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THE DEVELOPMENT OF INSTRUCTIONAL MATERIALS TO FACILITATE THE
INTERACTION OF HANDICAPPED AND NONHANDICAPPED THIRD GRADE
STUDENTS IN SELECTED PAROCHIAL SCHOOLS

by

James Nicholas Gonwa

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Education
Department of Educational Leadership

Western Michigan University
Kalamazoo, Michigan
December, 1981
This study focused on the development and use of instructional materials for teaching handicap awareness to elementary third grade children. The purposes of the study were (1) to determine if there is a need for instructional materials to teach handicap awareness, (2) to determine how teachers and experts would use instructional materials, (3) to determine the opinions of teachers and experts about the Handicap Awareness Series developed in this study and (4) to determine the opinions of children about the Handicap Awareness Series. The materials developed in this study were evaluated as an instructional method which could be used to prepare nonhandicapped third grade children for their interaction with handicapped peers in the mainstreaming process.

A total of 140 third grade children and five third grade teachers from Catholic parochial schools in Kalamazoo, Michigan and five experts in the fields of special education, early childhood education, social work, school psychology and reading instruction comprised the samples in this study. The instructional materials developed in the study included activity sheets and text for the students, a teacher's guide and a resource list. The materials were used by the teachers and students in classroom learning activities during the 1980-81 school year.

An opinion questionnaire was used to solicit opinions and/or recommendations from the three sample groups. The results of the data
collection from the teacher and expert questionnaires were interpreted
by the writer. The data from the children's questionnaire were ana-
lyzed using a chi-square test of independence and a contingency coef-
ficient. Significant differences were found in the children's prefer-
ences for some of the activities in the Handicap Awareness Series.

The major conclusions drawn from this study were:

(1) There is a need for additional types of handicap awareness
instructional materials.

(2) Previous teaching experience with handicapped children
was not important in teaching handicap awareness.

(3) Teachers used the materials with large groups rather than
with individuals or small groups.

(4) Teachers and experts judged the Handicap Awareness Series
to be of high educational value.

(5) Possible sex and classroom differences may exist in prefer-
ences for instructional activities.

(6) A minority of students shared their handicap awareness
instruction with their parents.

Recommendations for school systems, publishers and further research
in the area of handicap awareness instruction were presented.
ACKNOWLEDGEMENTS

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James Nicholas Gonwa

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THE DEVELOPMENT OF INSTRUCTIONAL MATERIALS TO FACILITATE
THE INTERACTION OF HANDICAPPED AND NONHANDICAPPED THIRD
GRADE STUDENTS IN SELECTED PAROCHIAL SCHOOLS

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CHAPTER I

NEED STATEMENT

Introduction

Currently, there is considerable emphasis on the placement of handicapped children into regular classrooms. This concept, known as mainstreaming, is legally based on federal legislation in Public Law 94-142, The Education for All Handicapped Children Act of 1975. Mainstreaming is also based philosophically on the concept of normalization. Both Public Law 94-142 and the concept of normalization require that handicapped persons be placed in the least restrictive educational program possible depending on each individual's social and cognitive abilities. Disabled students should be allowed to spend as much time as possible and appropriate in a regular classroom with their nondisabled peers. Since the late 1970's, school systems have attempted to integrate disabled students into regular classrooms. A variety of methods have been attempted to achieve this integration, e.g., itinerant teachers, resource classrooms and changes in student disability classification (Meyer, MacMillan & Yoshida, 1975; MacMillan, 1977). Services provided by the schools to facilitate mainstreaming integration have included in-service training for teachers and students, resource personnel, special programs and advocacy (Dunn, 1968; Deno, 1970). Heron (1978) pointed out a number of integration processes which included the provision of integrated work groups in classrooms and instructional units to develop awareness and acceptance of individual differences between individuals. Csapo (1972), Hamblin and Hamblin
(1972) and Chennault (1967) suggested the use of nonhandicapped peers as models and tutors for handicapped students as a method for enhancing the achievement of handicapped children and their acceptance by their nonhandicapped peers.

Children who have disabilities tend to achieve higher academic performance when integrated into regular classrooms (Cegelka & Tyler, 1970; Dunn, 1968; Johnson, 1962). Studies, however, have also indicated that handicapped children who are placed into regular classrooms are often rejected by their nonhandicapped peers. Researchers have found in sociometric studies that mentally disabled children were less accepted, or were rejected, by nonhandicapped peers (Lapp, 1957; Iano, Ayers, Heller, McGettigan & Walker, 1974; Goodman, Gottlieb & Harrison, 1972; Rucker, Howe & Snider, 1969; Miller, 1956). Kleck, Ono and Hastorf (1966) found that high school students communicated and interacted differently with physically disabled persons than they did with nondisabled people. Richardson (1969) concluded that nonhandicapped people feel ambivalent toward handicapped persons and tend to keep interactions with them formal, inhibited and controlled.

If handicappers must interact with nonhandicapped people who feel uncomfortable with them, the writer believes that the result is likely to be considerably more isolation for the handicapped person than for a nonhandicapped person. These findings have an impact on the success of mainstreaming. The success of mainstreaming depends to a great extent on the attitudes and knowledge that nondisabled children hold toward their handicapped peers (Cohen, 1978). Successful Mainstreaming also depends on the opportunities that handicapped students have for
positive social interaction. But it appears from the research findings that positive interactions do not always result from the practice of mainstreaming.

Although the interaction of handicapped and nonhandicapped children is often viewed as a potentially effective means for generating the acceptance of disabled peers by nondisabled children, that interaction may not, in itself, be sufficient to preclude rejection and nonacceptance of children who have disabilities (Evans, 1976; Hagino, 1980; Kirk, 1972; Block, 1950; Connor, Rusalem & Cruickshank, 1971; Steinzor, 1966; Hewett, 1974). Rejection of disabled persons has also occurred in situations where the opportunity for positive interaction was present. This has occurred in studies of persons with mental impairments, physical disabilities, learning disabilities, hearing impairments and speech disorders (Gottlieb & Davis, 1973; Richardson, Hastorf & Dornbusch, 1964; Bryan, 1976; Justman & Maskowitz, 1957; Elser, 1959; Blank, 1977; Johnson, Anderson, Kopp, Mose, Schuell, Shover & Wolfe, 1952). Similar social phenomena may be evident for individuals who have other disabling conditions, e.g., epilepsy, sight impairments, muscular dystrophy, mental disorders or birth defects. The results of the studies cited above reveal that, contrary to the expectations of some educators, increased social contact between nonhandicapped and handicapped children does not necessarily generate increased acceptance of disabled peers by those children who are not handicapped or disabled.

Cohen (1978) reported that little attention has been given by educators to the question of how to develop receptivity by nonhandicapped children toward handicapped peers who are or will be entering the
mainstreaming process. There has been some study of teacher attitudes and the mainstreaming process (Heron, 1978; Effron & Effron, 1967; Melcher, 1971; Shotel, Iano & McGettigan, 1972) in which in-service and other professional training for regular education teachers and staff have been suggested as methods for preparing teachers for the mainstreaming process. Those methods were also suggested as means for modifying stereotypic or negative attitudes toward handicapped children held by some staff and teachers (Popham, 1971; Shaw & Shaw, 1972).

Problem Statement

There appears to have been little emphasis, however, on the preparation of nonhandicapped children for their interaction with disabled peers in the mainstreaming process (Cohen, 1978; Hagino, 1980; Voeltz, 1980; Lombana, 1980). It seems obvious that the educational process of mainstreaming will put many demands on the nondisabled children whose reactions to their disabled peers may be ones of fear, avoidance, confusion, stress, pity, antagonism, inquisitiveness, cruelty, discomfort, compassion or, in some cases, misdirected helpfulness (Cohen, 1978; Voeltz, 1980; Willey & McCandless, 1973). These reactions, in part, stem from a lack of knowledge about interacting with handicapped peers, a factor which can be reduced through an instructional approach.

An instructional approach can be used as an intervention strategy to provide needed information and to correct misinformation. Instructional interventions used with nondisabled children prior to and during
the integration phases of the mainstreaming process have been successful in facilitating the acceptance of disabled children by their non-disabled peers (Rucker & Vincenzo, 1970; Chennault, 1967; Cooke, Apolloni, & Cooke, 1977; Jones, 1972; Heron, 1978).

A function of handicap awareness instruction would be to increase the understanding and knowledge that nonhandicapped children have of handicapped peers' characteristics and behaviors. Nonhandicapped children are more likely to accept behavior and, ultimately, the person they may consider to be strange if they know why a peer is behaving in a certain manner (MacMillan, 1977; Hoffman, Marsden & Kalter, 1977). Nonhandicapped children may learn that handicapped children are more similar than different from nonhandicapped persons. Awareness and knowledge of handicappers can serve to reduce the discrepancy between the expected and actual behaviors of disabled children because it allows the nondisabled children to judge the handicapped peers by different or changed perceptions which are positive in nature.

There is some evidence that children develop perceptions of and social preferences for certain handicapped children at an early age. Ten and eleven year old children indicated consistent preferences for certain disabled persons in studies by Voeltz (1980), Michardson, Goodman, Hastorf and Dornbusch (1961) and Willey and McCandless (1973). In a study conducted to determine the age at which stereotypes about disabled persons develop in nondisabled children, Jones, Sowell, Jones and Butler (1981) found that seven, eight and nine year old children held stereotypic perceptions of disabled people. Hoffman, Marsden and Kalter (1977) found that children's perceptions about a variety of
social situations, including those related to peer behavior, seemed to change markedly between the ages of about nine and eleven years. Jones and Sisk (1967) noted that perceptions of exceptionality begin considerably earlier than middle childhood and as early as four years of age. Yarrow (1960) also suggested that perceptions develop at an early age in children.

In view of these findings and the apparent lack of emphasis on the preparation of nonhandicapped children for their interaction with handicapped peers, educators are faced with the problem of instructing nonhandicapped children about disabilities before stereotypes and negative perceptions become established in young children. The writer believes that instructional materials for teaching handicap awareness should provide accurate information, depict acceptance of individual differences, depict the interaction of handicapped and nonhandicapped children, and avoid the representation of stereotypes about disabled people.

Purpose

This study focused on the development and use of instructional materials for handicap awareness. The purposes of the study were: (1) to determine if there is a need for instructional materials to teach handicap awareness, (2) to determine how teachers and experts would use instructional material, (3) to determine the opinions of teachers and experts about the Handicap Awareness Series and (4) to determine the opinions of children about the Handicap Awareness Series.

The materials developed in this study were evaluated as an instructional method that could be used to prepare third grade children for their interaction with handicapped peers.
Objectives

The objectives of this study were the following:

(1) To review research on handicap awareness materials usage.
(2) To list a review of the commercial instructional materials that are commonly available for handicap awareness instruction in regular classrooms.
(3) To determine what steps regular education teachers use or would use to prepare nonhandicapped children for the integration of handicapped peers.
(4) To determine the need for additional handicap awareness instructional materials.
(5) To develop instructional materials for handicap awareness instruction.
(6) To determine the acceptability of the instructional materials developed in this study through the use of an opinion survey and evaluation of the materials by regular education teachers, experts and children.

Assumptions

The development of the instructional materials in this study was based on the following assumptions:

(1) The use of instructional materials that teach handicap awareness has an impact on the acceptance of handicapped children by their nonhandicapped peers.
(2) Children in the third grade will be more accepting of their handicapped peers if taught to be tolerant of individual
differences and to recognize the similarities between individu-
als.

(3) Interaction between nonhandicapped students and their handi-
capped peers will be enhanced and maintained when information
about handicapped persons is received by them prior to the
interaction.

(4) Children's perceptions and attitudes toward handicapped persons
will be modified through the use of instructional materials.

(5) Children will develop their peer groupings and affiliation
during the early elementary grades.

Limitations

This study was conducted under the following limitations:

(1) The study was limited to 140 third grade children and five
third grade teachers in Catholic parochial elementary schools
in the City of Kalamazoo, Michigan.

(2) Only selected handicapping conditions were represented in the
instructional materials. Some conditions are not easily de-
picted or understandable at the emotional or cognitive level
of young elementary school age children, e.g., spina bifida,
leukemia, emotional or mental disorders, muscular dystrophy or
congenital malformations. For that reason, the instructional
materials concentrated on more visible handicapping conditions
such as orthopedic impairments, sight impairments, mental re-
tardation and hearing disabilities.

(3) The study was limited to the development of instructional
materials appropriate to the anticipated interests and learning characteristics of third grade children. The materials were limited to paper/pencil types of materials in a coloring book format. Audio-visual materials were not included in the Handicap Awareness Series but resource lists of other instructional materials were, however, included for use by the third grade teachers. Audio-visual materials were also available to the teachers from the Kalamazoo Catholic school system during the course of the study.

Definitions of Terms

The following definitions of terms and concepts are included to familiarize the reader with terminology used in the study.

**Normalization** refers to the process of providing handicapped persons with patterns and conditions of everyday life which are as close as possible to the norms and patterns of the mainstream of society.

**Mainstreaming** refers to the temporal, instructional and social integration of eligible handicapped persons with nonhandicapped peers on an on-going, individually determined, educational planning and programming process and requires clarification of responsibility among regular and special education administrative, instructional and supportive personnel (Kaufman, Gottlieb, Agard & Kukic, 1975).

**Least Restrictive Program** refers to the provision of instruction and services in a program which is as normal as possible and which is appropriate for meeting the educational needs of the person who has a disability. For example, placement in a regular classroom in con-
junction with the services of a reading specialist is not as restrictive as placement in a self-contained classroom.

Instructional Materials in this study refer to the activity sheets developed in the Handicap Awareness Series and other teaching aids such as films, filmstrips, books, simulation kits, etc. which are used by the teacher and students in handicap awareness instruction.

Handicapping Conditions in this study refer to visual impairments, orthopedic disabilities, mental retardation and hearing impairments.

Handicapped Children, based on Kirk's definition (1972), deviate from average children in mental, sensory, physical, health, social or communication characteristics to such an extent that the children require modifications in school practices or require special education services in order to develop to maximum capacity.

Summary

It appears that an instructional intervention strategy which allows all children who are nonhandicapped to learn more about their handicapped peers is needed but especially in the early elementary grades (Cohen, 1978). The writer believes that the attitudes and behaviors of acceptance or rejection which are developed in the early school years have an effect on the social interactions of handicapped and non-handicapped children throughout later school years and into adulthood.

Third grade appears to be the period during which social cooperation, team play, self-evaluation and readiness for explanations about handicapped persons become more developed (Newman & Newman, 1975; Hagino, 1980). An instructional intervention occurring at this time...
may facilitate the mainstreaming integration process.

A number of instructional intervention strategies or methodologies have been used to alter the attitudes and behaviors of nondisabled children toward handicapped persons (Chennault, 1967; Cleary, 1976; Gottlieb, 1970; Karniski, 1978; Lombana, 1980; Monson & Shurtleff, 1979). They have included the use of books, bibliotherapy, simulation activities, social contact, films, filmstrips, discussion and counseling. Instructional materials described in the literature and those available from commercial publishers do not appear to include consumable instructional materials for use in teaching handicap awareness.

In the writer's experience as a teacher, consumable materials have some advantages compared to other instructional aids. They can be less expensive and can be easily reproduced by teachers. They can allow greater flexibility in classroom learning activities. The writer believes that consumable materials also permit feelings of ownership on the part of the students who can keep the materials rather than returning them to the teacher or library.

This study focused on the development of instructional materials for handicap awareness instruction and the evaluation of those materials by third grade teachers, third grade children and a group of experts.
CHAPTER II

REVIEWS OF THE LITERATURE

This study had as its main concern the development of instructional materials which can be used to teach awareness of disabling conditions and the acceptance of disabled children by their nonhandicapped peers.

The nonacceptance and rejection of disabled children by their peers may be influenced by many factors. Some of those factors relate to the disabled children themselves. Disabled children may exhibit behaviors which cause avoidance behaviors in other children. Other factors which influence nonacceptance may be related to stereotypes and attitudes about handicapped people. These stereotypes and attitudes appear to develop at an early age in children. Children's literature and the mass media are significant factors in the formation of those stereotypes and attitudes. The educational institution, especially the school, can play an important role in shaping attitudes, providing correct information and promoting acceptance of handicapped persons.

The first section of this chapter contains a review of the historical antecedents and the research related to the rejection and acceptance of disabled people in our society. In the second section, research concerning the acceptance of handicapped children is considered. The third section surveys the depiction of disabled people in the mass media. The fourth section describes the depiction of handicapped persons in children's literature. The educational methods used to teach handicapped awareness in the educational setting are reviewed.
in the fifth section. The final section contains a description of instructional materials available from organizations serving disabled people and from commercial publishers.

Public Acceptance and Rejection of Handicapped Persons

The public's reactions to handicapped people may reflect the prevalent societal attitudes, stereotypes and behaviors toward handicapped groups. Negative attitudes toward disabled people are widespread and research has indicated that a variety of factors contribute to those behaviors and attitudes. Reactions to disabled persons may have both historical and interpersonal origins.

