

Increasing the Social Interaction of Preschool Children with  
Special Needs Through a Peer Training Playgroup

by


Margaret Joan MacDonald  
B.A., Simon Fraser University, 1982  
B.Ed., University of Victoria, 1990


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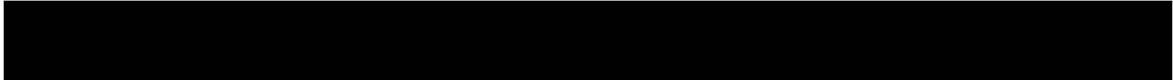
in the Department of Communication and Social Foundations

We accept this thesis as conforming  
to the required standard

  
Dr. Margie I. Mayfield, Supervisor (Department of Communication and Social  
Foundations)

  
Dr. Beverly A. Timmons, Departmental Member (Department of Psychological  
Foundations)

  
Dr. Alison Preece, Departmental Member (Department of Communication and  
Social Foundations)

  
Dr. Jennifer L. Hill, External Examiner (Department of Psychological  
Foundations)

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University of Victoria


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Supervisor: Dr. Margie I. Mayfield


Abstract

The purpose of this study was to examine the impact of a peer training intervention designed to increase the positive social interaction between a child with special needs and two peer helpers. A single subject research design was used to evaluate the play behavior and the interaction patterns of the children before, during, and after the peer training intervention. The study found that the both the play behavior of the child with special needs and the interactions among the children were increased following the intervention. Increases in play levels and interaction among the children were also found following the intervention during a separate prompting phase. These increases in positive interactions were limited to the playgroup sessions and no spill over effects were found during freeplay with the whole class following the peer training sessions.

Examiners:

  
Dr. Margie I. Mayfield, Supervisor (Department of Communication and Social Foundations)

  
Dr. Beverly A. Timmons, Departmental Member (Department of Psychological Foundations)

  
Dr. Alison Preece, Departmental Member (Department of Communication and Social Foundations)


  
Dr. Jennifer L. Hill, External Examiner (Department of Psychological Foundations)

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DEDICATION

This thesis is dedicated to  
my mother, Sasha MacDonald and  
my father, John MacDonald

## Chapter 1

### Introduction

As integration of young children with special needs becomes more common in early childhood settings, the primary concern of many parents, educators, and other professionals is no longer simply the question of equal access, but has shifted toward a concern regarding the "inclusion" of these children within the integrated setting. This concern often focuses on the level of involvement of the child(ren) with special needs and the acceptance of the child by his/her peers. The purpose of this study is to examine peer training as a method for promoting inclusion. In the chapter which follows, the inclusion of children with special needs will be discussed as it relates to (a) curriculum design, and (b) peer interaction. The chapter also includes the rationale and background for this study as well as a brief outline of the chapters to follow.

### Curriculum Design

The issue of appropriate curriculum and teaching practices in integrated early childhood centres is critical to the development of effective program planning for children with special needs enrolled in regular programs. Odom and McEvoy (1988), refer to the mainstream movement as an "evolutionary trend in early childhood special education" (p. 241). It has only been in the last two decades that children with special needs have been mainstreamed in regular pre-school classes. Prior to this it was typical for

young children with visible handicaps to stay at home with their mothers or be sent to institutions (Odom & McEvoy, 1988).

The development of teaching methodology which both meets the unique learning needs of children with challenging conditions, and is compatible with program design in regular pre-school settings is an issue currently facing early childhood educators. As stated by Guralnick (1990), "the contemporary issue is clearly not whether early childhood mainstreaming is feasible and should be encouraged, but rather how one can design programs to maximize its effectiveness." (p.3). One important factor in designing programs to facilitate the inclusion of children with special needs is an understanding of the different philosophical and theoretical orientations which are strongly rooted in the traditions of Early Childhood Education (ECE) and Early Childhood Special Education (ECSE) (Odom & McEvoy, 1990).

### Child-directed versus Teacher-directed Learning

One of the key differences in curriculum orientation between early childhood educators and early childhood special educators involves the controversy over child-directed versus teacher-directed learning. The rationale for child-directed or child-initiated learning in ECE is based on an abundance of research which suggests that young children learn as they playfully explore their environments and interact with adults, other children and materials (Fein, 1981; Garvey, 1990; Vygotsky, 1966). In regular pre-school programs which are considered to be developmentally appropriate, these opportunities for young children to explore their

environment are provided in "centres" or areas of interest where a child can choose from various learning materials. For example, the child may choose to go to the art area where materials would be set up for drawing, painting, and playing with play dough, clay or finger-paint. In another area of the classroom, constructive materials may be available such as blocks, or smaller interlocking materials. Other materials such as concrete manipulatives for counting and sorting may be available in yet another section of the room. There may also be a theme centre, where children may dress up and take part in dramatic play, such as acting out a game of "batman" or playing house. A library corner for looking at books and engaging in quieter activities may also be available.

When a child selects from among the activities available they are said to be directing their learning, in as much as they are choosing what activity they wish to explore. The advantages of having the child direct his or her own learning, as opposed to being directed by the teacher, are that the child is empowered with positive choice and independence (Wasserman, 1991). This is not to say that the child has ultimate control in the setting and is free to do whatever he or she wishes, but that the child is free to choose from the activities which are set out by the teacher. In this way the teacher takes on the role of facilitator in the learning process, particularly when the teacher sets out learning activities based on a theme study and brings in materials and books which are related to the topic of study.

According to Johnson and McChesney Johnson (1992) within developmentally appropriate practice "a balance is sought between teacher-led or convergent-thinking activities and child-initiated or divergent activities" (p.443). This approach leads to "horizontal learning", where the

child is able to relate concepts and make connections to their own experiences. This type of learning is preferable for young children who are not yet able to benefit from understanding abstract concepts that have no relation to their own experience.

From the point of view of ECSE, the difficulty with this approach for young children with special needs is that they may not have the skills necessary to benefit from the learning opportunities available in the classroom, and they may be unable to spontaneously interact with their environment and peers in the same way that typically developing children would (Odom & McEvoy, 1990). For example, children who have developmental delays exhibit lower rates of social interaction and show lower rates of participation in group play (Guralnick & Weinhouse, 1984). Children with special needs also tend to be less verbal in their play interactions and engage more in solitary and parallel play than their typically developing peers (Brophy & Stone-Zukowski, 1984).

It is necessary for teachers to intervene and plan activities in order to promote interaction between peers and to ensure that the child with special needs is able to interact with the adults, peers and materials in their environment. There have been many studies which suggest that the play of children with special needs can be enhanced in a variety of ways such as play training (Smith, 1983), teacher led play (Rogow, 1991), peer matching (Guralnick & Groom, 1987), and use of teacher prompts to direct play (Schloss, 1986).

In addition it may be necessary to guide children with special needs through activities and provide the necessary orientation and skill development so that they will benefit from the activities which are set out.

The child's special need will dictate the type of teacher support necessary. For example, a child who is developmentally delayed may not have the same ability to generalize and remember that there are play props available in the cupboards. In this case, play could be enhanced for the child by simply setting out items so that the child could use them for dramatic play or by leading the play and modeling where to get and how to use the props that are available.

### Intrinsic and Extrinsic Motivation

Another fundamental difference in curriculum orientation of early childhood educators and early childhood special educators is the use of intrinsic and extrinsic motivators. Guidelines by the National Association for the Education of Young Children (NAEYC) concerning motivation state that "children's natural curiosity and desire to make sense of their world are used to motivate them to become involved in learning activities" and that it is inappropriate practice when "children are required to participate in all activities to obtain the teacher's approval, to obtain extrinsic rewards like stickers or privileges, or to avoid punishment" (Bredekamp, 1987, p. 56). Extrinsic rewards have been used successfully in ECSE to correct inappropriate behavior and promote pro-social behaviors (Drege & Beare, 1991). However, there is an inherent contradiction between the use of a token reward system or any other external motivators within the child-directed learning model in ECE.

Some children with special needs, particularly those with social and emotional needs or behavioral disorders may not be intrinsically motivated

to take part in learning activities. This may suggest to the teacher that the child has more pressing needs than to explore the classroom environment, such as a need to develop a trusting relationship with an adult, or the opportunity to work out anger or frustration in an appropriate way. It may also suggest that the child is unable to sustain interaction in peer related activities and he/she may require extra adult support, and opportunities for smaller group play. If this is the case, the use of tokens or stickers will not solve the child's underlying problem but will merely act to temporarily modify behaviors without providing the child with appropriate outlets and strategies. A problem with external motivators is that once the token system is removed the child still may not be motivated to attend or behave appropriately or have the necessary strategies to solve peer related problems.

Another more practical difficulty concerning external motivators in early childhood settings is that it is difficult to target a single child in a mainstreamed environment and reward them for appropriate actions without upsetting the other children who have been behaving appropriately, but are not getting stickers. If on the other hand, all the children in the class were rewarded with external motivators whether they required them or not, then the children's intrinsic motivation would very quickly break down in their search for teacher praise and tokens.

### Whole Group versus Individualized Programming

The difficulty in setting up something as simple as the sticker program described in the previous section relates in part to a whole group versus individual program orientation. Although the NAEYC document does acknowledge "individual appropriateness" as being a component of developmental appropriateness, early childhood educators, according to Bredekamp (1993), "tend to interpret individualization as responding to children's interests while early childhood special educators individualize according to the children's needs in relation to individually determined goals and objectives" (p. 263). While this is not to say that there is no room in ECE settings for individualized programming for children with special needs, it points out a concern that educators have about being able to both develop inclusive practices and provide children with special needs the individualized services that they may require, such as physiotherapy, occupational therapy, speech and language therapy and other interventions.

When children are removed from the setting this can create difficulties for the child in terms of discontinuity in routines and disruption in peer interaction. The idea of creating a small group activity around the delivery of the specialized service can help to integrate the child with special needs into the program by allowing the child and his or her peers to share a common experience. The idea of promoting "shared understanding" and common experience is crucial to enhancing positive peer relations between children with special needs and their typically developing peers (Guralnick, 1993).

### Peer Interaction

Although studies comparing integrated and segregated early childhood programs have shown that social interaction occurs at a higher level in integrated settings for children who are mildly developmentally delayed (Guralnick & Groom, 1988), the social competencies of these children within the integrated settings still falls below expectations as indicated by the child's developmental level (Guralnick & Groom 1985, 1987; Guralnick & Weinhouse 1984; Siegel, Cunningham & Van der Spuy, 1985).

Social interaction within integrated settings may be affected by a variety of physical and social conditions that promote or hamper the chances of children seeking each other out for play (Peterson, 1982). Social acceptance of children with special needs and social interaction between children with special needs and their peers will therefore, not necessarily occur spontaneously and should not be considered an inherent outcome of a mainstreamed or integrated early childhood program (Jenkins, Speltz & Odom, 1985).

For children with special needs to be fully involved and for healthy peer relationships to develop, researchers and practitioners recommend that early childhood educators assess the social competencies of children within integrated early childhood programs and actively plan and utilize strategies which will promote social interaction (Brophy & Stone-Zukowski, 1984; Gottlieb & Leyser, 1981; Guralnick, 1993; Guralnick & Groom, 1985; Peterson & McConnell, 1993; Smith, 1993). For teachers within integrated early childhood settings, this change in emphasis requires a greater focus on

social skill development, and raises the following question which is central to this study: How can teachers improve the social skills of young children within mainstreamed early childhood settings to promote inclusion?

### Rationale and Background

One method which has been used to increase social interaction between children with special needs and their peers in integrated early childhood settings is that of peer training where typically developing children are taught to initiate interactions toward children with special needs. To date, these peer training sessions have been conducted using dyads consisting of a typically developing peer and a child with special needs, or triads consisting of two typically developing peers and a target child. In each case, the researcher has taught each peer confederate separately and then followed up the training sessions with practice sessions which have then included the target child. Although the peer training methods reported above show a good deal of promise in increasing the social interaction between children with special needs and typically developing peers under controlled test conditions, the feasibility of using peer training techniques under normal conditions within early childhood settings has yet to be studied.

It is usual for more than one child with special needs to be integrated into an early childhood program. Most early childhood programs have three or more children with special needs (British Columbia Ministry of Social Services, 1992), and it is common for a teacher to have an ongoing responsibility to more than one child in the setting. Intense training

sessions involving only the peer confederate may be considered both too time consuming, and too labour intensive. In addition, many of the studies reported make use of token rewards to encourage initiations on the part of the peer confederate. Under normal teaching conditions in early childhood settings this may not be feasible, or it may contradict early childhood education philosophies which promote intrinsic motivation, particularly on the part of the typically developing children.

### Present Study

The purpose of the present study was to address this general question of promoting inclusion by assessing one method of peer training. The proposed method has been adapted from peer training studies (Goldstein & Cisar, 1992; Goldstein, Wickstrom, Hoyson, Jamieson & Odom, 1988) and modified for more practical use in an integrated early childhood setting. The present study sought to normalize the peer training technique used in other studies for more practical use in an early childhood setting. This was done by: (a) increasing the teacher/child ratio during training sessions from one-to-one to one-to-three (modeled on small group activities typically found in early childhood programs), (b) teaching the social skills to all children including the child with special needs, (c) conducting the training sessions in the blockroom where the children would be playing following the lessons (to minimize transitions and create a natural learning environment), and (d) eliminating stickers or other extrinsic rewards used to motivate interactions among peers.

The outcome of peer training intervention was assessed by observing

the frequency of contact among the children in the playgroup, and the play level of each child, both during the peer playgroup sessions and during a play session later in the day in the presence of other children.

The research questions addressed in the present study were:

1. Are the interaction patterns of the children changed following the peer training intervention as measured by the frequency of contact among the children?
2. Are the play levels of the children in the playgroup changed by the peer training intervention as measured by changes in play behavior?
3. Did the effects of the peer training playgroup generalize to other free play sessions in the presence of other children in an integrated early childhood setting?

In the chapters which follow, the literature relevant to the present study is reviewed in Chapter 2. The research design and methodology are described in Chapter 3 and a discussion of the results are presented in Chapter 4. The summary and conclusions of the study are then presented in Chapter 5.

## Chapter 2

### Review of the Literature

In the following chapter, literature will be reviewed in the areas of: (a) peer relationships, (b) play, (c) play characteristics of children with special needs, and (d) methods of enhancing play and social development. This will then be followed by an outline of the purpose of the present study and a summary of the literature review.

#### Peer Relationships

In the following section, the area of peer relationships will be examined as it relates to child-child interactions, social competencies, and peer group entry.

#### Child-Child Interactions

Studies which have examined the role of social relationships in child development have pointed out the unique characteristics of child-child social interaction. Piaget (1962) describes peer social development as an opportunity to establish reciprocal relationships and to experience peer conflict and negotiation. This allows a young child to understand reciprocity in social situations and the meaning of compromise. Children's peer interactions can also help to consolidate and extend knowledge and/or skills by providing children with the opportunity to articulate their position

during conflict or negotiation. When challenged by a peer, the child is required to make sense of both his/her own perspective as well as the new information provided to them.

According to Rogers and Ross (1990), social relationships between a child and an adult are based on an uneven distribution of power which is unlike child-child interaction. Adults typically do not expect a child to understand and adapt to their needs in a social way, and consequently the interactions between adults and children do not create the same type of misunderstandings and conflicts or the same potential for negotiation of social problems. Child-child social interaction can, therefore, create a unique learning opportunity and the potential to extend a young child's understanding of the needs of others.

### Social Competencies and Communication

Several individual social behaviors have been identified that help to support the development of peer-related social competence and enable a child to seek out opportunities to enter into peer interactions. These social competencies impact upon the child's ability to successfully and appropriately select and carry out their interpersonal goals and have emerged as a central construct in the fields of child development and early intervention (Guralnick, 1990). Social competencies, according to Guralnick (1992), can be understood as a hierarchical series of behaviors, beginning at the lowest level with the child's ability to enter into social communication. As young children learn to converse, they acquire the assumptions, expectations and procedural rules that are part of our language. To join a

conversation for example, a child must know whether to respond to a partner's contribution, how to respond, and when to respond (Garvey & Berninger, 1981). This process becomes increasingly complicated by age 5 or 6 when children with typical language development are able to enter into descriptive conversations and present a sequence of ordered events often including an introduction to the story, and some indication of the time, location, objects, and characters involved (Garvey, 1990).

The quality of social communication is also affected by the child's ability to utilize social strategies during peer communication. These strategies represent the next level in the hierarchy of social competencies identified by Guralnick (1992), and include such things as the child's ability to persuade others to comply with a request, resolve conflicts during play, gain entry into peer groups, and maintain play for sustained periods of time. Researchers have been able to determine the effectiveness of these social strategies by examining patterns between social communication and social status. Black and Hazen (1990), have found that popular children communicated information more and expressed their feelings less than unpopular children, and that popular children were also able to direct their intentions to specific listeners. In addition to explicit language use, the quality of social communication can also be affected by a child's ability to interpret and respond to a variety of non-verbal signals and gestures as part of the communicative process. For example, the ability to discriminate facial expressions was found to be a significant determinant of social competence in children as young as 3 years of age (Walden & Field, 1990).

Social communicative skills can also be enhanced by a child's understanding of shared context. This may include such things as turn

taking and sharing toys. For young children, the definition of friendship is often based on shared experiences such as playing together and sharing non-play activities (Berndt, 1986; Garvey, 1990). The very act of sharing a toy, or piece of equipment or participating in an activity with another child can lead to positive peer relationships and the development of friendship.

### Peer Group Entry

One of the most complex social strategies in the social competency hierarchy is that of peer group entry. In a study of peer entry strategies, Dodge, Schlundt, and Delugach (1983) found that popular children were less likely to direct statements towards themselves when entering play situations and were less disruptive of the group's activities. Instead they were able to refer to the group activity in a general way or refer to the peer host in order to gain entry. In contrast to this, rejected children were found to engage in 10 times as many play entry behaviors that disrupted the peer group, while neglected children were more likely to simply wait and hover around the peer group without attempting to directly gain access.

According to Corsaro (1981), the difficulty of entering a peer group can be attributed to the fragility of peer interaction. This can be explained by the presence of two conflicting and ongoing concerns on the part of young children during play, that are to (a) gain access to an ongoing play episode when uninvolved, and (b) to protect interactive space when involved, in order to preserve the intimacy of the peer relationship, and the success of the interaction.

## Play

In the next section, play will be examined as it relates to social development, the definitions of play, stages of play, play categories, and the effects of classroom environment on play.

### Play and Social Development

Much has been written about the importance of play in children's social development (Garvey, 1990; Isaacs, 1933; Moyles, 1989). The exact role of play in social competency is difficult to measure. Social competence may be seen as either a product of play or the pre-requisite skill necessary to play successfully, or perhaps both. Studies which use correlation techniques to identify relationships between play and social-cognitive development, according to Rubin and Pepler (1980), are unable to pinpoint the causal variable. For practical purposes, however, play can be seen as a way to both operationalize existing social competencies and expand upon them, by providing a child with realistic opportunities to negotiate, solve problems, learn to see things from another person's point of view (perspective taking), and enjoy the pleasure of sharing an experience with another child or group of children.

### Defining Play

Often researchers begin with an attempt to define the elusive qualities of play, but are more apt to work from a categorization of play or a description of the process of play. For example, Rubin and Howe (1986, p. 113) define play as "intrinsically motivated, characterized by attention to means rather than ends, free from externally imposed rules, laden with positive affect, and characterized by a non-literate set, i.e. pretense or imagination". This definition, although general enough to accurately describe many of the qualities of play, does not describe the range of behaviors that are typically found in play, nor does it provide any information about the features of play that are typical during certain periods of child development.

### Stages of Play

To understand how play relates to child development, one of the most widely accepted categorizations of play is provided by Jean Piaget (1962). Piaget divides play into four stages or periods, those of, sensory motor play, constructive play, symbolic or representational play, and games with rules. The sensory motor play period can be observed in children from infancy through to the second year of life and is typified by a child playfully exploring his/her environment and seeking out the world of touch, sight and sound. Children at this stage often engage in repetitive functional play such as hitting an object to hear the sound, or filling and emptying

containers etc.

The repetitive functional actions typical in the sensory motor play period then evolve to what Piaget refers to as constructive play. This second play stage typically begins at around the age of two and lasts until around age seven. During the constructive play stage, the child is capable of creating something with the play materials and no longer simply explores the functional properties of objects. The child demonstrates more control and intent over the positioning and utility of objects, and also displays the ability to use imagination during play with these objects. For example, the child may build a structure with blocks and manipulate play materials with the intent of creating something from them.

Corresponding with the constructive play period, children enter the period of symbolic or representational play which is often characterized by pretense or make-believe. This third stage is again typical between the ages of two and about seven. During this time, children are able to recall images and events and encode their own experience into symbols. During play at this stage, children will suspend their literal belief in the function of objects, and in their own roles and mentally adapt themselves and objects in a symbolic way to represent other people or things. For example, a child involved in pretend play may take on the persona of a mother or father and carefully act out this role. During symbolic or representational play, objects within the play environment will often be adapted to represent other things, for example, a wooden cylinder may represent a glass of water or a can of pop, or a chair may become a car.

The fourth play stage described by Piaget is referred to as games with rules. This stage is found in the play behavior observed in school aged

children who have begun to understand the social concepts of cooperation and competition and are beginning to think more objectively. Play at this fourth stage is representative of the child's interest in the objective rules which govern games and team sports. It has been argued, however, that play never occurs without rules (Vygotsky, 1966). Although the rules are not formulated in advance and may change during the course of pretend play, they are present, and have been developed by the child in response to his/her understanding of social conventions. In this way, play with rules should be viewed as a continuum.

#### Parten's Play Categories

Much of what teachers and researchers understand about the social play of young children has also been shaped by the contributions of Mildred Parten (1932). Parten defined and categorized types of play and correlated them with chronological age. These categories range from unoccupied behavior, where the child is not directly involved in play, to co-operative play, which represents the highest level of participation and coordination between peers. Parten's play categories include:

1. Unoccupied Behavior: the child is not playing but is occupied by watching what goes on around him/her;
2. Onlooker: the child spends most of his/her time watching the other children play and may talk to the children while observing;
3. Solitary Independent Play: the child plays alone and independently with toys that are different from those used by the children within speaking distance. No attempt is made to refer to what the other

children are doing;

4. Parallel Activity: the child plays independently, but the activity he/she chooses brings him/her amongst other children who are playing with similar play materials; There is no attempt on the part of the child to take part in the activities of the other children nearby;

5. Associative Play: the child plays with other children and is involved in conversation concerning the common activity. Materials are borrowed and loaned and all the children involved engage in a similar activity. The children do not, however, exclusively work toward a common goal;

6. Cooperative or Organized Supplementary Play: the child plays in a group of children who are organized for the purpose of a collective goal or gain. There is a sense of group belonging and one or two of the members direct the activities of the others.

