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SOCIAL BEHAVIORS OF NONHANDICAPPED CHILDREN
TOWARD HANDICAPPED AND NONHANDICAPPED PEERS

presented by

Kalina Gonska

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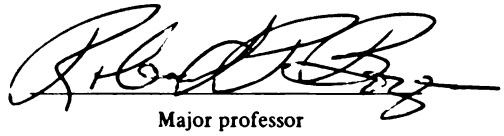

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# SOCIAL BEHAVIORS OF NONHANDICAPPED CHILDREN TOWARD HANDICAPPED AND NONHANDICAPPED PEERS

By

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ABSTRACT

SOCIAL BEHAVIORS OF NONHANDICAPPED CHILDREN
TOWARD HANDICAPPED AND NONHANDICAPPED PEERS

By

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Social behaviors of twelve preschool nonhandicapped children were observed in an experimental setting in two conditions: with a nonhandicapped peer; and with a handicapped peer. Observations of the children's social, verbal and nonverbal behaviors were recorded by use of a modified version of the Observation of Socialization Behavior (Boger and Cunningham, 1971). The data was analyzed by means of a paired t-test and the Wilcoxon Signed Ranks Test. The results of both tests indicated that there were no significant differences in any of the children's behaviors toward handicapped as compared to nonhandicapped peers. There were tendencies, however, for more behaviors to be directed toward an adult when the peer was handicapped and more goal-directed play and verbal behaviors with a nonhandicapped peer. The importance of investigating social behaviors of nonhandicapped children toward handicapped peers is discussed.

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# CHAPTER I

## INTRODUCTION

Since the issuance of the federal mandate (Public Law 94-142) to provide public education for all school-age children, there has been a trend to integrate handicapped children into regular preschool programs. This practice has been named "mainstreaming." It is the process of placing handicapped children (or children with special needs) into the mainstream of public education in an attempt to provide the most desirable social context for the educational experience of both handicapped and nonhandicapped children. The intent of the present study was to investigate the social behaviors of integrated preschool nonhandicapped children towards their handicapped and nonhandicapped peers.

A possible direct outcome of mainstreaming at the preschool level is the facilitation of social play among handicapped and nonhandicapped children, affecting changes in the social-emotional sphere for both handicapped and nonhandicapped children (Devoney, Guralnick, and Rubin, 1974; Hartup, 1978). It is suggested that integration will: (1) provide potential benefits to handicapped children from observing and interacting with more advanced peers (Guralnick, 1976); and (2) provide nonhandicapped children with increasing sensitivity and understanding of individual differences

(Guralnick, 1976), as well as teaching nonhandicapped children new methods of communication with handicapped children (Carlson, 1977). However, most of the research in the area of social interactions among handicapped and nonhandicapped children has focused on documenting the changes in handicapped children's social behaviors that have occured as a result of mainstreaming and investigating how the social behaviors of handicapped children with peers could be facilitated. Investigations of the social behaviors of nonhandicapped children towards handicapped peers have not been as extensive.

The few studies that have investigated the social behaviors of nonhandicapped children towards handicapped peers have indicated that social interactions with the handicapped children are infrequent (Allen, Benning, and Drummond, 1972; Devoney, Guralnick, and Rubin, 1974; Guralnick, 1976), although there is some disagreement (Ispa and Matz, 1978). Furthermore, there is still some question as to the nature of the behaviors of nonhandicapped children that do occur with handicapped peers.

A general problem of socialization research with young children is the intervening variables that affect children's social behaviors. These variables include: the ages of the children (Hartup, 1970); the type of play activity (Green, 1933; Quilitch and Risley, 1973); the play setting (Gump, 1975; Shure, 1963); and the presence of adults (Hartup, 1978; Wintre, 1974). In addition, social behaviors of nonhandicapped children toward handicapped children are influenced by the nature of the child's

handicap (Ispa and Matz, 1978) and the presence of other non-handicapped children (Apolloni and Cooke, 1978; Guralnick, 1978). In the present study, all of these intervening variables were controlled to determine the nature of social behaviors of nonhandi- children towards their handicapped peers.

## Statement of Problem

The study was designed to determine if differences exist in the social behaviors of nonhandicapped children toward non-handicapped peers as opposed to the same nonhandicapped children's behaviors toward handicapped peers.

## Objective

To determine the difference in a nonhandicapped child's social behaviors with a handicapped and a nonhandicapped child on the following dimensions:

## Social Behavior Variables

Peer-Directed Behavior
Goal-Directed Behavior
Adult-Directed Behavior
Verbal Behavior
Nonverbal Behavior
Initiation
Responsivity

## Definitions of Terms

Peer-Directed Behavior - - All those social behaviors of a child that are directed to a peer (ex. interacting with a peer through the exchange of play materials, the use of the same materials, or through verbal means).

Goal-Directed Behavior - - Those social behaviors of a child toward a peer that have a common purpose or goal (ex. interacting with a peer by sharing ideas and implementing them to further their play.

Adult-Directed Behavior - - Those social behaviors of a child that are directed to an adult (ex. attempting to play with the adult).

Verbal Behavior - - Behavior that is communicated through verbal means (ex. giving information, asking, ordering).

Nonverbal Behavior - - Behavior that is communicated through physical means (ex. giving help or affection, hitting, pushing).

Initiation - - The frequency of behaviors in which a child introduces him/herself into an activity and produces a change in the physical or social environment.

Responsitivity - - The frequency of behaviors in which a child reacts to a stimulus in the social or physical environment.

Handicapped Children - - Children evaluated "as being mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multi-handicapped, or as having specific learning disabilities, who because of those impairments need special education and related services (Federal Register, Vol. 42, 163, August 23, 1977).

## Assumption

A standardized setting, with the exception of modifying the social toys, will provide a similar environment to facilitate social interactions among the children.

# CHAPTER II

# REVIEW OF LITERATURE

## Mainstreaming

Since the federal Education for All Handicapped Children Act (Public Law 94-142) the number of integrated classrooms has been increasing. In the past many handicapped children were educated outside the mainstream of public education, in separate classrooms or at home - some were not provided education at all (Caldwell, 1973; Klein, 1975; Meisels, 1977). The goal of mainstreaming is to provide all special needs children between the ages of three and eighteen public education within the most normalized and least restrictive environment possible.

"Normalization" is a concept that has been defined by Wolfensberger (1972) as the utilization of means which will establish and/or maintain culturally normative behavior patterns and characteristics. Wolfensberger believes that normalization is important to facilitate the intellectual and social development of handicapped individuals.

Mainstreaming is a component of the normalization process. A normal environment will provide a handicapped child with maximum opportunities to use and expand the "normal aspects" of his or her behavioral repetoire (Wolfensberger, 1972; Bricker, 1978). A fundamental assumption of mainstreaming is that all children are

different from one another; they vary in background, interests, and abilities (Fairchild, 1978; Meisels, 1977). An integrated program attempts to provide opportunities that are relevant to the differences of children. Ideally, it is suggested that mainstreaming will help to enrich the lives of both handicapped and nonhandicapped children. The emphasis on normality, and the strengths, as well as weaknesses of individuals should help all children understand that a disability is just one aspect of a person's life. (Meisels, 1977).

## Rationale in Support of Mainstreaming

Legally, mainstreaming guarantees handicapped children the right to free public education and the right to an educational placement in the least restrictive, yet productive educational setting. In addition, mainstreaming guarantees parents of handicapped children the right of due process concerning educational decisions for their children through specific review procedures.

Educationally, integrated classrooms are expected to provide more opportunities for individual programs and diagnostic teaching for all children (Wynne, Ulfelder, and Dakof, 1975). In addition, from an economic perspective it is less expensive to provide services for handicapped children in the same setting as nonhandicapped children than in a separate setting (Meisels, 1977, Wolfensberger, 1972). Integrated classrooms presumably avoid extensive and long-term specialized educational provisions by providing special services within the regular classrooms. Specially designed integrated classes are usually smaller and require additional staff,

however, it is felt that this is still less expensive than other special educational services (Meisels, 1977).

Morally, mainstreaming attempts to alleviate prejudice and discrimination of handicapped individuals and increase understanding and acceptance of individual differences. Mainstreaming may be the educational alternative needed to facilitate attitude change:

> Exposure early in life to a handicapped child in an integrated setting may allay many of the fears of peers, parents, and community in general that form the basis of intolerance and impede progress toward the normalization of the handicapped individual (Bricker, 1978, p.11).

In the social realm, mainstreaming helps to provide handicapped children with positive peer models. It has been found that children who have been treated as different manifest many undesirable behaviors (Goffman, 1963). In addition, negative expectations of children by adults, as well as physical and/or social isolation help to create and perpetuate abnormal behavior patterns (Bijou, 1966; Melcer, 1970). In a realistic, accepting, and challenging environment there are many benefits that handicapped children can gain from observing and interacting with more advanced peers (Dybwad and LaCrosse, 1976; Guralnick, 1976).