Historical Factors

Hewett (1974), Wolfensberger (1975) and Lilly (1979) have presented historical perspectives on the bases of prejudices against disabled people. Early primitive cultures accepted, rejected or worshipped disabled persons. Primitive people often developed elaborate demonological systems to explain or treat deviant members of their societies. Early Babylonian writings refer to magical formulas and charms to protect people from giants, dwarfs and cripples. The Roman and Greek periods (500 B.C. to A.D. 400) were characterized by infanticide, eugenics, abandonment and seclusion of disabled persons.

The conflict over the natural versus supernatural causes of physical and mental disorders continued for almost two thousand years. The result was superstition and prejudice toward disabled members of society.
During the Middle Ages (A.D. 400 to 1500), disabled persons were treated as innocents blessed by God, tolerated as fools or court jesters or persecuted as witches and demons.

Much of the sixteenth and seventeenth centuries was characterized by irrational and mystical beliefs which were deeply rooted in society. Handicapped people continued to be treated with cruelty, demonology, exploitation and neglect. In the seventeenth century, special instructional techniques were developed for people who were deaf or blind. Attempts were made to describe mental illness and mental retardation in psychological and medical terms. The French Revolution in the eighteenth century prompted the awareness of individual worth and the rights of disabled persons. More humane treatment followed as fear, hostility and superstition lessened.

It was not until the nineteenth and twentieth centuries that scientific and medical explanations of disabilities began to dismantle thousands of years of superstition, cruelty and neglect of the disabled populations.

Improved and increased services to disabled persons have occurred in this century. In the 1960's, President Kennedy's efforts on behalf of the mentally retarded and other disabled citizens spurred an acceleration in the delivery of services to disabled people (Kennedy, 1963; President's Committee on Mental Retardation, 1976).

Attitudes toward disabled people have been an important area of research in the last 25 years, a period of social and political unrest. Harasymiw, Horne and Lewis (1976) pointed out in their review of the research literature that stereotypes and negative attitudes toward
disability groups exist, not only among the general public, but among human service professionals as well. In light of the fact that the development of humane treatment and attitudes toward the handicapped members of society is less than 200 hundred years old, this finding is not surprising. They also suggest that the maintenance of stereotypic attitudes may serve to aid nonhandicapped people's processes of screening, categorization and prejudice formation.

In order to determine the extent of stereotypic attitudes toward disabled groups, Harasymiw et al. (1976) conducted an eight year longitudinal study on 4,459 subjects in over 50 sampling categories. They found stable attitudes across all of the samples. A common tolerance level toward disability groups was related to the subjects' perceptions of normalcy, social position, productivity and social values. A significant finding was that elementary school children shared many of the same stereotypic attitudes found in the group of 70 to 80-year-old senior citizens. The researchers point out that the organization of society may contribute to the development and maintenance of stereotypic attitudes toward physically and mentally handicapped persons, as well as toward socially and culturally handicapped groups. In citing societal factors which contribute to the emergence of prejudice toward disabled people, they stated the following:

Prejudiced persons will be most numerous in cultures with such characteristics as: social structure marked by heterogeneity; vertical mobility permitted; rapid social change; barriers to communication; large or growing minority groups; direct competition and realistic threats; exploitation that sustains important interests in the community; customs regulating aggression favorable to bigotry; traditional justification for ethnocentrism; and neither assimilation nor cultural pluralism favored. (p. 101)
Interpersonal Factors

In addition to the possible societal and historical factors which may affect the nonhandicapped person's reactions to disabled people, there may be personal factors which also influence their attitudes and interactions.

In studies conducted by several researchers, nonhandicapped persons reported uncomfortableness and uncertainty in their interactions with disabled persons (Richardson, 1969; Richardson, Hastorf, Goodman & Dornbusch, 1961; Davis, 1961). Goffman (1963) contended that the nondisabled person perceives handicapped persons as having a discrediting stigma and long-term relationships are avoided for fear of an association with the handicapped person's stigma.

The results of a study of the effects of physical deviance on face-to-face interactions between disabled and nondisabled college and high school students supported the proposition that uncomfortableness, strangeness and uncertainty occur for the nondisabled person (Kleck, Ono & Hastorf, 1966). The behaviors exhibited in this study included the reticence in the expression of actual beliefs, less variability in behavior and hasty termination of the social interaction.

Force (1956) attributed lack of acceptance of handicapped people by nonhandicapped persons on the degree of disability apparent to the nonhandicapped person. A more visible disability, such as cerebral palsy or quadriplegia, may result in more rejection than a less visible type of disablity such as a heart defect.

In contrast to Force (1956), Shears and Jensema (1969) concluded that the visibility of a handicapping condition may reduce the discom-
fort experienced since the need to explain the disability is minimized. The nonhandicapped person may know what is expected or required in the interaction and can accommodate to the disabled person's condition.

Gottlieb and Gorman (1975) found that mentally retarded citizens were generally rejected by society. In a study of 430 nondisabled adults in the Boston area, they found that there were unfavorable attitudes toward the integration of mentally retarded children in the community and school classrooms. People who favored community integration did not necessarily approve of school integration.

Summary

Disabled persons are generally rejected or encounter ambivalent attitudes and practices in our society. Stereotypic attitudes may be a result of social, historical and interpersonal factors which influence the nondisabled person's reactions to handicapped people. These stereotypes and attitudes appear to remain consistent in the adult nondisabled population over time.

Peer Acceptance of Handicapped Children

Mentally Disabled Children

A great deal of research has been conducted concerning the social acceptance of mentally disabled children by their nondisabled peers.

Furbee (1975) investigated the social rejection of mentally handicapped children in the 3rd, 6th, 9th and 12th grades. The subjects were
all partially integrated into regular classrooms. He found that the intensity of social rejection increased significantly as the grade level increased. Children apparently can become more nonacceptant as they grow older.

Stiehl (1978) studied the effects of perceived similarity on children's attractions toward mentally handicapped peers in upper elementary grades. He found that the nonhandicapped children's attraction to and evaluation of a mentally retarded child were related to the degree to which the handicapped child was perceived to be different or similar to nonhandicapped children. The more similar the child was thought to be, the more positive were the evaluations. However, the children were found to be generally more positive in their evaluations of a nonretarded child than they were of the handicapped child.

Fox (1979) investigated whether the nature of the social contact between disabled and nondisabled children affected the degree of social acceptance of the disabled children by their nonhandicapped peers. A sample of fourth, fifth and sixth grade students were used in the study. The main conclusion in this study was that it is necessary to provide on-going intervention in order to insure that the handicapped child does not become less accepted during the course of the school year. The provision of opportunities for the mutual discovery and discussion of shared interests was considered to be a worthwhile approach for increasing social acceptance.

These findings support the conclusions drawn by Stiehl (1978) and Lowther (1979). Lowther (1979) used games, skits and art projects to study the effect of social contact on the interaction of mentally
handicapped and nonhandicapped children in grades three through six. Significant positive attitude changes were maintained through the intermittent use of the same strategies during the course of the year.

The extent of social contact between handicapped and nonhandicapped children appears to be a significant factor in the development of acceptance. Brown, Branston, Hamre-Nieptupski, Johnson, Wilcox and Gruenewald (1979) argued that the neighborhood public school provides the only environment that allows for daily and longitudinal interaction between disabled and nondisabled children.

Voeltz (1980) studied the attitude survey responses of 2,392 elementary grade school children who had no contact, low contact or high contact with mentally or physically handicapped peers over a three-year period. The high-contact group had participated in a highly publicized school-wide program which promoted positive peer interactions, discussion, awareness training and tutoring for the disabled children. The low-contact group participated in a tutoring program only. The researcher concluded that upper elementary grade school children, girls and children having the most contact with handicapped children expressed the most accepting attitudes. Children who had no contact with handicapped peers exhibited the least acceptance.

Sheare (1974) found similar results in another study. It was suggested that children's attitudes toward disabled persons could be modified through interventions to facilitate social acceptance of individual differences in integrated school settings. While the majority of children appeared to disagree with pejorative and stereotypic terms such as "sissy" and "dummy", they expressed concern about the
integration of handicapped children into their classrooms, sharing the teacher's time with slower learners and communication with the handicapped children. It was also suggested that nonhandicapped children do not always exhibit overt behavior toward disabled children that is consistent with their expressed statements of acceptance.

Burton and Hirshoren (1979) argued that mildly handicapped children are often excluded from activities by their nonhandicapped peers on the basis of the severity of the handicapping condition. As the severity of the disability increases, so did the degree of rejection by nondisabled peers.

Interpretations of the social contact variable are difficult. The research findings have been equivocal on the subject. Cook and Wallersheim (1976) and Strauch (1970) found that social contact with mentally handicapped peers is not, in itself, sufficient to influence more positive attitudes toward the disabled peers.

Cook and Wallersheim (1976) directed researchers to investigate not only the presence or absence of contact but also the quality of that contact. A difficulty in evaluating the effects of social contact is the fact that many studies were conducted in school settings and used controlled interactions, e.g., tutoring, activities directed by teachers or structured and controlled tasks. It may be possible that the quality of overt behavior toward handicapped peers is different in nonschool or voluntary social contacts.

Gottlieb and his associates have extensively studied the effects of social contact, labeling, social preferences and other factors on the social acceptance of mentally handicapped children by their peers.
They have found that there is a great variability in attitudes and reactions toward mentally handicapped children. Factors of sex, age, contact and perceptions play important roles in acceptance of disabled children by their nondisabled peers.

Gottlieb (1978) concluded that investigations of the effects of the integration of handicapped children into classrooms with their nonhandicapped peers are inconclusive. He presented evidence that intervention efforts can positively influence the acceptance process.

**Children With Physical (Somatic) Disabilities**

**Children with Hearing Impairments.** Although school programs have reflected an increased emphasis on assimilating hearing impaired pupils into regular classrooms, little information exists on their social acceptance by nondisabled children (Kennedy & Bruininks, 1974).

Justman and Maskowitz (1954) studied the integration of 10 hearing impaired fourth grade children into a classroom with 25 nondisabled children. The conclusion reached was that fourth grade nondisabled children held negative or neutral attitudes rather than positive ones.

Elser (1959) found that children without a visible hearing disability were less accepted than those who wore hearing aids. Apparently, the difficulty in communication and the lack of understanding affected social acceptance.

Force (1956) also concluded that children with hearing disabilities were less accepted. He determined that hearing impaired pupils
were selected less often on a peer nomination scale than all other disability groups except the cerebral palsied category. The visibility of the handicapping condition appeared to have an effect on the measures of acceptance.

Shears and Jensema (1969) posited that the visibility of a disability, e.g., the wearing of a hearing aid, reduced the awkwardness of nonhandicapped persons and improved the social interaction with children who had hearing handicaps. The hearing aid may have served as a explanatory cue which enabled the nondisabled person to modify reactions.

Kennedy and Bruininks (1974) studied 15 first and second-graders who had been integrated into regular classrooms with 277 nondisabled peers. The disabled children were found to be more socially accepted by their nonhandicapped peers than had been found in other studies. Although the precise reasons for this acceptance could not be given, the researchers suggested that the results could be related to an optimal classroom social climate. It was also possible that younger nonhandicapped children are more accepting than older children toward hearing impaired peers and handicapped peers in general. Unfortunately, this study was marred by inappropriate statistical analyses which make the conclusions difficult to evaluate (Vandell & George, 1981).

In their own investigation, Vandell and George (1981) studied the interactions of integrated preschool hearing and hearing impaired children. The duration and proportion of time spent in social contact was less with the hearing impaired children than with hearing peers.
These researchers found that the nondisabled children often used inappropriate gestures or vocalizations to initiate contact with the disabled children. Children in both groups did, however, develop alternative methods for initiating and increasing social interactions. The researchers suggest that intervention strategies could facilitate social contact, communication and understanding on the part of young nonhandicapped children.

The findings of Kennedy and Bruininks (1974) and Vandell and George (1981) also suggested that younger children may be more receptive to interactions with their disabled peers than older children. This proposition received some support from a longitudinal study conducted by McCauley, Kennedy and Bruininks (1976) in which they found increasing rejection of disabled peers as children grew older.

Children With Orthopedic Disabilities. Perceptions and reactions to physically handicapped or orthopedically disabled children appear to develop at an early age. It is highly probable that children's perceptions of disabilities begin considerably earlier than middle childhood (Jones & Sisk, 1967). Children in the Jones and Sisk (1967) study were asked to respond to drawings of children wearing leg braces and to those who were not. The researchers further questioned the two to six-year-old children to determine their understanding of orthopedic disabilities and their feelings of acceptance toward the disabled children in the drawings. Four and five-year-old children perceived the disabled child as less likely to have fun in certain activities than would the nondisabled child. Four was found to be
the age at which perceptions of disabilities first appeared with consistency.

By the age of 10, the presence of social stereotypes and non-accepting behaviors may already be established in nonhandicapped children. Willey and McCandless (1973) studied 341 fifth-grade students who ranged in age from 8 1/2 to 11 1/2 years. The children consistently assigned unfavorable adjectives to mentally handicapped peers. While the nonhandicapped groups assigned more favorable terms to the orthopedically disabled children, they did admit that the orthopedically disabled peers were somewhat rejected and were often teased.

Rapier, Adelson, Carey and Croke (1972) assessed changes in the attitudes of 152 elementary grade school children toward orthopedically disabled children as a result of an integrated school experience. The major conclusion was that integration and social contact improved the nonhandicapped children's attitudes and perceptions of their handicapped peers. The researchers suggested that, without positive social interaction and correct information, nonhandicapped persons often develop inaccurate perceptions of handicapped persons which continue into adulthood. Since it is easier, they reasoned, to change attitudes before they have become crystalized, educators should consider and plan for integration activities for nonhandicapped children.

**Children With Visual Disabilities.** There appears to be little information concerning the social status of children with visual impairments in spite of the current emphasis on mainstreaming (Bryan & Bryan, 1979).
Bateman (1964) reported that sighted children are likely to hold negative attitudes toward partially sighted and blind peers. There is some evidence that these negative attitudes and behaviors can be altered in young children. When Bateman (1964) compared the attitudes of children on the basis of contact with visually disabled peers, she found that more positive feeling occurred when social interaction was present. This suggested that children could become more accepting of blind people given some familiarity with and knowledge of visual disabilities.

Ovide (1978) found that affective development training in the form of group guidance effected a positive shift in the attitudes of sighted elementary grade school children toward visually disabled peers. A trend toward lower levels of interaction anxiety and stress in the visually handicapped children was also found. When nonhandicapped children had received information and training about visual disabilities prior to interaction with the disabled children, both groups experienced more positive initial interactions.

Summary

Disabled children may experience rejection by nondisabled peers. Evidence suggests that nonhandicapped children's stereotypes and attitudes develop at an early age and become well-established by the age of ten. Perceptions of similarities and the quality of the social interactions appear to play important roles in the initiation and duration of social contact. Information and cues about a person's disability may improve the interaction.
Disabled People in the Media

In a study of the cultural uniformity of reactions to physical disabilities, Richardson, Goodman, Hastorf and Dornbusch (1961) questioned how children developed relatively uniform preferences for and rankings of handicapped subgroups within our society. They stated:

The widespread uniformity found in the study raises an interesting question as to how this behavior could have been learned. Although no explicit training is known to have been given these children, there is considerable evidence in our culture of a deprecatory evaluation of persons with physical disabilities. This evaluation is commonly found in the mass media, in which cultural stereotypes of physical beauty are identified with goodness and those of physical ugliness are identified with evil. (p. 247)

The effects of mass media portrayals of disabled people on the perceptions and reactions of nonhandicapped children has not been extensively researched. Television and movies may be as much socializing forces as they are reflectors of societal values. It is important to consider that more than 100 million Americans are regular television viewers; 97% of all U.S. households have at least one television set. The average preschool child watches television for more than 23 hours a week. The average teenager has watched 20,000 hours of television by the time of high school graduation (Cutlip & Center, 1978).

The information received about handicapped people through the mass media may contribute greatly to the prevalent attitudes in society.

Nonprint Media: Television and Films

Donaldson (1981) viewed and analyzed 85 half-hour randomly selected television time periods. She investigated the portrayal of disabled people as objects of pity, as innocents, as sick persons, as objects
of ridicule, as superhuman persons and as growing, developing individuals. Only 0.4% of all characters appearing in any manner were portrayed as disabled. Only 3.2% of all characters in major roles were portrayed as disabled even though an estimated 15 to 20% of the total population is disabled in some respect. Handicapped characters never appeared in incidental roles as shoppers, spectators, jurors, customers or workers. Disabled people were seldom shown engaged in positive social or professional interactions with peers. Disabilities were often portrayed as having a central focus in the lives of a disabled person rather than as an inconvenience for an otherwise successfully functioning person. In this study, disabled persons were often shown in negative roles. In several television episodes, criminals had disabilities although it was not essential to the plot that the criminal character be disabled. Donaldson (1981) suggested that such portrayals reinforce subconsciously held stereotypes and fears.