In Parten's study, the age of the children observed was correlated with the mean number of times that they were involved in each of the six types of play. This information has formed a baseline of chronological age and play behavior and the categories have often been used as benchmarks or developmental signs when observing the types of play in which young children engage. For example, teachers and researchers may find solitary play acceptable behavior for a 2 year old, but may question this type of play behavior in an older child. Similarly, they may find unoccupied play behavior of concern in a child over 3 years of age. This type of information can help identify areas of concern.

### Rubin's Play Categories

Parten's categories of play behavior have been re-tested more recently to evaluate the play levels of kindergarten and pre-school children. Using Parten's scale, Rubin and Watson (1978) found that kindergarten children displayed less unoccupied, onlooker, solitary, and more group and dramatic play than preschoolers. This study pointed out the difficulty of using Parten's play categories to distinguish associative from cooperative play. This difficulty in distinguishing between what the children are actually doing and what we perceive them to be doing has also been pointed out by Smith, Takhvar, Gore, and Vollstedt (1985). They suggest that how we observe play may affect the type of play we record and ultimately impact upon our view of the child's play maturity. By simply asking the child(ren) what they are doing, an observer will be able to ascertain the child's intent and therefore make more accurate predictions of abilities.

In a further attempt to operationalize the play behavior categories, Rubin (1982), combined Parten's play categories with developmental descriptors derived from Piaget's studies, and created a more comprehensive play observation scale. In the study, Rubin went on to assess the play behavior of 4 year olds in a pre-school setting. The children were observed and rated during free play time and were also assessed using other measures such as a role taking test, social and personal problem solving tests, sociometric assessment, and teacher ratings of social competence. Rubin found that parallel constructive play was highly predictive of social competence, and that not all solitary play was negative. Solitary

constructive play, for example, although negatively correlated with the number of social overtures received, and the number of peer conversations held during free-play, lacked significant correlation in both peer sociometric ratings and teacher ratings of social competence and was assessed as a neutral indicator of social competence.

In the same study, Rubin also determined that the least mature forms of play and those most predictive of "at risk" behavior in 4 year olds were solitary-functional play and solitary-dramatic play. Both types of play were found to correlate negatively with the number of social overtures received from other children, the number of positive interactions compared to negative interactions, the number of peer conversations, sociometric ratings, and the successful completion of a play problem solving task. Solitary dramatic play was also found to correlate positively with teacher ratings of social maladjustment.

#### Effects of Classroom Environment

It should be noted however, that environmental variables have also been shown to influence the shared context of play and can act to either enhance peer interaction or restrict it. In a study of peer interaction and environmental design, Vandenberg (1981) found that the classroom environment affected not only the type of social play the children were involved in, but the size of the play group as well. Certain types of toys and equipment were found to lend themselves to differing degrees of social interaction. Interestingly, Vandenberg found that no cooperative play took place among the children in the classroom he studied and that there was also

a corresponding lack of play materials such as puppets, or dolls which would promote co-operative interaction.

### Play Characteristics of Children With Special Needs

Canning and Lyon (1990), have pointed out that teachers and caregivers require specific information about each child with special needs in their care. Children with the same type of need, for example, "developmentally delayed", "cerebral palsied", or "abused" will each have their own unique abilities, strengths, weaknesses, temperaments, likes, dislikes, ways of behaving and responding, favorite toys and activities, family backgrounds, and life experiences. In turn, these unique characteristics will affect the way that each child interacts with people and materials in his or her environment. An understanding of the child's unique qualities is essential to determine the child's specific needs in any given play situation. It is also important, however, to understand the potential effects that a child's handicapping condition may have on his/her ability to play. According to Fewell and Kaminski (1988), it has only been in recent years that the play behavior of young children with special needs has been thought of as an area targeted for early intervention. Previously, play was viewed only as a free time activity, or a break from direct instruction. More recently, play has come to be understood not only as an end in itself, but as a way of promoting gross motor, fine motor, social, self-help, cognitive, and communication skills for young children with special needs (Musselwhite, 1986).

In a general study on the social and play behavior of special needs and

non-special needs toddlers, Brophy and Stone-Zukowski, (1984) found that children with special needs spent more time looking at and listening to other children and adults than did non-special needs toddlers. The children with special needs also received more direction and help from adults than non-special needs toddlers, and were found to be less verbal, and more inclined to engage in solitary and parallel play.

These general differences in play behavior can be explained in part by the "compounding effects" of the child's handicapping condition on his/her abilities to interact with the people and materials in the play environment. In the section which follows, the play characteristics which are typical of children who have the following special needs will be described: mental retardation, physical impairments, visual impairments, hearing impairments and language delay, and emotional disturbances.

#### Play Characteristics of Children with Mental Retardation

In a study of the relationship of play behavior to developmental level in children with mental retardation, Odom (1981), found that the play behavior of children with mental retardation approximated their development in other areas, and followed the course of play behavior found in typically developing children, although it occurred at a later chronological age. Krakow and Kopp (1983) also found that there was a positive relationship between developmental age and the outward appearance of play, but found that the play behaviors of children with mental retardation at the developmental age of 3 became stereotypic, repetitive, or regressive. For example, the play characteristics of children

with Down syndrome and developmental delays were typified at this age by episodes of inflexible and unspontaneous activity as well as little social initiation. This type of repetitive and stereotypical play behavior, according to Krakow and Kopp is the result of a limited ability on the part of children with mental retardation to take advantage of and/or be aware of the play materials and social resources available. During free play, for example, these children were observed in repeated sequences of activities such as bathing and feeding the same doll, with no elaboration or change in the play script. These findings concur with Li (1985), who observed that typically developing children showed higher levels of pretend play than did children with mild mental retardation who were the same chronological age and children with mental retardation who were two years older.

#### Play Characteristics of Children with Physical Impairments

There is a wide range of physical impairments and a corresponding wide range in the types of play characteristics displayed by children with physical impairments. Physical impairments can result from cerebral palsy, spina bifida, muscular dystrophy, and various congenital malformations of the limbs. An additional problem for some children with cerebral palsy and spinal bifida is that they have difficulties with perception and integration of information (Riddick, 1982).

In general, however, a child's physical impairment will limit their movement and reduce their opportunities to actively explore their environment and engage in social play. A child with mobility problems will therefore require assistance in accessing play materials. For children who

are not ambulatory, their position in the play environment and the type of play materials that they are able to access and manipulate will effect the type of play the child is able to engage in. A child with severe mobility restrictions should be placed so that self-initiated play can occur (Mogford, 1977).

### Play Characteristics of Children with Visual Impairments

The play behavior of children who are blind or visually impaired is said to be strongly influenced by the play environment (Riddick, 1982; Rogow, 1988). Visual information from both the built environment (i.e., the location of play props such as tables, chairs, dress-up clothes, housekeeping furniture, etc.) and in the social environment (i.e., people's facial expressions, gestures, location, activity, etc.) are processed by typically developing children as they interact with each other and the materials in the play setting. It is not surprising therefore, that exploration of the built environment by children who are blind or visually impaired is delayed and that these children are either delayed in engaging in symbolic play (i.e., imaginative and role play) or do not enter into this type of play at all. Children who are blind or visually impaired are also more likely to engage in solitary or auditory play and are more likely to manipulate objects during free play and to explore tactile stimuli than are typically developing children (Fewell & Kaminski, 1988).

In an intervention study of the play behavior of three congenitally blind children, Skellenger (1990) found that the baseline behavior of the three children was typified by an inability to actively engage in play during

free play time, and that the children spent their playtime in acts of self-stimulation, wandering, pacing, or hoarding the play materials. Given these behaviors, Skellenger notes that teachers often choose to limit the amount of time allotted for play in favor of concentrating on skill based instruction, when in fact, skill based instruction is needed within the play setting as well.

### Play Characteristics of Children with Hearing Impairments and Language Delays

According to Fewell and Kaminski (1988), a child's lack of hearing does not seriously impact on their sensory motor play during the first two years of life. Children who are deaf are still able to explore the tactile, visual, olfactory and spatial properties of their environment. As the child enters into the symbolic representational play stage, however, the symbolic language which is used by other children during play becomes difficult to imitate and differences begin to emerge between the play of children who are deaf and children who are not. Typically developing children involved in pretend play use a wide variety of verbal and non-verbal techniques which convey information about the pretend activities (Garvey, 1990). This metacommunication sets the stage for the pretense and provides other children with the opportunity to either fit into the existing drama or create a similar play script and act out their own drama. Children with hearing impairments may not be able to follow the metacommunication of other children during pretend play and may miss the verbal signals to join in or may misunderstand the plot of the play episode. This relationship between communication and social play behaviors in hearing impaired children was

studied by Cornelius and Hornett (1990), who found that children in sign-based classrooms engaged in higher levels of social play and displayed lower levels of aggression than did children with hearing impairments in oral-based classes.

The impact of language delay on peer interactions has also been studied by Seigel, Cunningham and Van der Spuy, (1985). In this study, play behavior was observed in three types of language dyads. These included children with normal language ability interacting together, children with language delay interacting with children with typical language development, and children with language delay interacting together. The study found that children with normal language ability were more likely to initiate interaction when the children with language delay were engaged in solitary play. During both free play and in task related instruction, the children with normal language ability also exhibited more dominance over the children with language delays, and were more likely to use a control strategy to initiate interaction than they were when grouped with children of similar language ability.

### Play Characteristics of Children with Emotional Disturbances

As in the case of children with physical impairments, there is a wide range of emotional disturbances and a corresponding wide range in the children's play behavior. Emotional disturbances include such conditions as behavioral disorders, mental disorders, and infantile autism. The child's behavior in the play setting will depend on the severity of the emotional disturbance. In general however, children with emotional disturbances

have difficulty interacting socially (Thurman & Widestrom, 1985). A lack of social interaction is particularly true for children with autism. Autistic children according to Mogford, (1977) appear the most handicapped in all aspects of play as a result of the child's socially withdrawn behavior. Typical autistic characteristics include minimal eye contact, active avoidance of social contact, and a failure to initiate and sustain social interactions. In play interactions, autistic children tend to be socially unresponsive and appear to prefer repetitive activities like spinning or rhythmic movement rather than games that require social interaction (Schleien, Mustonen, Rynders, & Fox, 1990).

#### Methods of Enhancing Play and Social Development

Methods which have been used to enhance play and social development of children with special needs will be discussed in the following section, this will include a discussion of play training, script training and peer training and the utility of each method with respect to classroom practice in integrated early childhood settings.

#### Play Training

In a classic study on the effects of sociodramatic play training on the level of theme related play of disadvantaged preschool children, Smilansky (1968) tested the use of (a) theme related experience, (b) adult modeling, and (c) a combination of both (a) and (b) to increase sociodramatic play. The first group of children were exposed to theme related experience which

included a field trip to a grocery store, followed by a teacher led discussion about the store and the items in the store, and later an invitation to play in a grocery store play center. Themes and play centers were also designed around a visit to a medical center and based on a story book. In the second treatment group, no direct theme experience was introduced to the children but the children were shown how to play in the play centers through the use of direct adult modeling and prompting. In the third treatment group, the children were exposed to both the theme related trips and discussions as well as adult modeling in the theme related play centers.

Smilansky reported that the first playgroup did not show any change in their level of play, although they did show an increased interest in the themes themselves. In both the second and the third playgroups, improvements were made in imitative role play, make believe in regard to objects, make believe in regard to action and situation, persistence in play, interaction, and verbal communication. In the third playgroup, the improvements in these factors were more pronounced particularly in the children's verbal communication and make believe play in regard to objects.

Play training techniques using adult modeling have also been used successfully in subsequent studies designed to increase the play levels of children with visual impairments (Rogow, 1991; Skellenger, 1990). However, play training based on teacher modeling does not address the importance of child-child interaction noted by Piaget (1962) and Rogers and Ross (1990), and will not necessarily promote inclusion of the child with special needs within the integrated setting, or help to promote friendships between children with special needs and their typically developing peers. This training method does not therefore, address the total play environment

within an integrated setting and although it may be beneficial to orient a child with special needs within the play setting by way of modeling play and the use of play materials, or introducing other skills, it does not directly teach typically developing children how to interact with children who have special needs.

### Script Training

Several studies on fantasy play training (Saltz, Dixon, & Johnson, 1977; Saltz & Johnson, 1974; Smith, 1983) have shown that when children are given roles to act out from fairy tales or from prepared scripts their socio-dramatic play skills are enhanced. Role enactment of this type can occur in a controlled setting following the reading of a familiar story. The teacher reads the story, and then leads the drama by taking on one of the parts and assigning roles to the children involved. Stories with a predictable pattern and language such as "The Three Billy Goats Gruff" are ideal for fantasy play training because the language involved is simple and repetitive.

In a study by Goldstein and Cisar (1992), the effect of script training on social communicative interaction was tested using three triads. Each group, which included two typically developing children and one child with autistic tendencies, was taught a total of three socio-dramatic play scripts. The children were taught one script at a time over a period of 5-10 days. During script training, each child learned to enact the verbal and non-verbal script for one of the roles associated with the drama. During the intervention phase, the trainer would follow the script and prompt the child when necessary. The training schedule was considered complete when the

children were able to respond independently 80% of the time. To control "off task" behavior and to motivate the groups of children to learn the scripts a token reinforcement system was also introduced. Following the script training session interaction was assessed during the first five minutes of free play time. The study showed significant improvements in social communicative interaction among both the children with and the children without disabilities when teachers used script training followed by prompting during free play.

Script training was also found to be effective in a study by Goldstein, Wickstrom, Hoyson, Jamieson and Odom (1988). In this intervention study, one child with language delay and two other typically developing children were trained to enact a script that incorporated both gestures and verbal responses for each of three roles. Improved sociodramatic play followed during free play time when children were prompted to stay in their roles.

Researchers, however, have noted a "fatigue" factor on the part of the children who complained about having to "play this again" during the script training sessions (Goldstein et al., 1988), and although generalized effects were noted between the script training sessions, and free play periods, the success of the generalization was dependent on the teacher's use of prompts during "free-play" in the Goldstein and Cisar (1992) study, and prompting the children to "stay in role" during free play in the Goldstein, Wickstrom, Hoyson, Jamieson and Odom (1988) study. It is therefore questionable whether the children have generalized the play behaviors to these "free-play" situations or whether they are simply complying with the requests of the researchers.

### Peer Training

Children who are having difficulty entering into play with other children, or sustaining play may benefit from peer matching techniques. Peer matching involves matching a child with special needs with a child who is more socially skilled and developmentally advanced. Through role play and teacher prompting, peer confederates have been taught to increase social initiations toward children with special needs (Kohler & Fowler, 1985; Strain & Odom, 1986). In these studies, the typically developing child is directly taught pro-social skills including how to direct these skills towards the child with special needs. During the intervention, coaching is used by the researcher to verbally encourage and support the confederate child's attempts at peer interaction with the target child. This is usually reinforced with a token reward system, where the child receives a happy face sticker for each initiation toward the child with special needs. According to Strain, Shores and Timm (1977), this technique of peer matching can be effective when teaching peers social initiations directed toward behaviorally withdrawn children. Spillover effects in the classroom have also been reported, where other positive interactions have increased as the result of peer training (Strain Shores, & Kerr, 1976). As well, follow up studies done after a year show that children with special needs continued to interact with their peers at levels higher than baseline conditions (Storey, Danko, Strain, & Smith, 1992).

In a study by Goldstein and Wickstrom (1986), peer mediated intervention was used to promote the interaction of three children with

language delay. Specific strategies were taught to peer confederates outside the classroom for 15 minutes per day over a period of approximately six sessions or until the six strategies presented were mastered. Each strategy was mastered before the next strategy was introduced. The strategies were introduced one at a time through direct instruction to the peer confederate and were prompted during free play periods. Improvements were found in peer interaction in each of the three children with special needs.

#### Purpose of the Present Study

To promote wider use of peer training methods, this study tested an adapted peer training design under normal teaching conditions in an early childhood centre. The peer training technique was adapted by eliminating the one-to-one training of the peer confederate and modifying the training procedure by teaching two peer helpers and a child with special needs simultaneously. This was done to both moderately increase the teacher-student ratio during training sessions (from one-to-one, to one-to-three), so that an appropriate teacher-student ratio in other areas of the program could be maintained, and to model inclusion, by having the child with special needs present during the training sessions.

The peer training procedure was also normalized for classroom use by conducting the lessons in the blockroom, where the children would be playing at other times during the day and throughout the year. This was done to minimize transitions during the playgroup sessions and promote learning within the natural play environment. Finally, the peer training technique was modified by using teacher prompting and teacher praise to

encourage positive interactions and pro-social behavior among the children and eliminating the use of token rewards such as stickers or stamps.

### Summary

Literature in the areas of (a) peer relationships, (b) play, (c) play characteristics of children with special needs, and (d) methods of enhancing play and social development were examined in this chapter. Studies were cited which pointed out the importance of establishing reciprocal relationships between peers to develop perspective taking skills. A child's ability to select and carry out his/her interpersonal goals and interpret verbal and non-verbal signals and gestures during peer communication was found to be predictive of social competency and popularity. It was found that popular children expressed their feelings less and were able to communicate more information during discourse with peers. Popular children were also able to refer to the group activity in a general way or the peer host when entering play and were less disruptive of the group game. Rejected children were found to be more disruptive of group activities, while neglected children were more likely to wait and hover around the peer group.

The interpretation of play behaviors was examined in the context of child development. The stages of play behavior developed by Jean Piaget (1962), and categories of play developed by Mildred Parten (1932) were examined. Stages of play behavior, also were examined in more recent studies by Rubin and Watson (1978) and Rubin (1982). Rubin (1982), combined Parten's play categories with Piaget's developmental descriptors to assess play behavior and to create a more comprehensive play observation

scale. Rubin found that the least mature forms of play and those most predictive of "at risk" behavior were those of solitary functional and solitary dramatic play.

The play characteristics of children with special needs were also examined to provide a greater understanding of how a child's challenging condition may influence his/her ability to interact in peer play. The play behavior of children with mental retardation was found to be limited by their understanding of the availability of play materials, and play scripts. The play of children with physical impairments was found to be limited by their ability to access and manipulate play materials. The play of children with visual impairments was found to be restricted by their ability to get visual information from the built environment and the social environment. The play behavior of children with hearing impairments was found to be limited by their ability to follow peer communication. The play characteristics of children with emotional disturbances was found to be influenced by their interest in entering into social interactions with peers.

Three methods used to enhance play and social development of children with special needs using (a) play training, (b) script training, and (c) peer training were reviewed. Play training methods, where adults model play for children with special needs, were seen as beneficial to orient a child with special needs to a play setting, but failed to teach skill development to enhance peer interaction. Studies using script training, where simple scripts were taught to small groups of children for role enactment were also reviewed. These studies cited improvements in sociodramatic play during free play following the intervention but only when the children were prompted to stay in their roles. The third method reviewed was that of peer

training, where a series of skills are taught to typically developing peers to increase social initiations toward children with special needs. In these studies, initiations between children were usually reinforced by a token reward system and training sessions were conducted on a one-to-one basis targeting the peer confederate and not the child with special needs.

## Chapter 3

### Design and Procedures

In this chapter, the design and procedures of the present study will be discussed. This discussion will begin with an outline of the research questions and the child care program where the study took place. This will then be followed by a description of (a) the children participating in the study, (b) the peer training intervention, (c) the research design, (d) the observational procedures used for data collection, (e) limitations of the present study, (f) controls for internal validity, and (g) the data analysis used to interpret the results of the study. To define terms throughout this chapter, key words have been highlighted where they are introduced and accompanied by a definition.

#### Research Questions

The present study sought to normalize the peer training technique used in other studies for more practical use in an early childhood setting. This was done by: (a) increasing the teacher/child ratio during training sessions from one-to-one to one-to-three (modeled on small group activities typically found in early childhood programs), (b) teaching the social skills to all children including the child with special needs, (c) conducting the training sessions in the blockroom where the children would be playing following the lessons (to minimize transitions and create a natural learning environment), and (d) eliminating stickers or other extrinsic rewards used

to motivate interactions among peers.

The outcome of peer training intervention was assessed by observing the frequency of contact among the children in the playgroup, and the play level of each child, both during the peer playgroup sessions and during a play session later in the day in the presence of other children.

The research questions addressed in the present study were:

1. Are the interaction patterns of the children changed following the peer training intervention as measured by the frequency of contact among the children?
2. Are the play levels of the children in the playgroup changed by the peer training intervention as measured by changes in play behavior?
3. Did the effects of the peer training playgroup generalize to other free play sessions in the presence of other children in an integrated early childhood setting?

### Early Childhood Program

The early childhood program where the study took place is a kindergarten day care program where I work full time as a special needs teacher. The program serves 25 children, three of whom are children with special needs. The program is staffed with a supervisor, three full time teachers (including myself), and a part time teacher. The program philosophy is inclusive and emphasizes that the children with special needs are integrated into all the routines and activities at the centre throughout the day. The daily routine for the kindergarten children includes:

- 8:00 - 8:30 All children inside for: table toys, puzzles, books, art area
- 8:30 - 9:15 All children outside for play in sand box, on climbers, and riding tricycles and bikes (weather permitting)
- 9:30 - 10:50 All children inside for free play in the art area, block area and housekeeping room (constructive and socio-dramatic play), library corner, and quiet room (puzzles, games and writing activities)
- 9:30 -10:30 Ongoing snack in small groups
- 11:00 - 11:30 Morning group time (organized in two groups each with a teacher) for various group activities which may include: theme related stories, poems, fingerplays, counting, graphing, sorting, newsletter and whole group writing activities, science experiments
- 11:30 - 11:45 Writing workshop
- 11:45 - 12:30 All children outside for play

12:30 - 1:30	Lunch
1:15 - 1:30	Book time
1:30 - 1:45	Story time
1:45 - 2:30	Rest time
2:30 - 3:00	Group projects such as crafts and drawing and tracing etc., tactile play activities including playdough, water play
3:00 - 3:30	Afternoon circle time, singing, movement activities
3:30 - 3:45	Whole group snack
3:45 - 4:30	All children outside for play
4:30 - 5:30	All children inside for quiet activities in the art area, book corner

The peer training intervention was scheduled so that it would blend into the morning free play time. The children taking part in the peer training playgroup came in from outside time at 9:30 am and played in the block/housekeeping room for approximately 30 minutes before the block/housekeeping centre was opened to the other children.

