

A STUDY OF THE EFFECT OF COGNITIVE AND AFFECTIVE
INTERVENTION ON ATTITUDES OF UPPER ELEMENTARY
CHILDREN TOWARD PHYSICALLY
DISABLED CHILDREN

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CHAPTER I

Introduction

Statement of the Problem

The passage of P.L. 94-142 in 1975, with its mandate for action by September, 1978, impelled for the whole country opportunities for interaction with the handicapped. The implications inherent in such primarily involuntary contacts deal with the beneficial or deleterious effects on all those involved. The point of the legislation appeared to encompass within the boundaries of the acceptable those who deviated to a marked degree from the norm. The ramifications of the legislation are myriad. Overall recommendations for the procedures of P.L. 94-142 have frequently shown themselves to be insensitive to the needs of those affected. If we make decisions about handicapped children in a negative sense, we are limiting their opportunities. Changing attitudes can be accomplished by acknowledging feelings, beliefs, and values, gaining information and empathy, and working with political awareness (Barnes, 1975). Of particular relevance to the study are the attitudes toward each other of those who will need to interact: the handicapped with teachers, principals, and

peers. Saint-Martin (1977) asks of what moment it is to destroy architectural barriers if the psychological ones remain? "If, as we believe, the richness of human societies resides in the diversity of their members, integration, which benefits everyone, depends on restoring to the 'handicapped' their full human value" (p. 21). Although a number of studies have been made with regard to the attitudes of the nondisabled toward the disabled, relatively few have addressed the problem of encouraging positive attitudes, indeed altering attitudes in a positive direction, of the elementary school nondisabled child to his disabled peers. It seems of particular importance we learn how best to remove the barrier to perception that such things as labels and prosthetic appurtenances pose.

Brant (1979) conducted a study in an effort to identify those conditions or factors which may diminish receptivity of administrators, counselors and teachers of vocational education toward the handicapped. Results indicated that both affective and cognitive domains had negative attitudes; the most efficacious interpositions were information approaches and social contact approaches. The most fundamental of negative attitudes toward the handicapped tended to be the affective ones. The study pointed out that the attitudes of handicapped peers influence the effort required for the handicapped to adjust to and benefit from educational

experiences. The nonhandicapped appeared to have negative attitudes.

Thurman and Lewis (1979) acknowledged that studies show that rejection of preschool handicapped children by peers in the regular classes was common. Conjecture was that this phenomenon occurred due to children's innate ability to appreciate differences and respond differently to them. They cited the need for educational strategies which will deal directly with differences and develop an acceptable educational climate for both disabled and non-disabled children.

The use of simulations (Scheffers, 1977) such as the long cane, guide dogs, and Braille were included in a twenty-lesson unit developed to teach fourth graders about blindness. Other strategies included information about the physiology of the eye, causes of blindness, daily living skills, and attitudes toward blindness. Posttesting revealed a great deal of knowledge about blindness and a more positive attitude toward blind people. The problem of this study was the improving of attitudes of nondisabled children in grades four through six toward physically handicapped children.

Purpose of the Study

The purpose of this study was to measure the attitudes of nondisabled upper elementary pupils toward disabled peers using the Attitude Toward Disabled Persons Scale (revised for children). The study measured the changes in attitudes of these nondisabled upper elementary pupils, and indicated in which direction these changes were made following a series of treatments.

Major Hypotheses

In attempting to discover whether final attitudes of nondisabled upper elementary school children toward their physically disabled peers can be changed in a positive direction, and whether the affective or cognitive domains should be addressed in initial treatments, the following hypotheses, stated in the null form in Chapter III, have been established:

1. There will be no significant difference in initial attitudes toward the physically handicapped between the experimental and control groups of children.
2. There will be a difference between experimental and control groups of children in attitudes change from pretest to posttest₂.

3. Both experimental groups will exhibit significant positive attitudes change following experimental treatments while the control group will not.
4. There will be a significant difference in posttest₁ attitudes between groups given treatment #1 and treatment #2 as initial treatments.
5. There will be a significant difference in posttest₂ attitudes between experimental and control groups of children.

Definitions of Terms

Cerebral Palsy. Brain paralysis which involves problems in movement and posture beginning at birth or shortly after.

Muscular Dystrophy. Weakness of muscle groups where muscle cells are gradually replaced by fat.

Spina Bifida. Open defects in the spinal canal due to abnormal fetal development.

Osteogenesis Imperfecta. Imperfect bone formation resulting in brittleness.

Arthrogryposis. Stiff joints and weak muscles causing deformities obvious at birth.

Wheelchair. A chair mounted on large wheels.

Hoag chair. A chair having two wheels at the back and two legs at the front. The seatback is webbed. It must be put in motion by someone other than the occupant.

Crutches. Support used to assist a lame person in walking, usually but not always having a crosspiece at upper end to fit under the armpit.

Walker. An enclosing hip-high framework, sometimes with wheels at front, to support a handicapped person while walking.

Devices Limiting Arm and Leg Movement. Leather straps used to hold an arm immobile or legs together solely for simulation purposes.

Limitations of the Study

This study was limited to students enrolled in fourth through sixth grades in the Greensboro, North Carolina Public School System. Children between ages nine and 13 were included.

Only those children who lived within the boundaries of the Greensboro, North Carolina Public School System were included.

Attitudes were measured on one instrument: the Attitude Toward Disabled Persons (Yuker, Block, & Young, 1960) revised for children--research edition (Friedman, 1975), Forms A and B.

Students participating had permission to do so from one parent. Students could terminate participation at any time. Those who did not have parent permission were not included in the study.

CHAPTER II

Review of Literature

Attempts to alter attitudes have traditionally employed six types of approaches (Donaldson, 1980):

1. direct or indirect structured or unstructured contact with disabled persons;
2. information regarding disabilities;
3. persuasive messages;
4. analysis of the workings of prejudice;
5. simulation of disabilities;
6. discussion held by groups.

Successful interventions appear to have been marked by equal status relationships between handicapped and nonhandicapped persons. "Equal status" refers to social, vocational or educational status. Success was also noted when the contact was with disabled persons who did not exhibit stereotypic behavior (Donaldson, 1980). Leadership positions in agencies working on behalf of specific handicaps are more and more being filled by people with those handicaps (Wright, 1973). The United Cerebral Palsy Association promulgates the concept that people with cerebral palsy have a unique

contribution to make in terms of role models, education, and sharing experiences.

The handicapped of all types are, more and more, integrative parts of society. Many aspects of cognition and affect must be addressed, for handicapped and nonhandicapped alike. Melton (1977) notes some tools to be used: exhibits, films and books on special needs. These may be helpful in altering attitudes and in diminishing discomfort.

Global Attitudes Toward Handicapped

In a study spanning eight years (Harasymiw, Horne, & Lewis, 1976), involving 4,459 Americans and Canadians in 22 disability groups, one of three social distance scales was administered. The disabilities that were most accepted were those, such as ulcers, which had the least debilitation and disruption of work-life. The ones such as drug addiction which seemed to reject social values were least accepted. In order of preference regarding type of disability, the physical ranked highest, with sensory next, then psychogenic, and finally social. In Japan, Jordan and Cessna (1969) grouped 211 subjects into four areas: those who worked in special education and rehabilitation, regular teachers, executives or managers, and laborers. Those who worked in special education or rehabilitation had less traditional, more progressive attitudes toward the disabled. In an

ingenious experiment designed to measure whether more sympathy would be elicited in regard to handicapped children than nonhandicapped children, Cairns and Bochner (1974) arranged for 300 letters to be dropped in a downtown area of Sydney, Australia. The addresses on the envelopes were varied; 50 each were addressed to one of five types of handicapped children's groups and 50 merely to "Children's Aid Group." The return rate for each experimental group was compared with the return rate for the control. In four of the five experimental conditions, the return rate was significantly higher.

Investigating attitudes toward the mentally retarded, Harth (1973) addressed four population groups: professionals, institutional employees, parents of retarded children, and retarded children. Professionals (i.e., teachers) had a tendency to underestimate student ability. Institutional employees evinced more than one set of attitudes, with those in power more humanistic and targeting change, but those working directly with patients having a different target and possibly sabotaging the good intentions of the others. Parental attitudes, along with socioeconomic status and education, were "more important in determining speed of institutionalization than was the child's handicap or his behavior problem" (Harth, 1973,

p. 154). Retarded children were caught in a vicious cycle: special education teachers expected less, self-derogation resulted, and there was a lower performance in special education classes.

In an article discussing the unfair treatment and stigmatization of persons with learning disabilities, Vasa, Scranton and Rankin (1976-77) noted that this occurred in school, on the playground, and was evident in the view of insurance companies, who apparently used the medical model. Twenty-eight insurance companies in Nebraska, when responding to their questionnaires, indicated that special education was a substandard classification. Children under 24-hour supervision were not insurable although those in outpatient facilities were. Graduates of special education programs were not as readily insurable as graduates of regular education programs.