## Early Childhood Mainstreaming

On the preschool level, mainstreaming can be extremely important. Society is more receptive and tolerant of young children in the preschool years; differences in young handicapped children are more readily accepted. As children grow older, demands

for conformity become more and more stringent (Dywad and LaCross, 1976). Handicapped children that are mainstreamed early have the opportunity to confront socialization experiences before frustrations in relations with peers become strained perhaps because of the handicapping conditions. In the stimulating and secure environment of a preschool, a handicapped child can learn how to cope with his/her constraints in motor, social, and intellectual abilities when society's demands for conformity in appearance and performance are not as great. Preschool programs can be vital for the successful assimilation of the child into the "normal world" (Lewis, 1973).

In addition, nonhandicapped children need the chance for direct interactions with handicapped children to gain knowledge about and tolerance and acceptance of varying handicapping conditions (Bricker, 1978). Mainstreaming provides opportunities for handicapped and nonhandicapped children to play with one another during the early years when children's attitudes and perceptions of others are most pliable (Klein, 1975). Learning and playing with others who are different may prevent the development of stereotypes about handicapped individuals (Wynne et. al., 1975).

## Social Interactions of Children

Peers have an important function in the development of children. "Peer relations are not luxuries in human development; they are necessities" (Hartup, 1978, p.28). Social learning of children is facilitated through positive contacts with peers. William Hartup (1978) states that without sustained and successful experiences with peers, children may be developmentally "at risk"

(p.26). Unlike adult-child relationships peer relationships are equalitarian and reciprocal. These relationships provide children with give-and-take experiences essential to learning effective social and communication skills, modulating aggressive feelings, and forming moral values.

Direct reinforcement from peers is also a potent form of social influence during childhood. The influential effects are evident early in a child's life. According to Hartup (1978) children are crucial agents in their own socialization and they should be included as agents in early intervention programs, especially programs which integrate handicapped and nonhandicapped children.

## Social Interactions of Handicapped and Nonhandicapped Children

Research indicates that children become aware of other children's physical handicaps by the age of four (Jones, 1967). One methodological approach toward investigating the nature of social interactions of handicapped and nonhandicapped children has been through the use of projective and sociometric techniques in measuring attitudes of nonhandicapped children toward handicapped children. There have been inconsistencies in the findings, however, because of complicating factors such as: (1) the nature of the handicapped child's handicapping condition; (2) the ages of the children; and (3) the amount of time the children have been integrated.

Attitudes Toward Handicapped Children

Hearing-impaired children in integrated settings are often not as socially accepted as nonhandicapped children and in many instances the children are ignored or treated negatively (Elser, 1959; Force, 1956; Justman and Maskowitz, 1957; Shears and Jensema, 1969). However the children in these studies were primarily between the ages of 9 and 17.

A study investigating the attitudes of first and second grade children towards hearing-impaired peers reported that the hearing-impaired children were accepted by their peers (Kennedy and Bruininks, 1974). There were no significant differences found between the level of peer status of hearing-impaired and normal hearing children. In several instances the children with the most profound hearing losses were among the most popular in the class. The authors suggested that the reason the results were inconsistent with other studies may have been that the nonhandicapped children in their study were younger and may have been more nurturant. In addition, all the hearing-impaired children in their study had been a part of structured preschool experiences before the age of two years, including parent education, early diagnosis and treatment, and opportunities for social interactions with nonhandicapped peers. Aspects of this program may have enhanced the social acceptability of the hearing-impaired children.

A review of attitudes toward mentally retarded indicated that mentally retarded children were not as well accepted by their nonretarded peers (Gottlieb, 1975). As was found with

hearing-impaired children, younger nonretarded children were more accepting of retarded children than older nonretarded children (Gottlieb, Goodman, and Harrison, 1972). Moreover, a similar pattern of acceptance exists with regard to attitudes toward physically disabled children. In relation to nonhandicapped children, physically disabled children are perceived negatively (Force, 1956; Kleck, 1975). Older children, grades three to six, are significantly more unfavorable in their attitudes toward physically disabled children than younger children, in the first grade (Billings, 1963).

In summary, younger children are more accepting in their attitudes than older children, but the stability of young children's attitudes and their relationship to actual behaviors can be questioned (Goodman, 1952; Lawrence and Winischel, 1973; Moore, 1967).

Observations of Social Interactions

Direct observation has been a potent technique in uncovering the nature of social interactions among handicapped and nonhandicapped children (Moore, 1967; Stearns, 1971) and this technique has been extremely useful for studies of young children:

> The use of direct observation is of special significance to preschool children since they cannot yet deal dependably with abstracted concepts of formalized testing situations. To gather sociometric data, for example, direct observation yields much more information than does asking a four year old about "best friends" (Wynne, et. al., 1975, p. 91).

Despite the increasing number of integrated preschool programs, there has been a scarcity of research studies which have directly observed the social interactions of handicapped and nonhandicapped children in integrated settings (Wynne et. al., 1975).

Observational studies within integrated preschool settings have consistently noted that minimal levels of free-field peer interaction occur between the handicapped and nonhandicapped children (Allen, Benning,and Drummond, 1972; Devoney, Guralnick, and Rubin, 1974; Guralnick, 1976). Therefore, much of the research undertaken in the area has been a result of programs which have been designed to promote positive interactions among handicapped and nonhandicapped children through the use of specific behavioral techniques or through the use of supportive classroom environments.

Research Studies

Devoney, Guralnick, and Rubin (1974) investigated the types of social behaviors that were characteristic of handicapped children and the changes that occured when nonhandicapped children were introduced into a classroom of handicapped children. Prior to introducing the nonhandicapped children attempts were made by the teachers to structure interactions of social play among the handicapped children and to reinforce with praise and attention approximations to increasing and more highly developed play (associative or cooperative). However, no changes were noted. Only when nonhandicapped children were brought into the classroom during free play did the handicapped children increase their time spent in associative and cooperative play. Furthermore, dramatic changes occurred in the handicapped children's play when teachers structured social play interactions among the handicapped and nonhandicapped children and provided reinforcement. The handicapped children spent almost 75% of their play time in associative or cooperative play. The teachers

commented that the handicapped children also increased their interactions with their handicapped peers during other times of the day and the children's play evidenced more sophistication, organization, and fantasy elements.

The study was extended by Guralnick (1976) to train nonhandicapped children to structure play sessions with handicapped children to promote the handicapped children's associative and cooperative play. Before the treatment conditions, observations of the handicapped children revealed that they spent all their time in solitary play. In phase one of the experiment, handicapped children viewed nonhandicapped children interacting with toys, (the children usually playing associatively or cooperatively). There were no changes, however, in the handicapped children's behaviors following this condition. In phase two, the nonhandicapped children were taught, through the use of role playing and verbal descriptions, to encourage and selectively reinforce appropriate interactions with the handicapped children. This procedure was extremely effective and resulted in significant increases in the handicapped children's associative and cooperative play, as well as in their verbalizations.

Results of a series of studies reported by Apolloni and Cooke (1978) also indicated that peers could serve as models for handicapped children's behaviors. In their studies they found that delayed toddlers did not spontaneously imitate nondelayed peers, but through behavior programming the delayed toddlers could be taught to imitate the motor, material use, and verbal

responses of their nondelayed peers. The procedure they employed was referred to as Peer Imitation Teaching (PIT). In implementing PIT, teachers used verbal and/or physical prompting to induce a handicapped child to imitate a peers's behavior and then provided praise to the handicapped child.

In addition, PIT was applied in a bidirectional fashion. In bidirectional training both delayed and nondelayed toddlers were taught to imitate each other in material use and motor behaviors. (The authors noted that the behaviors imitated by the nondelayed child were not inappropriate). When the experimenter left the room after the training session, it was found that PIT was effective in producing reciprocal peer imitation and social interaction of the delayed and nondelayed toddlers.

A further study was undertaken to evaluate bidirectional PIT in three experimental conditions. The first condition was a training session with a delayed and nondelayed toddler. In the second condition, (a nontraining session) the same two children in the training session were left alone in the experimental room. Lastly, in condition three a second nondelayed toddler was introduced in the experimental room after the nontraining session. Results indicated that peer imitation and social interaction between the children were high in the training session. When the second nondelayed child was introduced after the training session, however, the nondelyed child interacted less with the delayed child and more with the other nondelayed child. This data may support the observations that there may be little

spontaneous interaction among handicapped and nonhandicapped children. When the nondelayed children in the study were given the choice of a playmate, they preferred to interact with a child who functioned at a similar level. Apolloni and Cooke (1978) suggest that some form of therapeutic intervention may be needed for handicapped and nonhandicapped children to socially benefit from being integrated, although they state that there is still insufficient data to make firm conclusions about the most effective intervention.

