THE ROLE OF TEACHER GUIDANCE IN PROMOTING SOCIAL INTERACTION IN A MAINSTREAMED PRESCHOOL SETTING

by

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THE ROLE OF TEACHER GUIDANCE IN PROMOTING SOCIAL INTEGRATION AT THE PRESCHOOL LEVEL

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ABSTRACT

Recently implemented programs mainstreaming special needs and typical children are based on research findings from the fields of psychology and education, and on advances in human and civil rights for handicapped individuals. Segregated special education was justified partially on the premise that disabled people were happier and less pressured in groups with their "own kind". Proponents of integration believe that isolation leads to both lower self esteem and achievement. They cite cases of amazing progress made with newer methods based on social learning theory, behaviorist technology, and precision teaching.

The purpose of this study was to test the hypothesis that teacher structured activities in an integrated group of typical and special pre-school children would have a carry-over of increased social interactions during a subsequent free play period. The rationale for this hypothesis was that the carefully organized small group activities would enable the children to become more familiar with each other and have common experiences on which to base later play episodes. There would be the opportunity for the typical children to view their special peers as competent in some skills in spite of deficits in others. There would also be opportunity for the teacher to access and reinforce positive social skills in the small group.

The study was based on systematic observations done in a pre-school setting during a summer program which enrolled equal numbers of special and typical children divided into control and experimental groups. The results supported the hypothesis; there were more spontaneous interactions among children in the experimental group during the free choice period following the structured group time. The experimental children initiated more interactions while playing in Children-Only modes. It was also found that in spite of the treatment special children in both groups spent more time alone and typical children spent more time in groups of three or more children and in Children-Only modes of interaction. This indicates a need for balancing time allotted for Children-Only and Children-With-Teacher situations. This study suggests that melding the social learning theory methods of teacher structuring with the developmental child-centered approach results in more spontaneous social play among children.

Future research on preschool mainstreaming conducted over a longer time period should include an assessment of all the children's entry level social skills, the use of social skills tutoring, and consideration of optimal levels of teacher involvement which promote social interactions.

DEDICATION

To my mother, Marjorie Benson, who had the audacity to challenge the high school counsellor who had decided to track me into the non-academic program because I wasn't "college material".

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CHAPTER I

Introduction

The recently popular policy of mainstreaming special needs and typical children in the educational system is fraught with strong emotional, political and moral arguments espoused by concerned factions, including special and regular education personnel, social service workers, parents, and most recently handicapped people themselves. Within the fields of psychology and education, there has been a dramatic shift in the past fifteen years from a viewpoint which advocated educational isolation to policies which propose full social integration of disabled individuals.

The concept of "critical years" has focused attention on young special needs children and early intervention programs. Recent research on infant psychology has encouraged a profound respect for the learning potential of very young children, and results are adapted for use with delayed infants (Hayden, 1979).

Much of the research done on disadvantaged preschool students is now applied to handicapped youngsters, and programs such as Head Start have been extended to include a percentage of special children. In some cases integration may not be appropriate for preschool children with certain disabilities, depending on the nature and severity of the handicap and on the

educational program chosen. For example, the requirements of a child from a socially-deprived background may be so entirely different from a severely hearing impaired child who is being taught sign language, that the research findings on language development that are appropriate for one child, may not be applicable to the other child (Schlesinger & Meadow, 1972). In some cases the special child may be appropriately placed in a typical classroom, after some basic skills are achieved in social behavior and communication.

Advocates of integration contend that special children do better in the more challenging mainstreamed environment, and that the typical children also benefit by becoming more empathic. Carefully sequenced curriculums of various models, based on developmental norms, have been drawn up by research-oriented preschool educators. These are often correlated with criterion referenced check lists which are used for assessment, prescriptive teaching, and evaluations. Another factor has been the use, in some programs, of behavioral technology, which has produced some dramatic learning with special needs preschool children. Although most of the materials designed for practitioners claim to cover all areas of development, there is in fact an emphasis on cognitive achievement. The focus on an analysis of cognitive components and clear orderly teaching has been emphasized by educators such as Bereiter & Engleman (1966). They maintained that delayed children did not have time to waste

on the unstructured enrichment activities which predominated in the traditional "soft" free-play preschools.

In the mid-seventies the pendulum in the literature on main-streaming began swinging toward a greater emphasis on social development, particularly peer interactions (Lewis & Rosenblum, 1975). Teaching in the social domain is more complex and less well researched than in the academic domain. North American teachers have traditionally adopted a "hands off" policy and left children to work out social relationships among themselves. Studies in comparative child-rearing and in moral development (Bronfenbrenner, 1971) have suggested that teachers should have a more active role in promoting positive social interactions. This issue has now come into prominence in the mainstreamed classrooms, where there is evidence of social rejection and isolation of the special child, as had been originally predicted by some special educators (Gresham, 1982). The present study is a report on research on the role of teacher guidance in promoting social interaction in a mainstreamed preschool.

CHAPTER II

Review of the Literature and Statement of the Problem

Historical background

Western society has traditionally segregated devalued persons from the mainstream. Since the time of the plague, diseased people have been physically isolated, including more contemporary examples such as T.B. sanitariums and leper colonies. Gigantic institutions such as Bedlam, the 14th century "lunatic asylum" in London, were built to house mentally ill, retarded, deaf, blind, and anti-social individuals. These measures were taken to protect society from what it considered its undesirable elements.

During the 19th century humanitarian movements emerged which advocated that society take responsibility for providing more than just custodial care of less fortunate members. Charity was seen as a legitimate concern of the wealthy and some programs were begun which offered donations of help to certain deserving "under-privileged" persons. This kind of assistance has been viewed traditionally as a gift bestowed with an essentially Christian motivation.

Contemporary Background: Desegregation and Mainstreaming

Civil rights for minority racial groups became a major social issue in the United States following World War II. Allport (1954) proposed the "contact hypothesis" in his influential explanation of the source of racial prejudice and suggestions of ways to ameliorate the problems which faced the desegregation movement.

Following the historical decision by the U.S. Supreme Court in 1954 that "separate was not equal", it was postulated that contact between black and caucasian children in integrated schools would dissipate some of the devastating effects of racial prejudice. But as desegregation proceeded, it became apparent that the practice of "tracking" children into academically homogeneous groups was again producing racial separations because of the predominance of minority children in the lowest track. Academic failure was attributed to impoverished home environments which were seen as lacking in stimulation, motivation, and life experience needed for success in school. A nation-wide program, Project Head Start, was begun in 1965 to provide an enriched preschool experience for "disadvantaged" children. This program was one of several which were set up to compensate for "deprivation" which children suffered in poverty environments. It coincided with a group of projects called Follow Through which were established to compare various early childhood models of intervention.

At the same time as civil rights for racial minorities were being fought for, the Normalization movement of the 1960's (Wolfensberger, 1972) developed, based on Scandinavian models. This ideal became established in most human services professions as the goal of getting as many "devalued" persons as possible out of institutions and into more normal community living situations. This humanistically based model incorporates an emerging value system which attempts to establish the right of a handicapped person to have access to education, work, home, and a lifestyle which is as culturally normative as possible.