Comic books, too, reflect attitudes toward the handicapped. Weinberg and Santana (1978) catalogued 290 characters in 40 different comic books. The classifications were "good," "evil," or "neutral." In the responses, no characters were rated "neutral" if they had physical deformities, sensory impairments, skin abnormalities, head distortion, or limb deformities. Of those rated "evil," 57% had physical deformities, 71% had distorted heads, and 75% had

limb deformities. It was concluded that the physically disabled are portrayed in unfavorable, stereotypic ways.

The way society responds to deviance may be the heart of the problem of attitudes toward the physically handicapped. Eisenman (1972) suggested that we conceptualize deviance as a process of social labeling: when society so defines him a handicapped person becomes deviant. Labeling had a significantly negative effect on 7th and 8th grade boy's attitudes toward mentally retarded peers (Cook & Wollersheim, 1976).

Nonhandicapped persons may experience uncertainty, strain, and inhibitions in their dealings with handicapped peers; this is a strong factor in developing and keeping negative attitudes (Evans, 1976). He suggested that the uncomfortable restraining force be removed from nondisabled persons by allowing disabled persons to express their feelings about their handicap and about the inquisitiveness of others. There are social taboos against talking about physical disabilities; people pretend they don't notice them. Nondisabled adults are afraid of children's questions, which may engender embarrassment and/or anger in the adults who are responsible for answering these questions. Melton (1977):

The handicapped person is treated as if he or she were normal, as if the differences did not exist.

Besides leading to stilted interaction and unrealistic expectations for the handicapped person, the person is able to engage in social interaction only if he or she behaves as if they were normal. (p. 89)

Langer, Fiske, Taylor and Chanowitz (1976) conjectured that physically different persons are avoided because of a conflict in the observer, to wit: the desire to stare at a novel stimulus vs. a desire to cleave to the premise that staring is to be avoided. In their research, it was observed that reduced avoidance occurred when there was a reduction in stimulus novelty.

The attitude of the community toward the handicapped has evolved through five general stages (Saint-Martin, 1977): the philanthropic, the "public welfare," fundamental rights, right to equal opportunity, and right to integration. This last stage presupposes information, as human beings will accept what they know. Klimanski (1978) has shown that attitudes may be determined by a framework of views--conditioning or situational--and depends on the history of interaction between disabled and nondisabled persons.

Family Attitudes Toward Handicapped

The handicapped child has a large influence on the family, caused by care for him, interpersonal conflicts and tensions, and family structure (Stockman, 1967). Since

there is so much that cannot be changed in the structure of the handicapped, Stockman advocates that the characteristics of his personality be addressed in the context of the environment.

Individuals with mental and physical handicaps most frequently are met with definitions which stigmatize them. Darling (1978) utilized a genetic counseling service to select randomly from its files 25 families having children from birth to 19 years with apparent disabling birth defects. A questionnaire revealed that most parents had developed an acceptance that was realistic and loving although many had had negative initial reactions. Many parents have complained about physicians who were reluctant to treat their children and who were not honest in their diagnoses and prognoses. Darling (1978) randomly selected and interviewed 15 pediatricians from those in private practice. Data reflected the accuracy of the reports by parents of the interaction between parents and physicians. It seems that a broadened outlook on the part of the medical and other representatives of society is necessary to enhance the life quality of the congenitally handicapped child. Parents and other primary members of the circle involved with the handicapped child provide love and support.

Parents of handicapped children experience difficulties. Van Kaam (1977) noted that in an unconscious effort to enhance their own power, parents may foster the child's dependency; the child's development may be interfered with by their care-taking; material gain may develop as a secondary motive; attempts at exploration and expression on the part of the child may be inhibited by the parents' embarrassment; and lack of reciprocity by the child may result in diminished care-taking. Heisler (1974) advocates humanistic depth therapy for parents of handicapped children. She states that parental adjustment to the handicap of the offspring "is rooted within the deeper dynamics of the parents' personality" (p. 339). Certain limitations are imposed upon the life experiences and functioning of a physically handicapped person. Covert but significant interchanges between the physically handicapped child and his parents help form the child; the handicap elicits from the parents their usual methods of functioning. No matter where the locus of the handicap, communication and expression may be limited in some children. This may cause difficulty in allowing others to see beyond the handicap to the person; it may be that the nondisabled will find themselves relating more to the handicap than to the person (Heisler, 1974). This may have a disastrous, depersonalizing effect, she says, and:

In order for . . . potential resources of the handicapped child to be actualized, he needs from his parents a sensitive recognition and support of his developing identity. Such sensitivity on the part of the parent is born of his own self-awareness. (p. 330)

Teachers' Attitudes Toward Handicapped

O'Rourke (1980) found a relationship between principal and teacher attitudes and the school morale of handicapped students. In Pietroski's (1980) analysis of background variables, she documented the relationship of the influence of personal, educational and professional variables to the attitudes of classroom teachers regarding mainstreaming. The Attitudes Towards Mainstreaming Scale was developed for this study, which found that the most influential factors in positive attitudes were support services and previous educational training for the regular educator.

Allen (1978), using the Attitude Toward Mainstreaming Inventory and the Rucker-Gable Educational Programming Scale, reported that teachers with the most experience with people who were handicapped had negative attitudes significantly worse than teachers with less experience with the handicapped. In Puerto Rico, 82% of the respondents to Rivera-Valentin (1978) were opposed to placing mentally retarded pupils in regular classrooms.

Cole (1976) used three measures, including the Vineland Social Maturity Scale. Cerebral palsied and trainable mentally retarded children were rated less competent socially than deaf, educable mentally retarded, or normal children 6½ to 12½ years old. Teachers rated all 60 children lower in social competence than their parents rated them.

In a study involving 473 nondisabled teachers using the Attitude Toward Disabled Persons Scale (ATDP), Conine (1969) was unable to detect a very high degree of approving reception. Females scored higher than males, showing a higher degree of acceptance. Elementary school teachers did not appear to be greatly accepting or rejecting of handicapped persons. Attitudes did not seem to be connected with respondees' race, age, religion, education, experience, choice of special area, or contact or relationship with a handicapped person. There was some evidence that cognitive understanding does not always mean a reflection of feelings. Harasymiw and Horne (1975) found attitudes of teachers of integrated classes to be significantly more positive than those of teachers who did not have handicapped students. Attitudes of female teachers were not, in this study, significantly different from those of male teachers. Age and amount of education were not significant.

Berrigan (1980) conducted four six-hour workshops. The Classroom Integration Inventory (CII) (Haring, Stern, & Cruickshank, 1958) was given to a randomly selected ninth of the participants. The first such ninth took the inventory before the workshop; the next ninth after the first workshop, and so on after each section of the workshop. Mean CII scores increased significantly after the series of workshops was completed. Jamison's (1978) use of the Teacher Effectiveness Training program as a tool to increase positive attitudes of regular classroom teachers toward the mildly handicapped did not appear to be effective. Shapiro (1978) concluded that in-service plus role-playing resulted in greater gains than role-playing alone.

Himes (1976) surveyed regular classroom teachers, special educational personnel, and elementary school principals. Ten rank-ordered variables were found to be important by educators for successful integration of handicapped children: teacher aides, lower class size, prescription programs, resource teachers, instructional materials, and consultants, administrative support, teacher in-service training, counselors, and curriculum center/library. Mandell (1976) found that team-teaching, years of teaching experience (inverse relationship), a diagnostic course, availability of a resource teacher, pre-special education experience, number

of university special education courses, class-size (25-27 students), and participating in in-service programs were significant predictors of positive attitude toward mainstreaming among teachers. There was a need to understand the complexity of the teacher's attitude in order to develop a positive classroom environment. Less experienced teachers with a knowledge of mildly educable handicapped appeared to have a more positive view of mainstreaming. In addressing the attitudinal changes of teachers who were not trained in working with the exceptional child but who had mentally or physically handicapped preschoolers in their classrooms, favorable agreement to the following was noted (Clark, 1976): class routines must be modified; both normal and exceptional children are effectively instructed with similar competencies; particular educational methodologies are not necessarily effective with exceptional children in a particular category; insight on the part of the staff does not necessarily insure normal responses; and it is not necessarily easier to teach physically handicapped than mentally handicapped children.

It is interesting to note the results of Gorelick's (1973) attempt to discover the willingness of preschools to integrate children with handicaps. Of 230 nursery schools in N.W. Los Angeles County sent questionnaires, 72 responded.

Sixty were willing to integrate, 27 had children with physical handicaps and 17 had children with mental handicaps. Among the reasons given for unwillingness to accept handicapped students were: staff was not trained, facilities were not appropriate, and licenses were not appropriate. Children with severe handicaps were the least desired, while children with hearing impairments were the most acceptable.

After in-service training provided to regular elementary teachers by other regular elementary educators enrolled in graduate study of exceptional children, Aldridge (1978) used the Cognitive Measurement Scale to measure knowledge and the Attitudes Toward Mentally Handicapped Children Scale to measure attitude. Knowledge improved but attitude did not. Fiorentino (1978) studied the effect of a short-term in-service education program on regular education teachers and found the in-service contributed significantly to positive teacher attitude change as well as teacher knowledge. No difference for sex of teachers or for experienced versus inexperienced teachers was found.