In another integrated preschool program, The High Scope Cognitively Oriented Program, Ispa and Matz (1978) have reported on a curriculum which they believe provides many opportunities for positive social interactions to occur between handicapped and nonhandicapped children without systematic attempts to "train" children (p.173). In their program the teachers create an atmosphere "in which each child can be actively involved in broadening and strengthening those particular abilities that are emerging" (p.171). Secondly, the teachers plan educational activities based on the universalities of child development. Therapeutic experiences for handicapped children are extensions of every day activities. Thirdly, the children are free to interact with peers most of the day; there are also times when children are in small groups to work on materials together or in parallel. The types of environments provided are hypothesized to facilitate positive interactions among the children.

To determine the social interactions of the children in the

integrated classrooms Ispa and Matz (1978) and Ispa (1978) undertook evaluations during two consecutive years. There were 10 handicapped and 18 nonhandicapped children enrolled in the first year and 8 handicapped and 21 nonhandicapped children enrolled in the second year.

Naturalistic observations of the children were recorded using a behavior checklist which contained 23 categories of social and emotional behaviors. The overall results from the two year evaluation study indicated that for most of the behaviors studied, the children were socially well-integrated. There was no evidence that the handicapped children were segregated.

In the first year positive interactions between the children were noted. Handicapped children seemed to perceive their nonhandicapped peers as children they could go to for help and they asked for help more often from the nonhandicapped children than from each other. Furthermore, the nonhandicapped children gave affection to and received affection from handicapped children more often then was expected by chance alone.

In the second year the classroom environment seemed to be warm and supportive to the handicapped child. Handicapped children received more help from peers (handicapped and nonhandicapped) than nonhandicapped children; nonhandicapped children were more helpful to peers than handicapped children. At the same time, the handicapped children were more noncompliant and were more aggressed against. It was noted that the variability between the two years may have resulted from differences in the ages of the children

enrolled and more importantly, the nature of the handicapping conditions (Ispa, 1978). Nonetheless, overall social interactions of the children were positive and teacher observations supported this conclusion.

Positive social interactions among handicapped and non-handicapped children were also reported in the PATHWAYS Project: A Human Support System Model for Integrated Handicapped Children and Their Families (Carlson, 1977). The PATHWAYS Project provides supportive services to the handicapped children within the regular preschool classroom, as well as supportive services to the regular classroom teachers and the parents of the handicapped children. Handicapped children are placed in an environment which will foster their growth and development and provide them with positive contacts with peers. (In most cases only one handicapped child is integrated in a classroom). The project has been underway for three years and teacher interviews and questionaires of social interactions of the children in their classroom have indicated that:

1. Many of the nonhandicapped children learned specific ways to communicate with handicapped children who had delayed language behavior.

2. Most of the handicapped children were accepted by their peers and seemed to behave similarly to peers.

3. A few of the handicapped children were not as social with their peers, although they were not "picked on" (p.4) by the children.

4. Some of the nonhandicapped children were aware of positive behavior modeling of the teachers toward the handicapped child and many of the children imitated the skills.

6. When nonhandicapped children asked questions about the handicapped child, they were answered openly and honestly by the teachers. The nonhandicapped children understood and accepted the answers (including a few instances where physically abusive behavior occurred and the children had asked questions later).

One of the unique aspects of the project which may have facilitated positive interactions was the concern to make an "adaptive fit" (p.13) between the handicapped child, the child's family, the teaching staff, and the other children and families. Such a concern may have had an important influence on encouraging the adaptive behaviors of the nonhandicapped children to learn to understand and interact with a child who has special needs.

Mainstreaming may provide positive experiences for nonhandicapped children by helping them learn new ways to interact with a handicapped child. A further study of adaptations of nonhandicapped children towards handicapped peers was undertaken by Guralnick and Paul-Brown (1977). The intent of the investigation was to systematically determine the communication adaptations in linguistic parameters that occur when nonhandicapped children talk to children of various developmental levels. Children were observed in an instructional setting and during free play. The results indicated that the nonhandicapped children adjusted their speech to the developmental level of their listener and the overall pattern of interaction was similar in the two conditions. When the nonhandicapped children were addressing more advanced children, their speech was more complex, frequent, and diverse. In addition, the children tended to divide their peers into two groups,

differentiating between a group of children with severe to moderate delays and a group of children with mild to no delays. Guralnick (1978) suggests that further studies are needed to determine if nonhandicapped children make similar adjustments or adaptations in their social behaviors toward handicapped children.

Observational Methodology

One of the most widely used scales of social interaction among children has been the Parten Scale (1932). Six categories of social play are defined to describe the free-play behaviors of children. The categories are defined as: unoccupied behavior- the child is not involved in play; solitary behavior- the child plays alone; onlooker- the child watches other children; parallel activity- the child plays independently, but beside other children with similar play materials; associative play- the child plays with other children, but there is no common purpose to their play; and cooperative play- the child plays with other children and there is a goal and common purpose to their play. The scale has high interrater reliability (Parten, 1932) and has been used to collect data on nonhandicapped children (Barnes, 1971, Boger and Cunningham, 1973), as well as handicapped children (Wintre, 1974).

Ispa and Matz (1976) included the Parten social play categories in a checklist of social and emotional behaviors which they devised to measure the social atmosphere in two High Scope integrated preschool classrooms. In addition, the Ispa and Matz instrument included the following behavior categories: facial expression; converses; orders; follows; asks help; gives help; receives help;

refuses to comply; is refused by others; hurts; abused; defends rights; dosen't defend rights; gives affection; receives affection; shows pride; takes; gives/shows; requests materials; is observed; and observes. The behaviors are recorded every 30 seconds.

A major instrument that has been used to measure social interactions of young children is the Observation of Socialization Behavior (OSB) developed by Boger and Cunningham (1971). There are ten scales on the OSB, two scales based on situational influence and eight scales based on observed behaviors. The scales include: social behavior; involvement; verbalization; physical behavior; play context; peer interaction; group interaction; adult interaction; emotionality; and inferred motivation.

The play context scale of the OSB (an indication of large or small muscle activity, cognitive or dramatic play) is a particularly important category since it has been found that social behaviors of children are influenced by the kinds of play materials and activities. Toys that are designed for competition or toys that have possibilities for dramatic play have been reported to facilitate social interactions (Charlesworth and Hartup, 1967; Green, 1933; Quilitch and Risley, 1973).

Furthermore, the setting of an activity influences the behaviors of the children (Gump, 1975). The different subsettings of a nursery school (art, book, game, and block areas) have been found to be related to the social behaviors of the children (Shure, 1963). Shure indicated that active social behavior and complex social interaction were highest in the doll area, moderately

high in the block area, and lowest in the art area. The importance of the mileau on the children's behaviors is a factor that needs to be considered (Gump, 1975).

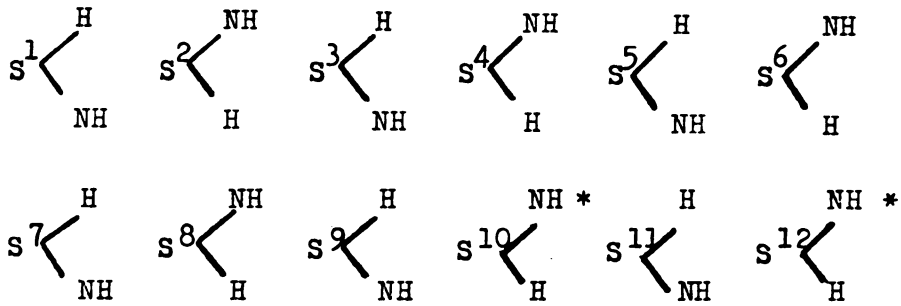
## CHAPTER III

## METHODOLOGY

### Research Design

The study was designed to determine the differences that occur in the social behaviors of twelve nonhandicapped children in two conditions. In condition one, each nonhandicapped child was in the experimental room with a nonhandicapped peer. In condition two, each nonhandicapped child was in the experimental room with a handicapped peer. The children were observed once each day until all the nonhandicapped children were observed in each of the conditions.

The design matrix of the study is shown in Figure 1.




S = Subject
H = Handicapped Peer
NH = Nonhandicapped Peer

/ = First interaction
\ = Second interaction

* Strict adherence to this design was prevented because of some children's absences from school. In two cases the order was reversed.

Figure 1

Design Matrix

## Hypotheses

The intent of the study was to systematically investigate the social behaviors that occur among handicapped and nonhandicapped children. There were three basic research questions and a number of sub-hypotheses:

1. Is there a difference in the peer, goal, or adult-directed behaviors of a nonhandicapped child with a nonhandicapped peer as compared to the peer, goal, or adult-directed behaviors of the same nonhandicapped child with a handicapped peer?

   $H^1$: There is no difference in the number of peer-directed behaviors of a nonhandicapped child with a nonhandicapped peer as compared to the number of peer-directed behaviors of the same nonhandicapped child with a handicapped peer.

   $H^2$: There is no difference in the number of goal-directed behaviors of a nonhandicapped child with a nonhandicapped peer as compared to the number of goal-directed behaviors of the same nonhandicapped child with a handicapped peer.