A major essay by Lloyd Dunn, past President of the Council for Exceptional Children (1968), precipitated major controversies because it questioned the separate education of the mildly retarded. His concern was actually tied in with the labelling of slum children as "slow learners" and assigning them to segregated classes, which subsequently emerged as a civil rights issue. Dunn recommended improved methods of screening and education in the mainstream extending the concept of integration of socio-culturally deprived children to the mildly retarded, on the assumption that with improved programming and assessment in general education, teachers would be better equipped to individualize instruction for special children in a typical classroom. This reversal of a position which had been developed for two decades by special educators was based mainly on the "Pygmalion in the Classroom" study (Rosenthal and Jacobson,

1966) which indicated that teacher expectancy was tied to labelling. That study was later criticized for methodological flaws, but at the time the results were extrapolated and used as evidence to discontinue the use of certain norm referenced tests and disability labels. Another major argument was that special class placement has a negative effect on the special class child's self-image and on peer acceptance (Meyerowitz, 1962). Dunn's ideas contradicted Johnson's (1950) earlier sociometric evidence for social rejection of mentally retarded children in regular classrooms, and Kirk's (1964) study which indicated that mentally retarded children generally made better social adjustments in special classes.

The combination of the two movements for the rights of racial minority and special needs children culminated in the United States with a mandate in 1972 that the preschool program for "disadvantaged" children, Project Head Start, should include 10% handicapped children. In 1975 the passage by Congress of the "Education for All Handicapped Children Act, PL 94-142" was proclaimed as a "bill of rights" for handicapped children. This landmark piece of legislation provides that <u>all</u> children shall be educated in the "least restrictive setting" and that every handicapped child shall have an annual I.E.P. (Individualized Educational Plan).

As these projects developed and teachers wrestled with problems of prejudice and peer acceptance, Allport's contact

hypothesis was expanded (Amir, 1969) and it was suggested that personal relationships and intergroup attitudes could be improved by providing not only opportunities for contact, but also by equal status contact, as well as contact with high status minority group individuals, and institutional support.

Although opportunities for "contact" exist in mainstreamed classrooms, consideration needs to be given to ways of creating situations where special children can participate on relatively equal terms, for example by individualizing or minimizing academic demands. Since many special children are deficient in communication skills, even though teachers structure activities for more equal participation, there may be difficulties in generalizing interactions to other social situations (Ballard, Corman, Gottlieb & Kaufman, 1977).

Many special children are not visible as such, nor publicly labelled as different, so even if such a child does achieve a higher status socially, this would not be perceived as an example to other children, so attitudes towards persons with that disability would not be changed (Gottlieb & Leyser, 1981).

As for institutional support of mainstreaming, most teachers do not express positive attitudes toward this practice (Shotel, Iano, & McGettigan, 1972). Even after workshops which help to change teacher attitudes, many of them do not alter their classroom practices to accommodate special children (Lombardi, 1982).

Much of the rationale for integrating handicapped with non-handicapped children was based on conjecture and justified because many educators believe that the effects of separate special class placement were socially destructive (especially in the area of self concept). The evidence regarding the special child's self-image is not clear cut (Guskin, Bartel and MacMillan, 1975) but proponents of mainstreaming suggest that this may be because of inadequate mainstreamed programming (Bricker, 1978). Mainstreaming is also reported to be of value to non-handicapped children by increasing their empathy and acceptance of people who are different. Voeltz' (1980) attitude survey of over 2,000 elementary school children where contact possibilities ranged from none to high between handicapped and typical children, demonstrated much more willingness for social contact in the high contact schools. Those schools had arranged for discussion periods for the typical children, and integrated recess play activities. The high contact children were also more tolerant of special children's deviant behavior, but this score was much lower. Voeltz suggests that future training of typical children should include more specific instruction and discussion on when to tolerate and when to reject a special child for social rule violations. She also notes that follow-up surveys and behavioral observations are needed in the area of acceptance of special children by typical peers.

No large scale studies have been done to evaluate the results of mainstreamed programs. However, an evaluation of varying models developed by researchers and practioners who set up the Follow Through programs, found that of 20,000 children tested, while there had been some earlier gains in I.Q. and achievement results, these were about equal with controls by grades 5 and 6. In comparing program models a slight edge was given to those programs labelled "direct instruction" (Stebbins, St. Pierre, Proper, Anderson and Cerva, 1977.) This evaluation was severely criticized for the classification of models and outcomes, selection of measures and data analysis (House, Glass, McLean and Walker, 1978). A follow-up reassessment by a group of the researchers who had developed the programs (Lazar and Darlington, 1982) had to agree that there were no significant long range achievement gains, but pointed out that the program children were less likely to repeat a grade or be placed in special classes. The Follow Through children were more achievement oriented and their mothers had higher vocational aspirations for them than control mothers had for their children. Many educators were disappointed that the heroic efforts of some of the nation's top educational researchers did not produce the expected increases in achievement scores. However, numerous programs were developed for teaching, assessment, and parent participation. Much of the work has been adapted and refined

for special preschool children in separate and mainstreamed classrooms.

Studies by Guralnick (1976) and Hibbs (1975) demonstrated that merely mixing special and typical children does not facilitate social interactions either quantitatively or qualitatively. In fact, problems of low self-esteem and social isolation have been reported for special children in mainstreamed classrooms (Gresham, 1982).

Although the past decade has seen a spate of programs touted as "individualized", the logistics of preparing, presenting, and assessing them has proven confounding for many teachers even in typical classrooms. The expectations for high levels of achievement for special children in ordinary classrooms has recently become more guarded, especially where the higher motivation generally found in experimental programs may be lacking. Proponents of integration now caution against "wholesale implementation" and urge "further examination of the approach" (Bricker, 1978).

Preschool programs which "mainstream" children have generally been run on the assumption that social acceptance will come as a result of teachers modeling accepting behavior. The purpose of the present study was to determine whether teachers can affect the amount of social interaction between handicapped and non-handicapped preschool children by structuring a portion of the day in such a way that small groups of handi-

capped and non-handicapped children are involved in doing specific activities together. If teacher structuring of social interactions has a carry-over into spontaneous interactions, it could be justified as a teaching technique in mainstreamed classrooms.

So far there has been no research done that provides conclusive findings to support the efficacy of preschool mainstreaming. Reports done on various projects focus on descriptive information and suggest techniques and general considerations. Much of the literature is a synthesis of the experiences of the authors, based on their projects. The judgements and conclusions which they reach are more intuitive than rigorously systematic. It has been suggested in "Mainstreaming and Early Childhood Education for Handicapped Children: Review and Implications of Research, Final Report" (Wynne, Ulfelder, and Dakof, 1975), that what is needed is research which is based on systematic direct observation of social interaction patterns.

Research findings from the fields of social psychology and developmental-cognitive psychology have been extrapolated and applied to studies of social interaction in mainstreamed classes for young children. Relevant research will be briefly reviewed and applications described in the following sections.

Social Psychology Research

Researchers in social psychology generally assume that adult or leader manipulation of the environmental variables is the key to increasing social interactions. One area of research of relevance to mainstreaming typical and special children is the study of group dynamics.

Historically the Horatio Alger myth characterizes Americans as competitive and individualistic. Horace Mann's ideal of the public school being the great institutional leveller has undergone dramatic swings back and forth as educators attempt to achieve a balance between individual achievement and social needs. Intense discussions regarding autocracy vs. democracy dominated the field of social psychology during and following the political upheaval which accompanied the Great Depression and World War II.

Lewin (1947) and Deutsch (1949) initiated large scale studies in group dynamics, which considered the distinction between cooperative and competitive conditions, and examined the behaviors elicited. This work was highly respected in scholarly circles because of its base in rigorous theoretical analysis. Festinger (1954) developed social comparison theory, which considered how individuals who undergo normative pressures in small groups make use of those experiences with others to understand both themselves and other people.