A humanistic curriculum was offered to one group of teachers by Rothschild (1978) and a cognitive curriculum was offered to another; a third group, not involved in either course, acted as control. Pretested and posttested on the Rucker-Gable Educational Programming Scale (R-G EPS)

and the Attitudes Toward Handicapped Children Scale (ATHC), the affective group scored significantly higher than the cognitive group on the R-G EPS, but there was no difference on the ATHC.

Treatments desensitizing through imagination or in life were utilized by Clark (1978). Results indicated that improved attitudes in teachers toward severely handicapped persons and lowered anxiety in dealing with severely handicapped persons were effected by the treatments, with no significant difference between the two treatments noted.

Segments of social interaction studied by Krein (1977) indicated that special needs children elicited and received more conflict as both the teacher and peers' sole target, and were involved in fewer nonconflict situations.

Kreinberg and Chow (1974) identified four types of problems in integrating the mildly handicapped into the classroom: legislative constraints and mandates, teacher training institutions, instructional arrangements, and pressures for accountability. Within these, attitudes of special and regular education teachers, management of instruction, and the politics inherent in the community are special problems. As they put it, "The children, teachers, principals, superintendents, parents and community create their own sets of expectations and goals against

which outcomes can be evaluated, either formally or informally . . . in any manner of gradual integration of handicapped children out of the self-contained classroom into the regular classroom, the relative frequency with which the same problems occur--across programs--is striking" (p. 2).

Students' Attitudes Toward Handicapped

Richardson (1970) stated that by the time children have reached the age of five or six, a group value appeared to have emerged. Only at this age level was the nonhandicapped child not the most liked. Wylie's (1976) review of several studies corroborates the conclusion that children become aware of physical handicaps in others at about age four and that negative attitudes appeared to increase with age. Weinberg (1975), in examining preschool children's attitudes toward the physically handicapped, found awareness of a handicapping condition increased from 17% among three-year-olds to 71% among four-year-olds and 75% among five-year-olds. Liking, willingness to share, perception of a child's desire to play with subjects were not significantly affected by knowledge about disability. Gerber (1977) worked to discover the ability of nonhandicapped preschoolers to see differences in their handicapped classmates. Results indicated that the nonhandicapped did perceive handicapping

conditions, with 70 of the conditions being tracked. In the sociogram, more nonhandicapped excluded the handicapped and those children with highly visible handicaps were least accepted. The study sample was nine 3½-5-year-old nonhandicapped and 3½-4-year-old handicapped children. Weinberg (1978) found that comprehension of a disability occurred between ages three and four, but negative attitudes toward the disabled appeared between four and five. There was significant favor of able-bodied children over disabled children.

Jackson (1976) studied the following components of self-concept in preschoolers: extraversion, task-oriented behavior, hostility, distractedness and considerateness in 40 normal and 20 handicapped children with different disabling conditions. He found that handicapped children were out-performed by nonhandicapped; the mean level of behavior showed significant change over the year; the mean difference between the two groups in social and task-oriented behavior was significantly reduced over the year; improvement in task orientation in handicapped children was finite; and handicapped children have lower self-concept than nonhandicapped.

Cohen (1978) selected children on the basis of their having had little or no previous contact with physically handicapped people, and ATDP scores which fell below the

fiftieth percentile. Four groups were formed. The first group received systematic desensitization over a four-week period. The second group were given information about the physically handicapped in four 20-minute periods. Group three received both treatments and group four, none. Pre- and post-treatment questionnaires were given in a seven-week interval. Results indicated that systematic desensitization significantly lowered anxiety but did not improve attitude; information significantly lowered anxiety and improved attitudes; and the combination did not have a significant effect.

Simon and Gillman (1979) noted anxiety and reversion to stereotypic and avoidance behaviors even in well-intentioned pupils and teachers in regard to continued contact with mainstreamed blind preschoolers. They caution that the success of mainstreaming is vitally related to extensive preparation for all participants.

Hawisher (1977) evaluated an experimental early childhood curriculum which attempted to create an accepting scholastic environment for the mildly physically handicapped youngster. Two treatment groups and a control group were formed from 133 first-grade children. The group which was both exposed to the physically handicapped and participated in daily activities designed to develop cognition of aspects

of feelings and needs showed greater acceptance and friendliness than did the other groups.

Spontaneous, independent opportunities for interaction with peers of the physically handicapped child frequently have suffered from lack of accessibility. Cormack (1979) developed an Environmentally Designed Learning Model to foster social and educational experiences in an integrated preschool in Cheswick, Pennsylvania. In order to minimize the moderately to severely handicapped child's isolation and exploration deficits, such things as lapboards, special chairs, and "excessive 'therapeutizing'" were eschewed in favor of a thrust toward enhancing functional mobility, adaptability, and social approachability. Preplanning and teacher in-services were considered essential, as was the presence or availability of medical personnel in the classroom for types of care. Although sameness was emphasized, the differences between handicapped and nonhandicapped children were utilized for learning opportunities in the curriculum. Nonquantified peer interactions were observed and the changes from September to March were noted in the areas of increased numbers of physical, verbal and visual contacts noted for each child.

In an upper middle class community, 34 male and 38 female fourth and fifth graders listened to audiotapes of

a supposed spelling bee. Superstein and Gottlieb (1977) used a social distance scale to measure reactions as they viewed photos of actors who portrayed the participants: two normal-appearing, one competent and one incompetent speller or both competent spellers; one normal-appearing and one Down's Syndrome, one competent and one incompetent speller or both competent spellers. Conclusions by Siperstein and Gottlieb were that children did not appear capable of dismissing physical stigmata in their perceptions of others; those with physical stigmata seemed to be less attractive than those without such stigmata. ". . . Children seem to construct stereotypic characterizations of new acquaintances on the basis of their first impression" (p. 460). Popular children tended to be more willing to interact with an incompetent child with normal appearance.

Richardson (1961, 1968, 1971) has done many studies regarding attitudes of children to different conditions. He reported with Hastorff, Goodman and Dornbusch (1961) that children appeared to have a remarkably consistent reaction to children with physical disabilities. In these studies, children were required to rank a series of six photos, ranging from a child with no physical handicap to a child who was obese. Among the ten- and eleven-year-old children studied, analysis of variance indicated there was

no difference in the ordering. Social handicaps were more emphasized by girls than boys. With Royce (1968) he systematically varied skin color and handicap in a series of drawings presented to ten- to twelve-year-old children from lower-income, Negro, white and Puerto-Rican families as well as from upper-income white Jewish families. Physical handicaps appeared to be far more important than skin color in establishing preference. In London (1971) Richardson worked with ten- and eleven-year-old children and concluded that their first impressions are based on appearance. They preferred (1) white children without handicaps, (2) black children without handicaps, and (3) children with facial disfigurements. Least liked were obese children. Prostheses used with amputations increased liking. Some sex differences were noted. The worst social stigma was attached to amputations. Katz et al. (1976) found that white elementary school students favored the white experimenter over black in wheelchair and nonwheelchair situations. Response did not appear to be influenced by the presence or absence of a physical handicap. Parish, Ohlsen and Parish (1978) gave the Personal Attribute Inventory for Children to 131 fifth, sixth and seventh graders and found their order of preference to be normal persons, physically handicapped persons, learning disabled persons, and emotionally disturbed persons.

Peterson (1974) had equivocal results on tests of 420 non-retarded children, grades five through eight. The trend seemed to be that more favorable attitudes were among the older subjects; negative attitudes occurred more among children of more highly educated parents.

Monson and Shurtleff (1979) used filmstrips and open-ended discussion to alter attitudes of 208 five-year-old to twelve-year-old children toward the physically handicapped. Results showed significant improvement in acceptance of the physically handicapped. A follow-up measure one year later showed the gains were maintained or increased.

Melton's (1977) exhibit entitled "What if I couldn't?" was developed for the Boston Children's Museum. Opportunities to explore a variety of orthopedic devices and simulate different disabilities were constructed. Wheelchairs were available for children to learn to maneuver. Included, too, were extensive graphics using verbal descriptions of the handicaps and answers to anticipated questions. The goals of the project were to increase understanding among children of other children with special needs; to effect a positive change in attitude among children; and to determine if the exhibit would disturb or offend viewers. Through observations and interviews, the museum staff determined that parents were complimentary and children were not upset.

Children six and under did not generally make the connection between equipment and disabilities. Children who went through the exhibit without an adult who explained where needed did not have their perceptions altered. However, children who viewed the exhibit with parents along for interpretation and explication were considerably more involved.

Lazar, Gensley, and Orpet (1971) administered the ATDP to an experimental group and a control group. All the children were mentally gifted. The experimental group had a special instructional program which was a special unit dealing with creative Americans, some of whom were handicapped. Special guests came, many of whom had a handicap. Results showed a significant difference in means on the ATDP post-test between experimental and control groups.

