a handicapped kid sat next to me in class.	Yes	Maybe-yes	Maybe-no	No
10. It would be okay if a handicapped kid went to the movies with me.	Yes	Maybe-yes	Maybe-no	No

Appendix G

Procedural Checklist

Pick up permission forms several days before pretest.
Assign 13 digit code numbers to those children who have parental permission.
Write code on each page of survey packet for pretest, posttest, and follow-up tests. Pretests will be in yellow folders, posttest packets will be in red folders, and follow-up packets will be in blue folders. All three folders will be in an accordion file folder according to classroom. Each building will have its own crate.
* The above will be done for you. Just meet in the office of each school, and you will be given a folder with all of your survey packets ready to go. Thank you!

Pretest:

* Use packets from the yellow folders.
* Introduce yourself. Tell them you are a student at UNO, and that as part of your schooling you have to do a special project that you would like them to be a part of. They will be seeing a puppet show called the Kids on the Block tomorrow. We would like to know what they learn from the puppet show, so we are going to ask them to answer some questions. These questions are not a test, and they don't have to worry because there aren't any right or wrong answers, but we want to know what they think and feel. We won't put their names on the papers, and no one will know how they responded. We want them to respond honestly and accurately. Don't look at a neighbor's paper, because we want to know how they feel.

* Obtain Child Assent - read through assent, have them sign and date it. Collect assent forms and place in assigned file in the accordion folder with parental permission forms.
* Hand out surveys. Read each question aloud. Walk around the room to make sure they are keeping up and filling in their answers in the right places.

* Only respond to questions in a very general way, for example, if they ask what a handicap is, tell them that you want to know what they think it is, and that you can tell them in more detail at the end of the study. You can say that it is the same thing as a disability.

* On the Who I Know questionnaire, tell them to keep in mind only one person as they fill this out.

* On the Knowledge Scale, explain that if they circle 'yes' it means they think the statement is true, and if they circle 'no' they think the statement is not true, or is false. They can circle not sure if they really can't decide.

* On the question, "Handicapped kids don't have many friends," tell them that if they respond 'yes' then that means that they think kids with disabilities don't have many friends, and that if they respond 'no' then that means they think they do have many friends.

* On the Social Distance Scale, when reading the first question, say, "Circle 'yes' if it is definitely okay with you if a handicapped kid went to your school, circle 'maybe yes' if you think it would be okay, but you're not totally sure, circle 'maybe no' if you would rather not have a handicapped kid in your school, and circle 'no' if you definitely would not want a handicapped kid to go to your school."

* Explain that you have four more questions for them to answer individually. Discuss responding honestly, and confidentiality. Tell them that they are not to discuss these questions with anyone after they are done. Talk about how someone's feelings might get hurt if they do.

* Have each child go to the back of the room individually to answer the sociogram questions. Have them bring their survey packet with them. Write their subject number in the space provided on the sociogram measure.

* Thank the class, tell them to enjoy the puppet show tomorrow, and remind them that you will bc back the day after the puppet show to ask them these same questions again.

* Ask the teacher which children have a verified disability, and write the disability next to their name on the class roster.

Posttest:

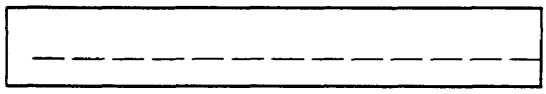
* Use the packets from the red folders.
* Ask if anyone had been absent and did not see the performance. Indicate on the surveys who had been absent.
* Hand out the surveys. Many children will ask why they are taking the same test again. Tell them that you are interested in finding out if they learned anything from the puppet show, and that you want to see if any of their answers have changed.
* Follow procedures from above. Sociogram questions will not be completed at the time of posttest.
* Remind them that they will fill out these same forms again in four weeks.

Follow-up test:

* Use the surveys from the blue folders.
* Follow procedures from above.
* Let them know that you will tell them how the study turned out, but that they will be in 3rd and 6th grade by the time it is done.
* Thank them for participating, and tell them that they helped us learn something very important.

Appendix H

Sociogram



Who would you most like to sit next to in class?

1.

2.

3.

Who would you most like to play with at recess?

1.

2.

3.

Who would you most like to study with?

1.

2.

3.

Who would you least like to spend time with?

1.

2.

3.

Appendix I

AAMR Functional Criteria

Communication: Communication includes the ability to comprehend and express information through symbolic behaviors (e.g., spoken word, written word/orthography, graphic symbols, sign language, manually coded English) or nonsymbolic behaviors (e.g., facial expression, body movement, touch, gesture). Specific examples include the ability to comprehend and/or receive a request, an emotion, a greeting, a comment, a protest, or rejection. Higher level skills of communication (e.g., writing a letter) would also relate to functional academics.