Sherif, Harvey, White, Hood, & Sherif (1961) did a lengthy study of intergroup conflict, hostility and cooperation with seventh grade boys in a camping situation. It was found that social distancing could be reduced if there was a super-ordinate goal which required co-operation on common tasks. This research supported Deutsch's findings of positive interpersonal behavior in cooperative situations and suggestions for ways of changing undesirable relations.

Extensive laboratory research was done on children's choice behavior in game situations (Madsen, 1967, Madsen & Shapira, 1970). These studies concluded that rural children collaborate more than urban subjects, and that urban middle class American students are the most strongly motivated to compete. The studies validated earlier research done by Mintz (1951), where college students in the "bottleneck" study exhibited maladaptive behavior by not cooperating even when it was clear that competition spoiled all participants' chances of success.

Although these gaming studies were elegant laboratory studies, the application to interpersonal relations has been questioned because the game situation demands minimal interpersonal contacts and does not take into account other kinds of social interactions (Vinacke, 1969).

More recent studies demonstrate that the retarded child who has appropriate or competent behavior is more apt to be accepted (Strickart & Gottlieb, 1977), and that misbehavior is

more closely associated with rejection by peers than is academic retardation (Gottlieb, Semmel, & Veldman, 1978).

Johnston and Johnston (1980) used both sociometric and observational methods in several studies comparing competitive, cooperative, and individualistic learning models in mainstreamed elementary classrooms to study peer rejection. They found that the cooperative model produced greater peer acceptance and more constructive interactions between typical and special students. These researchers also produced many suggestions of practical procedures for teachers working with heterogeneous groups of students.

In the past few years, parents and teachers have been presented with several powerful tools which can be used to teach socially acceptable behavior. Bandura's (1963) social learning theory takes advantage of children's tendency to do what they see important adults and respected peers doing. Positive reinforcement techniques, based on B.F. Skinner's (1969) work, point out that noticing and rewarding children for behaving in ways which the adult approves are effective (Allen, Hart, Buell, Harris & Wolff, 1964).

Social psychologists studying how peers influence each other through reinforcement and modeling note a dramatic increase in positive interactions from age three on (Rubin, Maioni, and Hornung, 1976). Positive reinforcers include passive attention and approval, affection and personal acceptance,

submission, and tangible objects (Charlesworth and Hartup, 1967), and are most frequently used among same-sex children. Although there are many more positive than negative interchanges, peer aggression (most commonly reinforced by crying, passivity, and defense reactions on the part of the victim) can become a major management problem (Patterson, Lettman and Bricker, 1967). Peer reinforcement has been used to reduce disruptive behavior (Wahler, 1967; Allen, 1976) by instructing children to ignore non-target behavior and respond to other behaviors.

Peer modeling is a powerful influence in affecting changes in children's behavior (Bandura, Grusec, and Menlove, 1967). Peer interactions have been increased in severely withdrawn preschool children after showing them a film demonstrating play (O'Conner, 1969). Peer imitation is increased when the model is rewarded in a problem solving situation (Geshuri, 1972) and when the model is the same sex (Bandura, Ross, and Ross, 1963). Higher levels of status, competence, and age increase the probability of imitation by peers (Goldman, 1976). Younger children's tendency to imitate older ones might be an issue in a mainstreamed mixed-age classroom, where older special children were placed with younger peers in order to match for certain developmental skills. The problem of typical children imitating undesirable behavior of special peers did not occur unless reinforced as part of the training procedure (Apolloni & Cooke, 1978).

A review of the literature on behavioral approaches to peer interactions (Nordquist, 1975) has indicated the need for further research in this area, particularly regarding the durability of results.

Developmental and Cognitive Psychology Research

Developmental psychology assumes a child-centered approach defining and elaborating on processes and stages in the unfolding progression of children's development. Most child psychology studies which relate to social development have focused on the mother/infant relationship and on social adjustment at the preschool (3-5) age. Recently cognitive psychologists have been concentrating more on social development and formulating constructs such as behaviorally derived "social competence" and Piaget-inspired "social cognition". Research is now done on toddlers and peers (Lewis, 1975), toddlers and fathers, etc. This new research will be relevant to those involved in mainstreaming preschool children because many special preschoolers demonstrate deficits in social skills.

Early research on young children's social development reported on social skills levels and popularity. Susan Isaacs' (1933) empirical observations of nursery school children's social behavior reflected her psychoanalytic approach to the child as a "naive egoist"; however her recording of episodes of children's interactions noted a predominance of friendliness

and co-operation. She attempted to isolate factors which facilitate or inhibit social behavior.

Parten (1932) provided one of the earliest examples of systematic observation using time sampling to document specific categories of social participation, noting an age progression from solitary to co-operative play. Murphy (1937) used Isaacs' episodic recording methods in a systematic study of the environmental influences on altruistic behavior of young children, comparing destructive and co-operative social interaction. Koch's (1933) sociometric studies were concerned with preschool children's popularity and the correlation with other indices of an individual child's behavior. Northway (1943) attempted to identify characteristics of unpopular children, and devise suggestions for helping children with various kinds of social problems. In contrast, Jennings (1937) focused on group leadership and isolation, and suggested that problems were situational and that teachers should manipulate classroom behavior to avoid exclusion of unpopular children.

A review of literature on peer interaction and socialization (Hartup, 1978) notes that this is a complex area and deserves much more attention, particularly when formulating assumptions regarding the importance of early childhood friendships. Hartup (1978) recommends more use of children themselves as socializing intervention agents both formally by using peer tutoring, and informally by planning "cooperative activities in

order to reduce tensions and promote productive social intercourse" in mainstreamed settings.

Children who rate low in sociability are more submissive, anxious, and show both a high variability in self esteem and inappropriate aggression (Bronson, 1966). A study by Getz (1977) on spontaneous co-operative play indicated that preschool children with positive social skills are both more co-operative and able to control negative social behavior. There is also a correlation between role-taking ability and social competence (Gottman, Gonzo, and Rasmussen, 1975).

Lewis and Brooks-Gunn's (1979) studies on social cognition give interesting insights regarding the development of self and the child's perception of peers. Their observations focused on the infant's acquisition of a knowledge of self during the first weeks of life, as the child observes his or her own body in relation to outside events. Lewis postulates the construct self permanence occurring simultaneously with the child attaining object permanence between the age of nine to twelve months. The use in the experiments of mirrors and photographs to ascertain the child's recognition of himself or herself as an individual identity has suggestive relevance for teachers working with children whose self identity appears to be impaired.

With regard to perception of peers, Lewis' (1975) work on stranger anxiety has demonstrated that infants are much more relaxed around strange children than strange adults. He tested

whether this might be a function of the infants' perception of the stature of the stranger by confronting them with midgets. The infants' reaction was one of negative surprise! This demonstrates that by one year of age children have developed sophisticated recognition cues as to what constitutes a person similar to themselves. Relevance of this work to Piaget's notions of decentering, egocentricity, and the ability to role-play suggest areas for further research.

Animal studies (Suomi and Harlow, 1972; Novak and Harlow, 1975) have demonstrated positive responses in the play behavior of isolation reared monkeys to the overtures by younger normal "therapist" monkeys. This was of significance because earlier experiments had shown no positive results when mixing isolates with same age or older monkeys.

Studies demonstrating older preschoolers' accommodation of their language to younger children's verbal level (Shatz & Gelman, 1973) encouraged educators to advocate mixed age groupings. Investigations of social interactions in homogeneous and heterogeneous age groupings in preschool classrooms have not been conclusive. Goldman (1976) showed no significant differences in time spent in social play, whereas Lougee, Grenich & Hartup (1978) showed that three year olds were more socially active when paired with a five year old but that five year olds were more sociable with other children of their own age.