   $H^3$: There is no difference in the number of adult-directed behaviors of a nonhandicapped child with a nonhandicapped peer as compared to the number of adult-directed behaviors of the same nonhandicapped child with a handicapped peer.

2. Is there a difference in the verbal behaviors of a nonhandicapped child with a nonhandicapped peer as compared to the verbal behaviors of the same nonhandicapped child with a handicapped peer?

   $H^4$: There is no difference in the number of peer-directed verbal initiations of a nonhandicapped child with a nonhandicapped peer as compared to the number of peer-directed verbal initiations of the same nonhandicapped child with a handicapped peer.

   $H^5$: There is no difference in the number of peer-directed verbal responses of a nonhandicapped child with a nonhandicapped peer as compared to the number of peer-directed verbal responses of the same nonhandicapped child with a handicapped peer.

   $H^6$: There is no difference in the number of adult-directed verbal initiations of a nonhandicapped child with a nonhandicapped peer as compared to the number of adult-directed verbal initiations of the same nonhandicapped child with a handicapped peer.

$H^7$: There is no difference in the number of adult-directed verbal responses of a nonhandicapped child with a nonhandicapped peer as compared to the number of adult-directed verbal responses of the same nonhandicapped child with a handicapped peer.

3. Is there a difference in the nonverbal behaviors of a nonhandicapped child with a nonhandicapped peer as compared to the nonverbal behaviors of the same nonhandicapped child with a handicapped peer?

$H^8$: There is no difference in the number of peer-directed nonverbal initiations of a nonhandicapped child with a nonhandicapped peer as compared to the number of peer-directed nonverbal initiations of the same nonhandicapped child with a handicapped peer.

$H^9$: There is no difference in the number of peer-directed nonverbal responses of a nonhandicapped child with a nonhandicapped peer as compared to the number of peer-directed responses of the same nonhandicapped child with a handicapped peer.

$H^{10}$: There is no difference in the number of adult-directed nonverbal initiations of a nonhandicapped child with a nonhandicapped peer as compared to the number of peer-directed responses of the same nonhandicapped child with a handicapped peer.

$H^{11}$: There is no difference in the number of adult-directed nonverbal responses of a nonhandicapped child with a nonhandicapped peer as compared to the number of adult-directed nonverbal responses of the same nonhandicapped child with a handicapped peer.

## Sample

Four handicapped and twelve nonhandicapped girls attending four integrated preschool classrooms affiliated with Michigan State University were chosen for this study. These particular classes in the MSU program consisted of approximately 20 children including one or two handicapped children. All of the handicapped chosen for this study were considered to be "moderately to severly developmentally delayed" (Carlson, 1978). Two of the children were diagnosed as having Down's syndrome and the other two as having cerebral palsy. Three nonhandicapped children were randomly

selected from each classroom.

The mean chronological age of the handicapped and nonhandicapped children were 5.3 (range = 4.9 - 5.7) and 4.3 (range = 3.7 - 5.6) years respectively. All children had been enrolled in the integrated program for approximately seven months prior to the commencement of the study.

## Instrumentation

Social behaviors of the nonhandicapped children were measured by using the Observation of Socialization Behavior Instrument (Boger and Cunningham, 1971). The Observation of Socialization Behavior (OSB) is an observation technique which uses a time and event sampling procedure.

There are two forms of the OSB. Form 1 was developed for observations of videotaped interactions of children in experimentally contrived situations. Form 2 was developed for classroom observations of children's free play interactions. In the present study particular scales of both forms were extracted and modified in certain instances for use in measuring the social behaviors of the children. A description of the scales used in the study will be discussed. (A complete description is provided in Appendix A).

Social Behavior - - This measurement aspect of the OSB utilizes the scale designed by Parten (1932). The scale was developed for measuring children's social play in a situation in which the children had a choice of their play materials. However, since the activities provided in this study were preselected for the children, a structured social behavior scale was developed,

following the Parten scale format. The structured social behavior scale was designed to meet the specific demands of the present study. The categories included the following behaviors: uninvolved- the child is not involved with the play materials; self-absorbed- the child plays with the play materials by him/herself; watcher- the child spends his/her time watching the other child; interactive- the child interacts with the other child; goal-dir-directed- the child plays with the other child with a goal in mind; and adult-directed- the child attempts to play with an adult.

Emotional Tone - - This scale provides an indication of the children's emotional tone. The the ratings range from overt negative (scored as a 1) to overt positive (scored as a 5).

Verbalization - - The verbalization scale is based on Bales (1951) Interaction Process Analysis. The verbalization ratings used in the present study were: solidarity; tension release; agrees; disagrees; gives information; orders; asks; shows tension; antagonism; fantasy; and mumbling. One rating, converses, was included (Ispa and Matz, 1978).

Nonverbal Behavior - - The categories of nonverbal behavior are social physical behavior, negative physical behavior, approach gesture, defensive posture, and physical motion. These categories were also developed by Bales (1951). In the present study, specific observable behaviors were defined, based on the above categories and the work of Ispa and Matz (1978). The categories included: gives affection; gives help; accepts affection; accepts help; shows; leads; hits,pushes; complies; observes; reacts, listens,

receives; takes; defensive posture; and nondefensive posture.

Involvement - - This scale is a rating of the type of behavior; whether it is an initiation, a response or an ongoing interaction.

Two specially trained observers, with experience in observing young children rated the behaviors of the children. They were equipped with a cassette tape recorder in which a tone was recorded every 20 seconds. Two earphone jacks were provided. During a ten minute session, the observers recorded in writing the first interaction that occured at each 20 second tone. The ten minute session session was considered sufficient to record a meaningful portion of behavior.

Interrater reliability was established through training sessions in which both observers recorded the same child. Both observers needed to establish a minimum interrater reliability of 85% on the total recordable positions. The mean agreement actually attained over a ten minute session was 89%.

## Experimental Setting

In each of the preschool situations, a separate room proximal to the main classroom was selected as the setting for the experiment. In this room the children were observed.

Three sets of social toys were provided. All were toys that could provide opportunities for social interactions through dramatic play. The toys were varied to ensure that on each data collection day the children would be equally stimulated and interested in the materials. One set of toys contained a miniature train and track and included small houses, trees and dolls. Another set included a miniature village which had a ramp to roll cars down. This set also contained houses of a larger type and miniature dolls in cribs. The third play set- a grocery store, included a miniature shopping cart, grocery items, cookie cutters, rolling pins and play dough. All of the play sets were spread out on a rectangular green shag rug (2' by 6').

One adult, an assistant, sat near the children, but did not attempt to structure interactions between the children. This adult was included in the experimental setting to make the setting seem similar to the classroom environment and to help out if problems arose. Two observers were located in a corner of the room seemingly occupied. They observed the social behaviors of the nonhandicapped children. The experimental setting is shown on Figure 2.

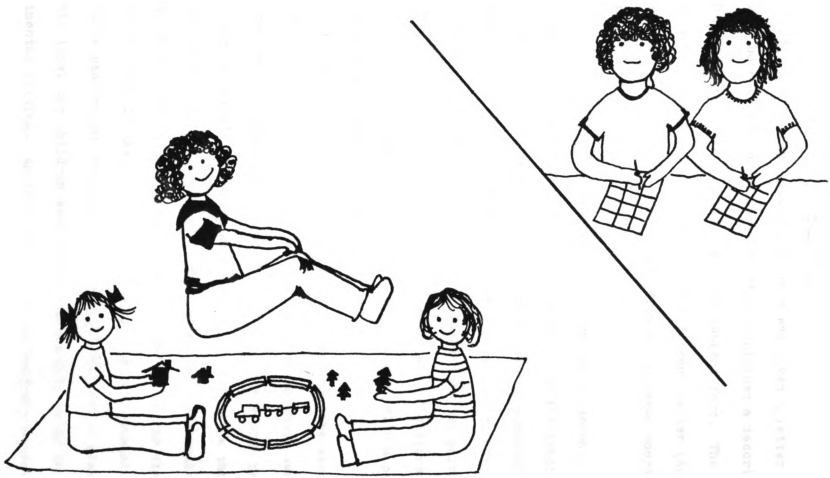


Figure 2

Experimental Setting

## Procedure

Each of the nonhandicapped girls was given a letter to be taken home to her parents. The letter contained a description of the study (Appendix B) and a parental consent form. The parents of the handicapped children were sent a different letter (Appendix C) which was followed by a phone call from the program coordinator at their child's school.

Atleast three nonhandicapped children were randomly selected from each class. Each child was paired with the handicapped child and randomly paired with one of the remaining nonhandicapped children to give a total of two observations per child. The children were only observed once in one day. Therefore, two pairs of children could be observed in one day. Each pair of children was randomly assigned to a set of toys; no child played with a particular set of toys more than once.

Prior to the initial day of data collection, the assistant and one observer (observer one) met the children in their own classroom and interacted with them for a two to three hour period during the children's free play and outside time to allow the children to become accustomed to them. On the data collection day, those same two adults accompanied the teacher of the class to ask the children if they would like to play with the special toys the adults had brought to school. If a child refused to play with the toys, the children were never coerced into being in the experimental setting. Another child from the randomly selected group was similarly asked to participate.