#### Children Participating in the Study

In the section which follows, the criteria for selection of the children participating in the study will be described. This will be followed by a description of each of the four children who began the study. Pseudonyms have been used throughout to protect the identity of the children who took part in the study.

### Criteria for Selection of Participants

The peer training playgroup was originally made up of two sets of matched peers. Each set included one child with special needs and one typically developing child. This size of the playgroup was chosen because it is common for groupings of from four to six children to be used in early childhood programs for activities such as cooking projects, art projects, and games. This provided a realistic opportunity to test the peer training intervention using a grouping size that is more common in early childhood settings and comfortable for both the teacher and children. This differs from other peer training studies using groups of two or three children, where the peer training lessons are targeted at the peer helper on a one-to-one adult to child basis not including the child with special needs.

Criteria for selection of the children with special needs for the peer training playgroup was based on:

- (a) enrollment in the integrated early childhood program,
- (b) regular attendance,
- (c) identification as having a special need, and
- (d) signed parental consent to participate in the study (see copy of letter, Appendix A).

The type of "special need" that the child has was not considered a condition of selection for the present study, but compatibility between the two children with special needs was taken into consideration.

Criteria for selection of the typically developing peers as suggested by Strain and Odom, (1986) included:

- (a) compliance with requests made by teachers,
- (b) regular attendance,
- (c) age-appropriate play skills,
- (d) no or positive social history with the special needs child(ren), and
- (e) signed parental consent to participate in the study.

### John

John, age 5, had been attending the full day kindergarten daycare program where the study took place for approximately six weeks at the time of the study. For two years prior to that he had attended a program for 3 and 4 year olds at the same child care centre. John was referred to the centre by the Arbutus Society for Children's Health and received extra support through the Arbutus Society in the form of occupational therapy, physiotherapy, and speech and language pathology. John required extra support to help treat developmental delays resulting from Down Syndrome. At the child care centre, John also received individualized goal planning as part of the special needs program to work on specific skills in the areas of language development, social development, and self-help skills such as toileting and dressing.

At the time of the study, John was steadily developing his language skills and was able to sign and/or use approximately 50 words in the correct context. John was being encouraged to communicate his needs in social situations with his peers and to share play materials. He was very interested

in the other children at the centre and in the activities that were available. Often however, he would leave activities after a short time or disrupt activities by grabbing the play materials or pushing the other children. John often needed to be re-directed so that he would not wander throughout the classroom. He was also being encouraged not to push or grab the other children or play materials and his peers were being coached to tell him to stop doing so using both words and signs.

### Steven

Steven, age 6, had been attending the full day kindergarten daycare program for approximately six weeks at the time of the study. For a year prior to that, he attended the program for 3 and 4 year olds at the same child care centre. He was referred to the childcare centre by the Arbutus Society for Children's Health and throughout his time in both the centre for 3 and 4 year olds and in the kindergarten program Steven has received extra support through the Arbutus Society in the form of occupational therapy, physiotherapy, and speech and language pathology. Steven requires this extra support to help treat developmental delays resulting from a seizure disorder. At both the centre for 3 and 4 year olds and the kindergarten daycare, Steven also received individualized goal planning as part of the special needs program so that specific skills could be worked on such as language and social development, motor development, and self-help skills in the area of feeding and toileting.

At the time of the study, Steven, was able to sign approximately 20 words and could verbalize approximately 12 words, although he would

sometimes use the signs or words out of context or over generalized them. For example, he would use the word "Dad" to refer to the teachers at the centre. He would repeatedly ask two questions, "What's that?" and "Who's that?" while pointing to objects or people. He would initiate these exchanges mainly with the adults in the setting and less often but occasionally with the children. He had difficulty attending to table toys and art activities and when he was directed to them and shown such activities he would often get up and leave within a few minutes of sitting down. He enjoyed turning the pages and looking at magazines and could point to pictures of babies and toys. He would often ask, "What's that?" or "Who's that?" when pointing to the pictures but would not usually respond when those questions were asked of him. During freeplay time, he would often wander between the different areas of the classroom until re-directed by the teachers.

### Ellen

Ellen, age 5, had been attending the full day kindergarten daycare program for approximately 10 months at the time of the study. She was familiar with the routines at the centre and often able to help others. She seemed to be interested in John and enjoyed playing with him and helping him through the routines by taking him by the hand to go outside or leading him between activities. She and John often sought each other out as play mates for short periods of time on a daily basis and seemed to enjoy each other's company. The teachers encouraged her when she was being helpful with John and other children and would sometimes ask her to be John's partner on outings or to help re-direct John when he was wandering

between activities. At times, however, John became rough with her and would push her. At these points, the teachers coached Ellen to tell John to stop and to tried to help Ellen to let John know that his rough behavior hurt her.

### Donald

Donald, age 5 had been attending the full day kindergarten daycare program for approximately nine months at the time of the study. He seemed interested in Steven and seemed to enjoy helping him with routines at the centre. He would often initiate this on his own and would lead Steven into the nap room or outside to play. The teachers at the centre acknowledged Donald's help with Steven and would occasionally ask Donald to help Steven with transitions between routines. By watching the teachers, Donald also learned to use the sign for "sit" and "more" and he would use these when talking to Steven. Without being told directly, Donald seemed to understand that Steven required extra support within the setting and would seek him out during transitions on a daily basis.

### Peer Training Intervention

The peer training intervention was conducted in the following way. The lessons began by sharing the objective of the playgroup with the children followed by sharing the learning outcome at the beginning of each session. This was done by telling the children that they will be learning how to play together (the playgroup objective) by practicing how

to get each other's attention (the specific learning outcome for that session). This was shared with the children to centre them on the learning task and provide a familiar opening to the playgroup session to help the children recall other playgroup lessons and establish a routine. Each session included a description of the skill, modeling of the skill, and a practice session where each child practiced the skill as described in Appendix B.

The skills were introduced sequentially and reviewed at the beginning of each session, so that each skill was built upon the previous skill(s) introduced. Skill proficiency was reached when the children were able to successfully replicate the social skill 80% of time during practice sessions. In the case of the child with special needs, this replication was not possible but approximations of the skill were encouraged and hand over hand guidance and prompting were used. The skills taught were taken from Goldstein and Wickstrom (1986). These six skills include (a) establishing eye contact by saying the target child's name or tapping the child's arm, (b) establishing joint focus of attention by asking a child to look at a toy or take part in an activity; (c) describing one's own play and the play of others, (d) prompting requests through a sequence of steps, for example by saying: What do you want? Do you want the bus or the plane? (e) responding to the speech of others by repeating (imitating what the subject said), expanding (restating and adding to what the child said), or requesting clarification ("What did you say?"), and (f) redirecting the play activity by suggesting a joint play activity.

The skill instruction and practice time took place at the beginning of the playgroup sessions. After completing training and practice of a particular skill, the children took part in free play for approximately 20

minutes within the play centre. During this free play time, the children were allowed to interact with whomever they wished within the playgroup (any of the two other children or the teacher), but were encouraged whenever possible through verbal prompts and praise to use the skills they had been taught with each other.

### Research Design

In the following section the research design of the present study will be outlined beginning with a discussion of the pilot study. This will then be followed by a discussion of single subject research designs in educational research and the research design used in the present study.

#### Pilot Study

A pilot study was conducted to test procedural and organizational aspects of the present study. At the time of the pilot study I had anticipated conducting the intervention using two sets of matched peers in the peer training playgroup. The participants in the present study were to include, two children requiring extra support each matched with a child who was capable of sustaining age appropriate social skills and had shown an interest in the child he/she was matched with. This peer matching procedure was followed in the pilot study and two children were chosen whose play interactions were less developed than those of their peers. These two children were matched with two other children who were capable of engaging in co-operative play, were compliant with teacher requests, and

were interested in the child that they were matched with. None of the children chosen for the pilot study took part in the present study.

Participants in Pilot Study. Child A, was a girl, age 5 who has been attending the kindergarten program for approximately six months at the time of the pilot study. She had difficulty entering into and sustaining group dramatic play. She would often try to talk to her peers while walking away. Her ability to accept other children's play ideas was limited and she would often complain that she had no one to play with.

Child B, was a boy, age 5 who had been attending the kindergarten program for approximately one month at the time of the pilot study. He had difficulty sustaining group dramatic and constructive play and regulating his emotions during peer interactions. This seemed to be related to a difficulty listening to others and taking turns.

Child C, was a girl, age 5 who had been attending the kindergarten program for approximately one month at the time of the pilot study. She demonstrated age appropriate play skills, and was able to enter and sustain positive play interactions with a variety of peers, including Child A.

Child D, was a boy, age 4 who had been attending the kindergarten program for approximately one month at the time of the pilot study. He demonstrated age appropriate play skills, and was able to enter and sustain positive play interactions with a variety of peers, including Child B.

Peer Intervention Used in the Pilot Study. The lessons introduced during the pilot study were designed to reflect the needs of the children requiring extra support. These needs included, play entry, and turn taking for Child A, and turn taking and appropriate expression of feelings for Child B. Child A and C were taught and practiced strategies to enter games,

including ways of asking another child what they were playing and asking to join in the game. They also practiced taking turns with ideas and play materials during the peer training lessons. Child B and D were taught turn taking skills for exchanges of ideas and play materials and strategies for expressing feelings when angry or upset, such as letting the other child know that you were upset or angry using a controlled voice.

Outcome of the Pilot Study. Three organizational aspects of transition from outside playtime to the play training sessions were worked out in the pilot study. These included, (a) the procedures for turning over my responsibilities of supervising outdoor play to another teacher, (b) easing the children's transition from outside play to the blockroom for the playgroup sessions, and (c) adjusting the timing of the playgroup sessions to accommodate children arriving late to the program.

The timing of the playgroup session coincided with the arrival of another staff member to the child care centre. This allowed me to take a group of children inside during the regularly scheduled outdoor playtime. Before doing this, information was passed on as needed to the other teacher so that consistency could be maintained in supervision of the other children. The transition from outdoor play to indoor playtime was organized by having the two peer helpers in the pilot study each invite their peer partner in for playtime in the blockroom. This procedure ran smoothly and was used in the present study. It was determined during the pilot study, however, that some flexibility in the timing of the start of the playgroup should be allowed to accommodate children in the playgroup who may arrive late.

Four other organizational aspects of the playgroup sessions were also

tested in the pilot study. These included, (a) the observational procedure, (b) presentation of the lessons, (c) prompting during the playgroup sessions while observing the children, and (d) video taping the playgroup sessions so that observations could be coded and validated at a later time.

The use of an ear phone and tape recorder to signal observations was tested during the pilot study, I found that the children were distracted from their play interactions by the equipment and had difficulty attending to what I was saying during prompting. I also found the ear phone and the tape recorder restrictive. I was not able to follow the children's dialogue as readily with the ear phone in place as without it and this seemed to restrict my spontaneous interactions with the children. A method of visually monitoring the observational intervals using a small digital clock was tested in place of the ear phone. I set the clock up on the shelf close to my scoring sheet and monitored the two minute intervals visually to minimize the distraction of the ear phone and tape recorder. I found that because the intervals were relatively short, I could keep track of the time while observing the play and prompting the children.

The procedure used to present the lessons to the children was also tested. This was done using a similar format to group time, where the children sit on their own mat on the floor in front of the teacher. Lessons which were relevant to the needs of the children in the pilot study were presented and props were used to practice skills such as turn taking and requesting a play item. Later prompting was also tested as the children interacted in freeplay in the playgroup and suggestions were made regarding ways to enter into play and share items.

During the pilot study, use of the video camera was tested also. The

room dimensions and lighting created the need for several adjustments in the angle and position of the video camera before the best vantage point for filming could be determined. Most of the room could be filmed with the video camera positioned at the block room door. This also minimized back lighting from the window. The angle of the camera lens was not wide enough to film the children at either side of the block room, and it was found that the camera needed to be panned if the children moved to the far right or left of the room. This meant that once a child's play behavior was recorded the camera needed to be panned to the next child being observed if they were outside the range of the camera lens.

### Single Subject Designs in Educational Research

A single subject research design was used to evaluate the impact of the peer training intervention in the present study. This type of design is able to accommodate design constraints and limitations of early childhood classrooms more readily than group experimental designs (Holcombe, Wolery, & Gast, 1994). In a single subject design, the subject serves as his or her own control. In this way, the subject's performance or behavior under one condition is compared with his/her performance under another condition. The type of single subject design chosen must be matched with the research question to optimize both the internal validity, that is, to control for other factors that may cause changes in behavior which are not related to the treatment or intervention (Holcombe, Wolery, & Gast, 1994) and to optimize the interpretation obtained by the researcher (Krishef, 1991).

Internal validity in single subject designs is also achieved by (a)

reliable observations, (b) repeated measurement, (c) description of experimental conditions, (d) baseline and treatment stability, and (d) standardized length of baseline and treatment conditions (Borg & Gall, 1989). Frequent observations of the behavior and the use of operational definitions to define the behaviors being observed are required. The observations should also be checked for observer bias by periodic checks of observer reliability. This can be done by having two observers measure the behavior of the same subjects at the same time and compare the results of the observations. Repeated measurement of the behavior, that is conducting more than one observation during each condition also aids internal validity. This helps eliminate the effect of variability in subject behavior from day to day and allows for a better determination of response to the treatment. It is also important that the researcher provide a description of each experimental condition so that replication of the study can be done. This is important so that further research can be done on other subjects to determine the generality of the findings across subjects (Hersen & Barlow, 1976).

Internal validity is also achieved by establishing stability in the baseline and treatment phases of the study. This allows the effect of the treatment to be measured against a stable condition. During the treatment phase, once the treatment effect has stabilized comparisons to other conditions can be made. When comparing results between conditions, it is also suggested that internal validity can be maintained by having each condition approximately the same length (Borg & Gall, 1989).

In the section which follows A-B-A designs used for single subjects or groups of subjects will be discussed. This will include variations of the

design and the utility of each of these designs to different research questions.

### A-B-A Single Subject Designs

In A-B-A designs, the treatment effect "B" is compared with the baseline or withdrawal phase(s) "A". There are several variations on the A-B-A design, some allowing the treatment to be withdrawn and others ending with the treatment phase. In A-B designs, for example, the "B" stage or intervention phase follows an assessment of the baseline or "A" stage. The A-B design is reported to have low internal reliability, however, and attributing the change to the treatment effect is difficult (Borg & Gall, 1989). The A-B design can be useful in pilot studies or other cursive evaluations where a more complete study is to follow. In A-B-A designs, the baseline is established and the treatment or B phase is introduced. This is then followed by a withdrawal phase where the treatment is faded out. This can be useful to measure the effects of the treatment condition and provides good internal validity (Borg & Gall, 1989). The drawback of the A-B-A design, however, is that the study ends in the withdrawal phase and the positive effects of the treatment are extinguished or diminished from the treatment phase (Borg & Gall, 1989; Hersen & Barlow, 1976). This leaves the researcher with an ethical dilemma concerning the outcome of the treatment. The option of adding a fourth phase where the treatment is re-established may be considered. When the treatment or intervention is one from which it is thought that the subjects will benefit, an A-B-A-B design can be used so that the study ends with a treatment phase and any positive effects resulting from the treatment

can be maintained longer.

### Research Design Used in the Present Study

To allow the participants to be left in a treatment rather than withdrawal phase, an A-B-A-B single subject research design was chosen in the present study. The three participants in the study were considered as one group of subjects and each condition or phase of the study was introduced to them simultaneously. Each of the four phases of the study will be described below.

Phase A-Baseline Conditions. In the first phase, the play levels and interaction patterns of the four children who began the study were assessed. This assessment was conducted from October 17th to October 21st. This was done to assess the baseline play level of each child prior to the intervention and without teacher prompting. The baseline play level was compiled using interval observations over the baseline period to determine the type of play or non-play behavior that the child most often displayed. During the baseline phase, the baseline interaction was also compiled. This was determined by calculating the number of interactions that the each child had with each of their peers in the playgroup prior to social skills training and without prompting from the teacher. This included both a coding of the quality of the interaction, as positive, negative, or neutral (as denoted by "+" "-" or "0") and an indication of who the child was interacting with (see the section on Observation Procedures for a complete description).

Phase B-Intervention. The intervention phase took place from October 27th to November 9th. During this time, lessons were taught as

described in the previous section. Following the lessons the children were invited to play together and were encouraged to use the skills taught in the lessons through prompting and verbal praise. Examples of prompting were of three main types which included, (a) encouragement to show a play prop to another child, (b) suggestions about using certain skills taught in the lessons (such as offering a choice of play items), and (c) demonstrations of sign language to support communication between the peers. Reminders about limiting play schemes that were too involved were also directed toward the peer helpers to help encourage appropriate play activities. Reminders were also given if play interactions were becoming unsafe during episodes of rough and tumble play.

Verbal praise of the participants took the form of (a) statements telling the children that they had done a good job, both at the time of a positive interaction and at later points to serve as reminders to the children of successful interactions that had occurred on a previous day or earlier in the play session, and (b) laughter and other reassuring comments that reinforced the positive interactions or a game that the children were enjoying. Interval observations were used to record each child's play level and interaction pattern throughout this phase of the research design.

Phase A'-No-lesson-no-prompting. From November 16th to November 18th a No-lesson-no-prompting phase was introduced. The intent of this phase was to re-establish a baseline of play levels and interaction following the intervention and prior to the prompting phase to minimize the carry over effect of the intervention and isolate the prompting phase (Holcombe, Wolery, & Gast, 1994). During this phase, the children in the playgroup were

invited into the block/housekeeping room, but no lessons took place and the children were not prompted to interact with each other or praised for pro-social actions.

Phase B'-Prompting. In the final phase from November 21st to November 29th prompting was re-introduced but no lessons were taught to the children. The children were invited into the block/housekeeping room and told that they could play together. Both peer helpers were encouraged to interact with the child with special needs and he was also encouraged to interact with them. Verbal praise was also used to encourage interactions and pro-social overtures among the children.

#### Organizational Changes in the Study Following the Departure of One of the Children

Baseline data were collected during the first week of the study on the play behavior and interactions of four children participating in the study. In the phase that followed, the intervention was to proceed using a peer matching model where the children with special needs were each matched with the typically developing peer helper. To test the effects of the intervention, each dyad was to be taught the lessons separately. After each lesson the second dyad would join the playgroup and all four would be observed for another 20 minutes following the intervention. The two children who were taught the peer training lessons would be prompted during this phase, and the other dyad would not receive prompting.

Unexpectedly, however, one of the children with special needs left the child care program and had to drop out of the study. This left the playgroup

with two peer helpers and one child with special needs. At this point, the structure of the study had changed and this meant that I needed to reflect on the study's direction and consider other options. Three options came to mind, these included, (a) replacing the child with special needs with another child and collecting new baseline data, (b) conducting the study using one dyad rather than two, and (c) continuing the study using two peer helpers and one child with special needs.

If I were to replace the child with special needs with another child, two difficulties were foreseen. These included: (a) the amount of lead time involved in both obtaining consent for another child to participate in the study and obtaining baseline data with a new participant, and (b) the question of finding a compatible participant who would interact favourably with the other subjects already selected. Given these two difficulties this option was rejected.

My second option of continuing the study with one dyad also had two associated difficulties; these were: (a) the difficulty of removing one of the participants from the study particularly when she was still getting over the departure of her friend, and (b) loss of the sense of the small group design if I were to have only two children present in the playgroup. I therefore elected the use of the third option of reorganizing the peer helping structure to include two peer helpers and the child with special needs. Although the impact of this change in peer partners was not analyzed formally, I did feel that it was difficult for the child who lost her partner in the playgroup. This was apparent in the beginning of the sessions when she was both less involved than the other peer helper and her interactions with the child with special needs were of shorter duration.

## Observation Procedures

### Play Observation Scale

A Play Observation Scale designed by Rubin (1989), was used in the present study. This scale combines Parten's (1932) play categories of unoccupied behavior, solitary play, onlooker behavior, parallel play, associative play, and cooperative play with the developmental stages of functional play, constructive play, dramatic play and games with rules identified by Piaget (1962) and elaborated on by Smilansky (1968). Several studies (e.g. Guralnick & Groom, 1987; Guralnick & Weinhouse, 1984; Higgenbotham, & Baker, 1981) have used this Play Observation Scale to assess the play of children with special needs in integrated settings.

The observation scale consists of a coding sheet which is divided into play and non-play categories. The categories and their sub-categories are as follows:

**Non-play**- the child is not playing but is engaged in one of the following non-play behaviors.

**Transition**- moving between activities, such as walking across a room, cleaning up or setting up a game in an area.

**Unoccupied**- when a child is unfocused and displays no intent toward objects or people in the setting, or if he/she is wandering around the room for no specific reason.

**Onlooker**- when a child is watching the activities of other children but is not involved and makes no attempt to enter into the activity, although he/she may offer comments.

although he/she may offer comments.

**Aggression**-actions which are non-playful and antagonistic in nature, such as pushing, hitting, kicking, or grabbing.

**Teacher Conversation**- when a child is either talking to or actively listening to a teacher or other adult in the setting.

**Peer Conversation**- when a child is either talking to or actively listening to another child in the setting.

**Solitary Play**- the child plays apart from the other children usually with toys that are different from what the other children are using. The child does not attend to the play or conversation of the other children.

**Functional**- an activity entered into for the physical sensation it creates such as repetitive motor activities like hammering, pouring, jumping.

**Exploratory**- examining an object to take in visual or auditory information. This may be an object the child is holding or something across the room.

**Reading**- includes both reading a book or leafing through it. It also includes counting objects and listening to an audio recording.