Anthropological studies (Konner, 1975) reporting advantages for children in mixed age groupings are supported by some reports from integrated age group day care centers. Cross cultural studies (Whiting and Whiting, 1975) indicate that the mixed age peer group is where children practice aggression and its control and acquire pro-social skills.

Selman (1981) suggests that the common notions of friendship rest on a philosophical ideal of "true friendship" based on mutuality and commitment as defined by Aristotle. Applying Piaget's stage theories of logical and cognitive development to social concepts, Selman proposes a structural-developmental model for investigating the domain of friendship as an interpersonal mode. This approach allows the observer who is assessing an interaction to take into account the child's level of reflective understanding in the social domain. Selman says the earliest stages in friendships of children are based on physical proximity or on bonds formed by temporary action.

Corsaro (1981) claims there has been "no sociology of childhood" and has taken an ethnographic approach to studying access strategies in preschool situations (1979), noting tactics such as non-verbal entry. Corsaro (1981) recently completed a year long "hypotheses generating" study of nursery school children's interactive episodes, in which he employs Selman's stage theory in an examination of cognitive strategies which link social knowledge to specific interactive events. He noted

ongoing conflicts and readjustment as children who found themselves alone attempted to gain entry into an established play episode. At this age peer interactions are fragile and entry is resisted by an established group, with children using ownership of space or objects, and crowding as the most frequent justifications to exclude. Children also use the concept of friendship to justify and to overcome exclusion. Corsaro concludes that preschool children are aware of the difficulties of gaining access and the disruptive effect of peer entry, and therefore usually have several playmates in order to maximize the probability of social success. He also notes that friendship at this age is rarely based on a child's recognition of personal qualities in a peer.

A recent example of materials being published which provide teachers with ideas for modifying programs designed for typical children to meet the varying developmental needs found in a mainstreamed preschool is notable for explicit reference to reducing teacher involvement as the child's skill increases (Southweine, Crimmins, & Mazel, 1981).

Social Skills Training

Recent sociometric studies (Oden & Asher, 1977; Asher & Renshaw, 1981) distinguish between peer acceptance and friendship and show that low popularity ratings in children correlate with social skills deficits. Coaching children with low social

skills can increase acceptance by peers, but not necessarily friendship nominations. These studies indicate that behavioral changes need to be accompanied by changes in cognitive processes so that children understand the meaning and importance of co-operation, participation, communication and supportive behavior in various situations. Children also need information on how to put their knowledge into practice and how to keep various goals in mind, for example, winning a game while also keeping it fun for both sides. These researchers support Selman's ideas of friendship having developmental levels and suggest further studies using sociometry, more sophisticated behavioral codes, and naturalistic observation.

Shure and Spivak (1978) have done extensive studies with young children and teachers and parents using "interpersonal cognitive problem solving" techniques, which have proven effective with both aggressive and withdrawn children. This method includes language and thinking skills training which the child is guided to use in generating possible solutions to social problems and to evaluate what the results might be of the various choices. The program is used to coach individual children and small groups.

Gresham (1982) suggests that cognitively based techniques should be combined with social learning strategies to train social skills in special needs children. Manipulating the social environment to provide situations for social interaction by

using activities such as "cooperative games", use of teacher and peer group contingent social reinforcement, and modelling accompanied by instructions and praise have all proven effective in social skills training with behaviorally handicapped preschool children (Strain, 1977).

Studies by Cooke, Ruskus, Peck, Apolloni (1979) indicate that the typical child benefits more in terms of social development in the segregated setting, but that mainstreaming is preferred for the special child. Their three year study, which used the direct intervention techniques peer imitation training (PIT), showed greater improvement for the special children in the third year. The progressing of changes is attributed to an improvement in teacher attitudes and strategies over time. This research supports active teacher involvement in arranging for social contacts and cautions that careful selection of typical peer models who are friendly and cooperative with whom to match the special children is the most beneficial in improving interactions.

Field Studies

Research studies on preschool children's social behaviour are generally based on observations done during free play periods in preschool settings. Assumptions often rest on Parten's (1932) classic time sampling study on social participation which proposed a developmental hierarchy of progressively more inter-

dependent interactions including solitary, onlooker, parallel, associative and cooperative modes of play.

Smilansky's (1968) proposed developmental sequence, which elaborated on Piaget's cognitive play levels, labeled play behaviors as functional, constructive, dramatic, and games with rules. An anlysis of free play behaviour using both Parten and Smilansky categories (Rubin, Maioni, Harnung, 1976) indicated social class differences as a factor, with advantaged children spending more time is associative and cooperative (Parten) and constructive and dramatic (Smilansky) play. These researchers also challenged the Parten assumption that solitary play is the least mature, noting that much solitary play is goal directed and educative. It is noteworthy that most studies of mainstreamed preschools neglect the socio-economic status factor, which may be very relevant, because research is often done in University preschools with the typical children from the academic community, while the special children are usually bussed in from the more broadly based neighborhoods.

One study (Field, 1980) which compared three separate levels (severe, moderate, mild) of developmentally delayed 3-1/2 year old preschool children with same age typical children, noted that with increasing developmental age there are fewer self directed or self stimulating behaviours and more other directed behaviours, including physical proximity, looking, vocalizing and offering to share toys with teachers and peers. There was

also a progression in behaviour from self to teacher to toys to peers. Field postulates that a persistence of self directed behaviour may interfere with other directed interactions. She also notes that high teacher-child ratios and a predominance of teacher directed activities may inadvertently provide fewer opportunities for fostering social interactions in delayed children.

Research on social interaction in mainstreamed preschools continues to suffer from methodological flaws in subject selection, definition and categorization of variables, lack of S.E.S. data, inadequate data analysis and reporting of defined treatment. The studies cited below are all based on observations done in preschool settings with subjects being compared on the basis of their status as special or typical but with treatment either vague or unspecified.

In a six month observational study (Dunlop, Stoneman, Cantrell, 1980) of a group of 21 preschool children enrolled in a model program for disadvantaged children which mainstreamed special needs children, six special subjects were chosen by staff rating those children who might become candidates for a special class first grade. The special subjects (average age five) were matched with six typical subjects (average age four) and all were rated at intervals on 25 varieties of behaviour. Analysis of the 25 categories did not produce significant results except that special children engaged in more "inappropriate

object play" and "negative adult-child interactions". The 25 categories were collapsed into four major groups including solitary, direct interaction/dominant, direct interaction/co-operative and adult-child interaction. The group of behaviours labeled direct interaction/positive included "parallel" defined as "plays independently without interacting or conversing" and "inappropriate object play" defined as "destroys materials, throws toys, dumps paint container, tears books" etc. Including "solitary" as an interaction, and "inappropriate" as cooperative without any qualitative analysis, confound the results. Nevertheless the researchers conclude that over time the interactions between typical and special subjects became more homogenous in proportions of interactions. What is not commented upon is that while special children spent less time in solitary and more in cooperative modes, the typical children spent slightly more time at the end of the study in solitary and less time in cooperative interactions. Although the special and typical children played more with each other as the year progressed, both groups played twice as much with typical children and play in groups which included both was minimal. Considering that these children were older than Rubin's subjects it is notable that their amount of play with other children is much lower than even the lower class Rubin subjects. Although mainstreaming may improve social interactions for the special children, one

can reasonably inquire about what happens to the level of interactions for the typical children.