After entering the experimental room, the children were shown the toys by the assistant. Observer one said that she had some work to do and would join them in a little while. She sat near observer two who was located in a corner of the room seemingly occupied. Observers one and two each observed one of the nonhandicapped children in the room. The observations lasted for ten minutes.

At the end of the session, observer one joined the children and brought closure to the activities. The children were told that there would be a new activity for them the next time they came to play. In most cases this was the next day, but not longer than five days, although in one instance one of the handicapped children was absent from school for a nine day period.

If one of the children refused to come into the experimental room the second day or if a child could not continue with the experiment due to an illness or an absence from school, another child was randomly selected. Data from children was not used unless both observations were made.

## Data Reduction and Analysis

All observational ratings were given numerical codes and recorded on computer coding forms. The coding was checked and punched on computer cards.

The Statistical Package for Social Sciences was the computer program used in the data reduction, performed by the control Data Corportion 6500 computer at Michigan State University. A frequency count program was created in which the frequencies of behaviors for each of the scales were summed for each child in condition one and in condition two. The frequencies obtained were then combined to create the variables.

Peer-Directed Behavior - - The two levels of social behavior which indicated that the children played with one another (interactive and goal-directed) were combined for each child to determine the total number of intervals in which there was peer interaction.

Goal-Directed Behavior - - The frequency of goal-directed behaviors were combined to determine the total number of intervals engaged in this type of behavior.

Adult-Directed Behavior - - The frequency of adult-directed behaviors were combined to determine the total number of intervals in which the children's behaviors were directed to an adult.

Peer-Directed Verbal (Nonverbal) Initiations - - The frequency of social behaviors that were either interactive or goal-directed and there was a verbal (nonverbal) behavior and an initiation rating were combined to determine the number of intervals in

which the children's behaviors were initiated to a peer.

Peer-Directed Verbal (Nonverbal) Responses - - The frequency of social behaviors that were either interactive or goal-directed and there was a verbal (nonverbal) behavior and a response rating were combined to determine the number of intervals in which there were verbal (nonverbal) responses to a peer.

Adult-Directed Verbal (Nonverbal) Initiations - - The frequency of adult-directed behaviors in which there was a verbal (nonverbal) behavior and an initiation rating were combined to determine the number of intervals in which initiations were directed to an adult.

Adult-Directed Verbal (Nonverbal) Responses - - The frequency of adult-directed behaviors in which there was a verbal (nonverbal) behavior and a response rating were combined to determine the number of intervals in which responses were directed to an adult.

To analyze the difference between the mean number of each of the social behavior variables for the group of nonhandicapped children in condition one as compared to condition two, a paired t-test was selected. To use a t-test the variances must be homogeneous (Borg and Gall, 1971). Therefore, to cover for the possibility that the variances may have been unequal, a nonparametric test, the Wilcoxon Signed Ranks Test was also performed on the data. There is evidence, however, that violation of this assumption has a small effect on the results (Hays, 1973; Kerlinger, 1964).

All the tests performed were two-tailed. The alpha level was set at .05.

# CHAPTER IV

## RESULTS

The results of the data analyses will be discussed in terms of the differences in the social behaviors of nonhandicapped children in the condition in which the children interacted with a nonhandicapped peer, (condition one), as compared to the condition in which the children interacted with a handicapped peer, (condition two). The results of the paired t-test will be presented first, then the results of the Wilcoxon Signed Ranks Test.

### Social Behavior Ratings

Table 1 contains the summed frequencies of the social behavior ratings for each of the nonhandicapped children in both condition one and two. Inspection of the table reveals that approximately 80% of the social behaviors in conditions one and two were classified as interactive behaviors, level 4 of the Structured Social Behavior Scale. Of the remaining behaviors, the most frequent were goal-directed behaviors, level 5 and adult-directed behaviors, level 6. In conditions one and two, respectively, 5.6% and 1.4% were goal-directed and 11.9% and 18.6% were adult-directed.

Further analysis by the use of paired t-tests were taken to determine if there was a significant difference in any of the social behaviors in each of the conditions. Table 2 contains the results of the analyses. The following hypotheses were

Table 1

Summed Frequencies of Social Behavior Ratings: Conditions One and Two.

| Social Behavior | Condition One | | Condition Two | |
|---|---|---|---|---|
| | Summed Frequency of Intervals | Percentage of Total Intervals | Summed Frequency of Intervals | Percentage of Total Intervals |
| 1-Uninvolved | 0 | 0.0 | 0 | 0.0 |
| 2-Self-absorbed | 2 | 0.6 | 3 | 0.8 |
| 3-Watcher | 0 | 0.0 | 0 | 0.0 |
| 4-Interactive | 295 | 81.9 | 285 | 79.2 |
| 5-Goal-Directed | 20 | 5.6 | 5 | 1.4 |
| 6-Adult-Directed | 43 | 11.9 | 67 | 18.6 |
| Totals | 360 | 100.0 | 360 | 100.0 |

Table 2

Means, Standard Deviations, and T-Ratios of Social Behaviors: Conditions One and Two.

| Social Behavior | Condition One | Condition Two | t-ratio |
|---|---|---|---|
| Peer-Directed | | | |
| Mean | 26.25 | 24.17 | 1.23 |
| S.D. | 3.14 | 4.97 | |
| Goal-Directed | | | |
| Mean | 1.67 | .42 | 1.46 |
| S.D. | 2.64 | .79 | |
| Adult-Directed | | | |
| Mean | 3.58 | 5.52 | -1.16 |
| S.D. | 3.18 | 5.09 | |

*p <.05

tested:

$H^1$: There is no difference in the number of peer-directed behaviors of a nonhandicapped child with a nonhandicapped peer as compared to the number of peer-directed behaviors of the same nonhandicapped child with a handicapped peer.

$H^2$: There is no difference in the number of goal-directed behaviors of a nonhandicapped child with a nonhandicapped peer as compared to the number of goal-directed behaviors of the same nonhandicapped child with a handicapped peer.

$H^3$: There is no difference in the number of adult-directed behaviors of a nonhandicapped child with a nonhandicapped peer as compared to the number of adult-directed behaviors of the same nonhandicapped child with a handicapped peer.

The mean number of peer-directed behaviors in each of the conditions was computed. The means of conditions one and two were 26.25 and 24.17, respectively. The difference was not significant ($.3 > p > .2$). Hypothesis ($H^1$) was accepted.

A paired t-test was performed on the mean number of goal-directed behaviors in conditions one and two, 1.67 and .42, respectively. This difference was not significant ($.2 > p > .1$). Hypothesis ($H^2$) was accepted.

Finally, a paired t-test was performed on the mean number of adult-directed behaviors in conditions one and two. The respective means were 3.58 and 5.52. This difference was also not significant ($.3 > p > .2$). Hypothesis ($H^3$) was accepted. Thus there was no significant difference in the mean number of peer-directed, goal-directed, or adult-directed behaviors of nonhandicapped children interacting with a nonhandicapped peer as compared to a handicapped peer.

Verbal Behavior Ratings

Table 3 reveals the summed frequencies of each of the verbal ratings that were observed in all intervals of condition one as compared to those in condition two. The total number of verbal behaviors in conditions one and two were 98 and 81, respectively. The majority of verbal behaviors, 92% in condition one and 89% in condition two, were "gives information" (55.1% vs. 60.5%), "asks" (16.3% vs. 18.5%) and "fantasy" (21.4% vs. 9.9%). In neither of the conditions did verbal antagonisms occur.

The data was then analyzed to determine if there was a difference between conditions one and two in the mean number of a.) verbal initiations toward peers; b.) verbal responses toward peers; c.) verbal initiations toward adults; and d.) verbal responses toward adults. A summary of these results can be found in Table 4. The following hypotheses were tested:

$H^4$: There is no difference in the number of peer-directed verbal initiations of a nonhandicapped child with a nonhandicapped peer as compared to the number of peer-directed verbal initiations of the same nonhandicapped child with a handicapped peer.

$H^5$: There is no difference in the number of peer-directed verbal responses of a nonhandicapped child with a nonhandicapped peer as compared to the number of peer-directed verbal responses of the same nonhandicapped child with a handicapped peer.

$H^6$: There is no difference in the number of adult-directed verbal initiations of a nonhandicapped child with a nonhandicapped peer as compared to the number of adult-directed verbal initiations of the same nonhandicapped child with a handicapped peer.