In a 45-minute simulation activity developed to discover effectiveness in increasing positive attitudes toward handicapped peers (Dahl, Horsman, & Arkell, 1978), 63 fifth-graders experienced some of the difficulties encountered by those with vision, hearing, coordination and physical impairments. Given a social distance checklist and the ATDP, the children evidenced an increased positive attitude only through the wheelchair experience.

Rapier, Adelson, Carcy and Croke (1972) pre- and post-tested 148 children--59 boys and 89 girls. During the time (one year) between the two tests, each classroom had at least one orthopedically handicapped child integrated. Attitudes among boys and girls developed similarly. ". . . Younger children perceived handicapped children in more extreme ways . . . older children were somewhat more realistic . . ." (p. 222). Findings indicate the necessity for allowing positive interactions between the handicapped and nonhandicapped to develop more favorable attitudes.

Bucich-Naylor (1978) randomly assigned three classes of nondisabled third grade students to two different treatment groups. Group one participated in the Peer-Peer Program, which involved structured contact with disabled peers. Group two participated in the Didactic Program, which utilized information dissemination, modeling, and persuasive tactics. Results did not show a positive attitude change in the nondisabled children.

Simpson, Parrish, and Cook (1976) studied second and third graders in one experiment and fifth graders in a second experiment. Results indicated partial success in attitude change in the younger children who had a four-week training sequence in regard to cognitive growth.

Litvak (1969) found that general attitude enhancement does not increase when exposure period is lengthened; the number of exposure periods seemed to have more effect. Karniski (1979) saw that a decrease in physical distance resulted from an increase in knowledge of the physically disabled.

Strauch (1970), studying the attitudes of normal students toward educable mentally retarded students relevant to contact or noncontact with such children, wrote that it did not appear that contact improved attitudes. A study of nine integrated blind students and 155 normal classmates in Israel revealed that their school marks were in the average range; they were adequately integrated into the social aspect of their classes, but that as the length of exposure to the blind students increased their acceptance by normal peers decreased (Englestein, 1975). Using 327 eleventh-grade Israeli vocational education pupils, Shurka and Katz (1976) showed that perception by the nondisabled of disabled persons related directly to the degree of personal responsibility for the disability and how the disability was incurred.

It is necessary to understand the perspective of the physically handicapped themselves, including their own prejudices (Connors, 1976). These prejudices include

negative attitudes towards debilitating illness, a disability which is visibly stigmatizing, and socially deviant conditions. People with a disability consistently anticipated that those without a disability would view a disability more negatively than the disabled did. Podeanu-Czehofsky (1975) found that cerebral palsied children face problems similar to those faced by children without cerebral palsy, but peer problems tend to be intensified in those having cerebral palsy. Alessi and Anthony (1969) conducted a study of 42 physically handicapped boys and girls in their attitudes toward various kinds of disability. There appeared to be a uniformity bordering on the remarkable in their rank ordering of physical disabilities, validating Richardson's work. Conclusions could be made regarding "most liked" (normal) and "least liked" (obese).

Self-concept gains in 45 eight- to sixteen-year-old handicapped boys were greater than self-concept gains in normal controls in a semi-integrated camp setting (Dibney, 1973).

Piagetian developmental theory and social communication were the bases for Seguin's (1975) study which attempted to explore the possibility of the effect of a physical handicap on social learning and communication. Handicapped children between nine and thirteen years of age lacked knowledge of

mutual interaction. Handicapped children over thirteen demonstrated inferior ability to organize and describe information regarding behavior patterns, personality characteristics, interpersonal networks and interaction.

In an effort to account for negative attitudes towards and low acceptance of disabilities, Abroms and Koderá (1979) studied college undergraduates from two contrasting southern universities. Results showed agreement with Tringo's (1970) study: the four most acceptable handicaps were ulcers, asthma, diabetes and arthritis. According to Abroms and Koderá, the most accepted disabilities were organic ones that can be controlled medically and that would probably not interfere greatly with daily life. The least acceptable were mental illness, cerebral palsy, and mental retardation. Eisenman (1970) showed that those with low self-esteem tend to be more prejudiced against the physically disabled than those with higher self-esteem. Murray et al. (1972), in a research project using 200 psychology students at Kent State University, found that people showing psychological disabilities were viewed less favorably than those showing physical disabilities. The greater the degree of psychological disability, the greater degree of rejection. A sympathy effect for physically disabled persons appeared to be present; the reason may be that a physical disability

is perceived as being the result of an uncontrollable circumstance, while a psychological disability is seen as being weakness within the individual.

Investigating attitudes of able-bodied college students towards the physically handicapped college student, Rice (1980) found that population A (many physically handicapped students on campus) had a less positive attitude than population B (few physically handicapped students on campus) concerning "provisions of academic services within the academic setting . . . willingness to interact with the physically handicapped in in-class and out-of-class experiences" (p. 4533a). Population A was more positive in the area of rights of the physically handicapped to go to college and to get services such as aides for personal care and meals and transportation.

Tringo (1970) used a scale of social distance items constructed and then given to 66 judges who were faculty members or graduate students at the University of Connecticut. He then attempted to investigate varying feelings toward the handicapped classified by disability. Four hundred fifty-five subjects from six sample groups, from high school through high school graduates, participated in the study in which the following hypotheses were supported:

1. A hierarchy of preference exists
2. Demographic variables affect the extent of social distance . . . but do not affect the relative position
3. Females express less social distance . . .
(p. 303)

Those in high school were far less accepting than others in the study. Parish, Eads, Reece, and Piscitello (1977) assessed future teachers' attitudes toward handicapped children. They found that educable mentally retarded and learning disabled children were evaluated significantly less positively than physically handicapped children by 32 nonspecial education majors and 13 special education majors. The special education majors were significantly more positive in their attitudes toward all handicapped than were nonspecial education majors.

Fifty-two undergraduates who were taking an Introduction to Special Education course were randomly assigned to two groups: those who viewed videotapes and those who did not. Daily (1978) used the Handicapped Subscale of Special Vocational Needs Attitude Scale and the ATDP. Nonspecial education majors' attitudes were positively modified through use of videotape, while special education majors' attitudes were positively modified without the use of videotapes. Elsewhere, 50 students, enrolled in introductory courses in special education on the undergraduate level, were

divided into two groups. Group one received an active learning approach on some units of instruction; group two had the lecture-based approach for these units. Approaches were reversed on the remaining units.

Although the active learning approach resulted in more positive attitudes than did the lecture-based approach, this trend was not universal. Certain categories of exceptionality showed consistently positive or consistently negative rank order changes, regardless of instructional method used. (Orlansky, 1979, p. 50)

The ATDP, forms A and B, was utilized with 80 college students in two classes on the psychology of exceptional children (Wilson & Alcorn, 1969). Required narrative reports of 40 students who participated in a simulation exercise showed this experience engendered a large amount of discomfort and psychological stress. The narratives were a useful tool in attitude formation and appraisal.

According to The Invisible Battle, some disabilities necessitate a degree of dependency upon others. However, non-disabled persons have no inborn duty to dispense pity, charity, or extraordinary assistance to a disabled person. Disabled persons lead lives quite similar to those of non-disabled persons. The Invisible Battle has listed pointers for behavior when meeting a disabled person and pointers for helping to integrate disabled persons.

Distances, both psychological and physical, tend to occur in the presence of that which we fear or don't understand or which makes us uncomfortable. Everybody Counts! (Ward, Arkell, Dahl, & Wise, 1979) is a handbook designed to aid the nondisabled to rise above their individual prejudices, so handicapping to us all. In an effort to assist people toward a better understanding, Everybody Counts! says: "We cannot help until we understand. We cannot understand until we feel. We cannot feel until we become" (p. 19). Since how we feel frequently determines much about our learning, it follows that easing anxiety and/or increasing comfortableness will increase learning and insight. Using Pfeiffer and Jones' (1975) experiential learning model (cited in Ward, Arkell, Dahl, & Wise, 1979), the handbook utilizes experiencing, publishing (sharing), processing' (evaluating), generalizing, and applying. Workshop leadership and activity schedules are set up along with sample IEPs and roles of parents, teachers and observers. Discussions of feelings are stressed.

In reference to the interaction between the deaf and the hearing, Higgins (1978) found that a factor causing strain was a lack of understanding of the impact of the impairment itself. Disabled people frequently find themselves treated primarily as "different." Disabilities

become problematic when they create the effect of interrupting successful interaction--i.e., face-to-face encounters with the blind or telephone conversations with the hearing-impaired.

In Sudbury, Massachusetts, the public schools undertook a project headed by Cleary (1976) designed to help school children understand their special classmates. Different methods were taught to and used by sixteen educators, who adapted them for their own use. Methods used were: group discussions, visits by resource people (nurses, therapists), and elderly people who have special needs, role-playing activities, and field trips and audiovisual materials. Developed out of the Sudbury Program was a guide for educators to use in helping nondisabled children to understand the nature and needs of the special population (Cleary, 1975). The guide included a curriculum and named audiovisual aids. Cleary (1976) commented that a medium providing concern, curiosity, comfort and acceptance in regard to likenesses and differences creates a strong program which can help children with special needs.