The absence of disabled people in general and the depiction of negative images of disabled persons on television led Leonard (1978) to the conclusion that television portrays handicapped people as a distinct and stigmatized group. She also found that only 3% of the major characters in samples of prime time television programs were handicapped. Children constituted 40% of the handicapped characters portrayed. Handicapped people were depicted as lower class citizens, unemployed or in low status occupations. They were generally not shown at home or at work. They were, unrealistically, not portrayed as parents or married. Disabled persons were often depicted as victims, as undesirable members of a group, submissive, uncultured, stupid, weak,
passive, selfish, sloppy or miraculously cured.

While the mass media often portrays disabilities in a negative manner, considerable activity concerning the handicapped population has been generated by Public Law 94-142. The media is beginning to present programming concerned with the urgency of needed services, the civil rights of disabled persons, research and the human potential of normal people who have been inconvenienced by a disability of some type (McLoughlin & Trammell, 1979).

McLoughlin and Trammell (1979) noted several films and television programs for children which present positive images of disabled people. It was also noted that many films present only a partial image of the disabled person.

Potter (1978) also listed a number of television programs and special films that are positive in their portrayal of handicapped individuals. She cited programs such as The Waltons, the ABC After School Special, Wilma, Eleanor and Franklin, the NBC Special Treats, the CBS Children's Film Festival and Zoom. These programs were considered to have the potential for providing positive insights and for increasing the understanding of disabilities.

Storey (1980) investigated the effects of the television series, Feeling Free, on children's attitudes toward handicapped people. The series of six television programs was designed to promote positive attitudes in children. Children, whose mean age was 9.5 years, viewed the programs and discussed them with their teacher. Those children who viewed the series were more aware, more understanding and more accepting of handicapped persons than were those children who did not
watch the programs.

The Association for Retarded Citizens (1980) presented an award to the American Broadcasting Corporation (ABC) and to KETV in Omaha, Nebraska for programming which dealt positively with the issues and concerns of mentally retarded persons and their families.

Biklin and Bogdan (1977) listed movies which negatively portrayed disabled people. Examples of such movies included The Sting, Dr. Strangelove, Dirty Harry and Burn, Witch, Burn. Also included were some Jerry Lewis movies, Mr. Magoo cartoon and two films about handicapped persons, Larry and Charly. Television programs which were considered to negatively depict disabled individuals included Ironsides, Longstreet and Marcus Welby, M.D. These series are no longer regularly aired. The television movie, Other Side of the Mountain, was found to be positive and honest in its portrayal of a disabled person's adjustment, sexuality and success.

Two children's television programs, Mr. Roger's Neighborhood and Sesame Street, have been commended for their sensitive presentation of disabled people (McLoughlin & Trammel, 1979; Wagner, 1975).

Print Media

McLoughlin and Trammell (1979) noted that newspapers can present disabled people in different forms. News features can cover mainstreaming, special events, barriers and services. Newspaper profiles of disabled persons can be a format for influencing public opinion. Whether the newspaper and magazine coverage is presented in a positive or negative manner depends on the reporters' perceptions of public
interest, sensationalism and information.

Weinberg and Santana (1978) reviewed comic books because they represent a massive proportion of popular reading matter. They reported that over 250 million comic books were purchased in 1978. Their research was designed to investigate whether 40 different comic books presented a stereotypic image of physically disabled people. They found that none of the 63 characters who had a physical abnormality was passive. The characters who were physically different were portrayed as either extraordinarily evil or especially good. A higher percentage of physically different characters were presented as evil. Weinberg and Santana (1978) cautioned parents and teachers to critically review the content of comic books as children's reading matter. Comic books may influence the development of negative attitudes.

Summary

Although some children's television programs have been commended for fostering the acceptance of handicapped people, television has, in general, presented a negative image of disabled persons. While more research is needed to determine the effect of this image on children, there is some evidence to support the proposition that television programming about disabilities can influence the attitudes of young viewers toward handicapped persons.

Newspapers and magazines can also have some influence on the perceptions of nonhandicapped individuals through the positive or negative presentation of facts about disabled people.
Children's Literature

Children's literature can have an important influence on the reactions and attitudes of children toward handicapped peers (Monson & Shurtleff, 1979). Greenbaum, Varos and Markel (1980) suggested that the use of children's literature can be an effective method of preparing nonhandicapped children for the mainstreaming process. Guidelines for the selection of children's literature should emphasize representative and positive images of disabled persons as well as correct information about disabilities. Guidelines should emphasize the whole disabled person, the limitations and abilities of disabled people and the similarity of handicappers to nonhandicapped children and adults.

Baskin (1974), in an investigation of 45 middle school library books, found that the problems caused by a disability were inadequately, inaccurately or over-emotionally demonstrated. No major differences in the depiction of disabled children were found in the books which were representative of a 31-year publishing period. Baskin (1974) suspected that the orientation of the writers represented largely unconscious, widely-held beliefs and perceptions about disabled people. The content of the books perpetuated semantic bias, distorted the capabilities of disabled characters by both under and overestimation of abilities, frequently dwelt on abuse, cruelty or rejection and were excessively melancholy or punitive in tone. Credibility appeared to be lacking in many of the children's books.

Schwartz (1977) reviewed 26 children's books and found that characters with disabilities are often depicted as evil and/or as having
sinister magical powers. Fear continued to be associated with the modern children's stories. This emotion has a long-standing emphasis as evidenced by popular children's classics and folk tales. Examples are Captain Hook in *Peter Pan*, Long John Silver in *Treasure Island*, Rumpelstiltskin and witches in numerous stories.

Several books glamorized famous disabled people such as Helen Keller, Stevie Wonder, Ray Charles and Louis Braille. Schwartz (1977) found that few books contained honest and nonstereotypic portrayals of disabled individuals.

Mauer (1979) stated the following about the representation of disabled people in children's literature:

There are few, if any, children's books in which physical abnormality is depicted in the context of behavioral normality, in which mutual dependence of the physically disabled and nondisabled is presented, and in which the strengths and weaknesses are presented and counterbalanced in both disabled and nondisabled characters. (p. 326)

In her study of responses to disabled storybook heroes, Mauer (1979) created a children's picture book which did depict the above characteristics of handicapped and nonhandicapped persons. The text and illustrations were modified to draw attention to the physical disabilities of the character who was the hero. She asked 127 children, aged four to seven years, to indicate their preferences for the disabled or nondisabled heroes in the storybook. She found that there were young nondisabled children who were ready to relate to a disabled child. Mauer (1979) concluded that they could perceive qualities in the disabled child which were desirable for a social relationship. It was suggested that books in which handicapped children are presented can be a method of promoting responsiveness, acceptance and positive social interaction.
Summary

Children's literature, both modern and classic, tend to depict disabled children in negative images and roles. Children's literature which portrays the abilities and limitations of disabled persons in a positive manner can influence the interactions of children.

Teaching Handicap Awareness

In view of the prevalence of stereotypic attitudes and nonaccepting behaviors of children toward handicapped people, the schools can play an important role in the development and promotion of positive attitudes toward handicapped persons. Direct contact occurs through the mandated mainstreaming process. But direct contact, in and of itself, is not enough. The optimal approach to fostering positive attitudes would be to combine contact with a curricular approach to the understanding of disabilities and the individuals who have handicaps (Cohen, 1978). Several different approaches have been used.

Karniski (1978) gave sixth grade children instruction on body functions and the effects of disabilities. Lessons included discussions, pictures, activities and filmstrips. The group who had received the instruction were found to approach a disabled person at closer distances than did the children who received no instruction.

Marcus (1980) investigated the use of daily oral reading and discussion with fifth and sixth grade children. This approach was not effective in improving attitudes of the nonhandicapped children toward
their handicapped peers. This finding may have been due to the design of the study, the interest of the children in the method used or the lack of value statements by the teacher. In this study, upper ability and upper socio-economic status children tended to have negative attitudes changes during the two-week duration of the study. This may also raise the question of the effect of peer leaders on the behaviors of classmates toward disabled peers.

No conclusions about a similar oral reading program for third grade children could be reached by Beardsley (1980). Attitudes toward disabled persons tended to be uncertain in this group of children. No changes occurred after two weeks of bibliotherapy.

In the previous two studies, it is possible that two weeks is too short a period of time to effect changes in children's attitudes. The children's literature used in the Marcus (1980) and Beardsley (1980) studies may have contained either neutral or negative portrayals of handicapped children. These factors may explain the results found in the two studies.

The results of a study by Jones, Sowell, Jones and Butler (1981) contrast with the findings of Marcus (1980) and Beardsley (1980). Jones et al. used a five-hour program of activities including interactions with disabled persons, simulations of disabilities, films, discussions and creative writing exercises about the children's experiences to change children's perceptions of handicapped people. The subjects were 75 elementary grade school children with a mean age of 8 1/2 years. It was found that young children's perceptions of disabled persons can be altered in a relatively short period of time.
They thought that the change could be accomplished with the use of inexpensive and readily available resources. It is also interesting that the subjects in this study did not participate in passive listening to stories about disabled people. The children were actively engaged in highly interesting, structured activities which encouraged creativity and familiarization or exploration of disabilities. A similar approach has been suggested by Lombana (1980).

Cronk (1978) found that positive attitude changes could be effected in third grade children through a structured activity involving interaction with mentally retarded peers. The nondisabled children changed their perceptions of the mentally disabled peers from "ugly", "mean", "stealing" and "use bad language" to more positive and accepting attitudes. The major finding was that a structured, goal-oriented task included in the interaction achieved greater acceptance and recognition of similarities.

Hawisher (1978) also concluded that, in first grade, social contact and daily joint activities geared to promote awareness of handicapping conditions and disabled children's needs and abilities resulted in greater acceptance levels than did social contact alone.

Gottlieb (1980) used group discussion with 339 children in grades three to six to improve attitudes toward mentally handicapped children. Gottlieb (1980) suggested that such informational discussion should be conducted prior to integration. He further advised that group discussion with children whose prediscussion attitudes are unknown is as likely to result in negative as positive attitude change. The teacher must identify the prediscussion attitudes of the class members before
introducing lessons about handicapped persons. The concept of awareness instruction about disabilities before integration efforts is supported by Siperstein, Bak and Gottlieb (1977), Jones et al. (1981) and Cohen (1978).

Cohen (1978) developed a curriculum which promoted the acceptance of individual differences. Disabilities were presented as points along a continuum of individual differences. The use of reading materials, simulation activities, photographs of disabled people, discussions, problem-solving exercises and social contact were found to change the perceptions of nondisabled children about their disabled peers.

Pieper (1974) and Cleary (1976) recommended preparing children for a handicapped classmate through the use of a variety of educational activities. Both of these authors listed simulation activities, group discussion, field trips to facilities serving disabled persons, the use of disabled people as resources and the use of instructional aids and materials such as films, books, pamphlets, filmstrips and videotapes. Pieper (1974) included the use of joint activities in which disabled and nondisabled peers work together toward common task goals.

Summary

A multi-faceted approach to teaching children about disabilities appears to be the most effective instructional strategy for handicap awareness training. The use of oral reading directed at young children may not result in positive attitude changes. Structured interactions may achieve positive social perceptions and attitudes if the handicapped and nonhandicapped peers share a few common goals related
to the interaction. Several researchers and authors found that the most effective instructional strategy is one which combines the use of instructional aids, discussions, problem-solving, exploration of feelings and simulation activities. As with many other learning activities, the instructional materials should be interesting and enjoyable for the children to use. It is also important that instructional materials and teaching guides be available for use by teachers.

Instructional Materials

A variety of instructional materials are currently available from commercial publishers and from organizations serving disabled people. This section contains a review of materials from these organizations.

Commercially Available Kits and Materials

The Learning Corporation of America produces a 24-minute film, The Invisible Children. It was designed to encourage young nondisabled children to ask questions about and learn about handicapped peers. The film features child-size puppets who describe their disabilities and abilities. The puppets represent a blind child, a deaf child, and a cerebral palsied child in a wheelchair. The movie characters discuss interactions with nonhandicapped peers. The puppets also describe aids used by disabled persons, e.g., white canes, wheelchairs, Braille, sign language, helmets and how they are used. The film can be used to prompt discussion with young children in elementary grades.

It provides accurate information which may be easily understood by
most young children. The film can be purchased for $350.00 or rented for $40.00.

An innovative approach to teaching young children was developed by Kids On The Block, Inc. The puppets shown in the film, The Invisible Children, have been expanded to 18 characters representing disabilities such as leukemia, mild visual impairments requiring eyeglasses, Down's Syndrome and obesity. A group of puppeteers can be hired and hosted by schools to present skits and, through the puppets, answer children's questions about disabilities. A newsletter and an educator's kit containing puppets, suggestions for skits, instruction sets and Braille cards can be obtained. No information was available on the cost.

Other films can obtained from The Learning Corporation of America. They deal with specific disabilities. Clockworks deals with the abilities of a child with Down's Syndrome. The Hayburners depict the friendship of a mentally retarded adult and a nondisabled teenager. Crossbar is a film for older children or adults dealing with physical disabilities. Another film, Reaching Out, assists older children in their understanding of physical and emotional handicaps. That's My Name -- Don't Wear It Out is the story of two boys, one of whom is deaf.

Guidance Associates produces a filmstrip program which presents a series of simulation and discussion activities related to a variety of disabilities. The filmstrip, You're Different, So Am I, can be used to encourage young children's exploration of their feelings about
themselves and about perceptions of differences found in others.

Selective Educational Equipment distributes a comprehensive series of kits dealing with mental retardation, orthopedic handicaps, learning disabilities, emotional disabilities, visual impairments and hearing disabilities. The instructional kits for each unit contain storybooks, materials and teaching aids for simulation activities, one reproducible black and white illustration and an audio cassette. The teacher manual for each unit contains basic facts about the disability, discussion questions and a bibliography of children's books related to the disability covered by the unit. It was found to be the most comprehensive, and perhaps the most expensive, series currently available. The title of the kit is *What If You Couldn't*.... The cost is approximately $300.00.

The *Meet Series* by H & H Enterprises utilizes photographs, records and brief textual information which can be used to introduce young children to learning disabilities, hearing impairments, multiple handicaps and mental retardation. Two to six sentences per page present pertinent information in the storybook format. The photographs are rather graphic and the author points out that third and fourth grade pupils appear to be able to better comprehend the photographs' depiction of "special" or "handicapped" than do first and second grade children. The complete kit is approximately $30.00.

The Encyclopedia Brittanica Educational Corporation has available a series of 10 films with the series title, *Like You, Like Me*. The films deal with epilepsy, mental retardation, emotional disturbances, prosthetic devices, hearing disabilities, visual impairments, asthma,
and orthopedic handicapping conditions. Each film, although animated and developed for children in kindergarten through sixth grade, is only about six minutes long. Swartz (1978) did not consider them to be an effective instructional tool. If used, the films would require careful teacher follow-up. The cost of the series is approximately $950.00.

The Children’s Television Workshop produces *Sesame Street*, the television program. People with disabilities and special needs have been regularly included in the curriculum for the television programming. Deaf, mentally retarded, visually impaired and physically disabled individuals are presented in a number of social settings. The research staff of Children's Television Workshop is currently planning to include disabled characters in the animated segments of the programming during 1981, the International Year of Disabled Persons. Teachers can request an activity book, *Sharing the Street: Activities for All Children*, and information about program schedules for classroom viewing and for permission to video-tape segments for classroom use.

Developmental Learning Materials (DLM) publishes *Accepting Individual Differences*. It consists of a series of booklets that deal with mental retardation, vision impairments, orthopedic disabilities and hearing impairments. The themes emphasize acceptance of individual differences and similarities among children in grades kindergarten through fourth grade. Picture books, photographs, problem-solving activities and simulation games and an audio cassette for the hearing impairments unit are contained in the series. The series costs approximately $25.00.
The Kids Come In Special Flavors Company produces a kit of instructional materials appropriate for many simulation activities with elementary school children. Learning disabilities, mental retardation, hearing impairments, visual and orthopedic impairments (cerebral palsy and spina bifida) are covered by the materials. A complete kit will include masking tape, Braille cards, elastic bandages, an audio tape of hearing impaired children speaking, materials for making your own Braille cards, sign language symbols, arm restrainers for simulation activities, sponges, soap and a list of Blissymbols. A teacher manual contains facts about the disabilities, lesson and activity plans and resources for additional instructional materials. The cost of the kit is approximately $25.00.

Materials From Organizations Serving Disabled Persons

Materials reviewed in this section were obtained from selected organizations serving disabled persons.

The President's Committee on Employment of the Handicapped publishes a booklet, People...Just Like You. It consists of a 36-page activity guide developed to promote acceptance of individual differences and understanding of disabilities and the people affected by them. It lists instructional activities and materials needed to teach handicap awareness at all grade levels.