Table 3

Summed Frequencies of Verbal Behavior Ratings: Conditions One and Two.

| Verbal Behavior | Condition One | | Condition Two | |
|---|---|---|---|---|
| | Summed Frequency of Intervals | Percentage of Total Intervals | Summed Frequency of Intervals | Percentage of Total Intervals |
| Solidarity | 1 | 1.0 | 1 | 1.2 |
| Tention Release | 1 | 1.0 | 1 | 1.2 |
| Agrees | 0 | 0.0 | 1 | 1.2 |
| Disagrees | 0 | 0.0 | 1 | 1.2 |
| Gives Information | 54 | 55.1 | 49 | 60.5 |
| Orders | 3 | 3.1 | 1 | 1.2 |
| Asks | 16 | 16.3 | 15 | 18.5 |
| Shows Tention | 0 | 0.0 | 0 | 0.0 |
| Antagonism | 0 | 0.0 | 0 | 0.0 |
| Fantasy | 21 | 21.4 | 8 | 9.9 |
| Converses | 0 | 0.0 | 2 | 2.5 |
| Mumbling | 2 | 2.0 | 2 | 2.5 |
| Totals | 98 | 99.9 | 81 | 99.9 |

Table 4

Means, Standard Deviations, and T-Ratios of Verbal Behavior: Conditions One and Two.

| Verbal Behavior | Condition One | Condition Two | t-ratio |
|---|---|---|---|
| Peer-Directed Initiations | | | |
| Mean | 3.38 | 2.58 | 1.65 |
| S.D. | 4.09 | 2.64 | |
| Peer-Directed Responses | | | |
| Mean | 1.50 | .67 | 1.60 |
| S.D. | 1.78 | 1.15 | |
| Adult-Directed Initiations | | | |
| Mean | 2.33 | 2.67 | -.27 |
| S.D. | 2.93 | 4.14 | |
| Adult-Directed Responses | | | |
| Mean | .25 | .83 | -1.25 |
| S.D. | .45 | 1.47 | |

*p < .05

$H^7$: There is no difference in the number of adult-directed verbal responses of a nonhandicapped child with a nonhandicapped peer as compared to the number of adult-directed verbal responses of the same nonhandicapped child with a handicapped peer.

The mean number of verbal initiations directed toward peers was 3.38 in condition one as compared to 2.58 in condition two. This difference was not significant ($.2 > p > .1$). Hypothesis ($H^4$) was accepted.

The mean number of verbal responses toward peers was 1.5 in condition one and .67 in condition two, but this difference was not significant ($.2 > p > .1$). Hypothesis ($H^5$) was accepted.

When the mean number of adult-directed verbal initiations in condition one and two were compared, the difference was not significant ($.8 > p > .7$). The respective means were 2.33 and 2.67. Hypothesis ($H^6$) was accepted.

The mean number of adult-directed responses in condition one was .25 and .83 in condition two. This difference was also not significant ($.3 > p > .2$). Hypothesis ($H^7$) was accepted.

In summary, the difference between the mean number of peer-directed initiations in conditions one and two and the mean number of peer-directed responses in conditions one and two were not statistically significant. The difference in the mean number of adult-directed initiations or adult-directed responses in in conditions one and two were also not significant.

Nonverbal Behavior Ratings

Table 5 contains the summed frequencies of nonverbal behaviors in each interval of conditions one and two. Approximately 94% of the nonverbal behaviors in condition one and 95% of the nonverbal behaviors in condition two were "shows" (7.9% vs. 4.4%), "observes" (9.7% vs. 8.1%), and "reacts, listens, receives" (76.3% vs. 82.6%). Generally, each behavior was recorded within only one interval, however the reacts, listens, receives, lasted an average of 1.54 intervals in condition one and 1.62 intervals in condition two. Peer-directed responses of reacts, listens, receives, lasted an average of 2.02 intervals in condition one and 1.89 intervals in condition two.

Analyses of the nonverbal behaviors were performed to determine if there was a difference between the means in conditions one and two for the following: a.) nonverbal initiations directed toward peers; b.) nonverbal responses directed toward peers; c.) nonverbal initiations directed toward adults; and d.) nonverbal responses directed toward adults. The results are presented in Table 6. Four hypotheses were tested:

$H^8$: There is no difference in the number of peer-directed nonverbal initiations of a nonhandicapped child with a nonhandicapped peer as compared to the number of peer-directed nonverbal initiations of the same nonhandicapped child with a handicapped peer.

$H^9$: There is no difference in the number of peer-directed nonverbal responses of a nonhandicapped child with a nonhandicapped peer as compared to the number of peer-directed responses of the same nonhandicapped child with a handicapped peer.

Table 5

Summed Frequencies of Nonverbal Behavior Ratings: Conditions One and Two.

| Nonverbal Behavior | Condition One | | Condition Two | |
|---|---|---|---|---|
| | Summed Frequency of Intervals | Percentage of Total Intervals | Summed Frequency of Intervals | Percentage of Total Intervals |
| Gives Affect | 0 | 0.0 | 0 | 0.0 |
| Accepts Affect | 0 | 0.0 | 0 | 0.0 |
| Gives Help | 2 | 0.7 | 2 | 0.7 |
| Accepts Help | 4 | 1.4 | 5 | 1.7 |
| Shows | 22 | 7.9 | 13 | 4.4 |
| Leads | 3 | 1.0 | 0 | 0.0 |
| Follows | 3 | 1.0 | 1 | 0.3 |
| Complies | 2 | 0.7 | 0 | 0.0 |
| Reacts,Listens,Receives | 212 | 76.3 | 246 | 82.6 |
| Observes | 27 | 9.7 | 24 | 8.1 |
| Nondefensive | 1 | 0.4 | 0 | 0.0 |
| Defensive | 1 | 0.4 | 4 | 1.3 |
| Takes | 1 | 0.4 | 2 | 0.7 |
| Hits,Pushes | 0 | 0.0 | 1 | 0.3 |
| Totals | 278 | 99.9 | 298 | 100.1 |

Table 6

Means, Standard Deviations, and T-Ratios of Nonverbal Behavior: Conditions One and Two.

| Nonverbal Behavior | Condition One | Condition Two | t-ratio |
|---|---|---|---|
| Peer-Directed Initiations | | | |
| Mean | 2.83 | 2.75 | .063 |
| S.D. | 3.38 | 3.02 | |
| Peer-Directed Responses | | | |
| Mean | 9.08 | 9.42 | -.27 |
| S.D. | 3.40 | 3.18 | |
| Adult-Directed Initiations | | | |
| Mean | .75 | .92 | -.41 |
| S.D. | 1.22 | 1.31 | |
| Adult-Directed Responses | | | |
| Mean | .83 | 1.75 | -1.78 |
| S.D. | .72 | 1.48 | |

*$p < .05$

$H^{10}$: There is no difference in the number of adult-directed nonverbal initiations of a nonhandicapped child with a nonhandicapped peer as compared to the number of nonverbal initiations of the same nonhandicapped child with a handicapped peer.

$H^{11}$: There is no difference in the number of adult-directed nonverbal responses of a nonhandicapped child with a nonhandicapped peer as compared to the number of adult-directed nonverbal responses of the same nonhandicapped child with a handicapped peer.

The means of the nonverbal peer-directed initiations in conditions one and two were 2.83 and 2.75, respectively. The difference was not significant ($p>.9$). Hypothesis ($H^8$) was accepted.

The means of nonverbal peer-directed responses in conditions one and two were 9.08 and 9.42. The difference was not significant ($.8>p>.7$). Hypothesis ($H^9$) was accepted.

The means of the nonverbal adult-directed initiations in conditions one and two were .75 and .92, respectively. The difference between the means was not significant ($.7>p>.6$). Therefore, hypothesis ($H^{10}$) was accepted.

The mean number of adult-directed responses in conditions one and two were 0.83 and 1.75, respectively. The difference was not significant. ($.2>p>.1$). Hypothesis ($H^{11}$) was accepted.

Thus, there was no difference in the mean number of nonverbal initiations towards peers or in the mean number of nonverbal responses towards peers in condition one as compared to condition two. There was also no difference in the mean number of adult-direct directed initiations or responses in condition one as compared to condition two.

The Wilcoxon Signed Ranks Test

The results obtained using the Wilcoxon Signed Ranks Test are presented in Table 7. There was no basis for rejecting the research hypotheses.

Therefore, a nonparametric test, the Wilcoxon Signed Ranks Test and a parametric test, the t-test both revealed no significant differences. In addition, the emotional tone of the children's behaviors in condition one and two were highly similar, although on statistical test was performed on the data. The respective means and standard deviations of conditions one and two were 4.05, $\pm$ .04 and 4.02, $\pm$ .04.