Another observational study (Novak, Olley and Kearney, 1980) measured the social behaviour of special needs children in five preschools (3 mainstreamed and 2 separate) comparing the various settings and the effects of teacher presence. They found that the special children in all settings played less with peers and more with objects and spent less time in close proximity to other children. They noted an increase in play behaviour in two of the settings when teachers withdrew, and concluded that social play was the lowest in one setting which had no free play period. However, the same preschool, (which was a separate facility for deaf children) produced more social constructive activity and social contact during the teacher directed activities than were observed during free play periods in the other settings. Results from this study present difficulties for generalization because of the variations in settings, group size, and composition.

A study comparing mainstreaming in elementary school and preschool classes (White, 1980) concluded that the special children were not accepted very well at either level. However, the researcher found less isolation in one of the two preschools studied where there was a larger proportion of special children (39%) and where the teachers were less directive during the free play period than in the school with fewer special children

(17%) and more teacher control during the free play period. The study is marred by lack of information on how the special subjects were selected from those available. The age of the special children in one group was almost a year above that of the other and the group sizes were different. Another confounding factor was that for one preschool the observations were done in the spring of one year and the fall of the next so that most of the subjects were not the same.

Another study (Rogers-Warren, Ruggles, Peterson and Cooper, 1981) of patterns of social interaction was done in a reversed mainstreamed class where several non-handicapped children were enrolled to serve as models for the special children. Four special and four typical children were selected as subjects. The special children were a year and a half older than the typical subjects. No indication is given as to how the subjects were selected from the larger group. This study analysed play areas, types of play, nature and frequency of social interactions and types of play behaviour. The only statistically significant finding was that the special children spent more time in solitary play on the playground. This study found that the special children played with special peers 1-1/2 times more frequently than with typical subjects and the typical children chose to play with typical peers 2 times more frequently than with special subjects. This is a striking finding in a reversed mainstreamed setting, indicating that the typical children

actively selected similar playmates in this study. This study also reported similar amounts of cooperative interaction for both groups, 6% outdoors and 3% indoors. Again this is a low rate for this age group. There are no socio-economic data on the typical children, but since the study was done at a University one might assume they were middle-class. This study gives no information on teacher-child interactions or program description and although it is stated that the typical children preferred non-structured activities and the special children had a higher rate of solitary play, no figures are given.

Statement of the Problem

Mainstreaming special needs preschool children has developed as a social-philosophical ideal over the last two decades, although there is a lack of empirical evidence to indicate superior social or academic performance in either mainstreamed or self-contained settings. Education in "the least restrictive environment" as a social goal raises complex issues regarding implementation. Learning theorists favor the use of teacher manipulation of the environment to foster social interactions, while developmental-cognitive psychologists suggest that children require sufficient opportunities to experience independent social interactions and practice social skills. For the present study these two approaches were combined in order to observe the effects of both teacher structuring and

organization and teacher participation on the social interactions of children in mainstreamed preschool settings.

Hypothesis

It was hypothesized that teacher guidance in structuring small group social activities would elicit more spontaneous social interactions among typical and special children in a subsequent free-choice play period, than would a less structured mainstreamed program.

CHAPTER III

Method and Results

Subjects:

The study was made at the summer Serendipity Program at the UBC Preschool for Special Children. This was a six-week summer activity program which served a mixture of 18 special and 18 typical children of preschool age (3-6). The children were divided into two groups of 9 special and 9 typical children each. The special children for the experimental and control groups were selected and matched as closely as possible for age, sex, and ability level by the director of the regular school year program. The special children were enrolled in the regular Pre-school Program because of a variety of developmental delays, including mental retardation, autism, and cerebral palsy. The non-handicapped children were recruited mostly from the neighbourhood, many from nearby student housing. Two children of each status were removed from consideration for each condition, because their attendance on days of observation fell below a two-thirds level selected by the researcher.

Table 1 shows the sex, age, and status for all 28 subjects of the study.

Table 1 - Subjects

Experimental				Control			
Subject	Sex	Age	Status	Subject	Sex	Age	Status
1	F	3	Developmental delay	1	M	3	Developmental delay Unknown etiology
2	M	3	Behavior disorder (some autistic behaviors)	2	F	4	Developmental delay & epilepsy (controlled)
3	M	4	Premature birth Social & language delays	3	M	4	Language delay (autistic behaviors)
4	M	4	Behavior disorder Language delay	4	M	4	Developmental disorder Unknown etiology
5	M	4	Down's Syndrome Occular imbalance	5	M	4	Behavior disorder (organic convulsive disorder - controlled)
6	F	5	Developmental delay (unknown etiology)	6	F	5	Moderate mental retardation
7	M	6	Down's Syndrome (mild retardation)	7	M	5	Cerebral Palsy - mild (slight social delay)
8	F	3	Typical	8	F	3	Typical
9	F	4	"	9	F	4	"
10	F	4	"	10	F	4	"
11	M	4	"	11	F	4	"
12	M	4	"	12	M	4	"
13	M	4	"	13	M	4	"
14	M	5	"	14	M	5	"

Basic Set-Up of the Serendipity Program:

Past Programs:

In the previous years, the four classrooms had been set up as free flow, free choice activity centres featuring arts, literature, dramatic play, blocks, music centre, etc. The children moved freely from room to room and indoors and out. The teachers had stations in the classrooms, but also followed the children to "where the action was".

The Year of the Study:

For the summer of 1978, the director of the preschool was very supportive of the plan to divide the 36 children into two groups for the first half of the program (1½ hours) each day. The two groups "A and B" (Apples and Bananas) each had nine "special" and nine "typical" children. The groups were divided evenly in terms of sex, age, and disability. Each group of eighteen children stayed with their three teachers from 9:00 to 10:30 each day. From 9:00 to 9:30 each day the teachers and children in both the experimental and control groups did pre-planned activities. From 9:30 to 10:30, the children in each group had free choice with teachers available informally. At 10:30, the children had their snacks and then all the children from both groups mixed freely on the playground or indoors for the last hour and a half. The total program time was three hours daily for six weeks during the months of July and

August. The program was run by a head supervisor and six preschool teachers. The staff were aware of the general nature of the study, but not of the specific details of the observation goals.

Treatment:

Both groups had the same kinds of materials and activities available such as cooking, gardening, dramatic play, music, art, and story time and teachers pre-planned for the time between 9 and 9:30.

The treatment for the experimental group involved teacher structuring of group size and status of children in the small groups during this half hour. The three teachers in the experimental group (Apples) were instructed by the researcher to each plan and carry out activities with a small sub-group of five or six children which would include as far as possible equal numbers of special and typical children. It was suggested that the teachers plan things where the children of varying abilities could participate, and teachers were also asked to provide situations where the children would get to know each other, such as singing name songs and frequent use of each child's name in conversations. They did activities such as acting out stories and preparing snacks for the rest of the group. Dramatic play situations were suggested by the teachers such as making a train or airplane out of chairs, or pretending

to be firefighters at work. In these kinds of activities there were roles for children of all levels, and the teachers were prepared with appropriate props and modelled language at various levels to stimulate and extend the participation of all the children. The teachers of the experimental group "set up" situations where small groups of normal and special children were together.

The "Banana" control group did similar activities but the teachers did not engineer the groupings in terms of status or size of group. There were often 12 or so children at an activity such as story time with two teachers supervising. The control group children were left free to choose their activities and which children they wished to be with.