In East Providence, Rhode Island, Alice Cassidy, Executive Director of the Meeting Street School, developed a program designed to raise the quality of life for handicapped children in their classrooms (Aiello, 1977). The

plan, "Understanding Children with Special Needs," became part of the curriculum at Hamilton Elementary School in North Kingston. It was a one-semester course, designed by Susan Bookbinder, which incorporated many simulation activities, visits from handicapped people, and instruction in the regular curriculum regarding handicapping conditions. Disabled and nondisabled children, teachers and parents responded with great enthusiasm.

Glockner (1974) would have us recall that a handicapped child is first of all a child; his needs are quite the same as those of the child without the handicap. Understanding one's own feelings toward the handicapped child is the basis for workable integration of the child into the mainstream. From an interview with Dr. Jenny Klein, she says it is helpful to learn about specific handicaps of those with whom one will work, and advises that opportunities be taken to attend relevant workshops and classes. Parents of the handicapped should be consulted, at a time when the discussion can be held without the child. Let the child visit the classroom before becoming officially enrolled; phase him in slowly. Be realistic in expectations and be positive; find the child's strong points. Help the child follow the rules. Be honest in regard to questions from others. Watch out for overprotectiveness or cruelty from other children.

As Simpson, Parrish, and Cook (1976, p. 27), point out, mainstreaming "can succeed to the extent that the regular classroom can support the atypical child." Attitudes of peers will be of vital importance to the success of integrating the handicapped child into the mainstream of education.

CHAPTER III

Procedures

Selection of Subjects

Two hundred forty-two children, grades four through six, were randomly selected from a pool of 950 in four schools. Children were randomly assigned to either a control or one of two experimental groups.

Measuring Instruments

The Attitude Toward Disabled Persons Scale (Yuker, Block, & Young, 1960), revised for children--research edition (Friedman, 1975) was used. "True" or "False" answers were circled by participants. Nonreaders had statements read to them by the examiner, who recorded their answers. The instrument contained 30 statements regarding crippled children. Answers circled "true" were given a plus sign and answers circled "false" were given a minus sign by the scorers. Plus and minus numbers were added. Possible range of scores was -30, indicating least accepting attitude, to +30, indicating most accepting attitude.

Steps in the Execution of the Study

Informing Parents. Parents were informed of testing and experiment procedures, in writing, and written permission for the children to participate in the study was obtained.

Pretesting and Posttesting. All children received the pretest four weeks before treatments began. Control groups received no treatment. Experimental groups received the cognitive treatment #1 and the affective treatment #2 but in different orders. These treatments occurred within 24 hours of each other. After these two treatments to the experimental groups, treatments #3 and #4 were given to both groups, so that by the end of the experiment all experimental groups had received all treatments. Posttest₁ was given immediately following the exposure of the subjects to the initial treatment received. Controls were posttested each time the experimental groups were posttested. The second posttest was given after all four treatments had been administered. All treatments were administered over a week's time.

Treatments

1. A short lecture covering the types of handicaps served at the Cerebral Palsy and Orthopedic School followed by a film showing the pupils at the Cerebral Palsy and

Orthopedic School participating in their regular activities during the day. A discussion period followed. Handicapping conditions included cerebral palsy, muscular dystrophy, spina bifida, osteogenesis imperfecta, and arthrogryposis.

2. A socialization visit between students of the Cerebral Palsy and Orthopedic School and students of regular schools in Greensboro. Students from regular schools asked questions of Cerebral Palsy and Orthopedic School students regarding aspects of handicapping conditions.

3. A field trip by students in the Greensboro Public Schools to the Cerebral Palsy and Orthopedic School, conducted by the experimenter.

4. The children in the Greensboro Public Schools participated in simulation activities, using wheelchairs, Hoag chairs, crutches, walkers, and devices limiting arm and leg movement.

Analysis of the Data

At the conclusion of the collection of the data on the three tests, the investigator applied statistical procedures. A 2 x 4 factorial analysis of covariance and ANOVA on change scores were employed. Independent variables were two experimental treatment groups (cognitive initial treatment and affective initial treatment), a control group assignment and schools. There were two dependent variables: affective

and cognitive scores on posttest one and all scores on posttest two. The covariate was the corresponding scores in the pretest. F-tests compared variance between groups and within groups. When significant differences were found, pairwise comparisons using Scheffé's test were conducted to locate the source of the significant differences. A complete summary of the design is given in Figure 1.

Statement of the Hypotheses

- Ho₁: There will be no significant difference in initial attitudes toward the physically handicapped between the experimental and the control groups of children before experimental treatments.
- Ho₂: There will be no significant difference between experimental and control groups of children in attitudes change from pretest to posttest₂.
- Ho₃: There will be no significant difference between attitudes gain scores for experimental groups and control group following experimental treatments.
- Ho₄: There will be no significant difference in posttest₁ attitudes between groups

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Control	Initial Attitude pretest — / posttest ₁	—	—	— / posttest ₂
Exp. #1	cognitive treatment, #1 posttest ₁	affective treatment, #2	treatment, #3	treatment, #4 posttest ₂
Exp. #2	affective treatment, #2 posttest ₁	cognitive treatment, #1	treatment, #3	treatment, #4 posttest ₂
covariate				

repeated measures

Change 2

Figure 1. Summary of Design

given treatment #1 and treatment #2 as initial treatments.

Ho₅: There will be no significant difference in posttest₂ attitudes between experimental and control groups of children.

CHAPTER IV

Results

Analysis of the Subjects

From a population of 950 upper elementary school children, 300 returned permission slips enabling them to participate in the study. Of these, 165 completed all treatments and tests in the experiment and 77 completed all tests as controls. The subjects came from all socioeconomic areas in the city of Greensboro, North Carolina. The Greensboro Public School System determines socioeconomic status (SES) by educational level of parents, beginning with formal education ending at the elementary school level and continuing to the graduate level. For the purposes of this study, SES was limited only by SES groups represented in the schools selected for the study.

The criteria for selection of the subjects were:

(1) that they attended grades four through six in one of the four selected schools in Greensboro; (2) that they be willing to participate in the study; (3) and that they have written permission from one parent to participate in the study. No attempt was made to control for race, sex, or intelligence. Races represented were Caucasian, Black,

American Indian, and Oriental. Both males and females were included.

Subjects ranged in age at the beginning of the project from 9-0 to 13-3. The lowest IQ was 57 and the highest IQ was 128, as recorded on group CTB IQ test data. There were no children with physical disabilities requiring orthotic or prosthetic devices or physical or occupational therapy.

Some children were not permitted by parents to participate in the study for the following reasons: (1) parents objected to time taken from classroom studies; (2) parents did not want their children to simulate the handicaps of physically disabled children; (3) parents did not want their children to visit the Cerebral Palsy and Orthopedic School; and (4) parents neglected to sign the permission slips before the experiment began. Some children did not take the permission slips home to be signed; some children lost slips and some children did not want to participate. During the period of time between returning permission slips and posttest₂, 58 children were dropped from the study for the following reasons: (1) absence from school on days treatments were given, (2) moving out of the school district, and (3) having more than one child in a family being permitted to participate.

Analysis of the Data

Means, standard deviations, and raw score ranges for pretests, posttests₁ and posttests₂ for all groups in all schools are presented in Table 1. As indicated in Chapter III, negative scores reflect less accepting attitudes and positive scores reflect more accepting attitudes. The standard deviation column in Table 1 indicates there was considerable variation in the attitudes of the subjects. Group E1 in all tables is the experimental group 1, which received the cognitive treatment as the initial treatment. Group E2 in all tables is the experimental group 2, which received the affective treatment as the initial treatment. Group C1 in all tables is the control group, which received no treatment.

Analysis of the Pretest Scores.

Ho₁: There will be no difference in initial attitudes toward the physically handicapped between the experimental and the control groups of children.