Table 7

T-Values of the Wilcoxon Signed Ranks Test

| Social Behavior | T-Value | N | P |
|---|---|---|---|
| Peer-Directed Behavior | 11 | 8 | .38 |
| Goal-Directed Behavior | 8 | 7 | .38 |
| Adult-Directed Behavior | 13 | 9 | .30 |
| Verbal Behavior | | | |
| Peer-Directed Initiations | 13 | 10 | .16 |
| Peer-Directed Responses | 2.5 | 6 | .13 |
| Adult-Directed Initiations | 20 | 9 | .82 |
| Adult-Directed Responses | 5 | 6 | .31 |
| Nonverbal Behavior | | | |
| Peer-Directed Initiations | 32 | 11 | .97 |
| Peer-Directed Responses | 29.5 | 11 | .80 |
| Adult-Directed Initiations | 8 | 6 | .69 |
| Adult-Directed Responses | 6.5 | 8 | .13 |

# CHAPTER V

## DISCUSSION

The study was designed to determine the differences that occur in the social behaviors of nonhandicapped children toward handicapped and nonhandicapped peers. Most of the studies indicate that there are infrequent interactions among handicapped and nonhandicapped children (Allen, Benning, and Drummond, 1972; Devoney, Guralnick, and Rubin, 1974; Guralnick, 1976). The question of import in this study was the nature of the social behaviors that do occur when a nonhandicapped child is with a handicapped peer. The frequency of social interactions among handicapped and nonhandicapped children may be lower than the frequency of interactions among nonhandicapped and nonhandicapped children, but the behaviors of the nonhandicapped children toward a handicapped peer may indicate a sensitivity and understanding of the special needs of the child. The overall frequency of interactions may not be as important as the types of behaviors.

In the present study, there were no significant differences in social, verbal, and nonverbal behaviors of nonhandicapped children towards handicapped and nonhandicapped peers, as determined by a parametric and a nonparametric test. There seemed to be a tendency, however, for the nonhandicapped children to direct their behaviors toward adults when they were with a

handicapped child as compared to a nonhandicapped child. A factor which may account for this tendency is that the nonhandicapped children were asking or telling the adult about the handicapped child's behavior. There were instances observed in which the nonhandicapped children asked the assistant to explain a handicapped child's behavior and instances in which the nonhandicapped children were interpreting their handicapped peer's behavior to the assistant. This data, however, was only recorded as an "asks" or "gives help." The specific nature of the behavior was not included as a part of the observation instrument. A more sensitive instrument which included categories that would account for the specific nature of the verbal behavior is needed in future research.

There was also a tendency for the nonhandicapped children to play more cooperatively with nonhandicapped children, as well as a tendency for verbal initiations and responses to be higher when the peer was nonhandicapped. Even though these findings were not statistically significant, they are important as an indication that the nonhandicapped children may have been adapting their behaviors to the developmental level of their peer. The same verbal ratings, "asks," "gives information," and "fantasy" accounted for the greatest proportion of behaviors in both conditions, although the specific dimensions of the behaviors in each condition could not be determined.

There seemed to be a positive atmosphere in each of the conditions since there were negligible sums of negative behaviors,

such as hits, pushes, takes, antagonism etc. and the emotional tone of the children was positive.

In both conditions, the greatest proportion of intervals were spent in the behavior rated as reacts, listens, and receives. This implies a more passive type of social interaction, but may have been a result of the nature of the social toys. Different toys are known to elicit greater or lesser amounts of activity (Green, 1933) and the confined space of the experimental room may have provided additional cues for more passive behaviors (Gump, 1975; Shure, 1963).

The finding of Ispa and Matz (1978) that the nonhandicapped children gave more help and affection toward handicapped peers was not evident in the present study. It may be interpreted that giving more help and affection to handicapped peers indicates that the nonhandicapped children were possibly adapting their behaviors to their handicapped peers. However, the findings in the present study may well indicate an adaptation. The nonhandicapped children were behaving toward their handicapped and nonhandicapped peers similarly, regardless of whether or not the peer had a handicap.

The children in the study were in an integrated program (the PATHWAYS Project), that attempted to facilitate adaptive behaviors of nonhandicapped children by providing a supportive environment to promote positive social interactions among handicapped and nonhandicapped children. The nonhandicapped children were encouraged to "simulate or understand the impact of

handicapment within their own experience" (Carlson, 1977, p.29). In addition, the children's questions about the handicapped children were answered openly and honestly, and the teachers stressed that the handicapped children "were learning to master various interactions and skills, and were competant, capable individuals" (p.29). This particular program may have influenced the children's behaviors to interact similarly with handicapped and nonhandicapped peers, although a pre-post measure would be needed to determine this.

An instrument more sensitive in measuring the type of behavior, as well as the complexity of the behavior may have indicated differences between the nonhandicapped children's behaviors in the two conditions. Perhaps the particular way a nonhandicapped child showed, helped, or gave information to a handicapped child would be considered an adaptation to the special needs of the handicapped child.

In summary, the findings of the study shed light on the nature of social behaviors of nonhandicapped children towards handicapped and nonhandicapped peers. Further investigations as to the "specific" nature of the behaviors are needed, but the present study suggests that the handicapped children were accepted by their peers.

# CHAPTER VI

## SUMMARY AND IMPLICATIONS

The study was designed to investigate the social, verbal and nonverbal behaviors of integrated preschool nonhandicapped children towards handicapped and nonhandicapped peers. Twelve nonhandicapped children in four integrated preschool programs were randomly selected for the study. Each of the children was paired with a nonhandicapped (condition 1) and a handicapped peer (condition 2). The children were observed in an experimental setting in which there were toys that could provide opportunities for social interactions. An adult sat near the children, but did not attempt to structure interactions between the children. The children were observed for a ten minute period in each condition, no child being observed more than once per day.

Observations of the nonhandicapped children's behaviors were recorded by use of a modified version of the Observation of Socialization Behavior (Boger and Cunningham, 1971). Data was collected on the social, verbal, and nonverbal behaviors directed toward the peer or the adult in the experimental setting. A paired t-test and a Wilcoxon Signed Ranks Test were used to analyze the data.

The results from both tests indicated that there were no

differences between the social, verbal or nonverbal behaviors of the nonhandicapped children in either of the two conditions. There were tendencies for more adult-directed behaviors when the nonhandicapped children interacted with a handicapped child and more cooperative play and verbal behaviors when the peer was nonhandicapped. These tendencies were not significant. Therefore, in the present study the handicapped children were treated similarly to the nonhandicapped children.

## Limitations and Suggestions for Future Research

1. One of the problems encountered in implementing this research project was the fact that the children were observed outside of the main classroom. It was necessary to obtain the children's consent to bring them into the experimental room and often it was not easily done. There were too many interesting activities provided in the classroom, in which the children had a choice. Furthermore, there was no guarantee that if a child came into the experimental room the first day she would want to come the following day. In future studies using a similar procedure it is recommended that the children be familiarized with the type of activity encountered in the experimental room prior to data collection.

2. The small sample size limits the generalizability of the results of this study to other studies which observe children outside of the main classroom. However, since there was only one handicapped child in each classroom, including more children

in the study would have increased the number of times the handicapped children were asked to participate in the activities. It was felt that this was too demanding of their time.

3. The use of a cassette tape recorder with earphones to signal 20 second intervals worked well. Ideally, an experimental room in which there was an observation booth would have been preferred, although the children were accustomed to seeing adults in their classroom.

4. The instrument in the study was felt to be the best available measure of social interactions, although to assess more subtle behaviors a more sensitive measure is needed. Perhaps choosing only the most frequent behavior categories and defining more specific dimensions to be observed would increase the sensitivity of the measure.

5. A careful effort was made to select nonhandicapped children of similar ages and handicapping conditions. All the children in the study were developmentally delayed, but the nature of the children's handicaps varied. This is a factor that must be encountered in this type of research, a factor which limits the generalizability of all the studies (Ispa, 1978). Perhaps increasing the number of classrooms and the number of handicapped children would have made the results more generalizable. At the time of this study this was not possible.

6. Since strict adherence to the design was not possible, the fact exists that the additional two children who interacted with the handicapped child first may have influenced the results,

however, Shantz and Gelman (1973) have indicated that these order effects are minimal.

7. Additional research could be undertaken to determine the changes that occur in the nonhandicapped children's behaviors toward handicapped children over time. It is likely that there may have been differences in the behaviors of the handicapped children toward their handicapped and nonhandicapped peers as measured before and after integration.

8. Furthermore it would be interesting to know if the nonhandicapped children in the study would behave differently to a handicapped child who was not a peer. Would there be differences in the nonhandicapped children's behaviors with a handicapped child who was not familiar as compared to a nonhandicapped child who was not familiar?

9. More explorations of the children's interactions in integrated classrooms are recommended. There is evidence that these interactions are special. In one situation, the handicapped child looked up at the assistant and attempted to communicate with her. The assistant looked confused, she did not understand what the child was trying to say. The nonhandicapped child did, however, she spontaneously exclaimed, "She said ...."