Self-care: Self-care refers to skills involving eating, dressing, grooming, toileting, and hygiene.

Home living: Home living refers to daily functioning within a home; housekeeping, clothing care, property maintenance, food preparation, planning and budgeting for shopping, home safety, and daily scheduling. Related skills include orientation, behavior in the home and neighborhood, communication of choices and needs, social interaction, and application of functional academics in the home.

Social skills: Social skills refer to appropriate and inappropriate social behavior. Appropriate social behavior includes such behaviors as making friends; showing appreciation, smiling, taking turns, cooperating with others, demonstrating honesty, trustworthiness, and appropriate play, showing concern for others, displaying empathy, and being fair. Inappropriate behavior includes behaviors such as tantrums, jealousy, fighting, excessive competitiveness, selfishness, public sexual behavior, interrupting others, overstaying a welcome, being overly demanding, constantly needing reassurance, and being nonassertive.

Community use: Community use refers to appropriate use of community resources. This includes traveling in the community, shopping for groceries and other items, purchasing or obtaining services from community businesses (e.g., gas stations, repair shops, doctor's offices), attending places of worship, using public transportation, and using public facilities (e.g., schools, parks, libraries, recreational centers, streets, sidewalks, theaters). Related skills include appropriate behavior in the community, indicating choices and needs, social interaction, and the application of functional academics.

Self-direction: Self-direction refers to making choices. Self-direction includes learning and following a schedule, initiating appropriate activities consistent with one's personal interests, completing necessary or required tasks, seeking assistance when needed,

resolving problems in familiar and new situations, and demonstrating appropriate assertiveness and self-advocacy.

Health and safety: Health and safety refers to maintaining one's own well-being: appropriate diet, illness identification, treatment, and prevention, basic first aid, sexuality, physical fitness, basic safety (e.g., following rules and laws, using seat belts, crossing streets, interacting with strangers, seeking assistance), regular physical and dental check-ups, and daily habits. Related skills include protecting oneself from criminal behavior, indicating choices and needs, interacting socially, and applying functional academics.

Functional academics: Functional academics refer to cognitive abilities and skills related to learning at school. Writing, reading, basic practical math concepts, basic science as it relates to the awareness of the physical environment and one's health and sexuality, geography, and social studies are included. The focus is not on grade-level academic achievement but on the acquisition of academic skills that are functional in terms of independent living.

Leisure: Leisure refers to a variety of leisure and recreational interests that reflect personal preferences and choices. Public activities should reflect age and cultural norms. Skills include choosing and initiating activities, using and enjoying home and community leisure and recreational activities alone and with others, playing socially with others, taking turns, choosing not to participate in leisure activities, participating longer, and

expanding one's awareness and repertoire of interests and skills. Related skills include behavior in the leisure and recreation setting, indicating choices and needs, social interaction, application of functional academics and mobility.

Work: Since this individual is a child the "Work" section does not apply to his situation and should be left blank. However, review with the class what the "Work" Adaptive Skills would involve if they were evaluating an adolescent or adult. Work relates to holding a part-time or full-time job (supported or nonsupported) or participating in a voluntary activity in the community. Related skills include specific job competence, appropriate social behavior, appropriate work skills (e.g., completion of tasks, awareness of schedules, ability to seek assistance, take criticism), money management, the application of other functional academic skills, and skills related to going to and from work, preparing for work, managing oneself at work, and interacting appropriately with co-workers.

Appendix J

Subject 1 is a female student with Down's syndrome. She has attended her current school since kindergarten, and is presently in fifth grade. Her classroom teachers and principal report much acceptance on the part of her peers. She has reportedly been invited to birthday parties and sleep-overs at the homes of her classmates. Data gathered from 10 students on the sociogram measure would suggest that she was not rejected (she was not mentioned by any student on the negatively worded question (Who would you least like to spend time with?). At the time of pre-test, one student selected Student 1 as someone they would like to sit next to, and two students selected her as someone they would like to play with at recess. One student selected Student 1 as someone they would like to sit next to on the follow-up measure.

During the initial observation at the time of pre-test, Student 1 was observed in science class during a snail race. They had previously designed race tracks, and their snails were now competing in a race. This had been a cooperative learning experience, and students were divided into four groups of four students each. Student 1 had another student assigned to work with her throughout the project. The teacher reports that students are often paired with Student 1, and feel that this has fostered much acceptance among class members.