Also received from this organization were several excellent soft-cover books about the history of disabled people in America, recreation for the handicapped citizens, building accessibility, communication and interaction with disabled persons and handicapped workers.
All of these books are appropriate for elementary grade level children and could be effectively used by children or teachers.

The Seeing Eye, Inc. sent two soft-cover books. One, in a comic book format, illustrated the training of guide dogs for blind persons. It would be appropriate for young children. The other book is a history of guide dogs and their use by blind people. In view of the negative stereotypes involved in handicapism, this book is not recommended by the writer for use with school children. The illustrations are reproductions of artwork which depicts the blind person and the use of guide dogs through the past few centuries. The reproductions illustrate the stereotypes of a disabled person with cap in hand, hence the term handicap. The persons in most of the pictures are shown as objects of pity or as victims of prejudice. A great deal of sensitivity and discretion should be exercised by the teacher in using this particular book with children.

Of the 28 organizations contacted, only two sent materials which could be used with nonhandicapped young children in elementary schools. The other organizations either did not respond to the request for instructional materials or sent materials which could not be used by children.

The following 15 organizations sent a variety of materials for use by adults, teachers or other professionals. Much of the information was directed toward teachers and consisted of background information about disabilities or brochures and catalogs from which some instructional materials could be ordered. The instructional materials most often were for use in teacher in-service training or for the
education of children with disabilities.

The following organizations have those types of materials available:

Alexander Graham Bell Association, Inc.
American Foundation for the Blind
Association for Children and Adults with Learning Disabilities
Association for Retarded Citizens
Gallaudet College
Massachusetts Department of Mental Health
Michigan Department of Labor: Commission on Handicapper Concerns
National Braille Association, Inc.
National Easter Seal Society for Crippled Children and Adults
National Rehabilitation Information Center
National Association for the Visually handicapped
National Wheelchair Athletic Association
New Jersey Association for Children with Learning Disabilities
The Council for Exceptional Children
United States Department of Health, Education and Welfare

Summary

A review of instructional materials appropriate for young elementary grade level children was presented. It appears that there are few commercially available materials which provide a variety of instructional activities for teaching handicap awareness. The kits tend to be relatively expensive and often require a great deal of teacher preparation and class time for presentation. None of the materials in this review contained consumable types of written matter for the children to use independently or in teacher-directed activities.

The materials available from organizations serving disabled people were generally informational in nature and would be appropriate for use by parents, teachers and other professionals. The materials included resource lists, bibliographies, professional enrichment activities and research literature.
Summary of the Review

This chapter contained a review of the historical and interpersonal factors which may have an influence on the stereotypes and reactions of nonhandicapped persons toward handicapped peers. Fear, avoidance and rejecting behavior and attitudes appear to be deeply rooted in our society.

Efficacy and sociometric studies of nonhandicapped children's acceptance and interactions with disabled peers have generally resulted in the finding that disabled children are not accepted by their nonhandicapped peers. These results have been found in a wide range of social situations. Nonhandicapped children may begin to develop their perceptions of disabilities as early as four years of age. Negative stereotypes and attitudes have been found to be established in ten-year-old children.

The media, although beginning to present more positive images of disabled people, tend to present negative or incomplete depictions of handicapped persons. Negative stereotypes may be reinforced and maintained through the lack of handicapper visibility in television programming as well as through the negative aspects of the handicapped characters portrayed.

Children's literature, both modern and classic, tend to present misinformation about handicapped children. Folk tales often depict disabled persons as evil, wicked, fearsome, pitiful or, on the other hand, as unrealistically good. Modern children's literature often inadequately treats the disabled child as a whole person who has some limitations and many abilities. This literature may represent the
unconscious, widely-held bias toward disabled people.

Several different instructional approaches can be used to teach nonhandicapped children about disabilities. The most effective of the methodologies appears to be the use of a combination of activities including instruction, simulation, role-playing and social contact. Social contact with handicapped peers or oral reading to children about disabilities, by themselves, have been found to be the least effective in modifying children's attitudes and behaviors toward disabled peers.

There are few commercially produced instructional materials available and suitable for teaching handicap awareness to young children. Four series of kits were reviewed which can be used in a variety of learning situations.

Materials available from organizations serving the population were generally found to be inappropriate for use by young children. The materials may be useful to teachers as sources of information and for ordering additional instructional materials.
CHAPTER III

METHODOLOGY

Introduction

This chapter describes the developmental process used by the writer to design the Handicap Awareness Series and the procedures needed to implement the study. The research questions, the selection of the research samples and the research procedures used in the study are presented.

Steps In The Development Of The Handicap Awareness Series

The following steps were used to develop the Handicap Awareness Series. The writer reviewed existing materials and procedures for teaching handicap awareness to young elementary grade children. The writer determined that there was a need for additional types of materials. After discussing the need for different types of materials with university faculty, graduate students in education and curriculum specialists, the writer decided that a disposable paper/pencil type of instructional material was needed. The writer reviewed selected elementary grade textbooks and commercially available materials and then developed a coloring book design for the Handicap Awareness Series. The writer developed rough sketches of handicapped and nonhandicapped children interacting in a variety of social situations. These drawings included illustrations of persons with mental, visual, orthopedic and hearing disabilities. These four disabilities were selected because
the writer felt that they were the most familiar to young children. The rough sketches were reviewed by a director of programs for the developmentally disabled, 20 doctoral students in education, three elementary school principals, two school superintendents and the three faculty members on the writer's doctoral committee. The changes recommended by the reviewers were then made in the rough sketches and given to a professional artist who completed the black line drawings which constituted the Handicap Awareness Series. A set of descriptions for each illustration was written by the author in conjunction with a reading specialist. Both the Fry and the Spache readability formulas were used to determine appropriate third grade reading levels for the written materials (Fry, 1979; Spache, 1972). Lastly, a Teacher Manual was developed for use with the Handicap Awareness Series. The manual contains four sections: (1) a rationale for the materials, (2) a brief description of each of the four disabilities, (3) a list of suggested instructional activities and (4) a bibliography of handicap awareness books available from the City of Kalamazoo Public Library.

Summary of Developmental Process

The writer reviewed existing instructional materials and determined that there was a need for additional types of handicap awareness materials. A disposable paper/pencil type of instructional material was designed by the writer and then reviewed by educational professionals and graduate students in education. The completed illustrations represent handicapped persons with mental, visual, hearing and orthopedic disabilities and nonhandicapped peers. Descriptions of each illustra-
Research Procedures

Introduction to Research Procedures

The following section describes the research procedures used in the study. Four main questions formed the basis of the study:

1. Is there a need for additional instructional materials to teach handicap awareness?
2. How would teachers and experts use instructional materials to teach handicap awareness?
3. What are teachers' and experts' opinions about the Handicap Awareness Series?
4. What are children's opinions about the Handicap Awareness Series?

Procedures Used

The following procedures were used in the study.

After designing the Handicap Awareness Series, the writer decided to conduct a pilot test of the materials. The total population of third grade teachers and students in the Catholic elementary schools in Kalamazoo, Michigan was chosen for the testing. The study was reviewed and approved by the superintendent who then sent letters of support to five teachers and the principals of four elementary schools. The letters explained the general nature of the study and encouraged the teachers to participate. The teachers were not required to participate but all did.
The writer and the director of the diocesan programs for handicapped people met with the five volunteer teachers for one-half hour to explain the study in greater detail. At that brief in-service meeting, the teachers received the Teacher Manual and also were given the opportunity to review and examine other handicap awareness materials and instructional aids available to them from the school system. The various instructional aids and materials as well as the Handicap Awareness Series were accessible to the teachers for the duration of the study. The teachers were instructed to use any aids they wished in conjunction with the Handicap Awareness Series.

In May, 1981, the writer delivered the children's activity sheets to each classroom teacher. The teachers were instructed to use the Handicap Awareness Series until the end of the school year, a period of three weeks. After using the materials, the teachers completed and returned the Teacher Questionnaire. The teachers briefly discussed the use of the materials with the writer in personal interviews. The Children's Questionnaire was administered by the teachers who read the questionnaire items to the students in each classroom. The student responses were then sent to the researcher.

The experts were each given a copy of the Teacher Manual and the set of children's activity sheets. They completed the Expert Questionnaire independently of each other. This procedure was used to determine whether experts in the fields of social work and education shared common opinions and recommendations for handicap awareness instruction and to determine similarities between experts and teachers. The experts were selected on the basis of a poll of faculty members.
who judged the experts to have knowledge and expertise in the area of instructional materials for handicap awareness.

The Teacher Questionnaire included demographic items and was modified from the Standard Criteria for the Selection and Evaluation of Instructional Materials (Woodbury, 1979, pp. 104-113) and the Activities Books Checklist and Evaluation Form (Woodbury, 1979, pp. 259-261). The Expert Questionnaire was a modified form of the Teacher Questionnaire. The Children's Questionnaire included six items related to reading difficulty, the child's opinion about the materials and the sharing of handicap awareness information with parents.

The teachers' and experts' responses were compiled and compared. The small number of respondents in the sample and the format of the questionnaires precluded statistical analysis.

The children's responses on the Children's Questionnaire were also compiled and compared. The children's data were analyzed using a chi-square test of independence for nominal data and a contingency coefficient as found in Hinkle, Wiersma and Jurs (1979, pp. 346-350). The significance of all statistically analyzed relationships was tested at the .01 level. Response categories on the Children's Questionnaire were combined in order to facilitate analysis. As suggested by Hinkle et al. (1979), it was possible to combine adjacent columns when more than 20% of the cells in the contingency table had expected frequencies of less than 5 and/or any cell had an expected frequency of less than 1.0 without distorting the data.
Three different opinion questionnaires were developed to survey the opinions of teachers, experts and children about the Handicap Awareness Series (see Appendix A).

The Teacher Questionnaire was constructed after a review of texts on the subject of instructional materials evaluation and after a review of evaluation forms. The questionnaire was adapted from examples found in Woodbury's *Selecting Materials for Instruction: Issues and Policies* (1979). Especially useful were the *Standard Criteria for the Selection and Evaluation of Instructional Materials* (pp. 104-113) and *The Activities Books Checklist and Evaluation Form* (pp. 259-261).

The Expert Questionnaire was developed from the Teacher Questionnaire. The questionnaire items were designed to parallel the similar questionnaire items on the Teacher Questionnaire. The questions were rephrased to reflect the experts' opinions of the potential rather than actual use of the Handicap Awareness Series. The responses of the teachers and experts were compared in each category. The results of the comparison were interpreted with respect to the applicability of the materials for teaching handicap awareness to third grade children.

The Children's Questionnaire was designed to solicit the children's opinions about the Handicap Awareness Series. It was also used to determine the general extent to which the children voluntarily shared the information in the materials with their parents at home. The questionnaire items were written in relatively simple language in order to facilitate the children's level of understanding and the
completion of the Children's Questionnaire.

Description of the Samples

A cluster sample of third grade teachers and students in the City of Kalamazoo, Michigan was selected as the sample in the study.

All five third grade teachers and the 140 third grade students in the Catholic parochial elementary schools within the city limits of Kalamazoo constituted the samples of teachers and students.

One of the five teachers had received previous training in the teaching of handicap awareness. Three of the five teachers had previous experience in teaching handicap awareness to nonhandicapped children. Three of the five teachers had previously taught disabled children in elementary grade classrooms. Two of the teachers were housed in the same building. Two of the teachers had taught in public school systems. The average number of years of teaching experience was 6.4 years with a range of one to eleven years. All the teachers were female.

Five experts in the fields of early childhood education, school psychology, reading, social work/mental health and special education were selected from the faculty of Western Michigan University. The five faculty members constituted the sample of experts.

Rationale for Evaluation of Results

The following strategy was developed to systematically answer the principle research questions of the study. The questionnaire items were categorized and responses of experts and teachers compared.
**Teacher and Expert Questionnaire Items**

The following set of four questions from the Teacher Questionnaire (T) and the Expert Questionnaire (E) were asked in order to answer Research Question #1: *Is there a need for additional instructional materials to teach handicap awareness?*

<table>
<thead>
<tr>
<th>Question #</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>T7</td>
<td>Did you use all of the sheets in the Series?</td>
</tr>
<tr>
<td>T11 &amp; E3</td>
<td>Do the materials meet the needs of students that are presently being met by other materials or kits?</td>
</tr>
<tr>
<td>T19</td>
<td>How much class time did it take to use the materials?</td>
</tr>
</tbody>
</table>

Question T7 addresses whether or not the materials were used by the teachers. It was expected that all of the teachers would use the complete set of activity sheets in the Handicap Awareness Series.

Questions T11 and E3 were asked to ascertain whether teachers used other handicap awareness materials and whether the teachers and experts perceived that the materials filled a gap in available instructional materials. A response, affirmative or negative, would support the premise that the teachers had knowledge of existing materials either in or out of the school system and that the experts were knowledgeable about instructional materials for handicap awareness.

Responses to Question T19 on the Teacher Questionnaire were tallied and averaged to determine the amount of class time actually used in the teaching of handicap awareness. The amount of time devoted to handicap awareness instruction would be an indicator of the importance attached to handicap awareness instruction by the teachers.
A set of eleven questions from the Teacher Questionnaire and the Expert Questionnaire were asked to determine answers to Research Question #2: How would teachers and experts use the instructional materials to teach handicap awareness?

<table>
<thead>
<tr>
<th>Question #</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>T14 &amp; E6</td>
<td>Can the sheets be adapted to meet differences in individual learner characteristics?</td>
</tr>
<tr>
<td>T15</td>
<td>Can individual students work on the sheets at his or her own pace?</td>
</tr>
<tr>
<td>T22 &amp; E10</td>
<td>Was the Handicap Awareness Series used with individuals? With small groups? With large groups?</td>
</tr>
<tr>
<td>T23 &amp; E11</td>
<td>In what ways did or would you use the materials? Describe the use of any additional materials.</td>
</tr>
<tr>
<td>T36 &amp; E24</td>
<td>Is there an activity or example of interaction which should be added to the materials to improve them?</td>
</tr>
<tr>
<td>T37 &amp; E25</td>
<td>What kinds of materials would you like to have developed to promote the interaction of handicapped and nonhandicapped students?</td>
</tr>
</tbody>
</table>

Questions T14, T15 and T22 from the Teacher Questionnaire indicate how teachers use the Handicap Awareness Series as well as the appropriateness of the materials for structured and unstructured (free-time) activities. Questions E6 and E10 reflect the experts' opinions about the use of instructional materials.

Questions T23, T36 and T37 on the Teacher Questionnaire and E11, E24 and E25 on the Expert Questionnaire seek information about the
use of the Handicap Awareness Series with other instructional aids.

The responses to these questions will help determine the preferences that the teachers and experts have for certain types of instructional materials or methods based on past experiences with handicapped children or handicap awareness instruction. The responses would also indicate those materials and activities which teachers and experts believe are effective in teaching handicap awareness to third grade children.

The next group of 19 questions was asked to provide answers to Research Question #3: What are teachers' and experts' opinions about the Handicap Awareness Series?

<table>
<thead>
<tr>
<th>Question #</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>T8 &amp; E1</td>
<td>Are there any actual or anticipated difficulties in using the materials?</td>
</tr>
<tr>
<td>T9 &amp; E2</td>
<td>Can the Handicap Awareness Series be easily used in classrooms where a variety of teaching styles are used?</td>
</tr>
<tr>
<td>T12 &amp; E4</td>
<td>Is the need for this type of material great enough to warrant a special effort in their development?</td>
</tr>
<tr>
<td>T13 &amp; E5</td>
<td>Do the sheets depict any stereotypes, prejudices or negative aspects of disabled people?</td>
</tr>
<tr>
<td>T16, T17 &amp; E7</td>
<td>Are boys and girls interested in the materials?</td>
</tr>
<tr>
<td>T18 &amp; E8</td>
<td>Can the concept of interaction with handicapped peers be grasped by nonhandicapped third grade students?</td>
</tr>
<tr>
<td>T20 &amp; E9</td>
<td>How much class time would you recommend for using the Handicap Awareness Series?</td>
</tr>
<tr>
<td>T21</td>
<td>Is the time spent worth the value of the activities?</td>
</tr>
<tr>
<td>T35 &amp; E23</td>
<td>Is there content that should be removed from the Series?</td>
</tr>
</tbody>
</table>
The following general questions included subsets of specific questions which were asked in both the Teacher and Expert Questionnaires.

<table>
<thead>
<tr>
<th>Question #</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>T24-29 &amp; E12-17</td>
<td>Is the format satisfactory?</td>
</tr>
<tr>
<td>T32-34 &amp; E20-22</td>
<td>Is the Teacher Manual satisfactory?</td>
</tr>
<tr>
<td>T30-31 &amp; E18-19</td>
<td>Is in-service training needed to effectively use these materials?</td>
</tr>
</tbody>
</table>

Questions T8, T9, T32-34 and T30-31 from the Teacher Questionnaire and questions E1, E2, E20-22 and E18-19 from the Expert Questionnaire were included in the questionnaires to determine possible areas of difficulties in teaching handicap awareness with the materials developed in this study. Interpretations of the responses would determine if there was a relationship between the teachers' experience and the perceived difficulty in the use of the materials. Negative responses would indicate general support for the premise that teachers can successfully teach handicap awareness without extensive in-service training if the materials are clearly written. Affirmative responses may indicate the need for teacher training in order for teachers to effectively present handicap awareness instruction to children.