**Constructive**- when a child is building, painting, drawing or manipulating materials for the purpose of creating something.

Different from a set up during transition the child is playing during the set up, for example when setting the stage prior to dramatic play.

**Dramatic**- when the child is engaged in pretend play such as imagining that she/he is feeding the doll, or serving dinner.

**Games**- activities organized with a set of either pre-arranged rules or rules that are articulated during the game. The child accepts the

terms of the rules and adjusts his/her behavior to them.

**Parallel Play**- the child plays independently but is usually in close proximity to other children playing with the same materials (within three feet). The child is usually aware of the activities of the other children but is not playing directly with them.

**Functional**- a parallel activity entered into for the physical sensation it creates such as repetitive motor activities like hammering, pouring, jumping in close proximity to another child but not directly with them.

**Exploratory**- examining an object to take in visual or auditory information at the same time as others and within close proximity of them but not together (i.e., one child holding the object while others look on would be group rather than parallel functional. Two children examining similar objects independently would be parallel functional). This may be an object the child is holding or something across the room.

**Reading**- reading a book or leafing through it, counting objects or listening to an audio recording in close proximity to others who are doing the same.

**Constructive**- building, painting, drawing or manipulating materials for the purpose of creating something in close proximity of others who are doing similar activities but engaged in separate games.

**Dramatic**- engaging in pretend play such as imagining that she/he is feeding the doll, or serving dinner at the same time as another child or children are doing the same but when the game the child is engaged is different from the games of the others. For example two

children may be both playing with dolls they do not have a joint play script where mutual goals are shared.

**Games-** when a child engages in activities organized with a set of either pre-arranged rules or rules that are articulated during the game within close proximity of others who are engaged in a similar game, but the children are not playing together.

**Group Play-** the child engages with one or more child in an activity involving a common goal or purpose which is group centred.

**Functional-** a group activity entered into for the physical sensation it creates such as repetitive motor activities like hammering, pouring, jumping. In group play this may involve rough and tumble play, or jumping games.

**Exploratory-** one or more child examining an object to take in visual or auditory information from it.

**Reading-** one or more child reading or leafing through a book, or counting objects and listening to an audio recording together.

**Constructive-** one or more child building, painting, drawing or manipulating materials for the purpose of creating something with a common goal or purpose.

**Dramatic-** one or more child engaged in pretend play with a common goal or purpose. Group dramatic play might involve a common game of house or pet owners where the children are organized in a common activity.

**Games-** one or more child involved in activities organized with a set of either pre-arranged rules or rules that are articulated during the game.

The Play Observation Scale also includes a rating section for affect, in which the quality of a behavior can be rated by the observer as positive, negative, or neutral. Space is provided to write down the names of other children or adults when the child being observed is interacting with peers or adults in the setting. An interaction was rated "positive" if it was prosocial in nature, such as, an act of helping, interest, praise, affection, reassurance, protection, gift-giving, acceptance of directions or gifts, warm greetings, smiling, laughing, an invitation or permission to play, an invitation to share, joking etc. An interaction was rated "negative" if it was antagonistic or anti-social such as any action that would make another child unhappy, angry, frustrated, such as acts of noncompliance, disapproval, rejection, teasing, blaming, yelling, ignoring. An interaction was rated "neutral" if the exchange was commonplace and was not positive or negative such as an exchange of information or exchange of ideas.

An observation begins by observing the child for 30 seconds to determine the context of the behavior. Following this the child is observed for a 10 second interval and behavior is coded for the next 5-10 seconds. Interval observations were conducted on a systematic basis every two minutes. At the first interval, an observation was made of Child A; at the second interval, an observation was made of Child B; at the third interval, an observation was made of Child C. This process was then repeated for the duration of the playgroup. This allowed systematic observations of all three children throughout the playgroup session. This procedure has been used in studies where observations have been required of more than one child (Horne, 1986).

Following the peer playgroup sessions the interval observations were

continued for another 20 minutes during free play with the whole class using the same procedure described in the previous section. This was done to determine the frequency of interaction among the three children during free play.

#### Controls for Internal Validity

There are two assumptions that have been made within the research design of this study. The first of these is that the room design and play materials in the play centre are developmentally appropriate for use by the children in the playgroup and are conducive to social interactions. For the duration of the data collection, no changes were made to the room design and no new play materials were added to the play centre. The play intervention did include a systematic introduction to some of the play materials in the centre, but this was only done with the play materials that had been available to the children throughout collection of the baseline data and other phases of the intervention. This was done in an attempt to control for increases in play performance and interaction as the result of the introduction of a novel piece of equipment.

The second assumption in the research design is that the interactions between peers can be validly measured using the Play Observation Scale. The scale reports inter-observer reliability of between 80% and 95% (Rubin, 1989). Several studies (e.g., Guralnick & Groom, 1987; Guralnick & Weinhouse, 1984) have used this scale to assess the play of children with special needs in integrated settings. An estimate of observer reliability was calculated by having another observer view a randomly selected video tape

of a playgroup session and calculate the play level and quality of interaction using the same interval observation procedure. A comparison was then made between observations of the same session. From this calculation, it was determined that 21 of the 23 observations or 91% agreement was reached on the behaviors observed.

#### Limitations of the Present Study

Two limitations within the present study are seen as the result of acting as teacher/observer/researcher. The first limitation includes the possible bias of acting as both teacher and observer. In this situation, my goal as a teacher to increase the positive interaction between the children with special needs and their peers may create a tendency to interpret behavior in a way that would favor my desired goal as a teacher. This was checked with the calculations of observer reliability described in the previous section. A second limitation results from my dual role as teacher/researcher in attempting to both teach, prompt and observe the social skills training lessons. This was offset somewhat by videotaping the playgroup sessions so that observations can be made at a later time. It should also be noted that the dual role as teacher/researcher was beneficial in teaching the social skill lessons, given the advantage of having established a teacher-pupil relationship. As well, it should be noted that given the specific characteristics of both the children in the study and the skill instruction used, results will be limited to the children in this group and may not generalize to other children with special needs or other peer helpers. The study is also limited by variations in the lengths of the four phases of the

study.

### Data Analysis

Daily frequency counts of the play levels and interactions between each of the subjects and their peers were collected and plotted on a graph for each of the four study conditions both within the playgroup and during free play with the whole class. This provided a graph of the frequency of interaction and the play levels for each of the three subjects for each study condition. From the graphs, frequency plots and play levels were compiled in each of eight conditions. The frequency plots and play levels were then used to compare the directional change (i.e., increases or decreases in frequency of contact and play level during each of the four study conditions) for each of the subjects. In addition, frequency counts were tallied to determine with whom each of the subjects had the most contact during each of the study conditions. This was done to determine any change in pattern of contact between the peers following the intervention phase. As well, the quality of the interactions were analyzed by tallying the number of interactions that were positive, negative or neutral within each of the study conditions. This was done to analyze any change in the interactions for each of the subjects before, during and after the intervention.

### Summary

In the present study, a peer training intervention has been normalized for more practical use in an early childhood setting. This was done by increasing the teacher child ratio during the peer training intervention, teaching skills to all children in the playgroup including the child with special needs, conducting training sessions in the classroom, and eliminating extrinsic rewards. The outcome of the training session was assessed by conducting observations during the playgroup and during freeplay later in the day. The study took place at a kindergarten day care which serves 25 children, three of whom are children with special needs. The program philosophy is inclusive and emphasizes that the children with special needs take part in all routines and activities.

Selection of the children in the study was based on the child's enrollment in the early childhood program, regular attendance, signed parental consent, and identification as having a special need (in the case of the child requiring extra support). For the peer helpers criteria included age appropriate play skills, compliance with teacher requests, and no or positive social history with the child(ren) with special needs.

Four children began the study, these children included: (a) John, a 5 year old boy requiring extra support in the areas of occupational therapy, physiotherapy, and speech and language pathology to help treat developmental delays resulting from Down Syndrome, (b) Steven, a 6 year old boy requiring extra support in the areas of occupational therapy, physiotherapy, and speech and language pathology to help treat

developmental delays resulting from a seizure disorder, (c) Ellen, a 5 year old girl who had age appropriate social skills and was interested in John, and (d) Donald, a 5 year old boy who had age appropriate social skills and was interested in Steven.

The peer training intervention was conducted by sharing the objective of the playgroup at the beginning of each playgroup session. This was followed by a lesson where a skill (i.e., using the child's name to establish contact) was taught through modeling, practice and by shaping approximations with prompting. The six skills taught were introduced sequentially and reviewed at the beginning of each session. Following each lesson the children took part in free play for approximately 20 minutes within the play centre. During this time, the children were allowed to interact with whomever they liked but were encouraged whenever possible through verbal prompts and praise to use the skills they had been taught with each other.

A pilot study took place involving four children, two of whom required extra support and two of whom displayed age appropriate social skills and were capable of interacting positively with a variety of children. During the pilot study, turn taking skills and sharing ideas was taught, practiced and promoted through prompting. Three organizational aspects including: (a) turning over my responsibilities to another teacher, (b) smoothing the transition from outdoor play to the playgroup, and (c) adjusting the timing of the playgroup to accommodate children arriving late were worked out in the pilot study. Four other organizational aspects of the playgroup sessions were also worked out in the pilot study, these included: (a) the observational procedure, (b) presentation of the lessons, (c)

prompting during the playgroup sessions while observing the children, and (d) video taping the playgroup sessions so that observations could be coded and validated at a later time. From the pilot study adjustments were made in the cueing of the observations using a digital clock and in the coding of play behavior during teacher prompting using a video camera to record the playgroup sessions so that observations could be coded and validated at a later time.

A single subject research design was used in the present study where the subjects act as their own control. This was done by collecting data on the children's play levels and interactions prior to, during and after the peer training intervention. Data was also collected during a no-lesson-no-prompting phase, a final prompting phase, and for approximately 20 minutes following the playgroup during freeplay with the whole class. An adjustment in the design of the study was made following the departure of one of the participants. The intervention was conducted using two peer helpers and one child requiring extra support rather than the two dyads that were originally planned.

A Play Observation Scale designed by Rubin (1989) was used in the present study to frame observations. The scale combined Parten's (1932) play categories with Piaget's (1962) and Smilansky's (1968) categories of play behaviors. The scale has been used in other studies and reports inter-observer reliability of between 80% and 95%. Inter-observer reliability was calculated in the present study by having another observer view a randomly selected video tape of a playgroup session and calculate the play level and quality of the interaction using the same interval procedure.

Data was analyzed in the present study by compiling and graphing

frequency counts of the play levels and interaction patterns for each of the participants in the study. The frequency plots and play levels were used to compare the directional change (i.e., increases or decreases in play level and contact) throughout each of the four study conditions for each of the subjects. Frequency counts were also tallied to determine with whom each of the subjects had the most contact with. The quality of each interaction was also analyzed to determine change in the interactions for each subject during the study conditions.

## Chapter 4

### Results and Discussion

During each of the four phases of the study the children taking part were observed during both playgroup sessions and freeplay with the whole class. This provided data in eight possible conditions for each of the three children who completed the study. Approximately 500 observations were made over a six week period from mid-October to the end of November. The observations were coded into play and non-play categories and the frequency of each of these behaviors was tallied and computed into percentages so that comparisons could be made between conditions. Each observation was also coded as positive, neutral, or negative to indicate the child's feeling at the time of the observation. A behavior was categorized as being positive when it left the playmate with a good feeling as in providing assistance, affection, giving toys, smiling or laughing. A behavior was categorized as negative if it was antagonistic, such as acts of aggression, yelling, pushing, grabbing toys or other objects, and left the playmate feeling unhappy. A neutral behavior was neither pro-social nor antagonistic.

In the chapter which follows, the results and discussions of this data will be presented in six sections. These sections are organized to reflect the four phases of the study which include (a) baseline, (b) intervention, (c) no-lesson-no-prompting, and (d) prompting. The fifth section will compare observations made at the time of the playgroup with observations made during freeplay with the whole class. The sixth section will provide a

summary of the results.

### Baseline Observational Data

The purposes of the playgroup were to increase the positive social interaction between the child requiring extra support and the peer helpers and to increase the play level of the child requiring extra support. The baseline observations were used to establish the existing interaction patterns and play levels for each child before the intervention. The baseline data were collected by inviting the four children who began the study into the block room and observing each child at intervals to code their behavior during the playgroup session and immediately following the playgroup during freeplay with the whole class. The following section will describe the baseline observations for each of the four children who began the study. This will be followed by a description of a validity test and a summary of the baseline data.

#### Baseline Data for John

During the playgroup, the majority of the baseline data for John consisted of behaviors falling into "Non-Play" and "Solitary Play" categories. As shown in Figure 1, non-play behavior accounted for 43% of the 14 observations and solitary play for a further 43%. Of these non-play activities two-thirds were "onlooker" behavior where John would simply watch the other children without becoming involved. The remainder of the baseline observations consisted of parallel play which accounted for 14% of John's

behaviors. When involved in parallel play, John participated in similar play activities to the other children in the playgroup using similar materials but was not interacting with the children, either to exchange ideas or materials or to describe what he was doing. In the affect category, 86% of the 14 behaviors were neutral, 7% were positive and a further 7% negative.

The baseline data for John during freeplay with the whole class showed a similar pattern of non-play and solitary play behavior. As shown in Figure 2, non-play behavior accounted for 50% of the 12 observations and solitary play for a further 33%. The remaining 17% was accounted for in parallel play. During freeplay at this time, snack is served to six children at a time. Often children going between activities, or who have come to the program early in the day and are ready for snack are the first to be invited to the snack table. During the observations, having snack or washing hands prior to or following snack is scored as a "Transition". In John's baseline data, this accounted for over 80% of the non-play behavior during the observed freeplay time. In the affect category, 92% of the 12 behaviors were neutral, and 8% positive.

#### Baseline Data for Steven

During the playgroup, 84% of the 19 observations fell into the non-play category as shown in Figure 3. Of those non-play behaviors 44% consisted of conversing with the teacher and 38% were onlooker behavior, where Steven would watch the other children without getting involved. Of the remaining 16% of the baseline playgroup behaviors, 11% were solitary and 5% were parallel play. Of these play behaviors, Steven was either

involved in functional play where he would touch a play prop or put it in his mouth to get sensory stimulation from it, or exploratory play where he would shake or look at an object to get auditory or visual information from it. In the affect category, 95% of the 19 behaviors were neutral and 5% were positive.

The baseline data for Steven during freeplay with the whole class showed a similar pattern of non-play and solitary play behavior to that of the baseline data during playgroup. As shown in Figure 4, non-play behavior accounted for 88% of the 16 observations and solitary play for the remaining 13%. Of the non-play behaviors, 50% were coded as "transition" taking place during snack time where Steven was either washing his hands before or after snack or eating. It is typical for Steven to take a longer time to feed himself than most children during snack time which explains the higher percentage of time in transition. Of the remaining non-play behaviors, 21% were categorized as "unoccupied". This coding was assigned when Steven was standing or sitting unfocused and had no goal or direction. In the affect category, the observations taken during the freeplay period showed that all of the 16 behaviors were neutral.