In an analysis of variance procedure, a significant difference was found in attitudes toward physically handicapped children in experimental and control groups before the experimental treatments began. Since there are pretest differences, the effectiveness of the treatments must be

Table 1

Means, Standard Deviations, and Raw Score Ranges
of All Tests

School	Group	N	Means	Standard Deviation	Raw Score Range
<u>Pretest</u>					
1	E1	23	7.82	7.85	- 4 - +22
1	E2	23	5.78	9.69	-14 - +22
1	C	21	7.95	9.21	- 8 - +22
2	E1	21	4.80	7.41	-10 - +20
2	E2	26	1.76	7.90	-19 - +10
2	C	21	9.85	8.86	- 8 - +30
3	E1	19	8.00	4.59	- 2 - +21
3	E2	22	4.68	7.31	-11 - +16
3	C	17	5.00	7.36	-12 - +18
4	E	16	13.87	5.82	4 - +22
4	E	15	9.53	8.45	- 3 - +25
4	C	18	10.83	7.19	0 - +26
<u>Posttest₁</u>					
1	E1	23	8.34	6.81	- 4 - +20
1	E2	23	3.78	7.88	-10 - +22
1	C	21	4.52	9.97	-15 - +22
2	E1	21	0.76	7.02	-16 - +16
2	E2	26	1.69	8.93	-14 - +16
2	C	21	4.47	9.81	-14 - +24
3	E1	19	5.63	8.53	-16 - +16
3	E2	22	0.95	9.58	-11 - +22
3	C	17	- 0.41	9.67	-16 - +12
4	E1	16	9.93	9.80	-11 - +24
4	E2	15	5.13	12.07	-20 - +20
4	C	18	6.88	9.19	- 8 - +24
<u>Posttest₂</u>					
1	E1	23	10.78	6.79	0 - +26
1	E2	23	8.13	9.66	-12 - +28
1	C	21	10.42	7.74	- 2 - +28
2	E1	21	4.80	7.41	-10 - +20
2	E2	26	7.15	8.96	- 8 - +21
2	C	21	11.14	10.79	- 8 - +30
3	E	19	11.42	7.76	- 6 - +25
3	E2	22	7.81	8.22	-14 - +22
3	C	17	1.64	10.56	-18 - +16
4	E1	16	13.87	5.82	4 - +22
4	E2	15	11.86	10.65	- 8 - +28
4	C	18	10.77	10.71	-12 - +28

measured in terms of change scores or adjusted means in analysis of covariance.

Table 2
ANOVA of ATDP Scores for Pretest

Source	DF	Sum of Squares	F Value	p Value
Group	2	510.56	4.16	0.0168*
School	3	1,161.68	6.31	0.0005*
School/Group	6	449.85	1.52	0.1723
Error	230	14,117.35	61.37	
Total	241	16,485.38		

*Significant at .05 level

Examination of the data in Table 2 revealed that null Hypothesis 1 was rejected. There was no interaction between school and group.

Analysis of the Final Change Scores.

Ho₂: There will be no significant difference in attitudes changes between experimental and control groups of children from pretest to posttest₂.

Ho₃: There will be no significant difference between attitudes gain scores for experimental groups and control group following experimental treatments.

Table 3
ANOVA of ATDP Scores for Change
(Pretest to Posttest₂)

Source	DF	Sum of Squares	F Value	p Value
Group	2	535.52	3.29	0.03*
School	3	127.40	0.52	0.67
School/Group	6	419.94	0.86	0.52
Error	230	18,736.18		
Total	241	19,774.52		

*Significant at .05 level.

Table 3 contains ANOVA data for Change 2, from pretest scores to posttest₂ scores for all subjects in the experiment.

Table 4
Means of Three Groups on Change 2

E1	3.41
E2	3.30
C	0.03

Table 4 contains the means of change of the three groups on posttest₂. Although the experimental groups did exhibit positive attitudes changes following the experimental treatments, the control group did not. Since there is a difference in attitudes change between experimental and control

groups, null Hypothesis 2 was rejected by the data. Since not all groups exhibited positive changes of attitude following experimental treatments, null Hypothesis 3 was rejected by the data. Scheffe's test shows that the control group differs significantly from the two experimental groups, but there is no difference between group 1 and group 2. There was no interaction between schools and groups.

Analysis of the Posttest₁ Scores.

Ho₄: There will be no significant difference in posttest₁ attitudes between groups given treatment #1 and treatment #2 as initial treatments.

Treatment #1 was the cognitive treatment of a short explanation of the handicapping conditions served at the Cerebral Palsy and Orthopedic School, followed by a film of the students of the School during a typical day of school work, physical therapy, and occupational therapy. Treatment #2 was the affective treatment, in which there was a socialization visit between students of the Cerebral Palsy and Orthopedic School and the students of regular schools. Table 5 contains analysis of the posttest₁ scores for all groups, showing no difference at the end of the initial treatment.

Table 5

ANCOVA of ATDP Posttest₁ Scores

Source	DF	Sum of Squares	F Value	p Value
Covariate (pre)	1	3,066.53	44.21	.0001*
Group	2	211.43	1.52	.2200
School	3	387.02	1.86	.1354
Group/School	6	341.56	.92	.5548
Error	229	15,882.36		
Total	241	21,066.05		

*Significant at .05 level.

There were no significant differences in attitudes between groups as measured by posttest₁ and there was no interaction between schools and groups. Hypothesis 4 is supported by the data. There was, however, a phenomenon evident when all groups were adjusted for pretest score differences and the posttest₂ scores were compared. When all treatments had been administered, there was a significant difference in positive attitudes between Group 1 and Group 3. The difference between Group 1 and Group 2 was not significant nor was the difference between Group 2 and Group 3 (see Figure 2).

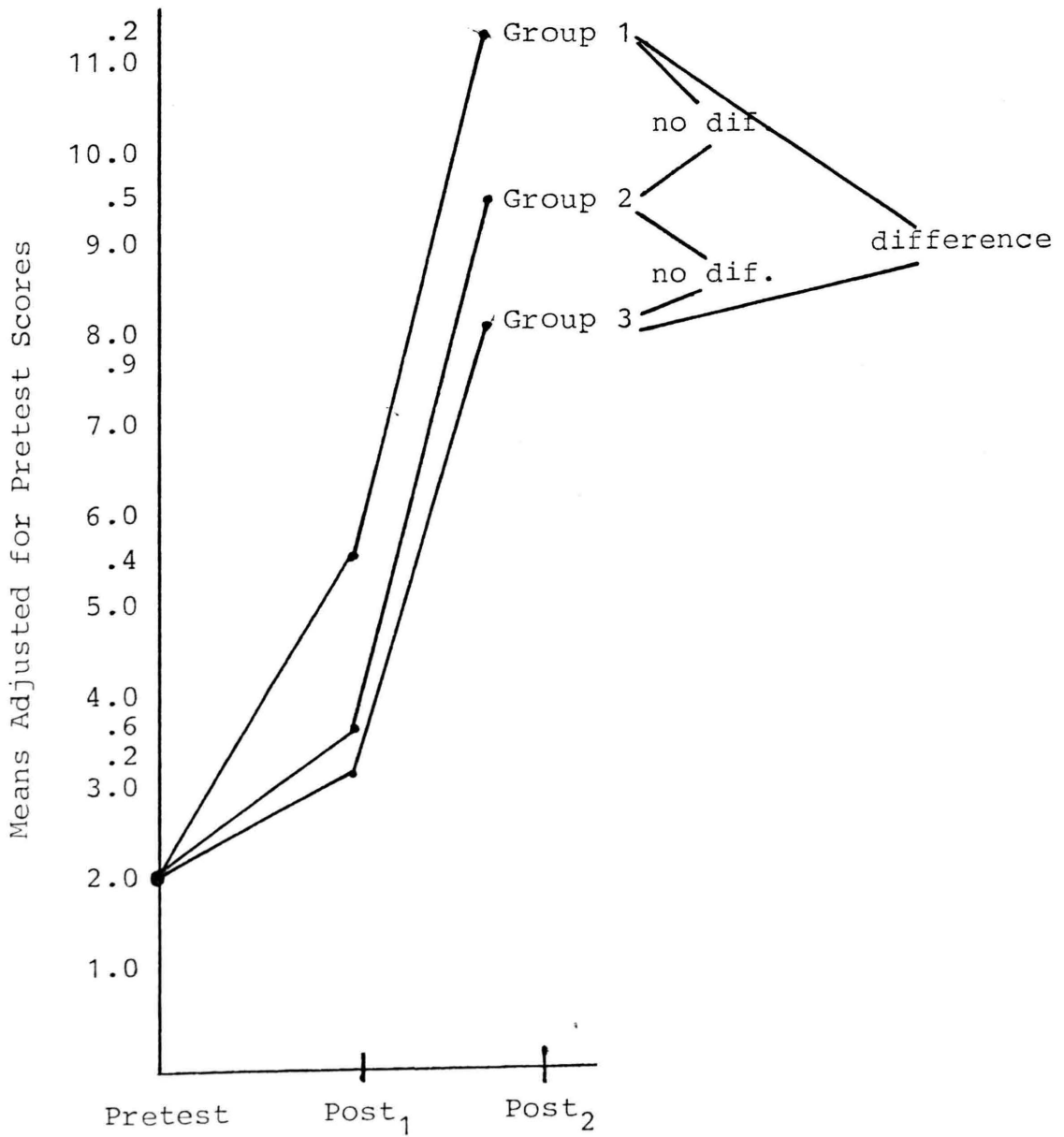


Figure 2. Graph of Differences in Attitude

Analysis of Differences in Attitudes Between Experimental and Control Groups at Posttest₂.

Ho₅: There will be no difference in posttest₂ attitudes between experimental and control groups of children.

Table 6 indicates a significant difference at the .05 level in posttest₂ attitudes (adjusted for pretest scores).