# APPENDIX A

## OBSERVATION OF SOCIALIZATION BEHAVIOR (MODIFIED)

## APPENDIX A

## OBSERVATION OF SOCIALIZATION BEHAVIOR (MODIFIED)

The general procedure of the OSB is to rate the children's behaviors every 20 seconds. Each 20 second frame is recorded as an individual unit. The children's behaviors at a previous time should not influence the ratings of a subsequent interval. The following scales were included in the present study:

The Structured Social Behavior Scale

| | |
|---|---|
| 1 = Uninvolved | The child is not involved with the play materials or the other child in the room. She may wander around aimlessly, play with her clothing or body or sit in one place looking into space with a glazed appearance. She may glance around the room but there does not seem to be any purpose in relation to her play. (Similar to unoccupied behavior on the Parten Scale ). |
| 2 = Self-absorbed | The child plays with the play material by herself. There is no effort to establish communication with the other child. She is only interested in the play materials and what she is doing. She may be playing with the materials similarly to the other child, but only because of the structure of the materials. Basically, the child plays alone as if the other child is not there. |
| 3 = Watcher | The child spends her time watching the other child play. She may converse (ask questions, make comments) but she does not attempt to enter the play of the other child. She shows interest, however, by attending (looking, speaking). That is the extent of her involvement. (Similar to onlooker on the Parten Scale). |
| 4 = Interactive | The child interacts with the other child (socially through the exchange of play materials, |

use of the same materials or through verbal means), however there is no common goal to their play. They may imitate one another's actions but with no common purpose. The children do not establish rules or roles in their play. Basically, each child has her own rules and her play is determined by this factor.

5 = Goal-Directed — The child plays with the other child with a goal in mind. They play together by attaining the goal, interacting by sharing of ideas and implementing them to further their play and define roles. There is organization evident in their play. (Similar to cooperative play on the Parten Scale).

6 = Adult-Directed — The assistant will not attempt to structure interactions between the children, however, some interactions with the assistant may occur such as attempting to play with the assistant, or looking at or touching the assistant. (This category has been taken from A.P. Boer, Application of a simple recording system to the analyses of free-play behavior in autistic children, Journal of Applied Behavior Analysis, 1968, 1, 335-373.

Emotional Tone

1 = Overt negative behavior (crying, spitting, hitting)

2 = Inferred negative mood

3 = Neutral emotional tone

4 = Inferred positive mood

5 = Overt positive behavior (laughing)

Verbalization

SL = Shows solidarity: raises other's status, gives help or reward

TR = Tension release: jokes, laughs, shows satisfaction

AG = Agrees: shows passive acceptance, understands, concurs, complies

GI = Gives information: gives suggestions, opinion, orientation

OR = Orders: orders, repeats, confirms

A = Asks: asks for information, suggestions, opinions

DS = Disagrees: shows passive rejection, withholds help

ST = Shows tention: asks for help, withdraws "out of field"

AN = Antagonism: deflates other's status, defends or asserts self

C = Converses: involved in a conversation with another person

F = Fantasy

MM = Mumbling

X = No verbalization

Nonverbal Behaviors

GA = Gives affect: hugs, kisses, pats

GH = Gives help: does something for other child, assists

AA = Accepts affect: receives hugs, kisses, pats

AH = Accepts help: receives assistance

S = Shows: shows play materials to other child, points

L = Leads: takes control of an activity

F = Follows: follows actions of another child

H = Hits, Pushes: negative physical behaviors

T = Takes: grabs, takes something not offered

C = Complies: follows when specifically ordered or asked

RL = Reacts, Listens, Receives: attentive; passive awareness of other child

D = Defensive: defends rights

ND = Nondefensive: is abused

O = Observes: watches another child for atleast 10 seconds

Involvement

I = Initiation: Introduction of self or change in activity

R = Response: Reaction to initiation

O = Ongoing: Any interaction which is not and initiation or a direct response to initiation

$$\% \text{ Reliability} = \frac{\text{Agreements (one point for each agreement)}}{\text{Agreements plus disagreements (Number of points possible for positions in which either observer recorded any code).}}$$

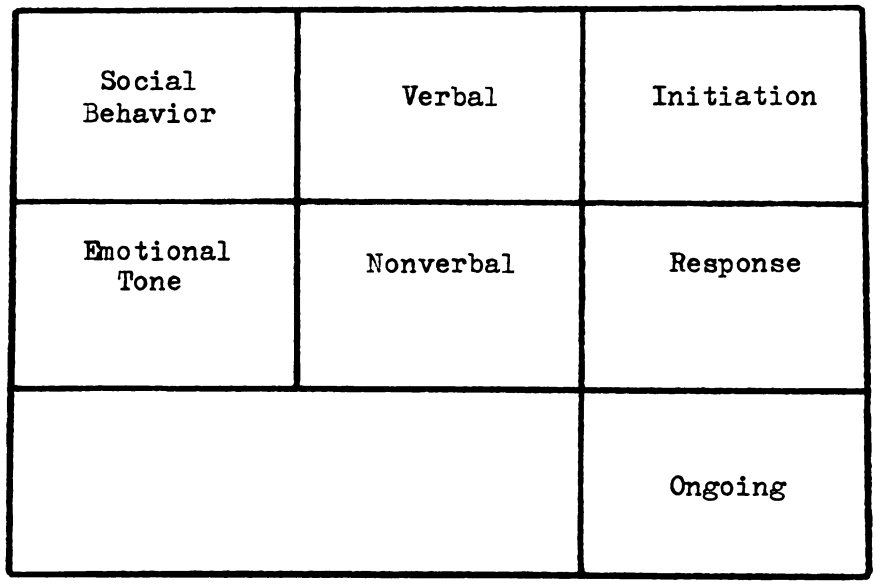



Figure A-1

An Example of One Observational Frame

# APPENDIX C

## REQUEST LETTER TO PARENTS OF THE HANDICAPPED CHILDREN

## APPENDIX C

### REQUEST LETTER TO PARENTS OF THE HANDICAPPED CHILDREN

May 8, 1978

Dear Parent:

As a masters student in Child Development at Michigan State University, I am undertaking a research project this spring affiliated with the PATHWAYS Project. I am interested in determining the nature of the social interactions that occur between children who have been in an integrated preschool classroom (1) to determine if nonhandicapped children differ in their interactions with a nonhandicapped child vs. a handicapped child; and (2) to determine the types of social adaptations nonhandicapped children make toward the special needs of some of their classmates.

I feel that this project will be important in determining the types of social interactions that occur in integrated classrooms. Hopefully some light will be shed on what the nonhandicapped child has gained in terms of social interactions with a handicapped child. In addition, the study may help to define the social climate of interactions between a handicapped and a nonhandicapped child to determine how the children play together, converse, and generally interact. This type of information can be very useful in providing insight about the social atmosphere of integrated classrooms.

Three children randomly selected and your child have been selected to participate in this study. I am requesting your permission to include your child in this research project.

Once the children have been selected the research will be completed by naturalistic observations of children interacting with each other in a group of two. The children will be asked by an experimenter (a student in early childhood with experience in interacting with children) to come into a room outside the main classroom, for example the kitchen and play a game set out on a table. Three games have tentatively been chosen - a train set, a toy village with miniature houses and cars and a store with places for various items.

The experimenter will be present, although she will not interfere with the children's activities. Two observers (myself and another person with experience in early childhood) will record the children's social interactions by use of an instrument that has been developed at the Institute for Family and Child Study at Michigan State

The experimenter will be present, although she will not interfere with the children's activities. Two observers (myself and another person with experience in early childhood) will record the children's social interactions by use of an instrument that has been developed at the Institute for Family and Child Study at Michigan State University named the Observation of Socialization Behavior. It is a rating form which has categories that include social behavior, physical behavior, verbalization, involvement, peer interaction, and inferred motivation.

The observation sessions will be for 10 minutes and each child will be asked to participate in the activities once a day for three days. All sessions will take place during free play so that the children do not miss any structured activity.

The activities selected have been designed to be fun for the children and I think they will enjoy them. The teachers have recommended them and they will take very little time.

All data collected will be anonymous and will remain strictly confidential. Only group data will be reported in discussing the results. The project has been carefully reviewed by the staff of the Early Childhood Laboratories, by the Early Childhood Studies Committee and by the Subcommittee of the University Committee for Research Involving Human Subjects.

Please indicate your permission on the enclosed sheet and return to your child's teacher as soon as possible. Thank you very much for considering this project. I will be glad to answer any questions you may have and can be reached during the day at 353-3897 or at night at 332-6675. A copy of the results will be sent to you upon completion of the study in August 1978, whether or not your child is still enrolled in the preschool.

Thank you

Sincerely,

Kalina Gonska

# APPENDIX D

# PARENT CONSENT FORM

## APPENDIX D

### PARENT CONSENT FORM

As parent or guardian of _____ I consent to have unobtrusive observations made of my child with another child in her class, outside of the main classroom (such as the kitchen) using the Observation of Socialization Behavior under the following conditions:

1. I have been informed of the study and understand the procedures.

2. I understand that the study and its activities have been judged by the professional staff to be in no way harmful to the children involved.

3. It is my understanding that I may withdraw my child from participation at any time if such involvement is unacceptable to me.

4. I understand that participation in this study will not interfere with my child's school program other than during her free play, and no additional benefits or affects are guaranteed.

5. I have the right to review the Observation of Socialization Behavior.

6. All children's names will be protected by using code letters when the information is gathered and reported.

7. Only group data will be reported.

8. I will receive a summary of the results of the study upon completion.

Signed _____

Date _____

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BIBLIOGRAPHY

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