FIGURE 1 - BASELINE DATA DURING PLAYGROUP  
 FOR JOHN                      OCTOBER 17-21

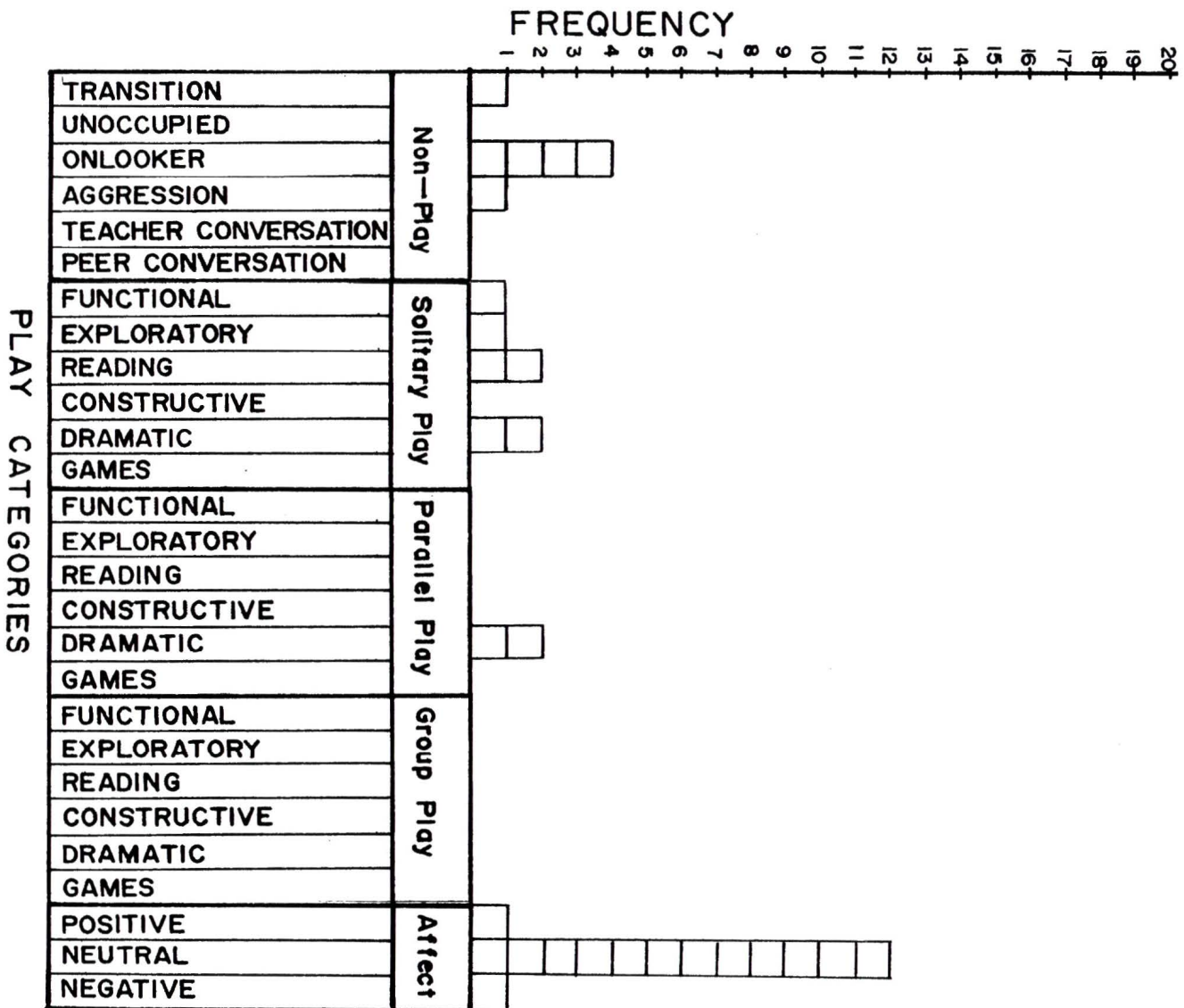


FIGURE 2 - BASELINE DATA DURING FREE PLAY  
FOR JOHN  
OCTOBER 17-21

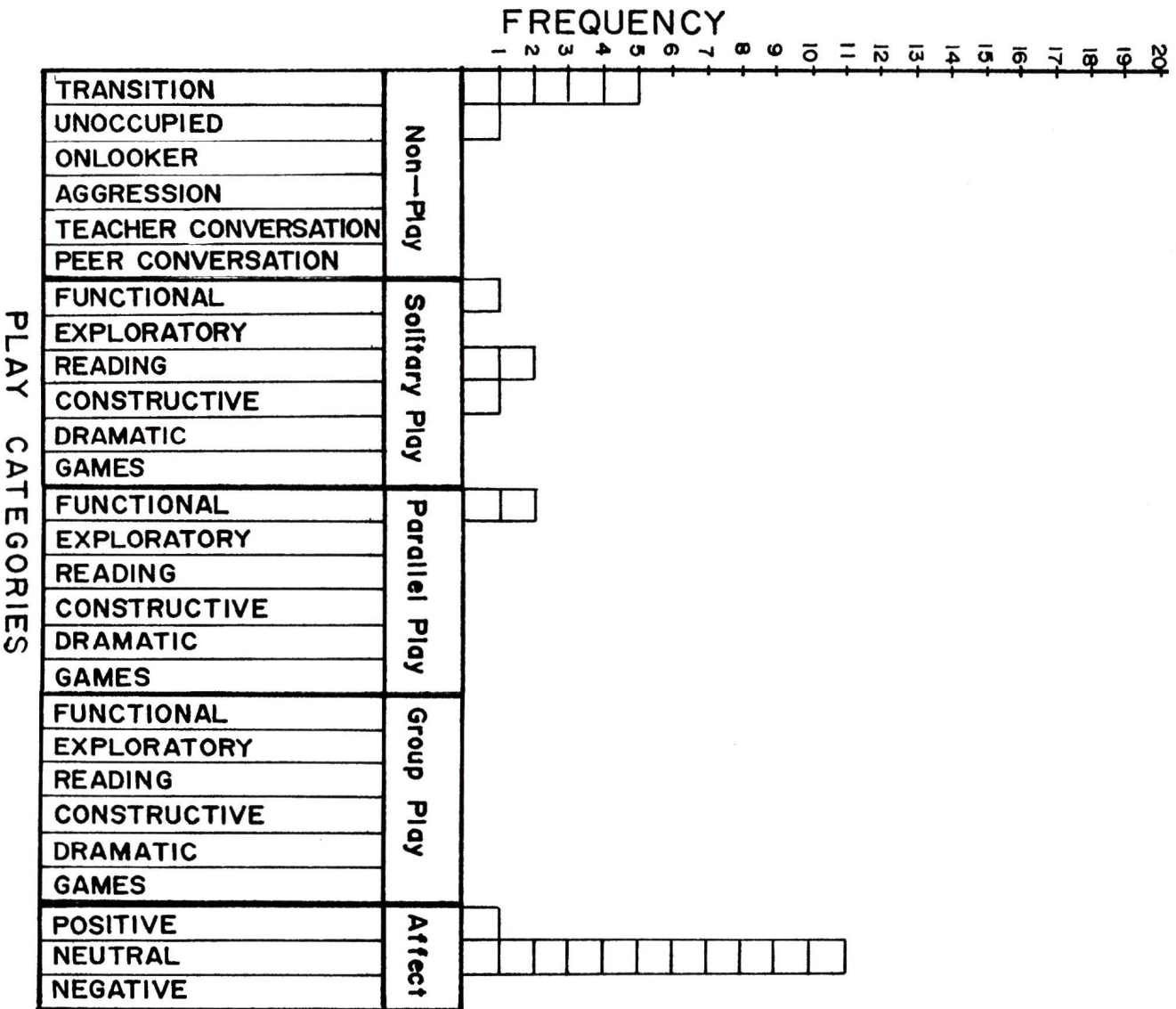


FIGURE 3 - BASELINE DATA DURING PLAYGROUP  
FOR STEVEN      OCTOBER 17- 21

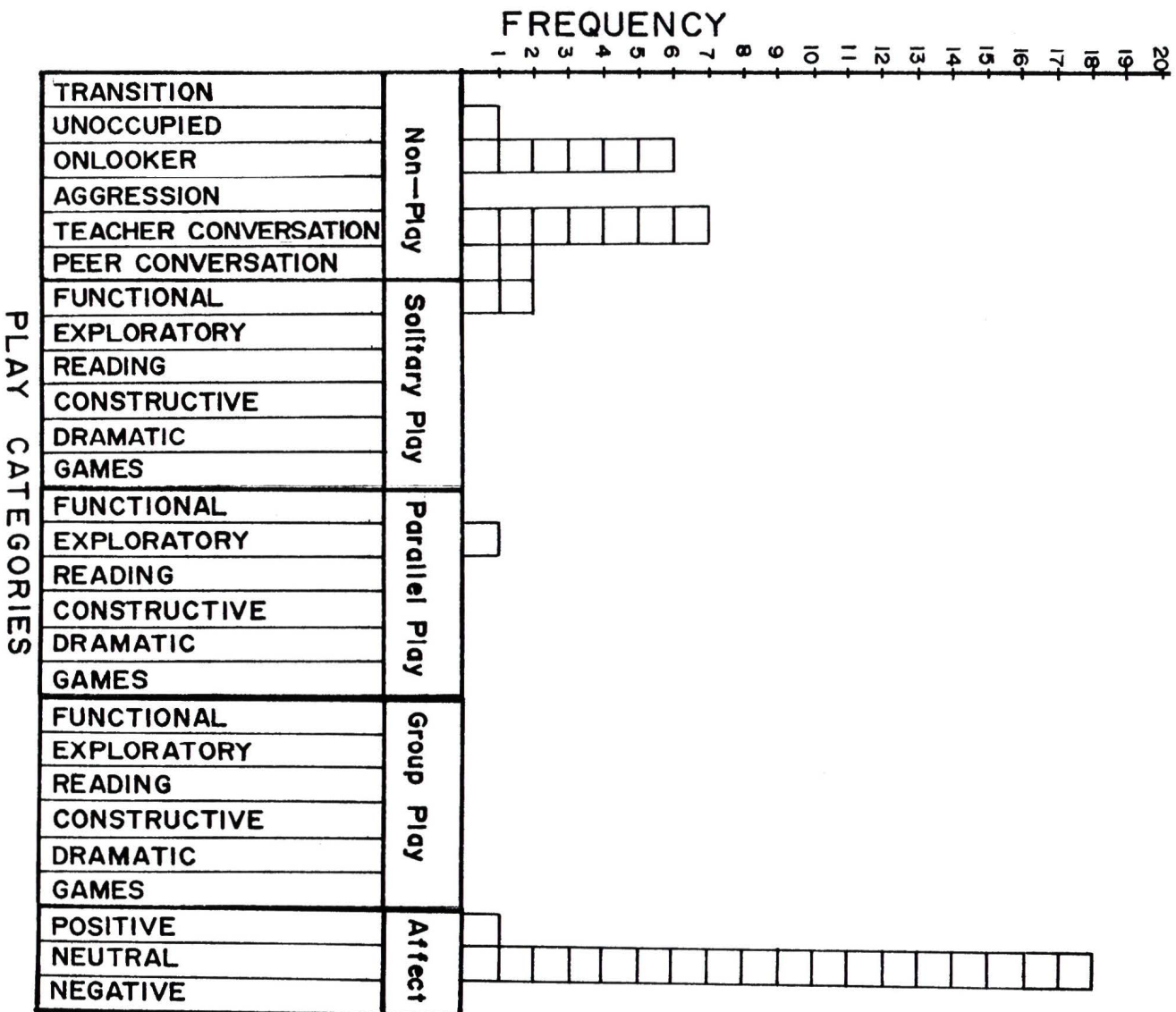
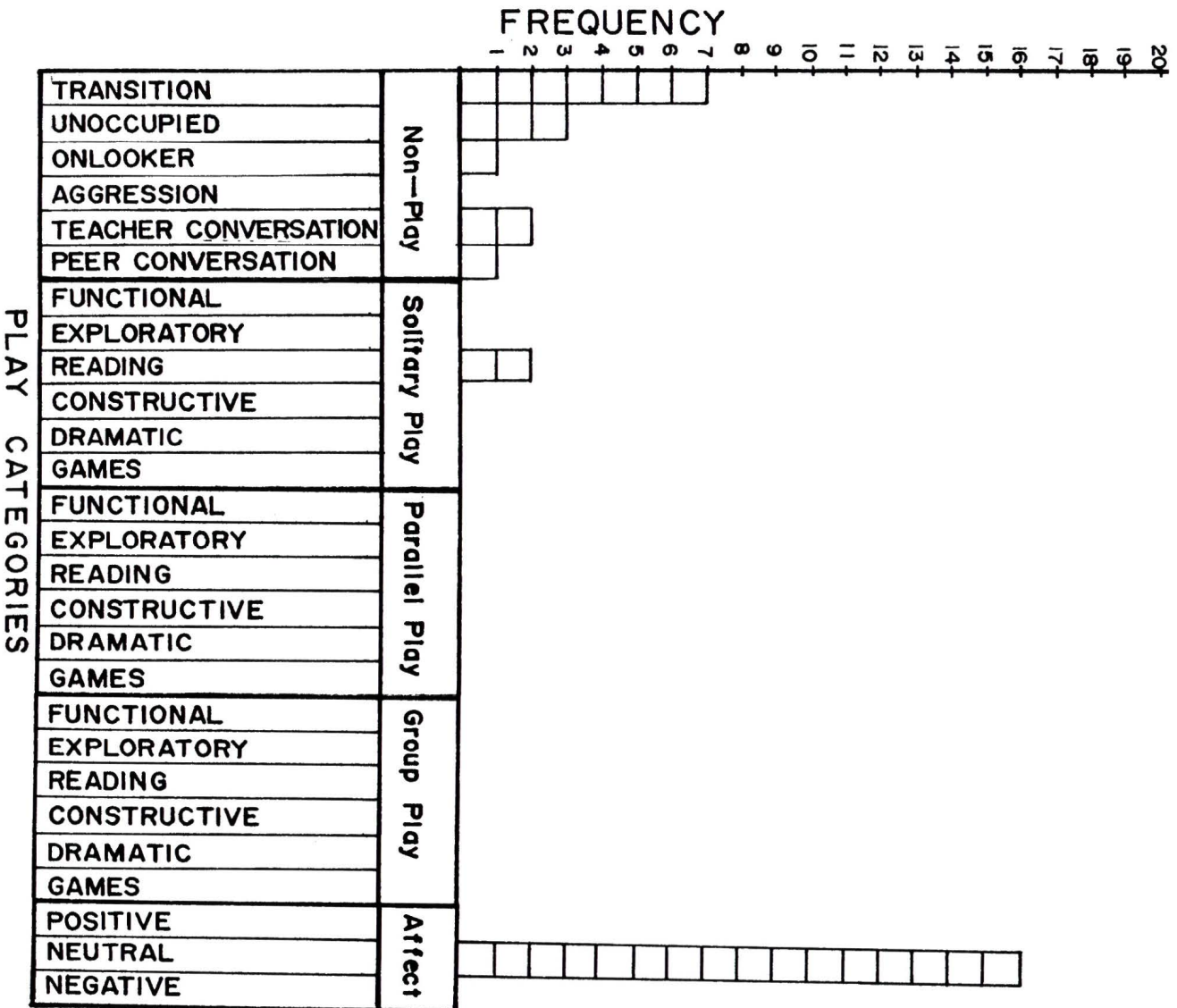


FIGURE 4 - BASELINE DATA DURING FREEPLAY  
 FOR STEVEN      OCTOBER 17-21



### Baseline Data for Ellen

During playgroup, 47% of the 19 baseline observations for Ellen fell into the category of group play as shown in Figure 5. Of the remaining observations, 26% were non-play, 21% solitary play and 5% parallel play. Within the non-play category, peer conversation accounted for 80% of the non-play behavior. In the affect category, 79% of the 19 behaviors were neutral and 21% were positive.

The observations of Ellen during freeplay with the whole class showed less diversity, with 88% of the 16 observations falling into the category of group play and the remaining 13% that of parallel play shown in Figure 6. In the affect category, 94% of the 16 observed behaviors were neutral and 6% positive. This shows a decrease of 15% in positive affect from that of playgroup where 21% of the observations were coded as positive.

### Baseline Data for Donald

During the playgroup, 60% of the 15 baseline observations for Donald fell into the category of group play as shown in Figure 7. A further 7% each fell into the categories of non-play and parallel play and the remaining 27% were coded as solitary play. In the affect category, 93% of the 15 behaviors were coded as neutral and 7% were coded as positive.

As with Ellen's baseline observations, Donald's behaviors during freeplay with the whole class shown in Figure 8 were less diverse. A full 83% of Donald's 12 observed behaviors fell into the category of group play

during freeplay while the remaining 17% was categorized as non-play divided equally between peer conversation and transition. In the affect category, 92% of the 12 behaviors were coded as neutral and 8% as negative.

FIGURE 5-BASELINE DATA DURING PLAYGROUP  
FOR ELLEN                      OCTOBER 17 - 21

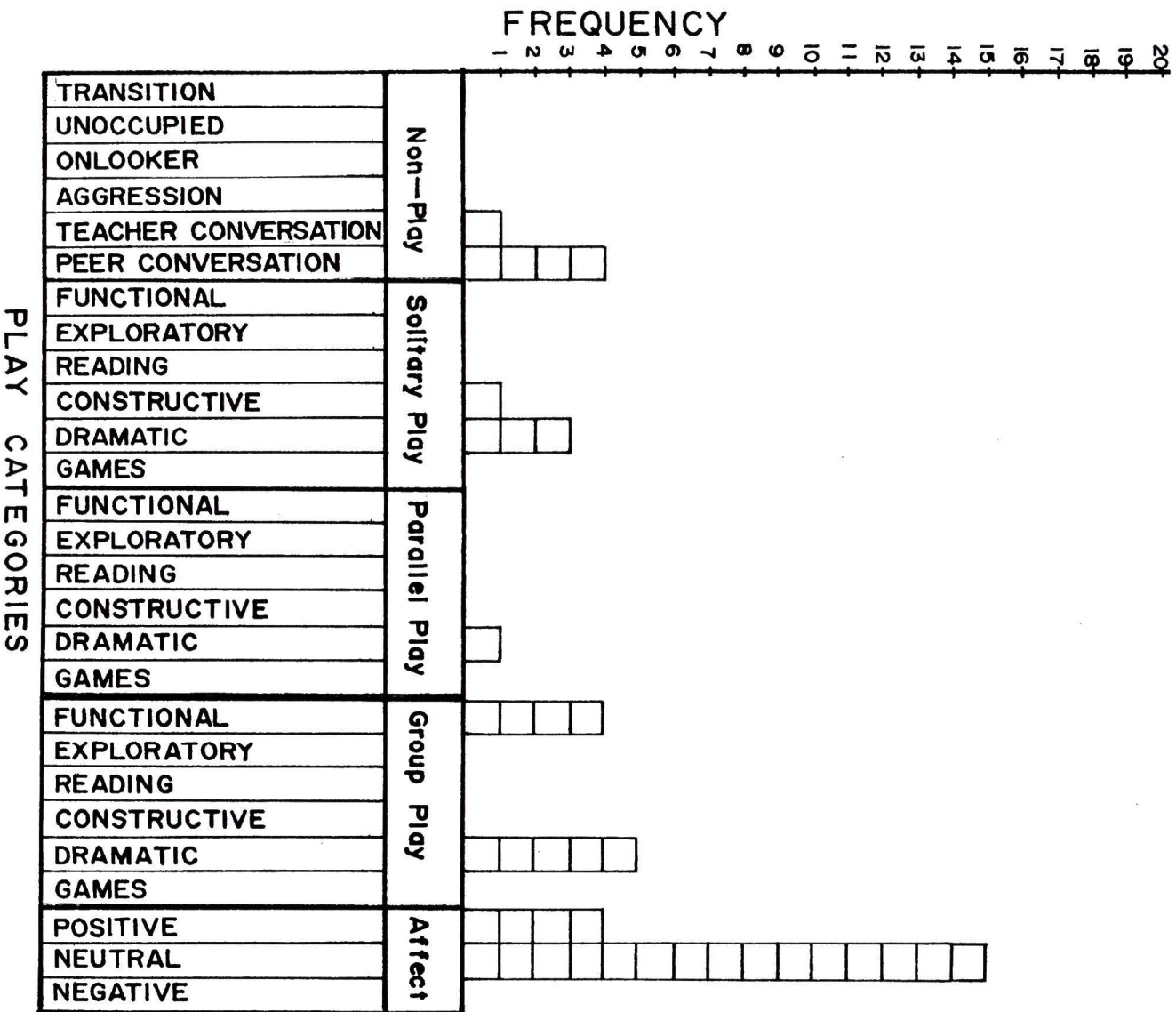


FIGURE 6 - BASELINE DATA DURING FREEPLAY  
FOR ELLEN                      OCTOBER 17-21

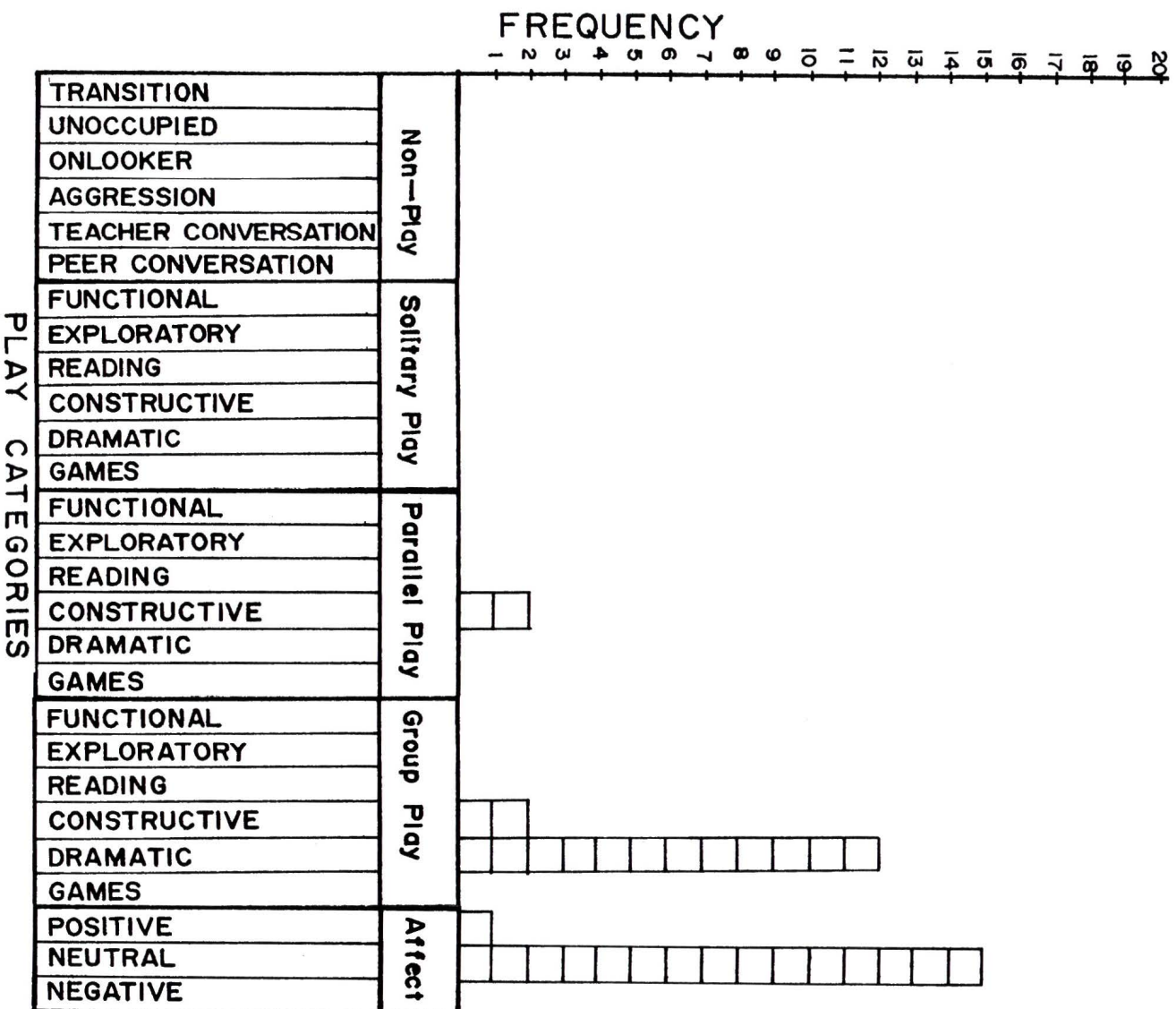


FIGURE 7 - BASELINE DATA DURING PLAYGROUP

FOR DONALD      OCTOBER 17 - 21

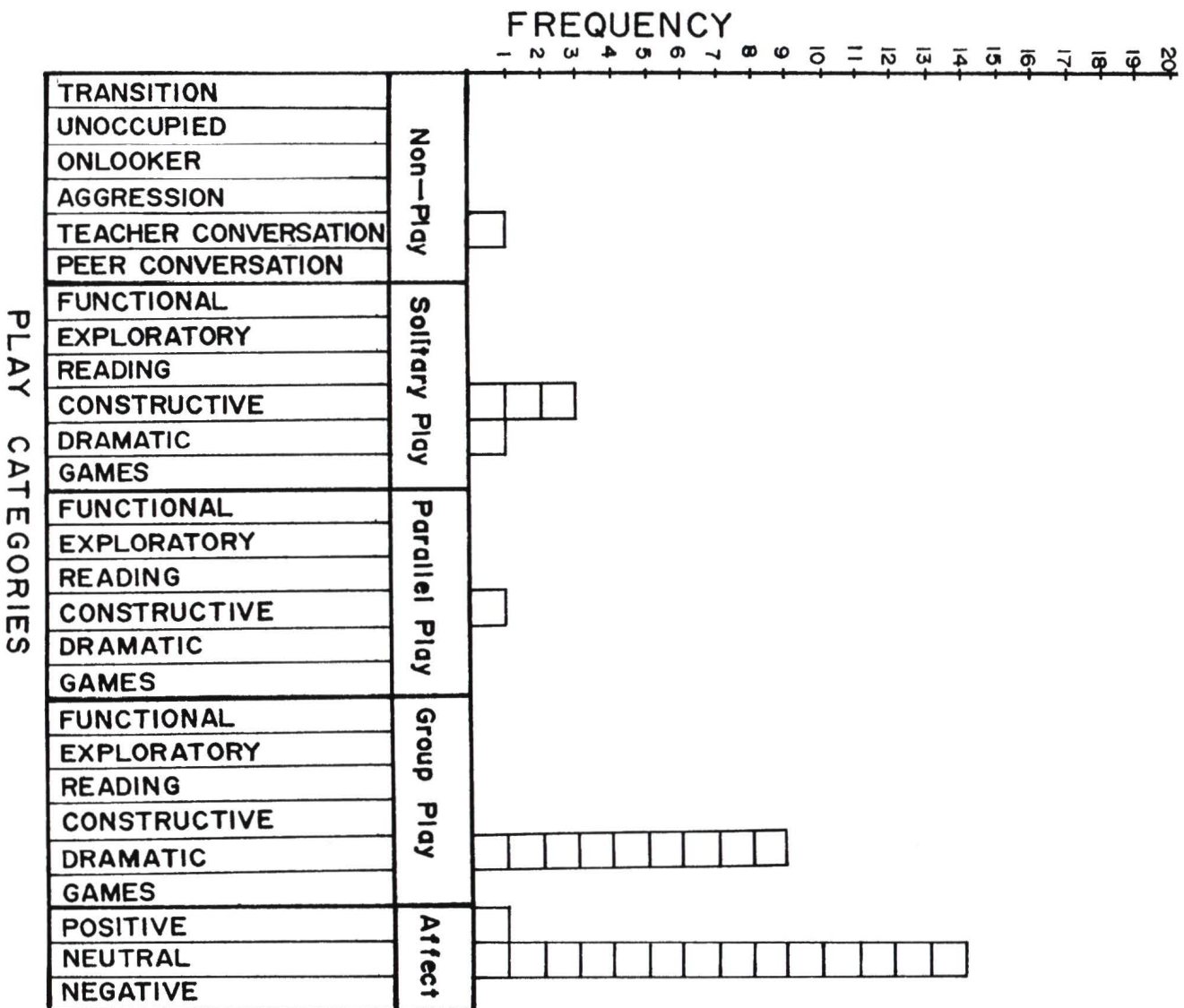
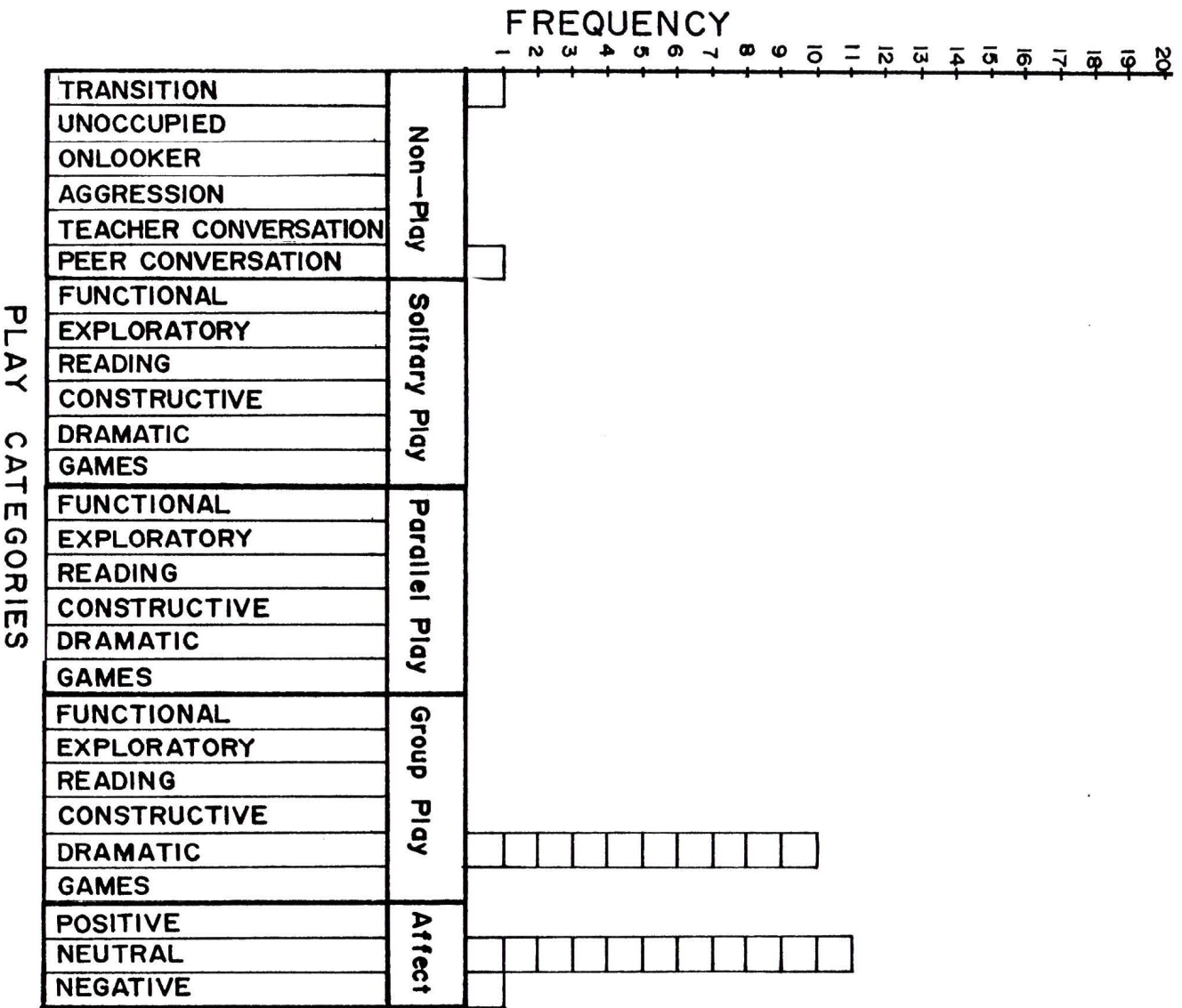