Table 6
ANCOVA of Posttest₂

Source	DF	Sum of Squares	F Value	p Value
Covariate (pretest)	1	3,219.00	49.53	.0001*
Group	2	429.08	3.30	.0386*
School	3	421.23	2.16	.0920
School/Group	6	723.98	1.86	.0892
Error	229	14,882.24		
Total	241	21,066.16		

*Significant at .05 level.

Scheffe's test shows that both Group 1 and Group 2, which received the experimental treatments, differed from Group 3, the control group which received no treatment. The difference showed a positive attitudes change for the groups which received the experimental treatments, while there was no attitude change for those subjects in the

control group. The data did not support null Hypothesis 5. A difference in attitudes between experimental and control groups of children was evident when experimental treatments were completed. There was no interaction between school and group.

Table 7

Posttest₂ Means Adjusted for Pretest Differences

Group	Posttest ₂ Means
E1	11.24
E2	9.56
C	7.90

CHAPTER V

Discussion and Recommendations

The primary purpose of this study was to determine whether or not the attitudes of upper elementary school children toward their physically disabled peers could be changed in a positive direction by the use of a combination of cognitive and affective treatments. The secondary purpose was to discover whether a difference existed between affective or cognitive treatments as initial treatments.

The sample consisted of 242 upper elementary school children from four Greensboro, North Carolina public schools. The children ranged in age from 9-0 to 13-2; in IQ from 57 to 128. Socioeconomic status ranged from families with parents having an elementary school education to those holding graduate degrees. The sample included the following races: Caucasian, Black, American Indian, and Oriental. All subjects had the written consent of one parent to participate in the study.

The subjects were randomly assigned to either a control or one of two experimental groups. All groups received the pretest ATDP Form A. Control group received no treatments. The experimental groups received the cognitive treatment #1

and the affective treatment #2 but in different orders. After these two treatments to the experimental groups, treatments #3 and #4 were given to both groups, so that by the end of the experiment all experimental groups had received all treatments. ATDP, Form B was given as posttest₁ to all subjects immediately following the initial treatment given to the experimental groups. The second posttest, ATDP, Form A, was given to all subjects immediately following the fourth treatment given to the experimental groups.

The treatments were:

1. A short lecture covering the types of handicaps served by the Cerebral Palsy and Orthopedic School followed by a film showing the pupils at the Cerebral Palsy and Orthopedic School participating in their regular activities during the day. A discussion period followed. Handicapping conditions included cerebral palsy, muscular dystrophy, spina bifida, osteogenesis imperfecta, and arthrogryposis.
2. A socialization visit between students of the Cerebral Palsy and Orthopedic School and students of regular schools in Greensboro. Students from regular schools asked questions of Cerebral Palsy and Orthopedic School students regarding aspects of handicapping conditions.

3. A field trip by students in the Greensboro Public Schools to the Cerebral Palsy and Orthopedic School, conducted by the experimenter.

4. The children in the Greensboro Public Schools participated in simulation activities, using wheelchairs, Hoag chairs, crutches, walkers, and devices limiting arm and leg movement.

The means for all pretests, posttests₁ and posttests₂ were examined with the following objectives:

1) to determine if differences existed before treatments;

2) to determine if such differences could be attributed to treatments;

3) to determine if such differences could be attributed to schools;

4) to determine if such differences could be attributed to the use of cognitive treatment #1 or affective treatment #2 as initial treatment.

These objectives were accomplished by using ANCOVAs and Scheffe's test.

Five research hypotheses were stated as follows:

Ho₁: There will be no significant difference
in initial attitudes toward the physically
handicapped between the experimental and

control groups of children before experimental treatments.

Ho₂: There will be no significant difference between experimental and control groups of children in attitudes change from pretest to posttest₂.

Ho₃: There will be no significant difference between attitudes gain scores for experimental groups and control group following experimental treatments.

Ho₄: There will be no significant difference in posttest₁ attitudes between groups given treatment #1 and treatment #2 as initial treatments.

Ho₅: There will be no significant difference in posttest₂ attitudes between experimental and control groups of children.

An analysis of the data demonstrated the following:

1. The null was rejected for Hypothesis 1. There was a significant difference in attitudes before the treatment began.

2. The null was rejected for Hypothesis 2. There was a difference in attitudes changes between experimental and control groups of children. The attitudes of the experimental

groups changed significantly while the attitudes of the control group remained unchanged. However, a curious phenomenon occurred in school #1, where the control group increased in positive attitude as much as the two experimental groups did. In discussions with teachers at school #1 and teachers who accompanied the Cerebral Palsy and Orthopedic School students to school #1 for the socialization visit, it was conjectured that the overall attitude of acceptance and eagerness to help at school #1 may have communicated itself to the control group there. The children in the control group at school #1 later confirmed that an interest in the handicapped children encouraged them to question the children in the experimental groups. It may therefore be assumed that some contamination of data may have occurred at school #1.

3. The null hypothesis 3 was rejected. There was a difference in positive attitudes gain scores for experimental groups and control group following experimental treatments. Experimental groups increased positive attitudes by 3.3 points, significant at the .05 level of confidence, while attitudes of control groups remained virtually unchanged. It was concluded that attitudes can be altered in a positive direction for upper elementary children by the application of a series of affective and cognitive treatments.

4. The null for Hypothesis 4 was supported. There was no difference in attitudes changes between groups given treatment #1 and treatment #2 as initial treatments. However, an interesting trend may be observed in the data. When scores among all groups were adjusted for pretest differences, it was shown that a gap appeared at posttest₁ between Group 1 (cognitive treatment #1 initial treatment) and Group 2 (affective treatment #1 initial treatment). This gap is not statistically significant. By posttest₂, when all four treatments had been administered, the gap had widened (see Figure 2). Scheffe's test indicates that Group 1 differed from Group 3 (control) but did not differ from Group 2 nor did Group 2 differ from Group 3 (see Table 7). This relates to the rejection of null Hypothesis 5, which states that there will be no significant difference between experimental and control groups in posttest₂.

Thus it may be hypothesized that, although affective or cognitive initial treatments may not have a statistically significant immediate effect, the cognitive initial treatment may allow for a greater change in a positive direction of attitudes towards physically disabled children.

5. The null for Hypothesis 5 was rejected. When the experimental treatments were completed, there was a significant difference between experimental and control groups of

children. Experimental groups showed a change in attitude significant at the .05 level of confidence, while the control groups showed no change in attitudes.

Throughout the data in the pretest and posttests random fluctuation was evident. There was so much fluctuation in posttest₁ that the averages became negative, making it appear that attitudes became worse for all groups following the initial treatment. Although this did not reach a level of significance, it happened. The average control decreased by 4.5 points in posttest₁ as compared with the pretest. By posttest₂ the data had stabilized, and it was apparent that the attitudes of controls had not altered significantly over the period of time involved in the experiment.

Summary

Increasing positive attitudes toward physically disabled children with regard to future acceptance in mainstreamed situations was the impetus for this study. The use of cognitive and affective treatments has been investigated previously. Donaldson (1980) has catalogued six types of approaches to altering attitudes, of which four were utilized in this study:

1. Direct or indirect structured or unstructured contact with disabled persons.
2. Information regarding disabilities.

3. Simulation of disabilities.

4. Discussion held by groups.

Of these four, #1 may be considered as more purely affective, #2 may be considered more purely cognitive, and #3 and #4 may hold equal elements of both. In the present study, treatment #1 (lecture, film, discussion) reflected approaches #2 and #4 above. Treatment #2 (socialization visit between Cerebral Palsy and Orthopedic School students and upper elementary school students) reflected approach #1: direct structured contact with disabled persons. Treatment #3 (tour of the Cerebral Palsy and Orthopedic School) reflected approaches #1 (indirect structured contact) and #2 above. Treatment #4 (simulation activities) reflected #3 above. Melton (1977) has recommended the use of films (treatment #1) and exhibits (treatments #3 and #4).

Brant (1979) identified negative attitudes in both the affective and cognitive domains, with the most fundamental of negative attitudes in the affective domain. Information and social contact approaches were found to be the most effective interpositions.

Barnes (1975) accomplished attitudinal changes by acknowledging feelings, beliefs, and values, by gaining information and empathy, and working with political awareness. The present study utilized acknowledgment of

feelings and gaining of information and empathy in treatments #1, #2, and #4.

The opportunity to receive first-hand information regarding handicapping conditions (treatments #2 and #4) seemed to support research by Evans (1976). He suggested that uncomfortable restraining forces exist in relation to handicapping conditions. Langer, Fiske, Taylor, and Chanowitz (1976) observed that reduced avoidance occurred with reduction in stimulus novelty (all treatments).

In 1977 Scheffers used simulation activities to teach fourth graders about blindness. A more positive attitude toward blind people resulted, supporting the use of simulation activities in the present study. Melton's (1977) exhibit included both simulation activities and information. Dahl, Horsman, and Arkell (1978) found that wheelchair experiences increased positive attitudes in nondisabled fifth graders (treatment #4).