Student 1 sat outside of the group until her partner attempted to include her. This was the initial interaction recorded. During the next half hour, 4 other interactions occurred, all with female members of the group. Two of the five interactions were

coded a 4, two were coded a 3, and one was coded a 1 (ratings range from 1-4, 1 indicates an interaction neither student would be interested in continuing and 4 indicates a positive interaction that both students would be interested in continuing). The interaction receiving the rating of 1 was a one-way, nonreciprocal interaction, in which the teacher requested the interaction.

Ratings at the time of post test included one interaction coded a 1. A male student approached Student 1, saying, "Want this?" He then turned away and said, "I'll share with a friend." This was the only interaction occurring during this half hour observation period. The observation took place during music, and there were many opportunities for interaction. The students were again working in cooperative learning groups of four students per group. Student 1 sat toward the back of the room, and was not encouraged to participate.

Follow-up observational data indicated several positive interactions (three rated as 4s, and two rated as 3s) that occurred for several minutes at a time. Boys and girls were observed to be interacting with Student 1 during gym class. Student 1 was included in "small talk" while the students waited for instructions. She did not respond verbally, however, she was obviously pleased, and smiled at the other children. A female student ran laps with Student 1, staying with her even as her peers continued to surpass them. During a game of kickball, six children gave her a High-5 after she attempted to kick the ball. After Student 1 made a home-run she was hugged by 4 children on her way in. Overall, it appeared to be a very positive time with many interactions.

The second student who met AAMR criteria was a second grade male with developmental aphasia. He was relatively new to the school, and had only recently received a diagnosis of developmental aphasia. His teacher reported that he there was little acceptance by his peers, which was supported by sociogram data. Not one of his classmates mentioned him on any of the positively worded questions (e.g., Who would you most like to...1) sit next to, 2) play with at recess, or 3) study with?), however, 11 of 14 students (79%) mentioned him on the negatively worded question (Who would you least like to spend time with?). Thus, based on sociogram data he appeared to be a very rejected child, rather than simply neglected.

Unfortunately, rejection was also supported by observational data. Student 2 was observed at the time of pre-test during an art activity. The students were free to talk quietly at their tables. Student 2 made three attempts at interactions with the other three students at his table, and all three were rejected, with the other children ignoring him, or saying, "That's stupid." After art the children sat in a circle on the floor for a discussion. Student 2 sat back away from the other children after another child said, "I don't want to sit by him." He continued to make attempts at interactions, and frequently smiled at his classmates. Another boy, the one most often selected for the positive sociogram questions, came back and sat with him. They conversed, and he even put his arm around Student 2 at one point.

The post-test observation occurred during science. The students were engaged in another circle activity lead by the paraprofessional assigned to work with Student 2.

They were discussing rocks and fossils. The same boy who interacted with Student 2 during the pre-test observation was sitting next to Student 2 again. No interactions, either positive or negative occurred during this activity. A tornado drill occurred and the students had to line up to go to the basement of the gym. Student 2 again attempted an interaction with two girls which was coded a 2 because there was a reciprocal interaction, but the quality was low.

The interactions during the follow-up observation were more positive and frequent than during the other two observations, however, the observation occurred during gym class, so this increase is likely due to the setting. Student 2 has significant expressive language delays which likely affect his interactions with his classmates. His motor skills are not as delayed, and he is able to more fully participate in the activities during gym. Five interactions were recorded during this half hour (two 4s, two 3s, and a 2). While running laps around the gym the boy from the previous positive interactions ran with him and frequently encouraged him. Several other children picked up on this, and also began to encourage Student 2. He responded to this encouragement by running faster and smiling. Two children ran by and slapped him on the back in a friendly manner as they passed. Student 2 was also observed 'dancing' with the boy who began the encouragement. Both students were laughing and obviously enjoying themselves. Student 2 was again joined by this student while he tied his shoes. They were engaged in conversation that both students appeared to want to continue. The conversation continued as they got into line at the drinking fountain, and led to conversation with two

other children. Student 2 appeared extremely happy during these interactions, and worked to continue them. Difficulties arose during attempts at conversation, however, and many of the children were not patient enough to wait while he tried to tell them something.

The differences in the nature or amount of interactions observed for either student over the course of the study were minimal. While the positive interactions increased for Student 2 at the time of the follow-up, this is likely due to several factors unrelated to the Kids on the Block program. First, the setting in which the observation occurred may have impacted student interactions. Expressive language is not as important during interactions in gym class as it is in other classroom situations. It is also possible that the students were becoming more accepting simply because they were becoming more familiar with Student 2 since he had now been in their classroom for an additional four weeks. A third reason for this increase in interactions may have been the result of the attention from the "popular" student in the classroom. Other students may have been modeling the positive interactions between this student and Student 2.