Procedure:

Observations were made between 9:30 and 10:30, two days a week, by four observers. The observers were trained during the first week of the program. The researcher took polaroid photos of each child on the first day of the program. During the training week the observers studied the photos and observed the children from the observation booths to learn their names. The observers also learned to use the stop watches and practiced recording observations on the raw data sheet as shown in the example in Appendix A. What the observer saw was recorded using the notations at the side of the page as guides to what to

record. They practiced transferring the data to the coded sheets as shown in an example in Appendix B. The observers were instructed to code a child alone even if the subject was near another child but not interacting verbally or non-verbally. An "alone" coding was not rated as negative or positive in quality as it was not considered an interaction. During the observation sessions the researcher gave the signals "go" at the beginning and "stop" at the end of the 4 minute observation periods. Each observer had a pack of six photos and six raw data sheets for the children she was to observe for each half hour period. There was a minute of rest time between each observation. The researcher was available to give the name of a child with whom a subject was interacting, if the observer needed it, but made no other comments on the activities. From week two through six, ten observations were made of each child. The 240 second running record observations were transcribed immediately to the coding sheets. An hour and a half was allowed immediately following the observations for the transcriptions. The observers coded the variables from the raw data observations to the coding sheets, with no discussion allowed during the coding period.

The observations were done from observation booths, so that there was no interaction between observers and subjects. The observers were carefully instructed as to their duties, but were not given information about the hypothesis of the study.

The observers and the time of observation for each child and each group were varied randomly from session to session.

To be recorded as a social interaction in the study, a social interchange of either an associative or cooperative type (Parten, 1932) had to occur between the subject and one or more individuals. Thus solitary, onlooker, and parallel situations were coded "alone" and not rated for quality (even though they may have been constructive), because they were not within the researcher's definition of "social interaction".

During the week of practice observations prior to beginning the study a meeting was held with the teachers from both groups. It was explained that during the observation hours we would be recording social interactions of the children. The teachers were requested not to do activities such as story times or dramatic play which would place them at the focus of any activity. It was suggested that they only be available as resource persons or step in as they normally would in a free play period to redirect any severe anti-social behaviour. The teachers were assured that there would be no reference to them individually in the observations, and that any interaction which included them would be coded simply "teacher". This session appeared to alleviate anxiety about comparison of individual teachers' performance.

Observers and establishing of interobserver reliability

Four observers, unfamiliar with the hypothesis of the study, recorded data for each subject in every observation session. They rotated in children observed and one of the four was designed as reliability observer for each session. Reliability observations were done on one-third of the subjects during nine of the ten observation sessions. Three reliability observations were done for each subject with a total of 236 interactions recorded for mode and quality. Interobserver agreement reached was 97% (229/236) for mode and 86% (203/236) for quality. The variable on which there was most discrepancy was that of "quality of interaction", with one observer rating an interaction as positive, and another rating the same incident as neutral, and vice versa. The observers were not aware of whether the children were typical or special in most cases, except with obvious individuals such as those with Down's Syndrome.

Scoring:

The interactions were recorded on a coding sheet to determine the amount of time in seconds spent in interactions on the eight modes shown in the final coding system, Appendix C (Code 10). Also recorded was the quality of the interaction: positive, neutral, or negative. The data were then tabulated and analyzed to see if there were differences between the

experimental and control conditions, and between the special and typical children, in mode and quality of social interactions.

Results

All data for "mode" and "quality" of interactions represent proportions of time. Six analyses of data were conducted. Three 2x2 (status X group) multivariate analyses of variance were done on (a) sets of variables for proportions of time spent in each of eight play modes listed as Code 10 in Appendix C, (b) on combinations of the same play modes which show Children-Only (C.O.) and Children-With-Teacher (C.W.T.) interactions, and (c) on quality of interactions. Instances of integrated special and typical children interactions were counted and C.O. modes compared with C.W.T. modes.

Finally, the results of a sociometric study conducted at the end of the six week program are presented.

Interactions: Mode

Means and standard deviations for the proportions of time spent in each play mode are shown in Table II. Table III shows the significance level over all dependent variables and the significant univariate F-tests and probabilities for each variable.

Table II

Modes of Interaction: Proportions of time spent in each of eight play modes (Means and Standard Deviations)

Mode variable	Experimental				Control			
	Typical		Special		Typical		Special	
1) Alone	11	(8)	39	(22)	12	(8)	26	(15)
2) Subject & 1 child	25	(15)	16	(5)	11	(13)	8	(7)
3) Subject & 2 children	10	(7)	5	(6)	4	(5)	9	(7)
4) Subject & 3 or more children (group)	15	(13)	1	(2)	13	(8)	3	(4)
5) Group & teacher	18	(15)	11	(10)	17	(13)	13	(9)
6) Subject & teacher	9	(4)	14	(7)	12	(11)	22	(11)
7) Subject & 1 child & teacher	7	(7)	10	(10)	11	(5)	13	(3)
8) Subject & 2 children & teacher	5	(5)	4	(4)	20	(14)	6	(5)

Table III

Modes of Interaction: Proportions of time spent in play modes (Manova and Univariate Anova Results)

Multivariate Analysis of Variance (Wilks Lamba) For the Eight Play Modes

Treatment x Status	F = 1.25, (n.s.)
Treatment	F = 4.49, p <.001
Status	F = 3.66, p <.01

Univariate F-tests which showed significance

Separate Modes

Treatment	
Subject + 1 child	F(1,24) = 9.72, p <.005
Subject + 2 children + teacher	F(1,24) = 3.66, p <.01
Status	
Alone	F(1,24) = 13.8, p <.001
Groups of more than 3 children	F(1,24) = 14.07, p <.001

The multivariate tests (Wilks Lambda) showed no overall significant effects for treatment X status ($F(8,17) = 1.25$ n.s. The multivariate significance for treatment was $F(8,17) = 4.49$, $p < .001$. The univariate F-test for time spent by the subject with one other child ($F(1,24) = 9.72$, $p < .005$) indicated that the experimental children spent more time in dyads. Time spent by the subject + 2 children + teacher indicated that control children spent more time in that mode ($F(1,24) = 5.6$, $p < .01$).

Multivariate F-tests for status showed a significance of $F(8,17) = 3.66$, $p < .01$. The univariate F-test for time spent alone indicated that special children in both groups spent more time alone ($F(1,24) = 13.8$, $p < .001$). Time spent in groups of more than three children indicates that typical children in both the experimental and control groups spent more time in larger groups ($F(1,24) = 14.07$, $p < .001$).

Means and standard deviations of combinations of play modes to show Children-Only (C.O.) and Children-With-Teacher (C.W.T.) are shown in Table IV. The MANOVA and univariate results for combined variables are shown in Table V. The multivariate result for status was $F(8,17) = 4.80$, $p < .005$. The univariate F-test for status indicated that typical children played more in Children-Only groups. The multivariate test for treatment was $F(4,21) = 5.20$, $p < .005$. The univariate F-test was significant for Children-Only showing that experimental children interacted more in groups of children ($F,(1,24) = 5.5$, $p < .01$).

Table IV

Combined Modes: Proportions of time spent in Children-Only and Children-With-Teacher modes (Means and Standard Deviations)

		Experimental				Control			
	Combined Modes	Typical		Special		Typical		Special	
1)	Children-Only	50	(23)	22	(8)	27	(8)	19	(10)
2)	Children-With -Teacher	38	(17)	39	(20	60	(11)	54	(14)

Table V

Combined- Modes of Interaction: Proportion of Time in Children-Only (C.O.) and Children-With-Teacher (C.W.T.) Modes (Manova and Univariate Anova Results)

Multivariate Analysis of Variance

Treatment X Status	F =	(d.f. 4,21)	.95 n.s.
Status	F =	(d.f. 4,21)	4.80 p <.005
Treatment	F =	(d.f. 4,21)	5.20 p <.005

Univariate F-tests

Status - Children-Only	F =	(d.f. 1,24)	11.57 p <.001
Treatment Children-Only	F =	(d.f. 1,24)	5.5 p <.05
Children-With-Teacher	F =	(d.f. 1,24)	8.92 p <.005

Results for Children-With-Teacher modes indicated that the control group had more interactions which included the teacher ($F(1,24) = 8.92$, $p < .005$).