FIGURE 8 - BASELINE DATA DURING FREEPLAY  
FOR DONALD      OCTOBER 17 - 21



### Validation of Baseline Data

The baseline data were validated by conducting separate interviews with two of the teachers at the child care centre to compare their assessments of each child's play level to that of the baseline data collected during the playgroup and during freeplay with the whole class. The interviews began with a description and examples of the play and non-play categories in the Play Observation Scale to familiarize each teacher with the categories that were used to code the play and non-play behaviors. Each teacher was then asked what behaviors each of the children would be most likely to display. Following this, the graphs of the baseline data were shown to the teacher and the teacher was then asked if she felt that these graphs accurately depicted each child's behavior. In the first interview, Teacher A said that John's behavior was most likely to fall in the categories of solitary and parallel play. She said that Steven's behavior was primarily non-play and solitary play, and that for both Ellen and Donald group play would be the dominate behavior. When shown graphs of the baseline observations during playgroup and freeplay with the whole class, she felt that the observations recorded accurately represented each child's play level.

Similarly, in the second interview Teacher B said that John would most likely display non-play, solitary and parallel play behavior. She said that Steven's behavior would be primarily that of non-play with some solitary play, and that both Ellen and Donald would be most likely to display group play behavior. When shown the graphs of the baseline observations for each child during playgroup and freeplay with the whole class, she also

indicated that the observations accurately represented each child's play level.

#### Summary of Baseline Data

The baseline data for both John and Steven show a pattern of behavior concentrated in the areas of non-play and solitary play. Neither children displayed any group play behaviors during the baseline observations. Non-play behavior accounted for 43% of John's observed behavior during the playgroup and 50% during freeplay. For Steven this percentage of non-play behavior was higher with 84% of Steven's observed behavior coded as non-play during the playgroup and 88% coded as non-play during freeplay. Of their non-play behaviors, both children exhibited higher percentages of onlooker behavior during the playgroup than during freeplay. For John this percentage of onlooker behavior was 29% during the playgroup and 0% during freeplay and for Steven, 32% during the playgroup and 6% during freeplay. The baseline data during the playgroup also showed that 44% of Steven's non-play behaviors were that of teacher conversation.

The baseline data for Ellen and Donald showed higher levels of group play during the freeplay observations. Group play accounted for 88% of Ellen's and 83% of Donald's freeplay behavior. During the playgroup both children showed more diverse play patterns which included higher levels of peer conversation for Ellen and more solitary and parallel play for both Ellen and Donald.

The baseline behaviors of John and Steven were consistent with the findings of Brophy and Stone-Zokowski (1984), who reported that toddlers

with special needs were more inclined to engage in solitary and parallel play and spent more time looking at and listening to other children and adults than did non-special needs toddlers. Different from the findings of the toddler study, however, John and Steven's onlooker and solitary play behavior in the present study occurred within the controlled environment of the playgroup where, (a) group size was limited, (b) no other interruptions occurred in the play setting (such as other children entering or leaving the play room), and (c) the children present all demonstrated an interest one or more of the other children.

The presence of this type of onlooker behavior during the playgroup indicates an interest on the part of John and Steven in the play of the other children, but points to the difficulty of entering play despite controlling for group size, disruptions in the play environment and the selection of children who have shown an interest in them. This finding concurs with Dodge, Schlundt and Delugach (1983), who point out the complexity of peer entry skills, referring to peer entry as a high level skill. It also indicates that Ellen and Donald did not have the necessary skills to invite John or Steven into their activities, or that they may not have perceived the helping roles which they had demonstrated at other times to be warranted during play.

### Intervention Data

The intervention data were compared with the baseline observations to determine if there was any change in observed behaviors during the intervention period from that of the baseline period. The intervention data were collected by observing each child at intervals to code their behavior following the playgroup lesson. Each of these play sessions during the intervention phase was video taped so that observations could be coded and validated at a later time. The following section will describe the intervention observations for each child who took part in the intervention phase of the study comparing the observations made during the intervention with those during the baseline phase. This will be followed by a description of a validity test and a summary of the intervention data.

#### Intervention Data for Steven

During the playgroup intervention phase, 32 interval observations were taken of Steven. These observations show that the percentage of non-play behavior for Steven dropped 46% from 84% at baseline to 38% during the playgroup intervention (see Figure 9). Of those non-play behaviors, the amount of teacher conversation dropped from 44% at baseline to only 8% during the intervention and the peer conversation rose from 13% to 58% respectively. The onlooker behavior also decreased from 38% at baseline to 33% during the intervention. There was also a decline in the amount of solitary play during the intervention from 11% during baseline to 9% during

the intervention and the amount of parallel play from 5% to 0%. Corresponding with these decreases in non-play, solitary and parallel play was an increase in group play for Steven from 0% during the baseline observations to 53% during the playgroup intervention. An interaction was coded as group play when Steven was engaged in an activity with one or both of the peer helpers and they were sharing a common goal or purpose such as playing "Ring Around the Rosy", or taking turns playing with a play prop. During the intervention, there was also an increase in the positive affect from 5% during baseline observations to 25% during the playgroup intervention.

The intervention data for Steven during freeplay with the whole class (see Figure 10), also shows a decline in the non-play behavior and an increase in play behavior throughout the 31 observations. The non-play behavior declined by 36% from 88% during the baseline freeplay observations to 52% during the intervention freeplay observations. The percentage of solitary play increased by 29% from 13% to 42%, while both parallel and group play increased from 0% to 3% from baseline freeplay observations to freeplay after the intervention respectively. No change took place in the affect scores between the baseline and the intervention freeplay condition.

At each of the interval observations, the name of the child or children with whom the subject interacts is recorded on the Play Observation Scale. From this, tallies of the number of times that Steven interacted with Donald and Ellen were made. For comparative purposes, this was done during the baseline phase and again during the intervention phase. It was found that Steven interacted twice each with Ellen and Donald during the baseline

phase and that during the intervention phase the number of interactions increased to 14 times with Ellen and 17 times with Donald. This showed an 86% increase in interactions with Ellen and an 88% increase in interactions with Donald from the baseline condition to the intervention phase.

FIGURE 9 - DATA DURING PLAYGROUP INTERVENTION  
FOR STEVEN OCTOBER 27 - NOVEMBER 9

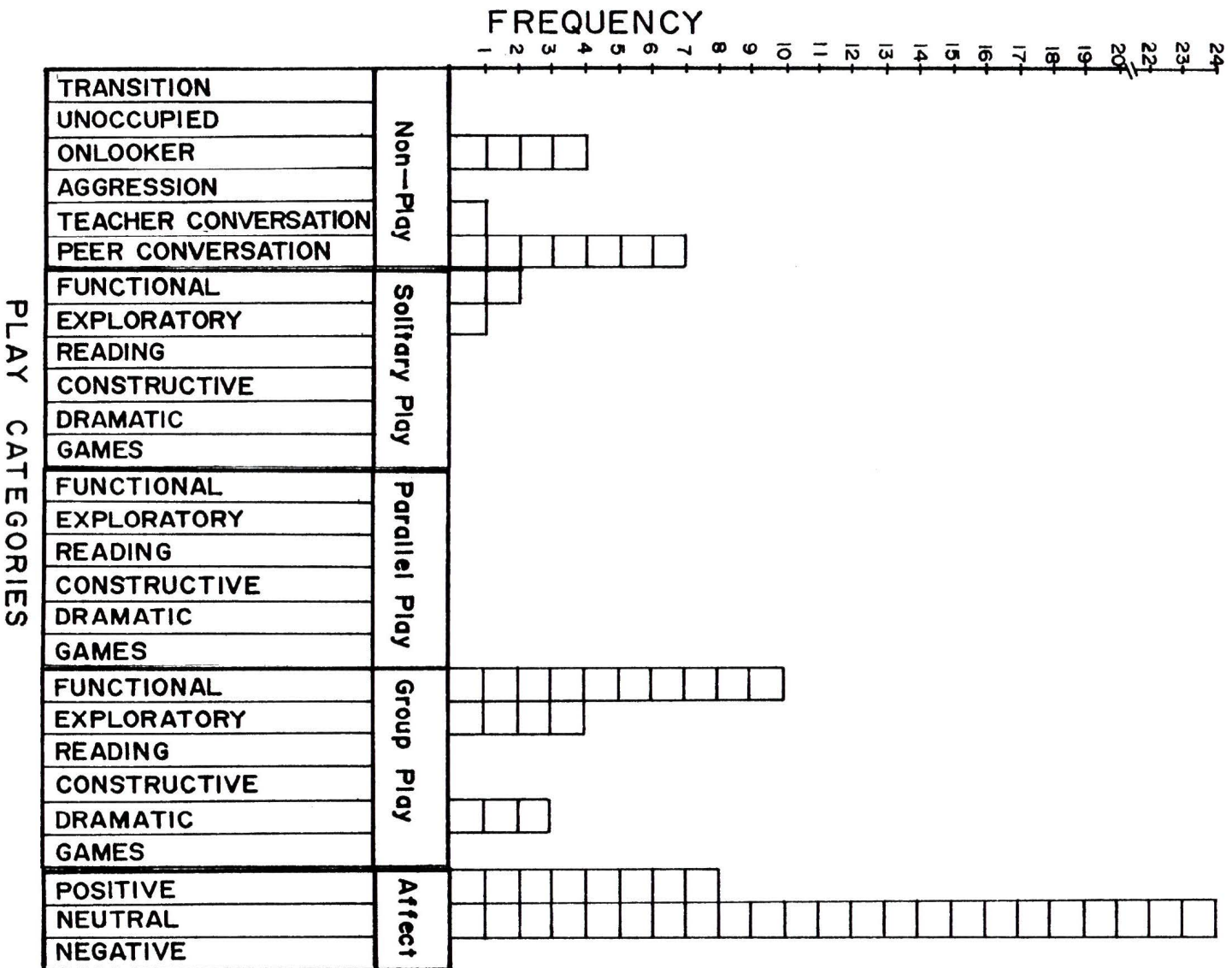
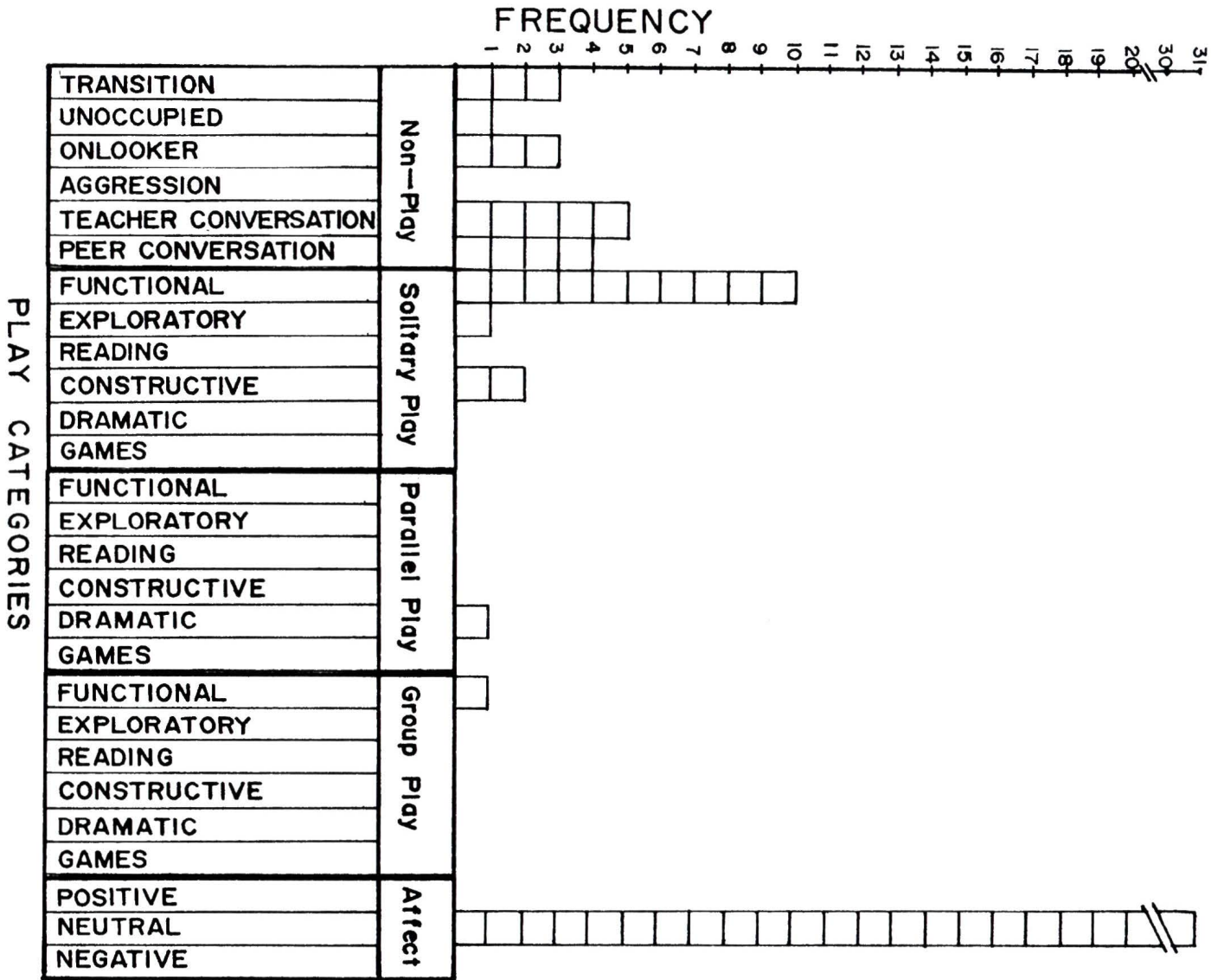


FIGURE 10 - DATA DURING FREEPLAY  
FOR STEVEN OCTOBER 27 - NOVEMBER 9



### Intervention Data for Ellen

During the playgroup intervention phase, 31 interval observations were taken of Ellen. These observations during the playgroup intervention are similar to those taken during the baseline. As shown in Figure 11, 23% of the behaviors observed were categorized as non-play, 32% solitary, 10% parallel and 35% group play. In the affect category, six of the 31 behaviors or 19% were positive and 71% neutral. Of the 31 behaviors observed during freeplay with the whole class shown in Figure 12, 27% less group play was coded during the intervention phase compared to the baseline and a corresponding increase occurred in non-play from 0% to 23% and in solitary play from 0% to 6% from the baseline to the intervention phase.

Despite similar percentages in non-play and play categories during the playgroup condition and the changes noted above during the freeplay condition. There were also changes in the patterns involving play partners for Ellen when comparing the baseline observations to the intervention. During the baseline condition, 80% of Ellen's interactions were with Donald and 20% were with Steven. This changed during the intervention where 54% of Ellen's interactions were with Donald and 46% were with Steven.

FIGURE 11 - DATA DURING PLAYGROUP INTERVENTION  
FOR ELLEN OCTOBER 27 - NOVEMBER 9

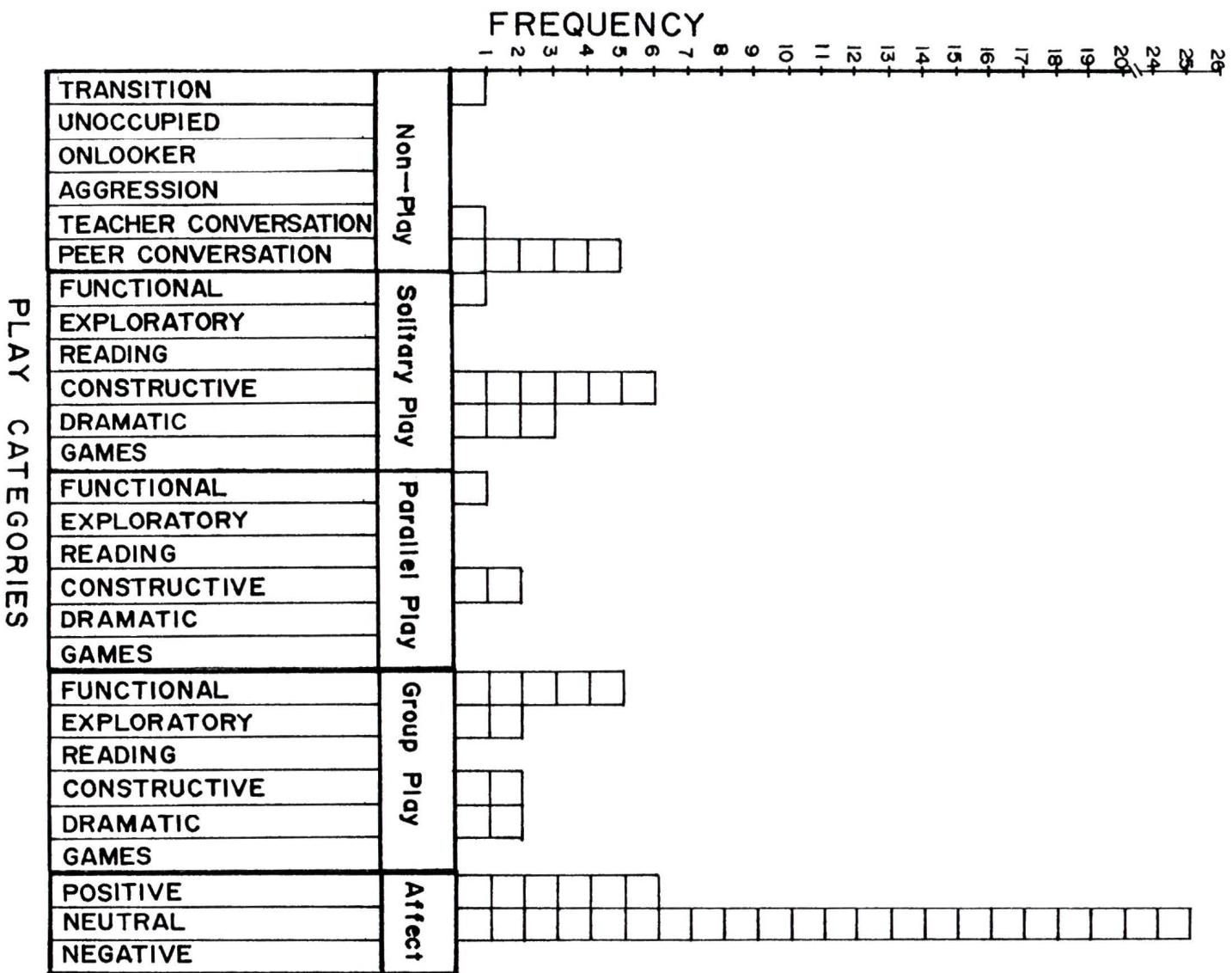
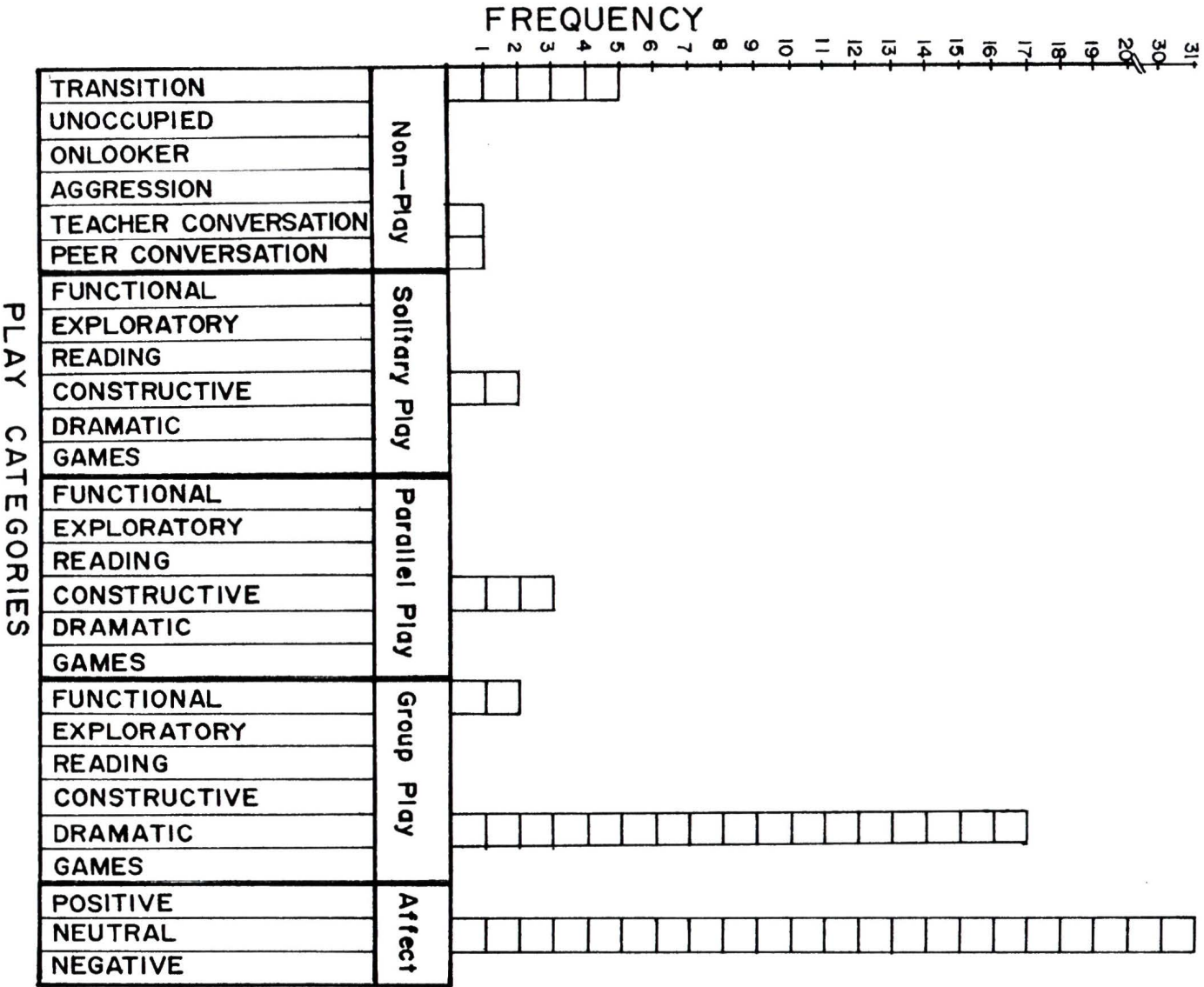