Teacher Questionnaire items T12, T20, T21 and T39 and Expert Questionnaire items E4 and E9 were used to seek opinions from the experts and teachers about the educational value of the materials. Affirmative responses would support the position that instructional materials of this type are needed and would be used by teachers.

Questions T13 and E5, on the Teacher and Expert Questionnaires respectively, were included as checks on the perceptions of the experts.
and teachers about stereotypes, prejudice and rejection toward handicapped persons. An affirmative response would indicate that the experts and teachers could recognize negative aspects of interactions between handicapped and nonhandicapped children and would reject such depiction in the Handicap Awareness Series. One picture depicting the rejection of a mentally retarded child was included in the materials as a prompt for the discussion of the affective nature of relationships between children.

Questions T16, T17, T18 and E8 reflected the teachers' observations and perceptions of their students' behavior as well as the experts' opinions about children's possible reactions to the materials. It was expected that there would be agreement between the teachers' perceptions of the students' reactions, the student responses on the Children's Questionnaire and the experts' opinions. Affirmative responses of the teachers, experts and children, when compared, would support the choice of activities and illustrations contained in the materials.

Questions T24-29 and T35 on the Teacher Questionnaire and questions E12-17 and E23 on the Expert Questionnaire relate to the subsets of items pertaining to the format, illustrations, text and list of suggested activities in the Handicap Awareness Series. Affirmative responses to T24-29 and E12-17 would support the assumption that inexpensive, reproducible and disposable instructional materials of this type are acceptable to teachers and experts. A negative response to questions T35 and E23 would be interpreted to mean that the content and activities are appropriate for third grade students in terms of scope and interest.
The following set of six questions were asked of the children in order to answer Research Question #4: What are children's opinions about the Handicap Awareness Series?

<table>
<thead>
<tr>
<th>Question #</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>How hard are the sentences to read?</td>
</tr>
<tr>
<td>C2</td>
<td>How much did you like the exercises?</td>
</tr>
<tr>
<td>C3</td>
<td>How much did you like the coloring?</td>
</tr>
<tr>
<td>C4</td>
<td>How much did you like the maze?</td>
</tr>
<tr>
<td>C5</td>
<td>How much did you like the Braille?</td>
</tr>
<tr>
<td>C6</td>
<td>Did you talk to your parents about the handicapped children in the pictures?</td>
</tr>
</tbody>
</table>

Question C1 is a check on the reading level of the text in the activity sheets. The responses would indicate whether the vocabulary was appropriate for third grade children.

Responses to questions C2-5 on the Children's Questionnaire are a check against the teachers' and experts' perceptions of the children's interest in the materials and activities. An affirmative response would support the selection of activities contained in the Handicap Awareness Series.

In question C6, the writer sought to determine whether there was any carry-over of handicap awareness instruction into the homes of the children. The number of affirmative responses would indicate the degree of carry-over which occurred before the students took the completed materials home with them at the end of the study.
Summary

The responses of the teachers, experts and children were analyzed according to the research scheme previously described. The data from the teachers and experts were not statistically analyzed but were interpreted by the writer.

The responses of the children were analyzed using a chi-square test of independence and a contingency coefficient of correlation.

The responses from the Children's Questionnaire were compared to the teachers' comments, preferences and observations of their students as indicated on the Teacher Questionnaires. The data in these comparisons were not statistically analyzed but rather were interpreted by the writer. Conclusions will be drawn from these interpretations.
CHAPTER IV

RESULTS

Introduction

The data presented and analyzed in this chapter represent the information gathered from five third grade teachers, 140 third grade children and five experts in the fields of social work/mental health, special education, early childhood education, school psychology and reading instruction. The data were collected through the use of three questionnaires. The questionnaire items related to each of the main research questions are presented.

Data Analysis: Teacher And Expert Questionnaires

Need for Instructional Materials

Question T7. Four of the teachers used all of the activity sheets contained in the Handicap Awareness Series. One teacher was not able to use the visual disabilities section of the materials due to her absence from the classroom and other conflicting duties.

Questions T11 and E3. All five teachers indicated that the Handicap Awareness Series met the instructional needs of their students that were not being met by other instructional materials which could be used to meet nonhandicapped children's needs for handicap awareness instruction. Three experts identified films and puppet programs as possible alternatives to the use of the Handicap Awareness Series.
Question T19. The teachers used the Handicap Awareness Series for the average of 7.0 hours during the three weeks of the study or approximately one-half hour per day. The range of hours used by the teachers to teach handicap awareness was four to 10 hours during the three-week period. The data are presented in Table 1 and Table 2.

Table 1

<table>
<thead>
<tr>
<th>Question</th>
<th>Teacher</th>
<th>Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>T7 Did you use all of the sheets in the Series?</td>
<td>--</td>
<td>4 1</td>
</tr>
<tr>
<td>T11 &amp; E3 Do the materials meet the needs of students that are presently being met by other existing materials?</td>
<td>2 3</td>
<td>5 0</td>
</tr>
</tbody>
</table>

Table 2

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Number of Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

Total 35

Average = 7.0 hours
Use of Instructional Materials

**Questions T14 and E6.** Four of the teachers indicated that the materials in the Handicap Awareness Series could be used to meet individual learner characteristics. Four experts indicated that the materials could be utilized to meet varying abilities among learners. One expert suggested that educational professionals would be in a better position to evaluate whether the materials met individual learner needs.

**Question T15.** All five teachers indicated that the materials could be used by individual students at a pace consistent with learning styles and teaching patterns in their classrooms.

**Questions T22 and E10.** The five teachers used the materials with large groups of 22 to 33 children. None of the teachers used the Handicap Awareness Series with individuals or small groups. Two experts indicated that they would use the materials with small groups. All five experts also stated that they would use the materials with small groups. Table 3 contains the frequency of teacher and expert responses on questions related to the use of the materials.
Table 3  
Use of Instructional Materials:  
Frequency of Responses

<table>
<thead>
<tr>
<th>Question</th>
<th>Teacher</th>
<th>Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Can the sheets be adapted to meet individual differences in learner needs?</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Can students use the material at their own pace?</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Use with individual children?</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Use with small groups?</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Use with large groups?</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

Opinions About the Handicap Awareness Series

Questions T23 and E11. The teachers used a variety of activities to teach handicap awareness. The materials were used as a prompt for group discussion, as a follow-up to simulation exercises, and as experiential activities. None of the teachers indicated the use of additional instructional materials such as films, kits, filmstrips or books. The experts suggested the use of actual social interaction or contact with disabled persons as well as films, books, puppets such as Kids on the Block, and other materials. Table 4 contains the list of instructional methods used or recommended by the teachers and experts.
Table 4
Frequency of Instructional Methods Used
And Recommended

<table>
<thead>
<tr>
<th>Teacher Methods</th>
<th>Number of Times Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion</td>
<td>5</td>
</tr>
<tr>
<td>Simulation activities</td>
<td>5</td>
</tr>
<tr>
<td>Children's seat-work done independently of teacher</td>
<td>2</td>
</tr>
<tr>
<td>Follow-up to discussion</td>
<td>2</td>
</tr>
<tr>
<td>Prompt for discussion</td>
<td>1</td>
</tr>
<tr>
<td>In conjunction with other instructional materials</td>
<td>0</td>
</tr>
<tr>
<td>Social interaction with a handicapped person</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experts' Recommendations</th>
<th>Number of Times Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prompt for discussion</td>
<td>3</td>
</tr>
<tr>
<td>Follow-up to discussion</td>
<td>3</td>
</tr>
<tr>
<td>Simulation activities</td>
<td>2</td>
</tr>
<tr>
<td>Social interaction with a handicapped person</td>
<td>2</td>
</tr>
<tr>
<td>In conjunction with other instructional materials</td>
<td>1</td>
</tr>
</tbody>
</table>
Questions T36-37 and E24-25. Teachers wanted lists of suggested instructional activities, instructional materials, films, displays, simulation kits and additional information about disabilities when asked to indicate the types of materials they would like to have developed or added to the Handicap Awareness Series. One teacher suggested the need for an informational pamphlet for the parents of non-handicapped children to acquaint parents with the mainstreaming of disabled children and to involve parents in the use of the materials. Experts recommended the development and use of films, simulation exercises, direct social contact with disabled persons and the use of videotape presentations and role-playing. The materials and activities which teachers and experts desired are presented in Table 5.

Table 5

<table>
<thead>
<tr>
<th></th>
<th>Teachers</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional information about disabilities</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Films, filmstrips and other aids</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Parent pamphlet</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Suggestions for activities</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Experts</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Films, aids and information</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Simulation activities and materials</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Social interaction</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Table 6 contains the frequency of opinions held by the experts and teachers about the Handicap Awareness Series.
<table>
<thead>
<tr>
<th>Question</th>
<th>Teacher</th>
<th>Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there any difficulties in using the materials?</td>
<td>1 4</td>
<td>4 1</td>
</tr>
<tr>
<td>Can the Handicap Awareness Series be easily used in classrooms where a variety of teaching styles are used?</td>
<td>5 0</td>
<td>5 0</td>
</tr>
<tr>
<td>Is the need great enough to warrant development of these types of materials?</td>
<td>4 1</td>
<td>5 0</td>
</tr>
<tr>
<td>Do the sheets depict stereotypes, prejudice or negative aspects of disabled persons?</td>
<td>0 5</td>
<td>1 4</td>
</tr>
<tr>
<td>Are girls interested in the materials?</td>
<td>5 0</td>
<td>5 0</td>
</tr>
<tr>
<td>Are boys interested in the materials?</td>
<td>4 1</td>
<td>5 0</td>
</tr>
<tr>
<td>Can the concept of interaction with handicapped peers be grasped by nonhandicapped third grade children?</td>
<td>5 0</td>
<td>5 0</td>
</tr>
<tr>
<td>How much class time would you recommend for using the Series?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) More than 10 hours?</td>
<td>5 0</td>
<td></td>
</tr>
<tr>
<td>b) Less than 10 hours?</td>
<td>0 5</td>
<td></td>
</tr>
<tr>
<td>Is the time spent worth the value of the activities?</td>
<td>4 1</td>
<td></td>
</tr>
<tr>
<td>Would you recommend the Handicap Awareness Series to teacher?</td>
<td>5 0</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Teacher</td>
<td>Expert</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>---------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>T35 &amp; E23 Is there any content or activity that should be removed?</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>T24 &amp; E12 Is the 8 1/2 X 11 inch size satisfactory?</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>T25 &amp; E13 Are the illustrations clearly drawn?</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>T26 &amp; E14 Are the illustrations appropriate for third grade children?</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>T27 &amp; E16 Are the illustrations attractive to you (as teacher or expert)?</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>T28 &amp; E16 Are the illustrations attractive to third grade children?</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>T29 &amp; E17 Did the illustrations satisfactorily depict the interaction of handicapped and nonhandicapped peers?</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>T30 &amp; E18 Is teacher in-service needed to use the materials?</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>T31 &amp; E19 Would a teacher have to be highly motivated to use the materials?</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>T32 &amp; E20 Does the teacher manual convey the rationale for the material?</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>T34 &amp; E22 Is the choice of activities appropriate for third grade children?</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Questions T8 and E1. Four teachers indicated that they had no difficulty in using the materials in the Handicap Awareness Series. One teacher expressed some difficulty in motivating the children in her class to complete the coloring exercises even though the coloring was included as an optional activity. Four of the experts indicated that a major difficulty might occur if the teachers did not have sufficient information about disabilities or had negative attitudes about disabled children.

Questions T9 and E2. All teachers expressed that the materials could be used by teachers having different teaching styles. All of the experts also indicated that the materials could be used with a variety of teaching styles.

Questions T12 and E4. Four teachers and all of the experts indicated that there is a need for handicap awareness instructional materials. One teacher thought that other materials could be used to teach handicap awareness. This teacher also expressed concern about the number of coloring exercises and the lack of educational value in those activities.

Questions T13 and E5. None of the teachers indicated that the materials depicted stereotypes, prejudice or negative aspects of disabled persons. However, two teachers expressed reservations about the activity sheet which depicted the rejection of a mentally retarded girl in the unit on mental retardation. They expressed that this illustration could possibly promote peer rejection if misinterpreted by young children.
One of the experts suggested that the illustrations were too stylized and resulted in the faces of the characters appearing to be unnatural. The other four experts indicated that they did not perceive any stereotypes, prejudice or negative aspects of disabled persons. One expert recommended the inclusion of nonsexist depictions of boys' and girls' participation in the activities in the illustrations, e.g., boys jumping rope and girls playing catch with a baseball.

Questions T16, T17 and E7. All teachers indicated that the girls in their classrooms were interested in the sheets and activities. One teacher indicated that some of the boys in her classroom were not interested in the materials in the Handicap Awareness Series. Those boys did, however, express interest in the simulation activities used by the teacher. All of the experts anticipated that the children, both boys and girls, would be interested in the materials.

Questions T18 and E8. All teachers and experts indicated that the concept of interaction with handicapped peers could be grasped by the third grade children.

Questions T20 and E9. Three teachers indicated the number of hours which they would recommend for using the materials. The other two teachers recommended that a longer period of time than the three weeks of the study were needed to effectively use all of the materials. An average of 15 hours was recommended by the teachers who provided data. The experts responded with the recommendation that the materials be used as needed for the teaching of handicap awareness.
Question T21. Four teachers indicated that the time spent was worth the value of the activities. One teacher indicated that the coloring exercises were not as valuable as other instructional methods such as discussion and simulation activities.

Question T39. All teachers indicated that they would recommend the Handicap Awareness Series to other teachers especially if some modifications were made in the materials. Two of the teachers suggested modifications such as the inclusion of more information about disabilities and additional activities for classroom instruction.

Questions T35 and E23. Three teachers indicated that no materials or activities should be removed from the Handicap Awareness Series. Two teachers who were housed in the same building indicated that the illustration depicting the rejection of the mentally retarded child should be removed or modified to depict a positive interaction between handicapped and nonhandicapped children.

One of the experts did not like the facial expressions on the characters in the illustrations. The suggestion was made that the facial expressions be modified to depict more naturalness. The other four experts did not indicate that modifications should be made in the materials.

Questions T24 and E12. The size of the sheets (8 1/2 X 11 inches) was satisfactory to all teachers and experts.

Questions T25 and E13. Four experts and all of the teachers indicated that the illustrations were clearly drawn.
Questions T26 and E14. Four teachers agreed that the illustrations were appropriate for third grade children. One teacher indicated that the illustrations were not appropriate but gave no explanation for the negative response.

Questions T27 and E15. Four teachers and four experts thought that the illustrations were attractive to them as adults. The other teacher did not give a reason for the negative response. The other expert suggested that the illustrations were too stylized.

Questions T28 and E16. All teachers and four experts had positive opinions about the attractiveness of the illustrations for third grade children. One expert stated that the characters appeared to be unnatural in appearance.

Questions T29 and E17. All teachers and experts indicated that the illustrations satisfactorily depicted the interactions of handicapped and nonhandicapped children.

Questions T30 and E18. Two teachers and three experts indicated that in-service training would be necessary in order to provide teachers with needed information about disabilities or to modify negative teacher attitudes about handicapped students. The other teachers and experts did not specify a need for teacher in-service training.

Questions T31 and E19. Four teachers expressed the opinion that teachers would not have to be highly motivated in order to use the materials. One teacher and two experts indicated that they thought
the teachers would likely need a high degree of motivation to use the materials primarily because of the amount of preparation time for instruction and the need for in-service training.

Questions T32 and E20. All respondents indicated that the rationale for the materials was clearly presented in the Teacher Manual.

Questions T33 and E21. All experts and teachers expressed the opinion that the choice of activities was clearly presented in the Teacher Manual. All teachers were able to use at least one of the suggested activities from the Teacher Manual.

Questions T34 and E22. Three teachers and four experts shared the opinion that the choice of activities presented in the materials was appropriate for third grade children. Two teachers indicated that the exercises were too easy for third grade children and that the coloring activities lacked sufficient educational value. The one expert who responded negatively maintained that the nondisabled children's direct social interaction with disabled peers was more important than instructional activities or worksheets in promoting the acceptance of disabled children by their nondisabled peers.