Quality of Interactions

The means and standard deviations for the quality of interactions are shown in Table VI. The multivariate significance shown in Table VII was $F = 4.9$, $p < .005$. The only significant univariate F-test for quality of interaction was for status, indicating more positive interactions for typical children in both experimental and control groups ($F(1,24) = 13.8$, $p < .001$).

Integrated and Non-Integrated Interactions

The sum of instances of integrated interactions among special and typical children for experimental and control groups is shown in Table XII. The percentage of integrated Children-Only interactions was similar for experimental and control groups.

Chi-Square results are shown in Table VIII. The Chi-Square test showed no differences for integration in Children-Only modes, but indicated that the experimental children had proportionately more integrated interactions than control children in the Children-With-Teacher modes $X^2 = 4.63$, $p < .05$.

Table VI

Quality of Interactions: Proportions of time spent in Positive, Neutral, and Negative Interactions (Means and Standard Deviations)

		Experimental				Control			
		Experimental				Control			
	Combined Modes	Typical		Special		Typical		Special	
1)	Alone	11	(8)	39	(22)	12	(8)	26	(15)
2)	Positive	73	(11)	43	(18)	69	(14)	48	(14)
3)	Neutral	11	(8)	15	(8)	17	(9)	24	(12)
4)	Negative	5	(7)	3	(3)	2	(2)	3	(7)

(Figures on "alone" are included to account for 100% of the time, although they were not considered as interaction and thus given no weight qualitatively.)

Table VII

Quality of Interactions: Proportion of Time Spent in Positive, Neutral, and Negative Interactions (Manova and Univariate Anova Results)

Multivariate Analysis of Variance (Wilks Lambda)

Treatment x Status	F = (4,21) .81, (n.s.)
Status	F = (4,21) 4.89, p <.005
Treatment	F = (4,21) 2.25, (n.s.)

Univariate F-test which showed significance

Status (Positive)	F = (1,24) 20.7, p <.001

Table VIII

Integrated and Non-Integrated Interactions:
Instances of experimental
and control children in
integrated and non-integrated Children-Only and
Children-With-Teacher interactions
(Numbers and Percentages)

	Children Only				Children with Teacher			
	Exper.		Control		Exper.		Control	
Integrated	49	(40%)	34	(42%)	25	(52%)	25	(31%)
Non-integrated	74	(60%)	46	(58%)	23	(48%)	55	(69%)
	123	(100%)	80	(100%)	48	(100%)	80	(100%)

Table IX

Integrated and Non-Integrated Interactions:
Instances of experimental
and control children in
integrated and non-integrated Children-Only and
Children-With-Teacher interactions
(Chi-Square Results)

Children-Only

$X^2 = .054$ n.s.

Children-With-Teacher

$X^2 = 4.63$ $p < .05$

Sociometric Study

A sociometric study was done near the end of the six week program. Each child was called in individually to look at photographs of the children in their group. Two questions were asked.

1. If your Mom said you could invite two of these children home for lunch today, who would you pick?
2. If your Mom said you could invite all the "Apples" (or "Bananas") to a party at your house, is there anyone you wouldn't want to come? (If there was someone, the child was asked, "Why not?".)

The results obtained from 13 of the 14 typical subjects (one was absent) and two of the special subjects are shown in Table IX. The other special children did not appear to understand the questions. The results were that 93% of the choices were of same sex children on the inclusion question. Of the 29 children chosen for inclusion, 10% were special children chosen by typical subjects. The two participating special subjects were males and they each chose two typical males for inclusion. No female rejected any peers. Two of the older typical male boys each rejected two special children. Of the four rejected, three were females. The reasons for exclusion were, "She's naughty," "She bites people," and "They're bad and they take up too much of the teacher's time!"

Table X

Sociometric Results

Subjects (Experimental)				Sex & Status of children chosen			
				Question 1		Question 2	
				Children Included		Children Excluded	
No.	Age	Sex	Status				
7	6	M	Special	MT	MT		
8	3	F	Typical	FT	FT		
9	4	F	Typical	FT	FT		
10	4	F	Typical	FT	MS		
11	4	M	Typical	MT	MS		
12	4	M	Typical	MT	MT		
13	4	M	Typical	MT	MT		
14	5	M	Typical	MT	O	MS	FS
Subjects (Control)							
7	5	M	Special	MT	MT		
8	3	F	Typical	FT	FT		
9	4	F	Typical	FT	FT		
10	4	F	Typical	MS	FT		
11	4	M	Typical	MT	MT		
12	4	M	Typical	MT	MT	FS	FS
14	5	M	Typical	MT	MT		

Key:

F = Female
M = Male
T = Typical
S = Special

Data collected for children's verbal and nonverbal initiations and responses were not analyzed because the coding system used proved inappropriate for time-sampled data. This important information could be more successfully retrieved in a study which used video-tapes of entire play incidents instead of time-sampling.

CHAPTER IV

Discussion

The findings are presented in two sections to show those results which related to treatment and those which indicate that status differences between typical and special subjects persisted in spite of treatment.

Treatment

The major finding of this study was that when mode variables were combined to show Children-Only as contrasted to Children-With-Teacher interactions, the experimental chldren spent more time in activities independent of teacher participation. This could be a result of the previously structured small group interactions carrying over to the free play period. It could also be that the experimental teachers were consciously holding back to see what the children would do on their own.

The finding that children in the experimental group spent more time in dyadic play supports the hypothesis that teacher structuring can influence pro-social interactions in a mainstreamed preschool situation by organization of a small group activity time in which all children can participate on a more equal basis, just preceding the free choice activity. This may be a demonstration of Hartup's (1978) suggestion that planning co-operative activities will promote productive social intercourse. The larger proportion of time spent in dyadic play in

the experimental group may indicate that the small groupings gave the children more confidence to attempt interactions in a situation where they were not overwhelmed by group size or pressure to compete. It may be that the experimental children became more accepting of each other as playmates as a result of experiences together in the smaller groups prior to the free play period.

The finding that the control group subjects spent more time with two children and a teacher may have resulted from the control group teachers not withdrawing themselves as much as the experimental teachers did during the free play situation. Research is needed to determine whether children require amounts of time of teacher "disengagement" in order to practice peer interaction skills. In preschool settings which include special children, there is a tendency for teachers to maintain a dominant presence much of the time (Field, 1980), thus leaving little time for pure peer interaction. Another interpretation of this finding (controls having spent more time in teacher + subject + 2 children mode) could be that since the experimental children spent more of their time in interactions with children only and the controls more in situations which included a teacher, the initial structured period in the experimental condition may have encouraged those teachers to step back and observe the consequences.

Integrated special and typical children play interactions are one of the goals which educators strive for in mainstreamed

classrooms. This study showed that the proportions of integrated instances were similar in Child-Only situations. It is noteworthy that in the control group, although there were more children-with-teacher interactions, there was a much lower proportion of integrated instances. This may indicate that when experimental teachers did become involved during the free play time, they continued to attempt to integrate the small groups. Or it could be speculated that the control children had not become as comfortable with each other and sought a more teacher-directed situation. In three of the four subgroupings (C.O. and C.W.T., Experimental, and Control) there were more non-integrated than integrated instances of interactions, but the proportions were much higher for integrated interactions than in the studies by Dunlop, Stoneman, and Cantrell (1980) and Rogers-Warren, Ruggles, Peterson, and Cooper, (1981) for both experimental and control groups in this study.