FIGURE 12 - DATA DURING FREEPLAY  
FOR ELLEN OCTOBER 27 - NOVEMBER 9



### Intervention Data for Donald

During the playgroup intervention phase, 32 interval observations were taken of Donald. The observations show a decrease in group play during the intervention from 60% recorded at baseline to 44% during the intervention and a corresponding increase in non-play from 7% at baseline to 34% during the intervention, (see Figure 13). During the playgroup intervention, peer conversation accounted for 82% of Donald's observed non-play behavior. In the affect category, there was an increase of 15% in the positive behaviors observed, from 7% recorded during the baseline playgroup phase to 22% during the intervention playgroup phase.

During freeplay following the playgroup, 30 interval observations were taken over the course of the intervention phase. These observations show that the distribution of non-play and play behaviors was similar for Donald from interventions to the baseline conditions. As shown in Figure 14, observational data for Donald during freeplay following the intervention shows 13% non-play, 73% group and 13% solitary play. In the affect category all behaviors were neutral.

To analyze playmate interaction, tallies of the number of times that Donald interacted with Ellen and Steven were made from the Play Observation Scale. This was done during the baseline phase and again during the intervention phase. During the baseline condition, including both the time in playgroup and during freeplay following the playgroup, none of Donald's interactions were with Steven. This changed dramatically during the intervention, where 53% of Donald's interactions were with

Steven and 47% were with Ellen.

FIGURE 13 - DATA DURING PLAYGROUP INTERVENTION  
FOR DONALD OCTOBER 27 - NOVEMBER 9

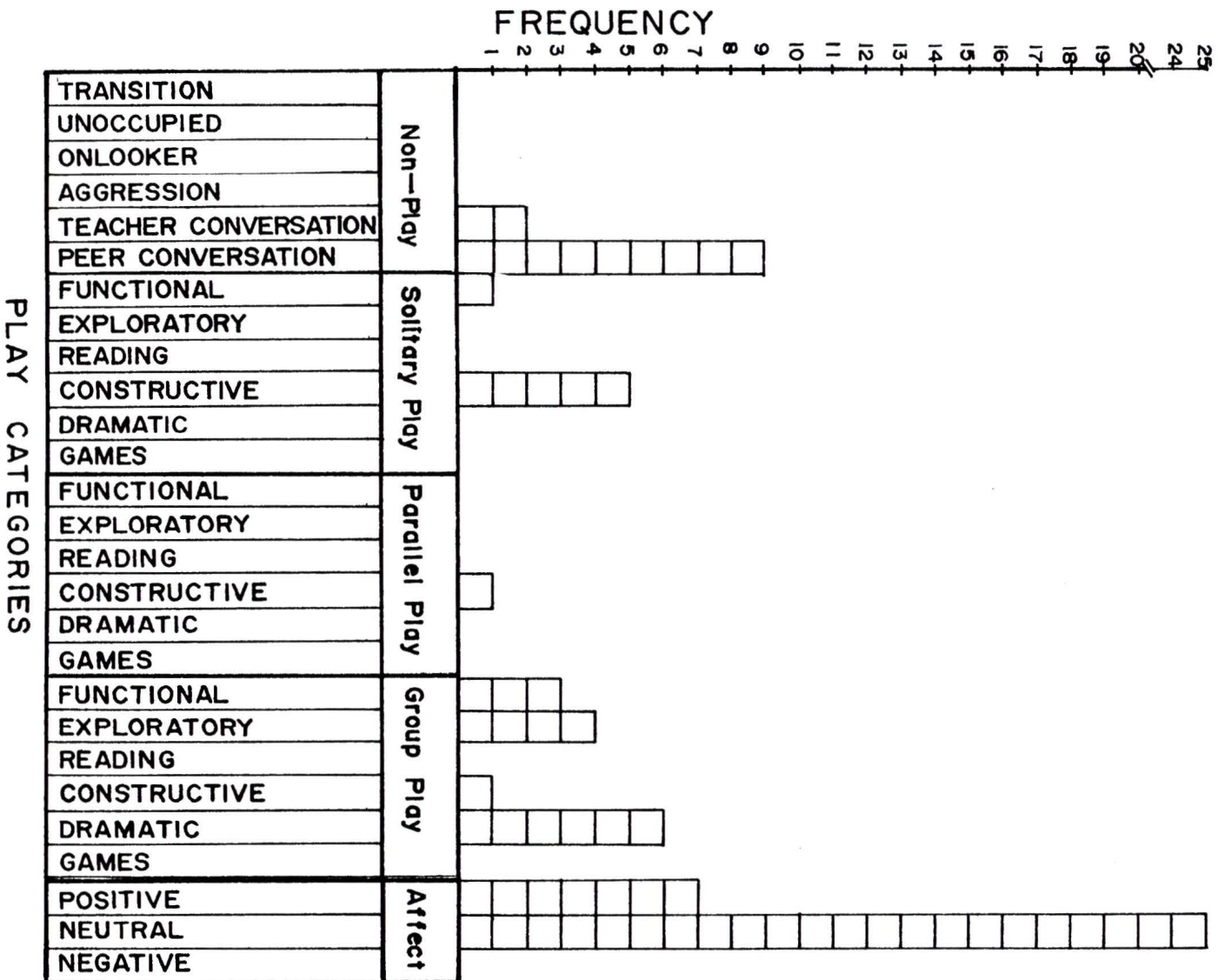
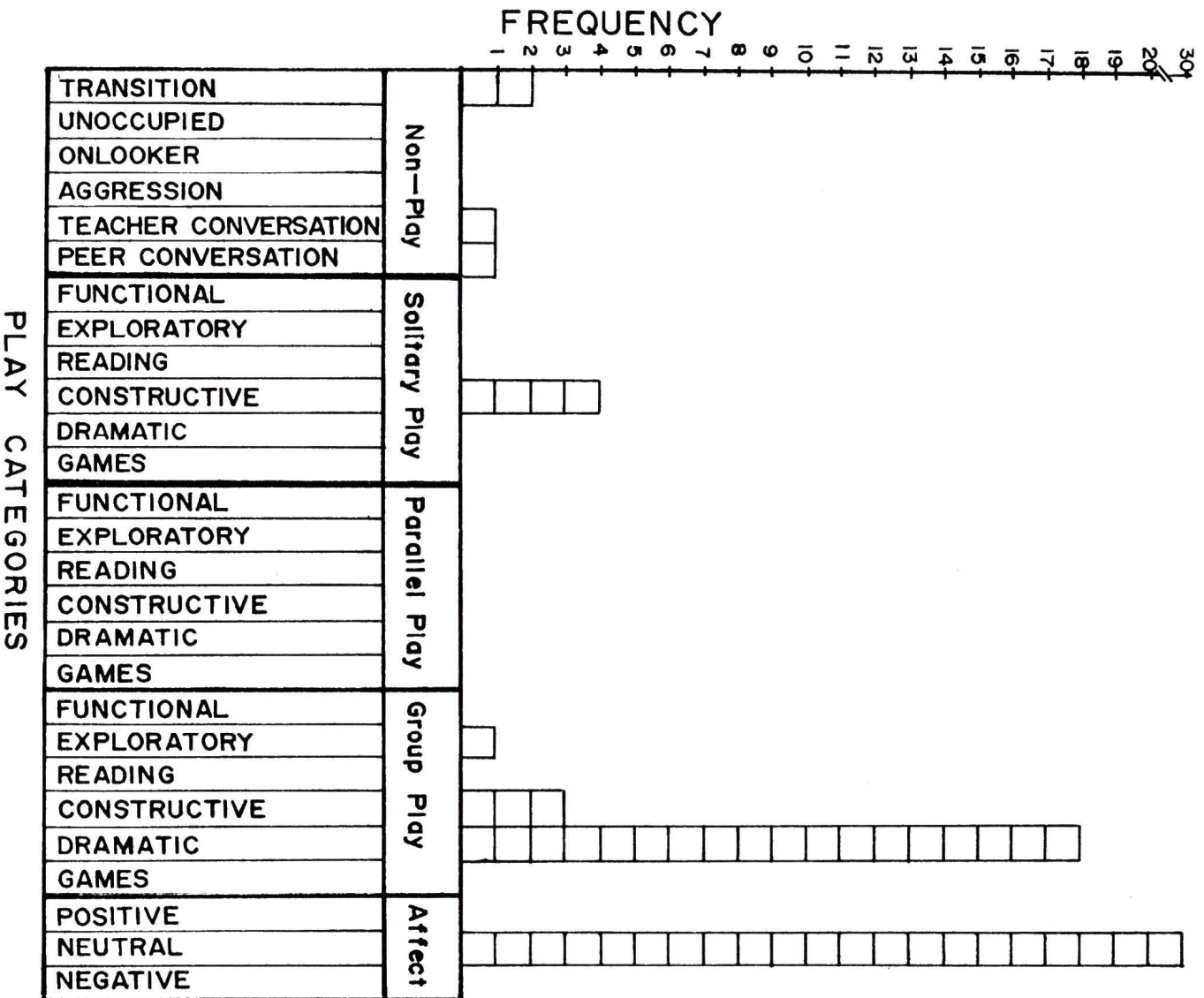


FIGURE 14 - DATA DURING FREEPLAY  
FOR DONALD OCTOBER 27 - NOVEMBER 9



### Validation of Intervention Data

An estimate of observer reliability was calculated by having another graduate student view a randomly selected video tape of the playgroup session during the intervention phase and calculate the play level and quality of interaction using the same interval observation procedure. A comparison was then made between my observations of the same playgroup session. From this calculation, it was determined that consensus was reached on 10 of the 11 or 91% of the behaviors observed.

### Summary of Intervention Data

During the intervention phase, a growth in Steven's play behavior was evident. This was most apparent during Steven's time in the playgroup where increases of 53% in group play, and 18% in peer conversation were recorded. Corresponding with these increases, were decreases of 46% in non-play behavior, 34% in teacher conversation, and 19% in onlooker behavior from the baseline condition to the intervention. These increases in play behavior were also evident during freeplay where an increase of 29% occurred in solitary play, and 3% each in parallel and group play. Corresponding to this was a 36% decrease in non-play behavior. Changes in the interaction between Steven and Ellen and Donald during the intervention were also dramatic. The number of interactions that Steven had with Ellen and Donald increased by 86% and 88% from the baseline condition to the intervention phase.

These outcomes are consistent with findings from other peer helping studies (Kohler & Fowler, 1985; Strain & Odom, 1986) promoting interaction through the use of role play techniques and teacher prompting. Different from these other studies, however, is that the increases reported in the present study occurred without the use of a token reward system. Reports of spillover effects in positive initiations by Strain, Shores and Timm (1977) and Strain, Shores and Kerr, (1976) were not supported by the present study. Although some increases in Steven's play levels were maintained between the playgroup condition and freeplay, the higher positive affect scores reported during the playgroup of all three children did not occur during freeplay following the playgroup intervention sessions.

#### No-lesson-no-prompting Data

The purposes of the no-lesson-no-prompting phase were to establish a new baseline of play levels and play interactions for each of the children following the intervention and prior to the prompting phase. There were several factors preventing a full week of the no-lesson-no-prompting phase to take place. These factors will be described in the following section, followed by a description of the data collected for each of the three children who completed this phase of the study and a summary of the findings.

### Absenteeism

Although it is estimated that young children may contract from six to eight respiratory and one or two digestive illnesses each year (Morgan, 1986), the issue of absenteeism did not arise during the pilot study. During the study however, Ellen was absent for three days with an eye infection. Prior to her absence, the child care centre had also been closed for Remembrance Day which fell on a Friday before the weekend. The playgroup was delayed for two of the three days that Ellen was absent and had not been in session for a total of five days before it resumed again with Donald and Steven. This corresponded to the beginning of the no-lesson-no-prompting phase of the study.

The day before Ellen's return, the playgroup resumed and Donald and Steven were told that during this part of the playgroup there would be no lessons. Each of the four times Donald and Steven were observed during the playgroup they were playing together and interacting positively. When Ellen returned to the playgroup, however, she was not interested in group play, and her observed behavior showed that she was either involved in peer conversation or solitary play. Ellen's lack of interest in group play also seemed to influence Donald's interactions with Steven and changed the playgroup dynamics. Without being able to encourage play through prompting, it became clear that many of the opportunities to stimulate more positive interactions between the children were lost.

### Re-entry Following Absenteeism

A contingency plan for re-entry into the playgroup following a child's absence was not developed in the proposal. Neither did the need for a re-entry strategy become apparent during the pilot phase of the study. When looking at the play behavior which followed Ellen's absence, however, it became apparent that a re-entry strategy would have aided all the children involved in the playgroup to resume their positive interactions. Such a strategy may have included allowing the children the opportunity to play on their own informally in the playgroup during a re-entry period to become re-acquainted with each other following an absence of one of the playgroup members or a closure of the child care centre. This may have then been followed by a brief review of the playgroup objectives and lessons once the formal playgroup had resumed. During the study, the correspondence between Ellen's re-entry into the playgroup and the no-lesson-no-prompting phase of the study prohibited this type of review of the lessons and prompting for interactions.

### Ethical Considerations

The playgroup objectives of increasing the positive social interaction between Steven, Ellen and Donald and helping to increase Steven's play level were not being supported by the no-lesson-no-prompting phase of the study. As it was designed, the no-lesson-no-prompting phase was to act as a baseline phase after the intervention and prior to the prompting phase. I was faced

with the ethical question of whether to continue gathering data or whether to begin the prompting phase of the study to re-establish the positive interactions between the children. I chose to shorten the length of the no-lesson-no-prompting phase and begin the prompting phase so that I could attempt to re-establish the previous play levels and interactions. This question may not have arisen if Ellen had not been absent, had been absent fewer days, or if her absence had coincided with another phase of the study where a review of the playgroup lessons and prompting would have been possible. Under the circumstances, however, beginning the prompting phase of study seemed necessary to continue meeting the objectives of the playgroup.

#### No-lesson-no-prompting Data for Steven

As shown in Figure 15, four of the 10 observations, or 40% of Steven's total observed behavior in the playgroup during the no-lesson-no-prompting phase of the study, was that of non-play behavior. A further 10% was parallel play and 50% group play. Of the non-play behaviors, 75% were that of onlooker and 25% peer conversation. This represents an increase in the onlooker behavior of 17% and a decrease in peer conversation by 19% from the intervention to the no-lesson-no-prompting phase respectively. In the affect category, four of the ten observations or 40% of the observed behaviors were rated positive and 60% neutral. The relatively high group play and positive affect score during the no-lessons no-prompting phase can be explained by the positive group play interactions between Steven and Donald on the first day before Ellen's return.

During freeplay with the whole class (see Figure 16), six of the eight observations, or 75% of Steven's observed behavior was scored as non-play, 13% solitary and a further 13% parallel play. In the affect category, all eight of the behaviors were scored as neutral. When comparing this to the intervention phase, this shows a 23% increase in Steven's non-play behaviors during the no-lessons-no prompting phase. Of the non-play behaviors scored during the no-lessons-no prompting phase, 83% consisted of transition and 17% onlooker behavior where Steven was watching the other children. Given the shorter length of the no-lessons no-prompting phase of the study, tallies to determine playmate preference were not used to compare the amount of interaction between the children from the baseline phase to the no-lesson-no-prompting phase.

FIGURE 15- DATA DURING PLAYGROUP NO LESSONS  
 NO PROMPTING FOR STEVEN NOVEMBER 16-18

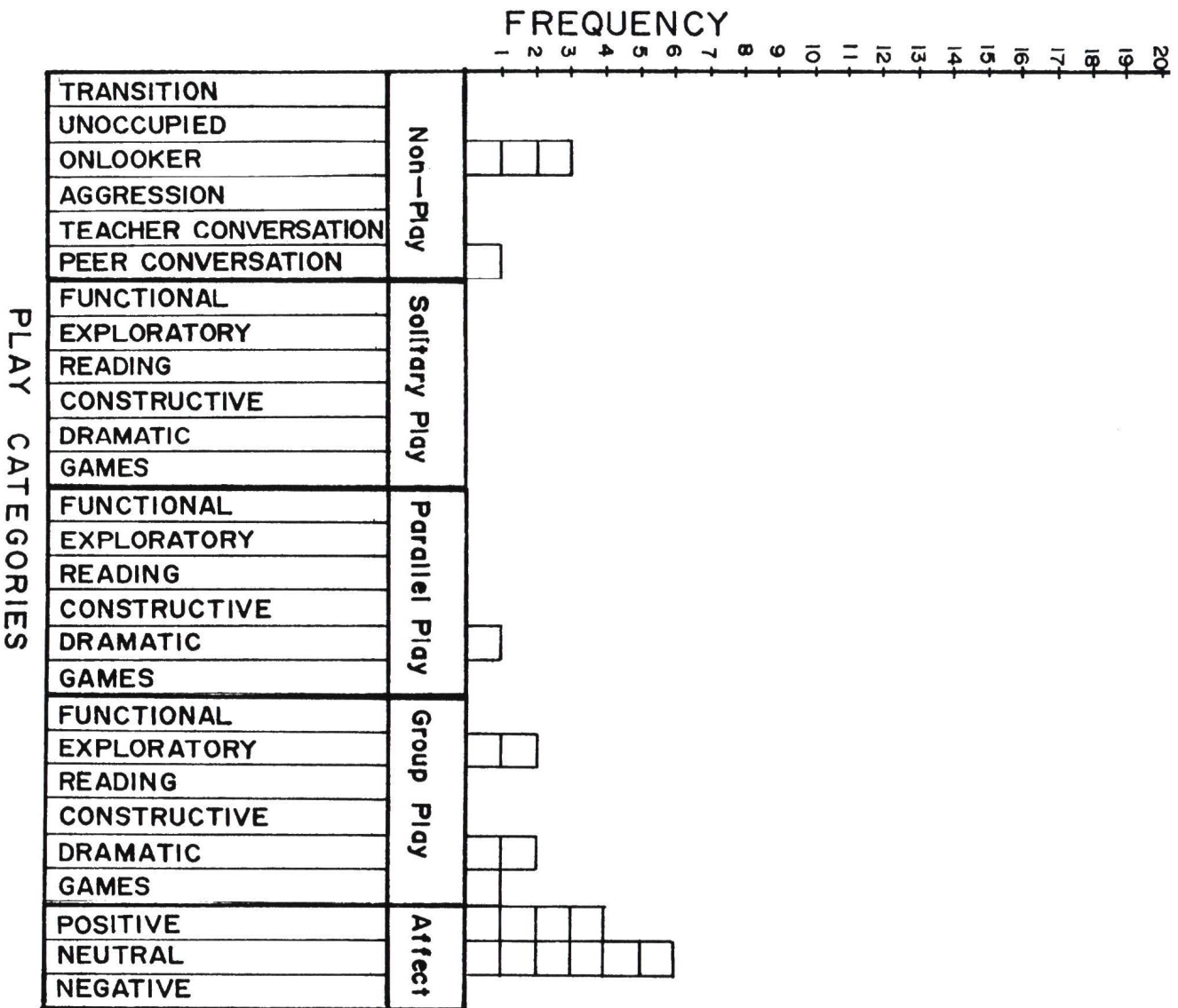
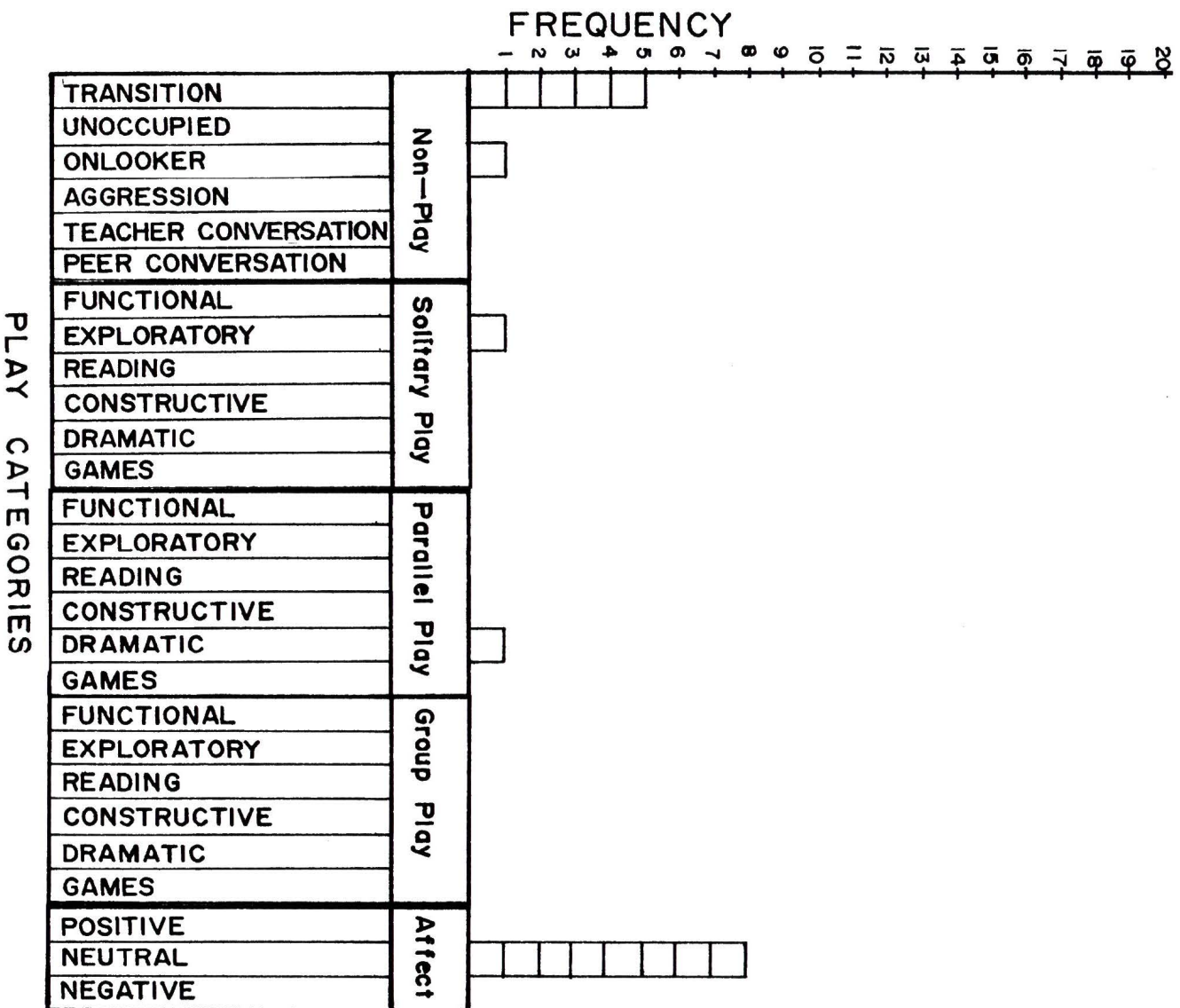