Ward, Arkell, Dahl, and Wise (1979) caution that understanding is facilitated when we can feel and become like the handicapped. Contact, information, and simulation activities (all treatments) have striven in this study to enhance understanding. Cleary (1976) and Cassidy (1977) developed curricula involving information, exposure to handicapped persons, field trips, and discussions.

Peterson's 1974 research in grades 5 through 8 indicated more negative attitudes among children of more highly educated parents. The present study does not support this. The Greensboro elementary school (school 4) which serves the children of the most highly educated parents showed the most positive attitudes on all three tests (Table 1).

In conclusion, this study supports Simon and Gillman (1979) in their strong advocacy of extensive preparation for all participants when planning for mainstreaming. The intention here has been for these treatments to widen the boundaries of normalcy, so that the handicapped will not be defined as deviant. Eisenman's (1972) comment on conceptualization of deviance as a process of social labeling is relevant here. Klimanski (1978) observed that attitudes depend upon the history of interaction between disabled and nondisabled persons, and may be determined by a framework of conditioning or situational views. This study has made the effort to manipulate this framework and has demonstrated that attitudes of upper elementary school children toward their physically handicapped peers can be affected by the use of cognitive and affective interventions.

Recommendations for Further Research

The following recommendations for further research are indicated:

1) the results of this study be disseminated to encourage further research;

2) a longitudinal study be conducted to establish the effect of treatments administered with greater time lapses between them;

3) a replication of this study be conducted to cross-validate the results of the current study;

4) further research be conducted to cross-validate the effect of cognitive vs. affective treatments as initial treatments;

5) a study be conducted to correlate Forms A and B of the ATDP.

APPENDICES

Appendix A

Dear Parents,

Your child is being asked to join in a study which, when sampled, will give valuable information to the teachers and administrative personnel of the Greensboro Public Schools. The study will try to determine if we can increase the positive attitude of students toward physically disabled children.

If your consent is given, your child will be placed in one of three groups by random selection. One group will receive only 30-item pre- and posttests which will look at attitudes toward physically disabled children. The other groups will receive a 30-item pretest, a mini-course of instruction, and two 30-item posttests. The test questions will be answered "true" or "false." Your child's name will not be used in the release of any data.

The mini-course will consist of four segments (sequence changeable):

- a) A film of children and activities at the Greensboro Cerebral Palsy and Orthopedic School
- b) A visit by children from the Cerebral Palsy and Orthopedic School to your child's school
- c) A visit to the Cerebral Palsy and Orthopedic School by your child
- d) A selection of handicapping conditions to be imitated for a short (one hour or less) period of time by your child and his/her classmates.

The mini-course will be conducted by me, Frances Schwartzwald, M.A., doctoral candidate in Special Education, as the research requirement for dissertation. I can be reached from 7:00 to 10:00 p.m. Monday through Friday at 852-4532. During the day, from 8:00 to 4:00, your name can be left for me at 274-0181. The results of the research will be helpful in deciding what steps to take to facilitate the process of mainstreaming handicapped children.

Your child may stop his/her participation in the research at any time. Any questions you have will be answered before the study begins, or as it progresses. If you would like your child to participate, please sign the enclosed form and return to school.

Sincerely,

Frances Schwartzwald

Appendix B

Consent Form: TEXAS WOMAN'S UNIVERSITY, HUMAN SUBJECTS
REVIEW COMMITTEE
(Form B)

Title of Project: A STUDY OF THE EFFECT OF COGNITIVE AND
AFFECTIVE INTERVENTIONS ON ATTITUDES OF UPPER ELEMENTARY
CHILDREN TOWARD PHYSICALLY DISABLED CHILDREN

Consent to Act as a Participant for Research and Investi-
gation:

I have received a written description of this study, includ-
ing a fair explanation of the procedures and their purpose,
any associated discomforts or risks, and a description of
the possible benefits. An offer has been made to me to
answer all questions about the study. I understand that my
child's name will not be used in any release of the data
and that he/she is free to withdraw at any time. I further
understand that no medical service or compensation is
provided to subjects by the University as a result of injury
from participation in research.

Parent's signature Date

Participant is a minor (age ____)

Participant's signature Data

Appendix C

ATDP Form A

Read each sentence and circle the word to show whether you feel each statement is True or False. Remember, this is to see the way you feel. There are no right or wrong answers.

- | | | |
|--|------|-------|
| 1. Crippled children are usually not friendly. | true | false |
| 2. Crippled children should not have to compete in school against those children who are not crippled. | true | false |
| 3. Crippled children get upset more easily than children who are not crippled. | true | false |
| 4. Most crippled children are more worried about what people think of them than children who are not crippled. | true | false |
| 5. We should expect just as much from crippled as from children who are not crippled. | true | false |
| 6. Crippled children are not as good students as children who are not crippled. | true | false |
| 7. Crippled children do not usually help their communities very much. | true | false |
| 8. Most people who are not crippled would not want to marry anyone who is crippled. | true | false |
| 9. Crippled children get as excited about things as other children. | true | false |
| 10. Crippled children have their feelings hurt more easily than other children. | true | false |
| 11. Very crippled children are usually messy. | true | false |

ATDP Form A

- | | | | |
|-----|--|------|-------|
| 12. | Most crippled children feel that they are as good as other children. | true | false |
| 13. | The driving test given to a crippled teenager should be harder than the one given to a teenager who is not crippled. | true | false |
| 14. | Crippled children are usually friendly. | true | false |
| 15. | Crippled children usually don't worry about getting their work done as much as children who are not crippled. | true | false |
| 16. | Very crippled children probably worry more about getting sick than less crippled children. | true | false |
| 17. | Most crippled children are not unhappy with themselves. | true | false |
| 18. | There are more strange children who are crippled than not crippled. | true | false |
| 19. | Most crippled children do not give up easily. | true | false |
| 20. | Most crippled children are jealous of physically normal children. | true | false |
| 21. | Crippled children should compete with physically normal children. | true | false |
| 22. | Most crippled children can take care of themselves. | true | false |
| 23. | The best thing would be if crippled children would live and go to school with children who are not crippled. | true | false |
| 24. | Most crippled children try just as hard as children who are not crippled. | true | false |
| 25. | Crippled children feel as good and as important as other children. | true | false |

ATDP Form A

- | | | | |
|-----|---|------|-------|
| 26. | Most crippled persons want more love and praise than other people. | true | false |
| 27. | Crippled children are often not as smart as children who are not crippled. | true | false |
| 28. | Most crippled children are different from children who are not crippled. | true | false |
| 29. | Crippled children don't want you to feel any more pity for them than for other children who are not crippled. | true | false |
| 30. | The way crippled people behave is annoying. | true | false |

Appendix D

ATDP Form B

Read each sentence and circle the word to show whether you feel each statement is True or False. Remember, this is to see the way you feel. There are no right or wrong answers.

- | | | |
|---|------|-------|
| 1. Crippled children are usually friendly. | true | false |
| 2. Children who are crippled should not have to pay for class trips. | true | false |
| 3. Crippled children do not show their feelings as much as children who are not crippled. | true | false |
| 4. Crippled children can play the same games as children who are not crippled. | true | false |
| 5. Most crippled children get angry easily. | true | false |
| 6. Crippled children can be as good students as children who are not crippled. | true | false |
| 7. Very few crippled children are ashamed of being crippled. | true | false |
| 8. Most children feel uncomfortable when they are around crippled children. | true | false |
| 9. Crippled children do not get as excited about things as children who are not crippled. | true | false |
| 10. Crippled children do not become upset any more easily than children who are not crippled. | true | false |
| 11. Crippled children are often more shy than other children. | true | false |

ATDP Form B

- | | | |
|--|------|-------|
| 12. Most crippled children will get married and have children. | true | false |
| 13. Most crippled children do not worry any more than anyone else. | true | false |
| 14. Teachers should not be allowed to punish crippled children. | true | false |
| 15. Crippled children are not as happy as children who are not crippled. | true | false |
| 16. Very crippled children are harder to get along with than less crippled children. | true | false |
| 17. Most crippled children expect special treatment. | true | false |
| 18. Crippled children should not expect to live normal lives. | true | false |
| 19. Most crippled children give up easily. | true | false |
| 20. The worst thing that could happen to a child would be for him to be very badly hurt. | true | false |
| 21. Crippled children should not have to compete with children who are not crippled. | true | false |
| 22. Most crippled children do not feel sorry for themselves. | true | false |
| 23. Most crippled children do not try as hard as children who are not crippled. | true | false |
| 24. Most crippled children prefer to go to school with other crippled children. | true | false |
| 25. Crippled children do not feel as good as or as important as other children. | true | false |

ATDP Form C

- | | | | |
|-----|---|------|-------|
| 26. | Most crippled children don't want more love and praise than other children. | true | false |
| 27. | It would be best if a crippled person would marry another crippled person. | true | false |
| 28. | Most crippled children do not need special attention. | true | false |
| 29. | Crippled children want you to feel more pity for them than other children. | true | false |
| 30. | Most crippled children behave differently than children who are not crippled. | true | false |

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