Status

The finding that special children in both the experimental and control groups spent a large proportion of time alone suggests several possible explanations. The special children may be less mature socially and at a less sophisticated level of social development (e.g., solitary-onlooker play behavior, Parten 1932). Field's (1980) studies find a correlation between developmental level and social participation. Another factor could be that a part of social immaturity includes a lack of

skills in initiating social contacts. Further interpretation might support the contention that if a handicapped child is integrated without social skills and ongoing training, the environment may become more restrictive than an isolated special class (Gresham, 1982). We know from the literature on modelling (Evers & Schwartz, 1973), that onlookers are influenced by behavior which they observe, especially if it is accompanied by teacher praise. Thus watching other children can provide ideas and motivation for the less skilled child. A key issue here which may influence whether the special child becomes involved in the play is self concept. The child who feels rejected or too isolated may not see the possibility of inclusion, or may not have a companion with whom to try out the play ideas which have been modeled. Appropriate levels of independence and assertiveness need to be developed in the special child, if our goal is inclusion.

Since this study showed that typical children are more apt to spend time in groups of three or more children, a special child who shows evidence of wanting to enter a group may need some assistance in the form of teacher coaching to facilitate group entry.

Combining the variables to compare the interactions which include Children-Only and Children-With-Teacher indicated that typical children spent more time in Children-Only modes, which supports Field's (1980) finding that special children interact less with peers than typical children.

The quality of interactions was much more positive for the typical children, indicating an expected higher level of social interaction skills, which is common for more mature nursery school children (Charlesworth & Hartup, 1967).

The sociometric study, while limited, did confirm previous findings of same sex preference and preference of typical children for playmates similar to themselves (Bandura & Walters, 1963). It also confirmed findings (Cooke et al., 1981) that boys are apt to be more outspoken in excluding playmates, and that less mature children often show preference for a more mature playmate (Hartup, 1978). The reasons for exclusion are of interest because they support the finding that exclusion may rest on the child's inappropriate behavior (Gottlieb et al., 1978), or resentment of extra attention by teachers.

The educator's major role in promoting social integration may be in assessing all the children's levels in social and communications development as well as gaining a thorough familiarity with each child's interests and experiences. Imaginative use of this information would enable the teacher to assemble appropriate play materials, and to structure and orchestrate activities which encourage social interactions. Teachers may find that some children need prompting, encouragement, or social skills tutoring to assist them in becoming more competent in social interactions. However, staff members also need to be aware of how teacher involvement may inhibit

spontaneous interactions among the children and promote dependency on adult direction of play.

Implications for further research

Studies of social interactions in mainstreamed preschools would be more convincing if they were extended in time to at least one school year. Social development is complex, and monitoring it over a longer period may show trends not evident in a short study. A study of a mainstreamed preschool setting which used Corsaro's (1981) method of recording entire incidents would give interesting anecdotal information which could be analyzed in more depth than a time-sampling study. Assessment measures for preschool children's entry-level social skills need to be developed because there is a great deal of individual variation evidenced, even among children with similar diagnostic labels. In the mainstreamed preschool, an assessment of the typical children's social skills and interaction styles would be of interest to test the elementary school age findings of Cooke, Ruskus, Peck & Apolloni (1981) that friendly and co-operative typical peers are the best agents to promote social interactions in a mainstreamed setting. Although studies of social interaction of preschool children do not generally include previous peer experience or sibling availability as factors in social play levels, that should probably be considered,

especially when special children have very limited peer experience prior to attendance at an organized program.

Educators need to address the issue of the effects of mainstreaming on typical children. It has been suggested that "mainstreaming may violate the rights of the more gifted children unless programming and evaluation are carefully done" (Scriven, 1976).

Further studies which are done during a regular year-long program need to include recording of adult involvement in interactions and description of the adult role in the program. In many preschools which include special children, the adult is expected to "stimulate" development to compensate for the children's deficits. The question of opportunity to practice "social competence" needs to be explored and documented.

Since very young children are apparently aware of "differences", it has been suggested that teachers confront the differences directly, instead of assuming they will be eliminated (Thurman & Lewis, 1979). Thus typical children would be guided (without negative labelling) to understanding the differing needs and abilities of special peers. As far as possible, special children might also be helped to realistically and positively assert their differences to others. One graduate of the Berwick preschool who was being taunted on an elementary school playground responded to that negative behavior by proclaiming, "I'm <u>not</u> stupid, it just takes me longer to learn!".

Rigorous research is needed in assessment of social skills, teaching methods which promote social interactions, and outcome evaluations of special children in mainstreamed and separate preschool programs. Until there is more data available, educators would be prudent to proceed cautiously in mainstreaming special needs children in order to be as sure as possible that the program into which a child is placed is indeed "the least restrictive" possible.

Appendix A

Raw Data Sheet

NAME: MARION (SUBJ. 5)

DATE: AUGUST 2

TIME: 9:56 - 10:00

GROUP: APPLES

OBSERVER: JOAN

Guide - Record Mode, Quality & Time for each separate interaction

RUNNING DESCRIPTION

PERSONS INVOLVED IN INTERACTION

SUBJECT MARION

T = teacher

Children's Names

QUALITY

Pos. = positive - constructive

Neu. = neutral

Neg. = negative = aggressive or non-cooperative

A = Alone = no interaction

- T + Joey + Subj. 5 : Children at clay table. Subj. 5 watches talks to teacher. Joey asks question, Subj. 5. responds. Subj. 5 plays, makes clay snakes and balls.
  1'50" POS.
- T + Subj. 5 : Subj. 5 gets up, speaks to teacher. Resp to teachers question verbal
  10" POS.
- Subj. 5 : Subj. 5 gets toy car, walks around humming to self
  1'40" A.
- Subj. 5 : Subj. 5 puts car on rug, goes into bathroom
  20" A

Appendix B

Final Coding Sheet

Name of Subject: MARION (SUBJ.5)
Date: AUGUST 2
Time: 9:56 - 10:00
Observer: JOAN

Group: APPLES

Interactions

PEOPLE INVOLVED	Subject 5 + T + S.10	Subj. 5 + T	Subj. 5	Subj. 5		
WATCHES OR WAITS	✓					
INITIATES OR APPROACHES	✓ VERBAL	✓ VERBAL				
RESPONDS OR INTERACTS	✓ VERBAL	✓ VERBAL				
LENGTH IN MINUTES & SECONDS	1'50"	10"	1'40"	20"		
QUALITY: POSITIVE	✓	✓				
NEUTRAL						
NEGATIVE						
ALONE			✓	✓		

Appendix C
FINAL CODING SYSTEM

1 - 2 Subject code number

3 Group code 1 = experimental; 2 = control

4 - 5 Date of observation

1 = July 17	6 = Aug. 2
2 = July 18	7 = Aug. 9
3 = July 24	8 = Aug. 11
4 = July 25	9 = Aug. 14
5 = Aug. 1	10 = Aug. 16

6 - 7 Total number of observations

8 Sex 1 = male 2 = female

9 Status 1 = normal 2 = special

10
1 = alone
2 = subject + 1 child
3 = subject + 2 children
4 = groups (more than 3 children)
5 = group + teacher
6 = subject + teacher
7 = subject + 1 child and teacher
8 = subject + 2 children and teacher

11 - 12 Interactor

13 - 14 Interactor

15 - 16 Interactor

17 - 18 - 19 Seconds of interaction

20 Nature of interaction
1 = initiates verbal
2 = initiates non-verbal
3 = responds verbal
4 = responds non-verbal

21 Quality of interaction
1 = positive
2 = neutral
3 = negative

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