Analysis of Data: Children's Questionnaire

The Children's Questionnaire was administered to 140 third grade children. Table 7 contains the data from the children's responses to the questionnaire items.
Table 7

Frequency of Children's Responses

<table>
<thead>
<tr>
<th>Question</th>
<th>Easy</th>
<th>Little</th>
<th>Very</th>
<th>Total No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C1 How hard were the sentences to read?</strong></td>
<td>119 85</td>
<td>21 15</td>
<td>0 0</td>
<td>140</td>
</tr>
<tr>
<td><strong>Did Not Like a Little Like a Lot</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C2 How much did you like the exercises?</strong></td>
<td>5 4</td>
<td>35 25</td>
<td>100 71</td>
<td>140</td>
</tr>
<tr>
<td><strong>C3 How much did you like the coloring?</strong></td>
<td>8 6</td>
<td>33 24</td>
<td>99 70</td>
<td>140</td>
</tr>
<tr>
<td><strong>C4 How much did you like the maze?</strong></td>
<td>5 4</td>
<td>36 26</td>
<td>99 70</td>
<td>140</td>
</tr>
<tr>
<td><strong>C5 How much did you like the Braille?</strong></td>
<td>6 5</td>
<td>34 30</td>
<td>73 65</td>
<td>113</td>
</tr>
<tr>
<td><strong>Yes No</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C6 Did you talk to your parents about the handicapped children in the pictures?</strong></td>
<td>54 39</td>
<td>86 61</td>
<td></td>
<td>140</td>
</tr>
</tbody>
</table>
Question C1. As shown in Table 7, 85% of the children indicated that the sentences were easy to read. The other 15% indicated that the sentences were slightly hard to read. None of the children found the sentences hard to read.

Question C2. Five children did not like the exercises. Of the remaining 135 children, 71% indicated that they liked the exercises and 25% indicated that they liked the exercises somewhat.

Questions C3, C4 and C5. These questions were asked to determine the children's opinions about the specific activities, namely, coloring, maze completion and the solution of a Braille puzzle.

Seventy percent of the children liked the coloring activities. Six percent did not like the coloring. Twenty-four percent indicated that they had a slight liking for the coloring exercises.

The maze completion exercise was liked by 70% of the children. Of the remaining children, 26% indicated that they liked the maze completion activity somewhat and 4% indicated that they did not like the activity.

Only 113 of the total sample of 140 children used the Braille solution activity sheet. Of those 113 children, 65% liked the activity which involved the deciphering of Braille symbols and the matching of the symbols to a picture of a corresponding object. Five percent of the children indicated that they did not like the activity and 30% indicated that they liked the activity somewhat.

Question C6. The children were not given any specific instructions
to discuss the information from the Handicap Awareness Series with their parents. This question was used to determine whether the children voluntarily shared the handicap awareness information with their parents. Of the 140 children, 39% indicated that they had talked to their parents about the handicapped children depicted in the illustrations.

A comparison of the five classes is presented in Table 8. Table 8 contains the frequency of the classrooms' responses to the six items on the Children's Questionnaire, the percentage of response in each category and the chi-square scores. The responses were analyzed using a chi-square test for independence and a contingency coefficient in cases where a significant relationship was found. The null hypothesis in each case was that there would be no difference between the classes.

The null hypothesis of no difference in the responses of the children in the five classes was not rejected for the items related to the level of reading difficulty, the degree of liking for the general exercises, the Braille solution activity and the sharing of handicap awareness information with parents.

Significant differences were found at the .01 level when the responses to questions about the coloring and the maze completion exercises were compared for the five classes. A chi-square of 22.86 was found for the children's preferences for the coloring exercises. This figure exceeded the chi-square critical value of 13.27 at the .01 level of significance. The correlation between the class placement and the children's responses was found to be .37 using a contingency coefficient of correlation. In this case, the maximum value of the
Table 8
Comparison of the Five Classes

<table>
<thead>
<tr>
<th>Question C1: How hard were the sentences to read?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

$\chi^2 = 5.22$

<table>
<thead>
<tr>
<th>Question C2: Did you like the exercises?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

$\chi^2 = 12.64$
Table 8  
Comparison of the Five Classes

Question C3: How much did you like the coloring?

<table>
<thead>
<tr>
<th>Class</th>
<th>Not liked/ Liked a little</th>
<th>Liked a lot</th>
<th>Number in Class</th>
<th>$x^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>4</td>
<td>23</td>
<td>92</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>50</td>
<td>11</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>4</td>
<td>26</td>
<td>96</td>
</tr>
<tr>
<td>4</td>
<td>14</td>
<td>42</td>
<td>19</td>
<td>58</td>
</tr>
<tr>
<td>5</td>
<td>13</td>
<td>39</td>
<td>20</td>
<td>61</td>
</tr>
</tbody>
</table>

Question C4: How much did you like the maze?

<table>
<thead>
<tr>
<th>Class</th>
<th>Not liked/ Liked a little</th>
<th>Liked a lot</th>
<th>Number in Class</th>
<th>$x^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td>32</td>
<td>17</td>
<td>68</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>13</td>
<td>20</td>
<td>87</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>52</td>
<td>13</td>
<td>48</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>30</td>
<td>23</td>
<td>70</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>18</td>
<td>27</td>
<td>82</td>
</tr>
</tbody>
</table>
Table 8
Comparison of the Five Classes

Question C5: How much did you like the Braille?

<table>
<thead>
<tr>
<th>Class</th>
<th>Not liked/ Liked a little</th>
<th>Liked a lot</th>
<th>Number in Class</th>
<th>(X^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>36</td>
<td>16</td>
<td>64</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>18</td>
<td>18</td>
<td>82</td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
<td>36</td>
<td>21</td>
<td>64</td>
</tr>
<tr>
<td>5</td>
<td>15</td>
<td>45</td>
<td>18</td>
<td>55</td>
</tr>
</tbody>
</table>

Question C6: Did you talk to your parents about the handicapped children in the pictures?

<table>
<thead>
<tr>
<th>Class</th>
<th>Yes</th>
<th>No</th>
<th>Number in Class</th>
<th>(X^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>13</td>
<td>52</td>
<td>12</td>
<td>48</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>23</td>
<td>17</td>
<td>77</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>52</td>
<td>13</td>
<td>48</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>27</td>
<td>24</td>
<td>73</td>
</tr>
<tr>
<td>5</td>
<td>13</td>
<td>39</td>
<td>20</td>
<td>61</td>
</tr>
</tbody>
</table>
contingency coefficient was \( + .71 \), not \( + 1.0 \). A correlation of .37 may therefore indicate a moderate degree of relationship between class and the children's responses to the coloring exercises. A review of Table 8 shows that the children in Classes #1 and #3 had the highest percentage of positive responses. The children in Classes #2 and #5 had the lowest percentage of positive responses. The teachers in these two latter classrooms were also the teachers who expressed the that the coloring activities had the least educational value.

There was a low positive correlation of .29 between class placement and the children's responses about the maze completion. The chi-square was 13.23 with the critical value of chi-square being equal to 13.27 at the .01 level of significance. The difference of .04 was judged to be too small to risk making a Type II error, i.e., failing to reject a false null hypothesis. A review of the data in Table 8 shows that the children in Classes #1 and #3 liked the maze completion exercise the least of all the children in the five classrooms. The children in Classes #2 and #5 liked the maze activity more than the children in the other three classrooms as determined by the percentage of positive responses. The classes which had the highest percentage of children who liked the maze completion exercise (Classes #2 and #5) were also the classes which had the lowest percentage of positive responses to the coloring activities. Those classes which liked the coloring activities as indicated by higher percentages of positive responses (Classes #1 and #3) were the classes which liked the maze completion exercise the least.
CHAPTER V

DISCUSSION, CONCLUSIONS, IMPLICATIONS
AND RECOMMENDATIONS

Summary

Introduction

The purposes of this study were (1) to determine the need for instructional materials to teach handicap awareness, (2) to determine how teachers and experts would use instructional materials, (3) to determine the opinions of teachers and experts about the Handicap Awareness Series and (4) to determine the opinions of a group of third grade children about the Handicap Awareness Series. To help answer these questions, a set of activity sheets, the Handicap Awareness Series, was developed for use by third grade teachers and children in handicap awareness instruction. Five teachers and 140 third grade children used the set of materials. A group of five experts also evaluated the Handicap Awareness Series.

Three questionnaires were constructed based on a review of the pertinent literature and evaluation forms. The Teacher Questionnaire and the Expert Questionnaire contained items related to (1) the actual or recommended use of the instructional materials, (2) the need for instructional materials to teach handicap awareness, (3) the format of the Handicap Awareness Series materials and (4) the opinions of the teachers and experts about the content of the materials developed in this study. The Teacher Questionnaire also contained demographic items related to the teachers' experience.
The Children's Questionnaire contained items that were related to (1) reading difficulty, (2) the children's opinions about the learning exercises and (3) the sharing of handicap awareness information by the students with their parents. The items on the Children's Questionnaire were analyzed using a chi-square test of independence and a contingency coefficient. A .01 level of significance and a 2 X 5 contingency table were used after combining adjacent response categories.

Responses to the Teacher and Expert Questionnaires were not statistically analyzed due to the small samples. The format of these two questionnaires, i.e., yes and no response categories, did not allow meaningful statistical analysis. However, the data were interpreted by the writer for trends and consensus of teacher and expert opinions. The written responses to the teachers' and experts' open-ended questions were also used in the interpretation of the results.

Discussion of the Findings

Need for Instructional Materials

This study was conducted near the end of the school year in 1981. Although the five teachers had other responsibilities to finish regular instructional units, complete end-of-the-year reports and prepare the classrooms for the summer recess, all but one of the teachers were able to use the complete set of materials in the Handicap Awareness Series. Each teacher expressed that she wanted to spend more time using the materials and would use the Handicap Awareness Series during the following academic year. The teachers also indicated that they had some
knowledge of the availability of other instructional materials which could be used to teach handicap awareness. Only one teacher, however, had previously used such materials prior to using the Handicap Awareness Series in this study.

The teachers and experts were in general agreement that the activity sheets and exercises of the Handicap Awareness Series provided an additional source of instructional material to be used in teaching children about people with disabilities. The Handicap Awareness Series was considered by the teachers and experts to fill a gap in available instructional materials. The teachers and experts indicated that the Handicap Awareness Series could be most effectively used in conjunction with other instructional materials to reinforce positive perceptions and attitudes about handicapped persons. In summary, this study found that there is a need for instructional materials to teach handicap awareness.

**Use of Instructional Materials**

The teachers tended to use the Handicap Awareness Series in structured teacher-directed classroom activities. In two classrooms, the structured activities occurred first and then the children were directed to complete the activity sheet exercises as seatwork during free-time periods.

Although the teachers and experts indicated that the materials could be adapted to meet the learning needs of individual students, the writer was unable to draw any conclusions about the actual use of the activity sheets with individuals. Each of the teachers used the
materials in large group formal instruction. Some children who were unable to complete the activity sheets were still able to keep the activity sheets for completion at a later date. In summary, the manner in which the Handicap Awareness Series was used by teachers did not allow for instructional pacing to meet individual learning needs or characteristics in the children.

Previous teaching experience with handicapped children did not appear to influence teacher preference for the use of other instructional aids. Three teachers had previously taught students who were disabled with hearing impairments, learning disabilities, blindness, muscular dystrophy, emotional disorders, polio or accidental injuries. One teacher who had not had previous experience with handicapped children in the classroom expressed a need for additional information about disabilities before teaching handicap awareness. In summary, previous teaching experience with handicapped children was not an advantage for using the Handicap Awareness Series.

Except for actual social contact between handicapped and nonhandicapped children, the teachers used or recommended the instructional activities and methods that were suggested by the group of experts. They suggested methods which included simulation exercises with discussion about handicapping conditions and the use of films, filmstrips, books and experiential activities.

Although a wide range of instructional materials such as films, storybooks and simulation kits were available to the teachers through the school system, none of the teachers in the study used the aids during the course of the study. The writer was unable to determine
why other materials were never used. The teachers may have been enga­ged in other activities at the end of the school year that limited the amount of time the teachers could devote to teaching handicap awareness.

In conclusion, it has been found in this study that teachers using the Handicap Awareness Series used it in large group instruction and without additional instructional aids. Previous teaching experience with handicapped students was also not an important factor in teaching handicap awareness. Both teachers and experts were aware of and listed other teaching aids and methods to teach handicap awareness.

Teacher and Expert Opinions About the Handicap Awareness Series

Three of the teachers said that in-service training for use of the Handicap Awareness Series was not necessary. They indicated that the descriptions of the suggested activities were clearly written so as to afford easy implementation of the units of instruction.

The majority of teachers (four of five) indicated that the Handicap Awareness Series had instructional value for fostering the acceptance of disabled children by nonhandicapped students and that the materials would be used if made available to teachers. The only negative teacher response and comment was related to the educational value of optional coloring exercises. Coloring appeared to be an instructional activity that many, but not all, of the teachers and children valued. Some classes tended to prefer coloring more than other classes and it may be that teacher characteristics related to instructional preferences and styles may have affected the manner in which the
exercises were used or emphasized. In summary, the Handicapped Awareness Series was found to have high educational value.

The teachers and experts generally agreed that the Handicap Awareness Series did not depict stereotypes, prejudice or negative aspects about handicapped people. Two teachers shared the opinion that one of the illustrations may have depicted negative interactions between non-handicapped and handicapped peers. This illustration in the unit on mental retardation depicted the exclusion of a mentally retarded girl by a group of children. This illustration was included in the materials as a prompt for discussion about the affective aspects of social interaction. The text which accompanied the illustration was meant to provide a focus on the personal feelings of any person who is rejected from a peer group. Although these two teachers expressed that the group discussions with children in their classrooms were very beneficial in response to this illustration, they would have preferred a more positive depiction of acceptance rather than of rejection. In summary, the teachers judged the Handicap Awareness Series to be generally free of negative factors.

The teachers and experts shared the opinion that third grade children would be interested in the Handicap Awareness Series. This observation was supported by the children's responses to the Children's Questionnaire where 96% of the children expressed some degree of liking for the exercises in the Handicap Awareness Series. In summary, during the development of instructional materials to teach handicap awareness, it would seem to be important to consider the special interests of boys and girls for the types of activities depicted in the materials.
The choice of activities and illustrations was considered by the teachers and experts to be appropriate for third grade children. The boys in one classroom tended to prefer the simulation exercises more than the completion of the activity sheets. The teacher in this particular classroom emphasized the simulation activities to a greater degree than did the other four teachers and this may have accounted for the boys' preference for this type of activity.

Format

There was general agreement among the teachers and experts about the format of the materials in the Handicap Awareness Series. The responses supported the assumption that inexpensive, reproducible and disposable materials of the type found in the Handicap Awareness Series are acceptable, are needed and would be used by teachers in this study. All of the teachers stated to the writer that they would duplicate the materials for use with future classes. In summary, the Handicap Awareness Series is a valuable instructional format different from other available instructional materials on the same topic.

In conclusion, the Handicap Awareness Series was judged to be of high educational value, free of negative stereotypes, appropriate for third grade students, and did not require in-service training. Some differences of opinion existed between the teachers for the value of coloring as an educational activity and for one of the illustrations. Male and female sex preferences may also exist for some of the illustrations and for the use of simulation activities.
The teachers and experts agreed that the content in the Handicap Awareness Series was appropriate for third grade children in terms of information and activities. Three of the experts, however, indicated that instruction which included "social contact" activities with handicapped children was necessary before any positive acceptance of handicapped peers by nonhandicapped children was possible. The list of suggested social contact activities included direct social contact, disabled guest speakers, cooperative task-oriented activities with disabled children and field trips to visit disabled children or a facility for handicapped persons. A review of the literature, however, indicated that social contact activities, by themselves, have been found to produce equivocal results in achieving acceptance of disabled children by their nondisabled peers. In summary, the experts suggested that a wide range of instructional methods be used in combination with the Handicap Awareness Series to teach and promote handicapper acceptance. Three teachers, although approving of the content of the materials, also indicated that additional options for using the activity sheets would have improved the Handicap Awareness Series.

In conclusion, it was found in this study that teachers and experts perceived that nonhandicapped children in the third grade can comprehend the concept of positive interaction with handicapped children. Four of the five teachers also reported that they discovered the third grade children had more information about disabilities and more experience with disabled people than the teachers had previously been
aware of prior to the use of the materials in this study. Although not tested in this study, the teachers also reported that after receiving information about disabilities and completing the activity sheets, the majority of children in each classroom expressed that they would be friends with a child who had a handicap. The teachers also reported to the writer that the children's general level of acceptance of individual differences appeared to have increased. It should be noted that these were teacher perceptions and the reported increases were not tested in this study.

**Children's Opinions About the Handicap Awareness Series**

The readability level chosen for the Handicap Awareness Series appeared to be appropriate for the third grade children in this study. Of the 140 children, 85% indicated that the reading level was not difficult. Since the students were completing the third grade school year, the children may have had general reading abilities at the lower fourth grade level. The materials could possibly have been written at a higher grade level without loss of comprehension on part of the students.

The children's opinions about the specific activities of coloring, maze completion and Braille solution were generally positive. The three different activities were, however, not preferred equally by all of the students. Generally, those students who liked the coloring exercises did not prefer the maze and Braille activities as much. Those students who preferred the maze and Braille activities appeared to have the least preference for the coloring exercises.
Although the activity sheets and classroom activities were enjoyed by the children, in summary, it appears that the materials should include a wider range of activities and options. More consideration should also be given to the amount and type of instructional activities used by classroom teachers during the course of the school year. In this study, the children may have been exposed to certain kinds of activities such as coloring and problem-solving and this may have affected their responses to the materials and the questionnaire items.

There was no significant difference found between the classes in the number of children who shared the handicap awareness information with their parents in the home. Only 39% of the children reported that they had voluntarily shared the information with their parents. It should be noted that the children were asked to respond to this questionnaire item prior to taking the completed materials home with them. Discussions in the children's homes may have increased after the children took the completed Handicap Awareness Series home with them at the end of the study.

In conclusion, the third grade students judged the reading level to be appropriate, enjoyed the various activities and a similar number of children from each class shared the handicap awareness information with their parents.

Summary of Conclusions

Taking into consideration the limitations of this study, the following conclusions were drawn from an analysis and interpretation of the responses and comments of the teachers, experts and children.
(1) There is a need for additional types of handicap awareness instructional materials to teach handicap awareness.

(2) Teachers and experts are aware of teaching aids and methods for teaching handicap awareness.

(3) Previous teaching experience with handicapped students was not important in this study.

(4) Teachers used the Handicap Awareness Series with large groups rather than with individuals and small groups.

(5) Teachers and experts judged the Handicap Awareness Series to be:

   (a) of high educational value
   (b) free of negative stereotypes
   (c) appropriate for third grade students
   (d) unique in format compared to other materials
   (e) useable without in-service training.

(6) Teachers differed in their opinions about

   (a) coloring activities
   (b) one illustration depicting peer rejection.

(7) Possible sex and classroom differences may exist in preferences for instructional activities.

(8) Teachers and experts agree that the concept of positive interaction between handicapped and nonhandicapped can be grasped by third grade children and that the concept can be taught at the third grade level with the Handicap Awareness Series.

(9) A greater variety of instructional materials for teaching
handicap awareness are desired by teachers and recommended by experts.

(10) Children using the Handicap Awareness Series judged
(a) the reading level to be appropriate
(b) enjoyed the materials and activities.

(11) A minority of students disliked some of the instructional activities in the Handicap Awareness Series.

(12) A minority of students shared their handicap awareness instruction with their parents.

Implications

The Handicap Awareness Series was found to be a valuable intervention strategy to foster the acceptance of handicapped children by their nonhandicapped peers. The results of this study and the review of the literature in Chapter II indicate that teachers would present handicap awareness instruction to their elementary grade school pupils given an adequate variety of instructional materials. The implication for school systems is that increased attention must be given to the development and provision of instructional materials, aids and training needed for teachers to prepare nonhandicapped children for the mainstreaming of peers who have disabilities.

Legislation has mandated that mainstreaming occur but wholesale mainstreaming, even in the face of current economic expediencies, without adequate preparation is ill-advised. If, as suggested in the literature, children develop relatively enduring stereotypes and perceptions of handicapped people by the age of ten, it becomes crucial
for educators to attend to the development of positive attitudes and behaviors in young nonhandicapped children.

Early interventions which focus on the development of positive attitudes and behaviors would be expected to have implications for the education of all children, for disabled people in the community and for the community in general.

Major interaction problems such as teasing, fighting or attention seeking which can disrupt classroom order and instruction can possibly be avoided or minimized if nonhandicapped children are informed about the needs of their handicapped peers and the disabling conditions that they may come into contact with. By minimizing the disruptive social interactions which may interfere with teaching and learning, all of the children in a classroom would be able to benefit from the educational process. The school, as an institution which serves the societal role of communicating the values and practices of a community, can, in the mainstreaming process, communicate that disabled persons are not to be secluded or avoided. The schools should provide the optimal climate for social interaction with and acceptance of disabled people. This may best be accomplished through adequate handicap awareness instruction in all the grades but especially in the early elementary grades.

The anticipated outcomes of early and continued intervention through the use of handicap awareness instruction would be (1) to develop in students the awareness of community attitudes and practices which mitigate against disabled people and (2) to motivate students to take actions that will counteract unfavorable attitudes and practices
toward handicapped people. It would be hoped that the positive attitudes and behaviors learned in the elementary grades would continue through high school and into adulthood.

The emphasis on positive attitudes and behaviors toward disabled persons in the schools and, ultimately, in the community would have implications for the handicapped children and adults in the community. Interactions between handicapped and nonhandicapped persons would be enhanced. Positive community attitudes would have a beneficial effect on the quality and quantity of occupational, social and recreational opportunities available to disabled persons. The community itself could receive greater benefit from the services and resources afforded by disabled members of the community.

The development of instructional and informational materials by teachers and curriculum specialists in the schools is only the beginning of the handicap awareness process. Handicap awareness is not just for the school children in a community. Handicap awareness is a lifelong process for handicapped and nonhandicapped persons alike. If the integration of disabled children and adults into the mainstream of society is to occur, all of the educational forces in the community -- business, industry, schools, media, churches, human service agencies -- must develop and/or utilize intervention strategies to develop positive attitudes and practices toward handicapped individuals. Increased efforts should be directed toward the development and use of those intervention strategies.
Recommendations

On the basis of the findings in this study, the following recommendations are presented by the writer.

(1) School systems should make additional handicap awareness materials available to teachers especially in the elementary grade schools. The provision of in-service training should be considered and used to prepare teachers for handicap awareness instruction and mainstreaming.

(2) Publishers of instructional materials and curriculum specialists in the schools should be encouraged to develop a wider range of handicap awareness instructional materials suitable for all kindergarten through twelfth grade students.

(3) A study similar to the present one should be conducted at other grade levels. The additional research should focus on the development of instructional materials appropriate for the teaching of handicap awareness to both handicapped and nonhandicapped children involved in the mainstreaming process in both the community and the schools.

(4) A study should be conducted to determine the effects of the Handicap Awareness Series and other instructional materials on the changes in attitudes and behaviors of nonhandicapped children toward disabled peers.
Appendix A

HANDICAP AWARENESS SERIES
TEACHER QUESTIONNAIRE

Thank you for using the materials from the HANDICAP AWARENESS SERIES. Your time and effort is greatly appreciated. Your input on this short questionnaire will be valuable in evaluating the materials in the SERIES. Your responses will be kept confidential.
If you have any questions, please feel free to contact me at: 372-5977 (home) or 383-1995 (Western Michigan University).

<table>
<thead>
<tr>
<th>TEACHER INFORMATION</th>
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<tbody>
<tr>
<td>T1</td>
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<td>T2</td>
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<td>T3</td>
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<td>T4</td>
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<td>T5</td>
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<td>T6</td>
</tr>
</tbody>
</table>
TEACHER QUESTIONNAIRE

HANDICAP AWARENESS SERIES

DIRECTIONS: This questionnaire is designed to allow teachers to record their reactions to the HANDICAP AWARENESS SERIES. As a teacher, you are in the best position to judge the educational value and to offer constructive advice for making changes in the materials. Please use the materials in the HANDICAP AWARENESS SERIES and read the teacher's manual. Then please respond to each question on this questionnaire. You may use the back of the page for additional room if necessary:

<table>
<thead>
<tr>
<th>USE OF THE MATERIALS</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>T7 Did you use all of the sheets in the Series with your students?</td>
<td></td>
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<tr>
<td>If NO, identify which sheets were not used and state why they could not be used.</td>
<td></td>
<td></td>
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<tr>
<td>T8 Were there any difficulties in using the materials?</td>
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<tr>
<td>If YES, please describe.</td>
<td></td>
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<tr>
<td>T9 Can the HANDICAP AWARENESS SERIES be easily used in classrooms where a variety of teaching styles are used?</td>
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<tr>
<td>T10 Did you observe any negative side effects caused from use of the materials?</td>
<td></td>
<td></td>
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<tr>
<td>If YES, please describe.</td>
<td></td>
<td></td>
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<tr>
<td>T11 Do the materials meet the needs for your students that are presently being met by other existing materials or kits?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T12 Is the need for this type of material great enough to warrant a special effort in their development and marketing?</td>
<td></td>
<td></td>
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<tr>
<td>T13 Do the sheets in the HANDICAP AWARENESS SERIES depict prejudice, stereotypes or negative aspects of handicapped people?</td>
<td></td>
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<tr>
<td>T14 Can the sheets be adapted to meet the differences in individual learner characteristics?</td>
<td></td>
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<tr>
<td>T15 Can individual students work on the sheets at their own pace?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T16 Were the girls in your class interested in the materials?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T17 Were the boys in your class interested in the materials?</td>
<td></td>
<td></td>
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<tr>
<td>T18 Was the concept of interaction with handicapped peers grasped by your pupils?</td>
<td></td>
<td></td>
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<tr>
<td>T19 How much class time did it take to use the materials? ______ hours</td>
<td></td>
<td></td>
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<tr>
<td>T20 How much class time would you recommend for using the materials? ______ hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T21 Is the time spent worth the value of the activities?</td>
<td></td>
<td></td>
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<tr>
<td>If NO, please explain.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T22 How did you use the HANDICAP AWARENESS SERIES sheets? (Check all that apply.)</td>
<td></td>
<td></td>
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<tr>
<td>With individual students</td>
<td></td>
<td></td>
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<tr>
<td>With small groups</td>
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<td></td>
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<tr>
<td>With large groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T23 In what ways did you use the materials with your class? Please describe any additional materials, kits, books or other audio/visual materials which you used during the week of the field testing.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
HANDICAP AWARENESS SERIES

TEACHER QUESTIONNAIRE

FORMAT

T24 Is the 8 1/2 X 11 inch size of the sheets satisfactory?  YES  NO
T25 Are the illustrations clearly drawn?  YES  NO
T26 Are the illustrations appropriate for your students?  YES  NO
T27 Are the illustrations attractive in appearance to yourself?  YES  NO
T28 Are the illustrations attractive in appearance to your students?  YES  NO
T29 Did the illustrations satisfactorily depict the interaction of handicapped and nonhandicapped persons in a manner recognized by your students?  YES  NO

PREPARATION FOR USING THE HANDICAP AWARENESS SERIES

T30 Do you think that an in-service meeting is necessary in order for you to effectively use the HANDICAP AWARENESS SERIES sheets?  YES  NO
If YES, what type of training or preparation would be most helpful to you?  __________________________________________

T31 In your opinion, would a teacher have to be highly motivated to use the Series?  YES  NO

TEACHER'S MANUAL

(Please read the Teacher's Manual before answering these questions.)

T32 Does the manual convey the rationale for the materials?  YES  NO
T33 Are the descriptions of suggested methods for using the materials clearly presented?  YES  NO
T34 Is the choice of activities (coloring, mazes, questions, etc.) appropriate?  YES  NO
If NO, please explain.  __________________________________________

CONTENT

T35 Is there any content in the materials that should be removed (for reasons of grade level, inaccuracies, objectionable depiction, etc.)?  YES  NO
If YES, please specify.  __________________________________________

T36 Is there any activity or example of interaction that could be added to the materials to improve them?  YES  NO
If YES, please specify.  __________________________________________

T37 As a teacher, what kinds of materials would you like to have developed to promote the interaction of handicapped and nonhandicapped students?  __________________________________________

T38 What additional comments do you have that would improve the materials or Teacher's Manual?  __________________________________________

T39 Would you recommend the HANDICAP AWARENESS SERIES to another teacher?  YES  NO

Thank you for your assistance in using these materials. Your input will be valuable in evaluating the materials and will be used in decisions about future development of additional units of the HANDICAP AWARENESS SERIES.
EXPERTS' QUESTIONNAIRE ON THE HANDICAP AWARENESS SERIES

DIRECTIONS: This questionnaire is designed to allow you to record your reactions to the Handicap Awareness Series. As a professional, you are in a position to judge the educational value of the materials and to offer suggestions for making changes in the materials. Please review the materials in the booklet. Then please respond to each question on this questionnaire. You may use additional sheets of paper to answer the questions if necessary.

USE OF T.E. MATERIALS

E1. Would you anticipate any problems for the teacher in using the materials? If Yes, please explain______________________________

E2. Could the Handicap Awareness Series be easily used in a classroom where a variety of teaching styles are used? If No, please explain______________________________

E3. Do the materials meet student needs that may be met by other instructional materials that you know of? If Yes, please list the materials______________________________

E4. Is the need for this type of instructional material great enough to warrant a special effort in development?

E5. Do the Handicap Awareness Series sheets depict prejudice, stereotype or negative aspects of disabled people? If Yes, please explain______________________________

E6. Can the sheets be adapted to meet differences in individual learner characteristics?

E7. Do you think that boys and girls would be interested in the materials? Please explain______________________________

E8. In your opinion, can the concept of acceptance in interactions with disabled peers be grasped by young elementary school children?
E9. How much class time would you recommend to teach handicap awareness to children? _______ hours per week

E10. How would you use the Handicap Awareness Series?  
- With individuals?  [ ]
- With small groups?  [ ]
- With large groups?  [ ]

E11. How would you recommend teaching handicap awareness to children?  
Please describe methods, materials, books, films, etc.

---

**FORMAT**

E12. Is the 8 1/2 X 11 inch size satisfactory?  [ ]

E13. Are the illustrations clearly drawn?  [ ]

E14. Are the illustrations appropriate for third grade children?  [ ]

E15. Are the illustrations attractive to you?  [ ]

E16. Would the illustrations be attractive to third grade children?  
If No, please explain ______________________________________________________________

---

E17. Did the illustrations satisfactorily depict the interactions of handicapped and nonhandicapped children?  [ ]

**PREPARATION FOR USING THE MATERIALS**

E18. Do you think that an in-service program would be necessary for teachers to effectively use the materials?  
Please explain ______________________________________________________________

---

E19. Would a teacher have to be highly motivated to use the Handicap Awareness Series?  [ ]

**TEACHER MANUAL**

E20. Does the manual convey the rationale for the materials?  [ ]

E21. Are the descriptions of methods for using the materials and activities clearly presented?  [ ]

E22. Is the choice of activities appropriate for children?  
If No, please explain ______________________________________________________________

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E 23. Is there any content in the Handicap Awareness Series that should be removed?  
If Yes, please specify__________________________________________________  
______________________________________________________________________  
______________________________________________________________________  

E 24. Is there any activity or example of interaction that should be included?  
If Yes, please describe__________________________________________________  
______________________________________________________________________  
______________________________________________________________________  

E 25. What kinds of materials would you like to have developed to promote the positive interaction of handicapped and nonhandicapped children?  
Please describe__________________________________________________________  
______________________________________________________________________  
______________________________________________________________________  

ADDITIONAL COMMENTS

Please return to Jim Gonwa, Community Leadership Training Center, 3312 Sangren Hall, W.M.U.
Appendix C

CHILDREN'S QUESTIONNAIRE

Please put a circle around your answer to the questions.

C 1. How hard were the sentences to read?
   EASY          A LITTLE HARD          VERY HARD

C 2. How much did you like the exercises?
   DID NOT LIKE THEM          LIKED THEM A LITTLE          LIKED THEM A LOT

C 3. How much did you like the coloring?
   DID NOT LIKE IT          LIKED IT A LITTLE          LIKED IT A LOT

C 4. How much did you like the maze?
   DID NOT LIKE IT          LIKED IT A LITTLE          LIKED IT A LOT

C 5. How much did you like the braille?
   DID NOT LIKE IT          LIKED IT A LITTLE          LIKED IT A LOT

C 6. Did you talk with your parents about the handicapped children in the pictures?
   YES          NO
FORWARD

Currently, there is considerable emphasis on the placement of handicapped students into regular classrooms with their nonhandicapped peers. This concept is better known as mainstreaming. Since the late 1970's, schools have been integrating handicapped students. But some studies, however, indicate that nonhandicapped students often do not accept their handicapped peers in the mainstreaming process. The result has been misunderstanding and isolation for the handicapped students.

The success of mainstreaming and the acceptance of handicapped children in the regular classroom by their nonhandicapped peers depend to a great extent on the attitudes of the nonhandicapped children. Those attitudes are affected by the knowledge and expectations they have about their handicapped peers.

These instructional materials are an effort to develop an awareness and acceptance of handicapped children by their nonhandicapped classmates.

The HANDICAP AWARENESS SERIES has been developed:
- To foster an understanding of handicapping conditions
- To help children discover how they are alike and how they are different
- To encourage interaction between handicapped and nonhandicapped children
- To assist acceptance by promoting positive perceptions about handicapped children and adults
- For children's use in the classroom, home, church or neighborhood
- As a stimulus for discussion for children, parents, teachers and siblings.

INTRODUCTION

Four sample units of the HANDICAP AWARENESS SERIES are included in these materials. Each unit deals with a different handicapping condition:
- Orthopedic impairments
- Visual impairments
- Hearing impairments
- Mental retardation

The activity sheets in each unit are designed for flexible use in the classroom. The activity sheets do not have a specific sequence and can be used in conjunction with other available commercial or teacher-made materials, kits or audio-visual materials. The units can also be used with a variety of other activities, such as, simulation, role-playing, discussion or field trips. Each activity sheet in the units has its own instructions for the student. The question: to the students do not require an answer and are asked to stimulate the student's thoughts about handicapped children. The activity sheets can be used independently by the students or in groups directed by the teacher.

In the following sections of the teacher manual, each of the four units are presented. Each unit includes a brief description of the handicapping condition, objectives for the unit and suggestions for additional activities if the teacher wishes to provide further instruction. A list of resources available in Kalamazoo, Michigan is included in the back of the manual.
HEARING IMPAIRMENTS

A variety of factors can contribute to hearing impairments. A common factor is old age. Other factors which can contribute to hearing impairments include genetics, prenatal illnesses of the mother, disease, injury or hearing problems associated with colds or allergies.

Some hearing losses can be treated with medication or surgery. In many cases, however, the loss of hearing can only be compensated for by the individual. A hearing loss can be compensated for through the use of a hearing aid which amplifies sound, through lip-reading, by the use of sign language or by writing messages.

In many young children, the hearing loss can contribute to difficulties in speech, communication or understanding. With a slight hearing loss, a handicapped person may have difficulty in hearing faint or distant speech. A child with a mild hearing loss may hear conversational speech at a distance of three to five feet from the speaker but may miss as much as fifty percent of a conversation if the speaker is not in the handicapped person's line of vision. A child with a severe hearing impairment will hear loud sounds about one foot from the ear.

People who are deaf tend to rely on their vision to gather information about their environment.

Unfortunately, many children and adults who have hearing impairments are judged by nonhandicapped persons to be mentally retarded because their speech patterns are, in some cases, difficult to understand.

UNIT OBJECTIVES

To promote awareness of the abilities and interests of hearing impaired children by their nonhandicapped peers.

To assist nonhandicapped children to recognize that children who cannot hear well can have similar interests, e.g., watching t.v., playing games, etc.

SUGGESTIONS FOR ADDITIONAL ACTIVITIES

Have students simulate a hearing impairment by wearing earphones and then listening to a story read by a friend.

Have a demonstration of sign language.

Discuss the ways in which a student could "talk" to a deaf person.

Have the students watch a t.v. program without sound. Discuss their reactions.
Some people cannot hear as well as other people can. A person who cannot hear well may use sign language. Maybe you have seen someone using sign language on T.V. What do you think this lady is telling people who cannot hear?
You can color the picture.
Children who cannot hear well like to play games just like you do. How do you think the girl is teaching the boy to play the game? How would you teach your favorite game to a friend who could not hear well? Would you use sign language? You can color the picture.
Some children who cannot hear well use a hearing aid to help them hear better. The boy with the football wears a hearing aid that helps him hear his friends when they play.

Have you ever played with a friend who wears a hearing aid? You can color the picture.
ORTHOPEDIC HANDICAPS

Orthopedic handicaps affect individuals by impairing motor functioning and range from a slight loss of movement or coordination to a severe loss of movement in one or more parts of the body. Orthopedic impairments can occur as the result of congenital malformation (such as the absence of an extremity at birth), of disease (such as polio), of impairments in the neurological system (such as cerebral palsy) or of accidental injury.

The nature and scope of the orthopedic handicap is dependent on the extent and location of the damage to the body. Neurological damage to the brain, spinal cord or central nervous system can result in the impaired functioning of a number of body parts. Other impairments resulting from disease, injury or prenatal factors may affect only one part of the body.

Some conditions, such as cerebral palsy, may result in multiple handicaps affecting speech, hearing, vision and/or learning ability.

There is a wide range of treatments available to persons having orthopedic handicaps. Some of the most common (and those which your students may be familiar) are prosthetic devices such as artificial limbs or braces. Common adaptive aids are wheelchairs and crutches.

Most children with orthopedic handicaps will learn to compensate for their impaired functioning. Generally, they will be able to participate in social and academic activities with their nonhandicapped peers. Their needs for social and intellectual stimulation and their stages of development will be the same as for children without the handicap.

UNIT OBJECTIVES

To assist students in recognizing that children who use braces or wheelchairs can participate in games and activities with peers.

To promote the acceptance of children who are different because of a handicap.

SUGGESTIONS FOR ADDITIONAL ACTIVITIES

Discuss similarities and differences between children.

Discuss the variety of things that a person with braces or in a wheelchair can or cannot do.

Have the students list the ways in which they can involve a handicapped person in their play and school activities.

Have the students simulate having a handicap by spending a part of the day in a wheelchair or using a crutch. Discuss their feelings and discoveries about the things they could or could not do.

Explain and discuss the kinds of obstacles that present difficulties for a person in a wheelchair, e.g., rocky ground, hills, stairs, gates, holes in the ground, etc.
The boy in the wheelchair cannot walk. He can do many things with his best friend. They like to play catch. What kinds of things could you do with a friend who is in a wheelchair? You can color the picture.
People who use wheelchairs cannot go over rocks, holes, stairs or up hills. Can you help the person in the wheelchair get to the house? Draw a line from the person to the house. Do not go over any lines.
Some children use a crutch to help them walk. The boy with the braces is having a good time on the slide. His friend is holding his crutch for him while he is on the slide. Could you help him if he was your friend? You can color the picture.
One of these girls is wearing braces on her legs. The braces help her to stand and walk. She cannot jump rope like her friends but she can do many other things with them. Her friends like to ask her to play with them.
You can color the picture.
VISUAL IMPAIRMENTS

Visual impairments can occur from a variety of factors including congenital conditions, accidental injury or disease. The extent of the visual impairment varies from person to person. It may result in blindness or partial sight. People who are considered to be legally blind may have some useful vision. The effects of the handicap may be reduced visual acuity for near or distant vision, reduced field of vision, sensitivity to light or defects in color vision.

Children who have low vision may have very little distance vision but can see objects and materials held from several inches to a few feet away from their eyes. They can use their remaining vision for many tasks but may rely heavily on their sense of touch.

Children who are visually limited have useful vision but may need special lighting, prescription lenses, magnifiers and enlarged materials for reading or manipulation.

Children who are blind may have light perception and can see differences in light patterns or shadows. They may rely on touch to identify objects.

Nonhandicapped children may be familiar with some of the aids used by visually handicapped persons, e.g., seeing-eye dogs, a white cane or braille symbols.

UNIT OBJECTIVES

To develop an awareness of the abilities of visually impaired peers.
To promote the acceptance of handicapped persons by the nonhandicapped.

SUGGESTIONS FOR ADDITIONAL ACTIVITIES

Simulate vision impairments by having the children put on blindfolds and then perform simple activities such as eating, drinking from the water fountain, walking around the classroom, etc.

Have the children look through a piece of glass or eyeglasses which have been coated with Vaseline or soap.

Have blindfolded students move around the classroom using a yardstick or dowel as a cane. (Assign a "buddy" to the blindfolded student to avoid accidents.)

Discuss the students' feelings about their experiences with the simulation activities and about the activity sheets from the unit.
Some times a person who is blind needs a friend to help him. This boy and his friend who can see are going to ride a bicycle that is made for two people to ride. The blind boy is holding on to his friend's arm when they are walking. What kinds of things could you do with a friend who is blind? You can color the picture.
Have you ever seen a person use a white cane when walking? Some people who cannot see use a white cane to keep them from bumping into things when they are walking. This boy uses a cane when he walks home from school with his friend. You can color the picture.
Some people who are blind use Braille to read words and numbers. Blind people use their fingers to feel the Braille letters. The letters are different from the kind of letters that you can read. This is how Braille would look to you. Can you tell what is in each jar and can? The answers are at the bottom of the page.

1. Peas
2. Fish
3. Candy
Mental Retardation

Mental retardation refers to a condition in which a person's social, cognitive, sensori-motor and academic development and abilities are affected and usually delayed. There is no one single method or criterion for determining that a child is mentally retarded. The classification of mental retardation is generally made on the basis of I.Q. scores and on the basis of deficits in social and cognitive abilities.

There are currently about 250 known causes of mental retardation ranging from prenatal to postnatal factors. Genetics, infections, disease, nutrition, injury and many other unknown factors can cause mental retardation.

Mental retardation occurs in varying degrees. About 90% of those persons classified as mentally retarded have only mild retardation. They can master basic academic skills and differ from non-retarded children only in their rate of development and degree of intellectual ability. Mildly retarded children generally do not differ in appearance from other children and, as adults, often get married and are employed.

Moderately mentally retarded children may be noticeably slow in their development. They may also have distinguishing physical characteristics such as those associated with Down's Syndrome. These persons can generally learn some academic, social, communication and occupational skills but will require some supervision as adults.

Severely and profoundly mentally retarded children will require supervision throughout their lives. They will benefit from instruction in basic self-care, self-help, mobility and communication.

UNIT OBJECTIVES

To promote the acceptance of mentally retarded children by their peers.

To help nonhandicapped students recognize that mentally retarded persons have some abilities, interests and feelings that they share in common.

SUGGESTIONS FOR ADDITIONAL ACTIVITIES

(While it may be difficult for your students to imagine functioning at a cognitive level either above or below their present ability level, a simulation activity may help them experience the type of frustration, confusion and discouragement felt by many mentally retarded children.)

Give your students a page of math problems. Limit the amount of time you give them to about 1/2 of the usual time. Keep reminding them of the short amount of time remaining to complete the problems. Discuss the students' feelings about the activity. Explain that a person who is mentally retarded can do the problems but that more time is needed.

Tell your students to prepare for a usual lesson. Give them 6 - 8 quick directions but change the order and position of the things they would usually write on the paper. For example, tell them to get a pencil and a piece of paper. Then tell them to write their names on the left side of the bottom line and write the math problems at the right side of the top of the page. Discuss the students' reactions.
Some children do not learn as fast as other children do. This girl and boy are doing their math problems. The boy has to take more time to do his work. He needs more time to think about each problem. Sometimes the teacher has to give him more help. Can you think of something at school that takes you more time to do? You can do the boy's math problems and then color the picture.
Sometimes children who learn slowly are mentally retarded.
The boy with the fish is mentally retarded but he can do a lot of things with his friends.
He is teaching his friend how to catch fish.
You can color the picture.
The girl who is feeding the rabbits is mentally retarded. She can do a lot of things in school. She does the best job of taking care of the rabbits. Her friends like to help her. You can color the picture.
The children who are playing are not letting the girl play with them because she is mentally retarded. How do you think she feels? How do you feel when other children do not let you play with them? You can color the picture.
These books are available from the Kalamazoo Public Library

General

J362.7 Pursell, Margaret Samford. A Look At Physical Handicaps. Lerner 1976 $4.95
J362.7 Stein, Sara Bonnett. About Handicaps. Walker, 1974 $7.95

Blindness

J Allan, Mabel Esther. The View Beyond My Father. N.Y. Dodd, Mead, 1978 c.1977 192p. $5.95
J Butler, Beverly. Gift Of Gold. Dodd, 1972 $5.95
J Cookson, Catherine. Go Tell It To Mrs. Golightly. N.Y. Lee Shepard, 1952 280p. $7.95
J Garfield, James. Follow My Leader. Viking Press, 1957 $8.95
J Little, Jean. Listen For The Singing. Dutton, 1977 $7.95
J Mathis, Sharon. Listen For The Fig Tree. Viking 1974 $6.50
JE Montgomery, Elizabeth Rider. "Seeing"in The Dark; Drawings by Troy Howell. Champaign, ILL. Garrard, 1979 44p. $5.58
J921K Peare, Catherine O. The Helen Keller Story. (5-7) Crowell, 1959, 183p. $4.50
JE Quigley, Lillian. The Blind Man And The Elephant; Retold by L. Quigley. Scribner, 1959 $6.95
J362.4W Weiss, Malcolm E. Seeing Through The Dark; Blind And Sighted - A Vision Shared. Harcourt, 1976 84p. $5.95
### Deafness

| J | Coolidge, Olivia E. Come By Here. Houghton Mifflin Co. 1970 239p. | $5.95 |
| J | Corcoran, Barbara. A Dance To Still Music. Atheneum, 1974 $8.95 (paper, $1.95) |
| J | Dejong, Meindert. Journey From Peppermint Street. Harper Row. 1974 | $7.95 (paper, $2.95) |
| J | Gage, Weston. Down In The Boondocks. Greenwillow, 1977 | $5.95 |
| J | Hanlon, Emily. The Swing. Scarsdale, N.Y. The Bradbury Press. 1979 209p. | $7.95 |
| J617B | Levine, Edna S. Lisa And Her Soundless World. Human Sciences Press, 1974 | $8.95 |
| J617.8L | Litchfield, Ada B. A Button In Her Ear. 1976 | A. Whitman $6.50. |
| J | Robinson, Veronica. David In Silence. Lippincott, 1965 $8.95 |
| J617.8W | Wolf, Bernard. Anna's Silent World. Lippincott, 1977 $8.95 (also in Spanish) |
| J | Yolen, Jane Hyatt. The Mermaids Three. Wisdoms Philomel 1978 | $6.95 |

### Mental Retardation

| J362.3A | Anders, Rebecca. A Look At Mental Retardation. Lerner, 1976 | $4.95 |
| J | Butler, Beverly K. Gift Of Gold. Dodd, 1972 | $5.95 (paper, $1.95) |
| J | Byars, Betsy. Summer Of The Swans. Avon 1974 (paper, $1.75) Viking |
| J | Carpelan, Bo. Bow Island; Story Of A Summer That Was Different. Delacorte,1979 $4.95 |
| J | Cleaver, Vera. Ma Too. Lippincott, 1973 | $8.95 NAL pap. 1.95 |
| J362.3 | Dunbar, Robert E. Mental Retardation. Watts, 1978 | $4.90 |
| J155.452 | Fassler, Joan. One Little Girl. Human Sciences Press 1969 | $8.95 |
| J | Hunt, Irene. The Lottery Rose. Scribner, 1976 | $7.95 |
| J | Klein, Gerda. The Blue Rose. Lawrence Hill & Co. 1974. | $7.95 (paper $3.95) |
| J152.4 | Lasker, Joe. He's My Brother. Whitman, 1974 | $6.50 |
| J | Little, Jean. Take Wing. Little, 1968 | $7.95 |
| J | Long, Judy. Volunteer Spring. Archway, 1977 | $1.50 pap Dodd, $5.95 |
| J155.452 | Ominsky, Elaine. Jon O; A Special Boy. Prentice-Hall, 1977 | $6.95 |
| J | Rinaldo, C.L. Dark Dreams. Harper Row, 1974 | $6.95 |
| J | Rodowski, Cabby. What About Me? Watts, 1976 | $5.90 |
Mental Illness/Emotional Disturbance

- Ellis, E.T. The Morning. Atheneum, 1972 $7.95
- Fassler, Joan. The Boy With A Problem. Human Sciences Press, 1971 $8.95
- Gold, Phyllis. Please Don't Say Hello. Human Sciences Press, 1975 $8.95
- Koningsburg, E.L. George. Atheneum, 1970 $8.95
- Pottor, Marian. The Shared Room. Morrow 1979 $6.95
- Sachs, Marilyn. The Bear's House. Doubleday, 1971 $5.95
- Storr, Catherine. Thursday. Harper Row, 1972 $8.95

Learning Disabilities/Perceptually Handicapped

- Fassler, Joan. Howie Helps Himself. Whitman, 1975 $6.50
- Lee, Mildred. The Skating Rink. Seabury, 1969 $6.95
- Little, Jean. Listen For The Singing. Dutton, 1977 $7.95
- Smith, Doris. Kelly's Creek. Crowell, 1975 $7.95
- Stein, Sarah. About Handicaps; An Open Family Book For Parents And Children. Walker, 1974 $6.95

Orthopedically Handicapped

- Beckman, Delores. My Own Private Sky. Dutton, 1980 $8.95
- DeAngeli, Margaret. The Door In The Wall. Doubleday (crippled) Doubleday $6.95, (pap. $1.95)
- Henry, Margaret. Mustang, Wild Spirit Of The West. Rand, 1966 (polio) $5.95 (pap. $2.95)
- Little, Jean. Nine For Keeps. Little, 1962, (cerebral palsy) $7.95 (pap. $1.75)
- Pyle, Howard. Otto Of The Silver Hand. Dover, 1967 (no hand) $2.95
- Sachs, Marilyn. Amy and Laura. Doubleday, 1966. (invalid mother) $6.95
- Thrasher, Crystal. The Dark Didn't Catch Me. Atheneum, 1975 (epilepsy) $7.95
- Welk, Mary H. The Jazz Man. Atheneum, 1966 (lame leg) $6.95 (pap. $1.95)
- Winthrop, Elizabeth. Marathon Miranda. Holiday, 1979 $7.95 (Asthma)


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