FIGURE 16 - DATA DURING FREEPLAY  
FOR STEVEN      NOVEMBER 16-18



No-lesson-no-prompting Data for Ellen

As shown in Figure 17, four of the eight observations, or 50% of Ellen's observed behavior was non-play, 38% solitary play and 13% group play. Of the non-play behaviors, 75% was categorized as peer conversation and 25% teacher conversation. Of the remainder of Ellen's total observed behavior, 38% was solitary play and 13% group play. In the affect category, all eight of the behaviors were scored as neutral. When comparing these scores to the intervention phase of the study, Ellen's non-play behavior increased by 21%, and her group play behavior decreased by the same amount. Ellen's score for positive affect also went from 19% during the intervention to 0 during the no-lesson-no-prompting phase. During freeplay following the playgroup (see Figure 18), three of the four observations, or 75% of Ellen's observed behavior was categorized as group play, 25% as non-play and all four of the affect scores were neutral.

FIGURE 17- DATA DURING PLAYGROUP NO LESSONS  
 NO PROMPTING FOR ELLEN NOVEMBER 17-18

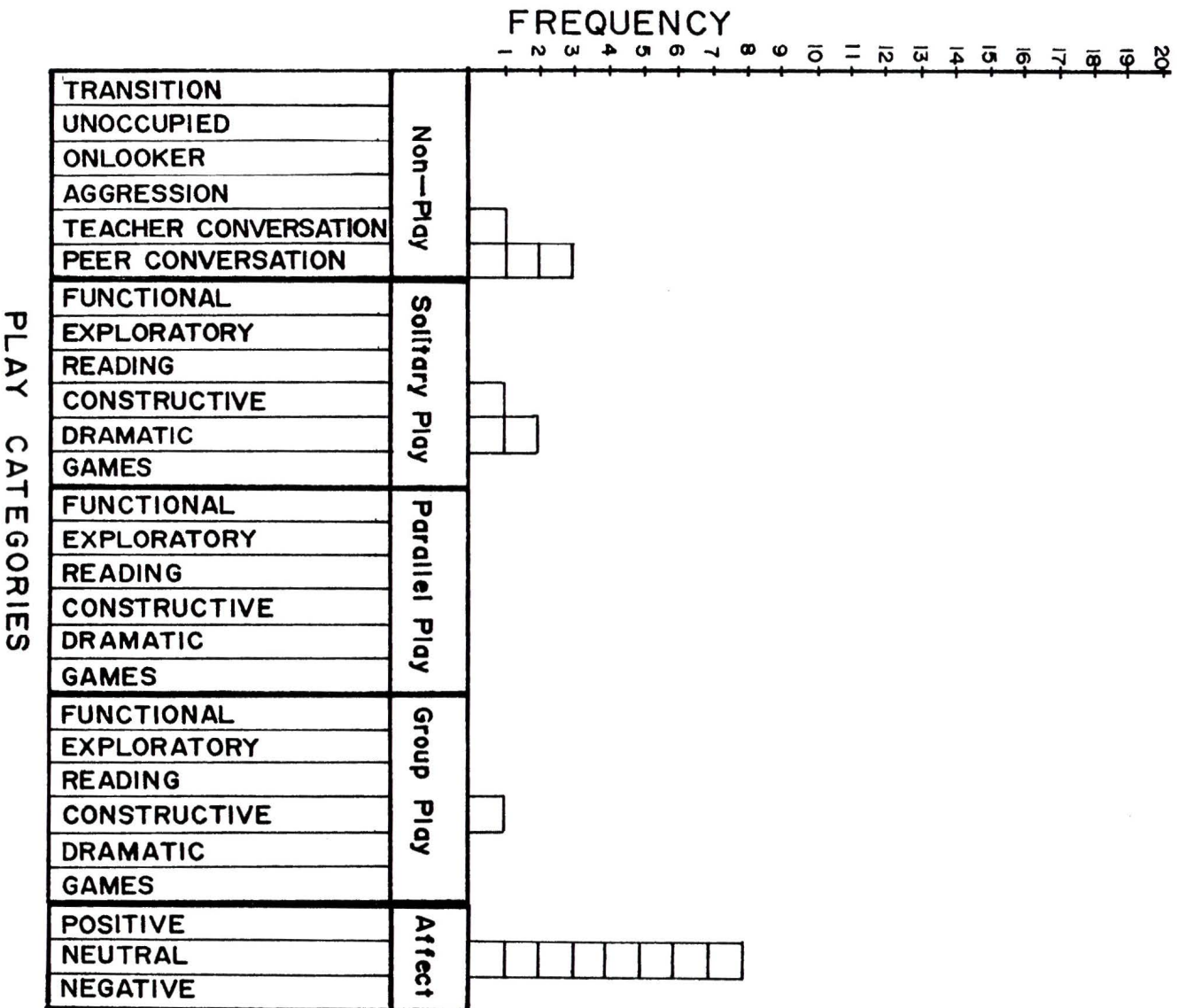
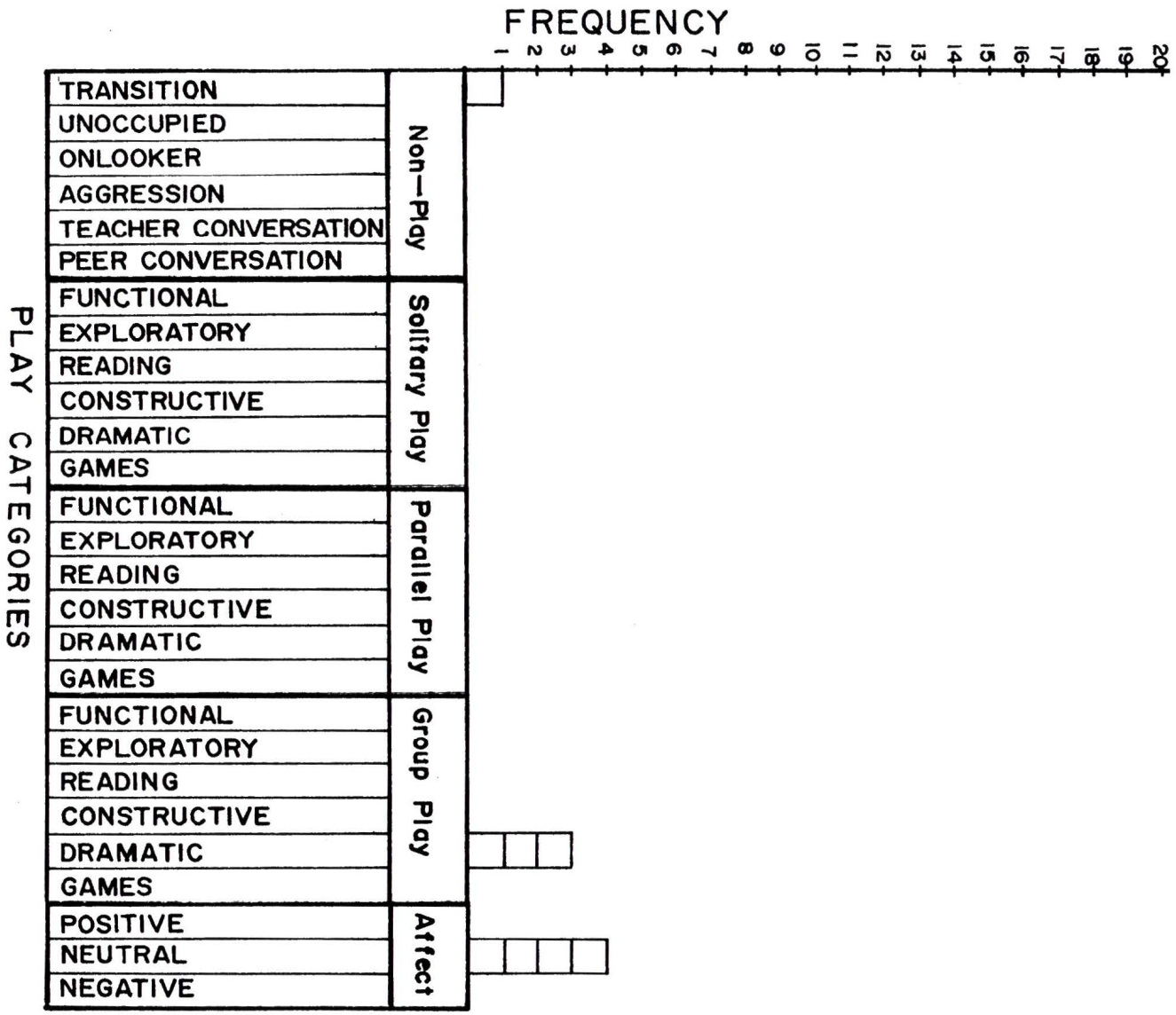


FIGURE 18-DATA DURING FREEPLAY

FOR ELLEN NOVEMBER 17-18



No-lesson-no-prompting Data for Donald

As shown in Figure 19, two of the 13 observations, or 15% of Donald's observed behavior during the playgroup session of the no-lesson-no-prompting phase was that of non-play, 31% solitary, 8% parallel play and 46% group play. Within the affect category 62% of the 13 observed behaviors were rated as neutral and 38% positive. As in the case with Steven, this relatively high group play and positive affect score during the no-lesson-no-prompting phase can be explained by the positive group play interactions between Steven and Donald on the first day before Ellen's return. The eight observations taken during freeplay with the whole class, indicate 100% group play and 100% neutral affect (see Figure 20).

FIGURE 19 - DATA DURING PLAYGROUP NO LESSONS  
 NO PROMPTING FOR DONALD NOVEMBER 16-18

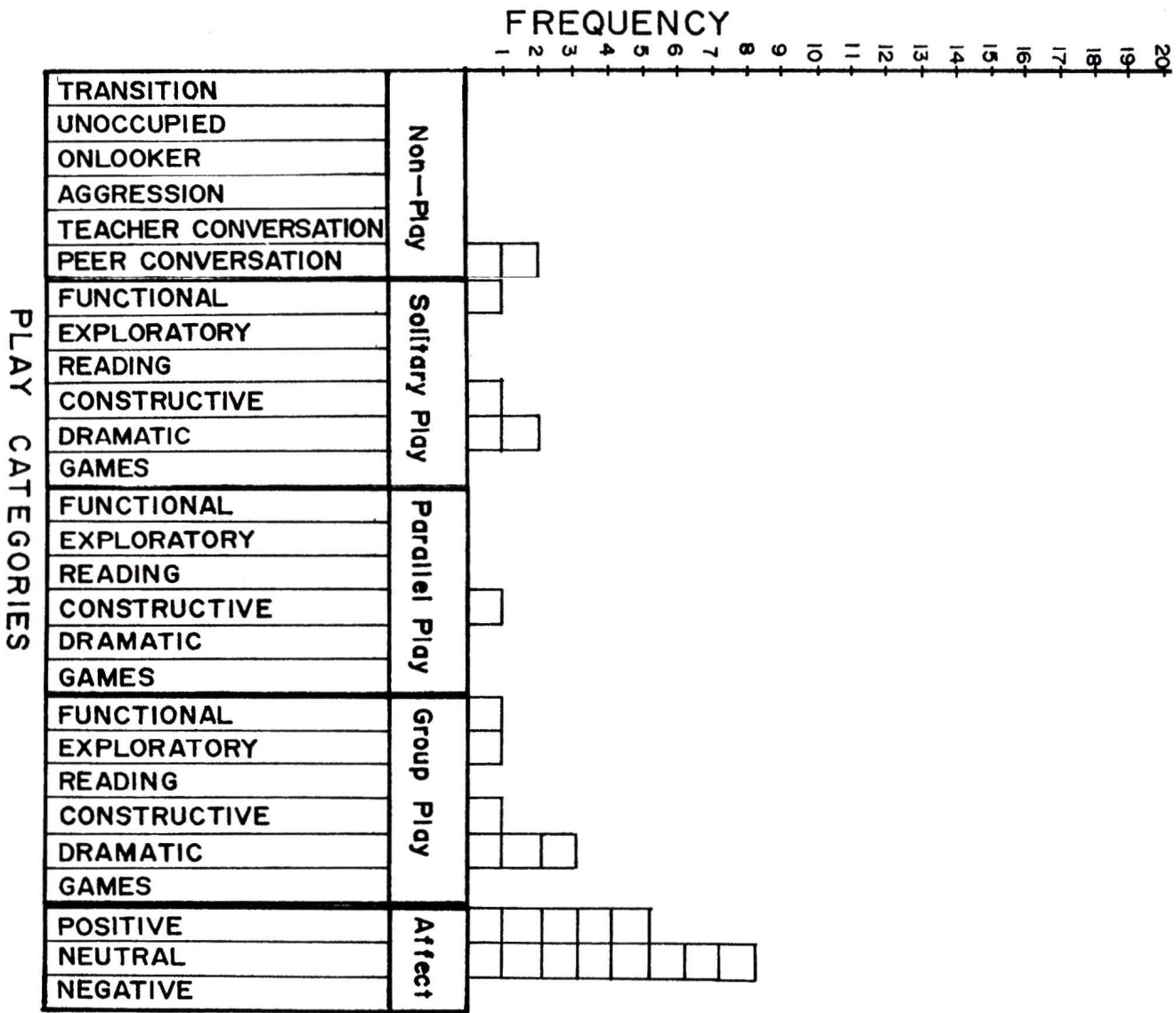
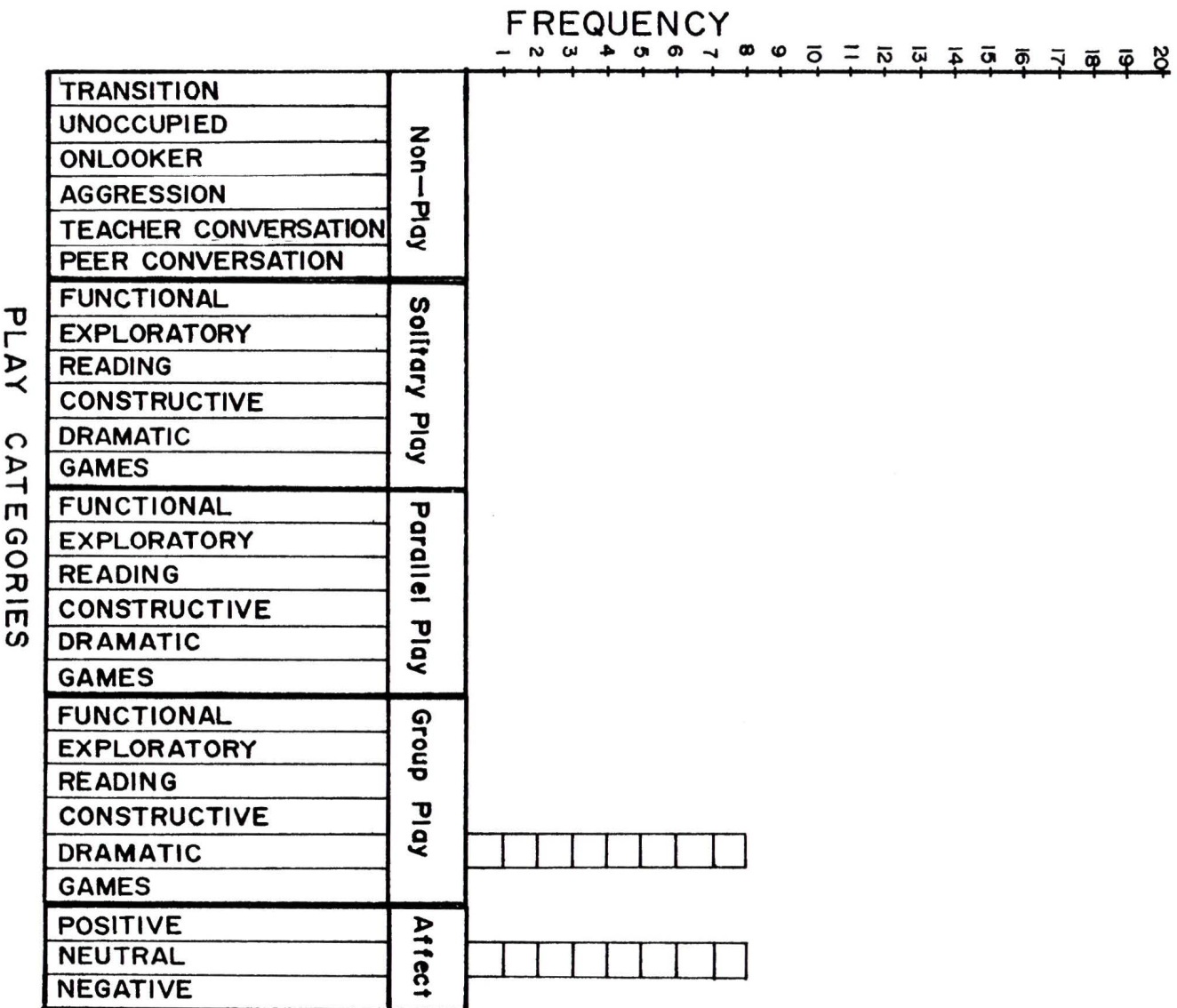


FIGURE 20-DATA DURING FREEPLAY  
FOR DONALD NOVEMBER 16-18



### Summary of No-lesson-no-prompting Data

During the no-lesson-no-prompting phase of the study, Steven's non-play behavior rose by 2% from the intervention phase. Of these non-play behaviors, the percentage of onlooker behavior grew by 42% from the time of the intervention and the percentage of peer conversation dropped by 33%. Observations of Steven during freeplay showed a 23% increase in non-play and a 29% decrease in solitary play behavior compared to the intervention. This change indicates the importance of teacher involvement during play time in monitoring and helping promote positive interactions between the children.

These findings also attest to difficulty of play entry for children with special needs. During the intervention phase, the peer helpers were taught to support Steven's play and encourage him to interact. In the no-lesson-no-prompting phase, the peer helpers were not prompted to interact with Steven and Steven did not initiate play with them. During this time, the pattern of Steven's onlooker behavior which was found in the baseline condition began to re-emerge.

During the playgroup session of the no-lesson-no-prompting phase of the study, half of Ellen's observed behaviors were that of non-play, and none of the interactions were recorded as positive. This lack of positive interaction is not found in any other phase of the playgroup sessions and serves as a reminder of the difficulty of sustaining positive interactions if one is feeling poorly, or readjusting to a situation, as was the case following Ellen's absence and re-entry into the playgroup. Ellen's difficulty

sustaining play following her absence from the playgroup raises the following two questions regarding teacher expectations of peer helpers: Are we placing too much pressure on children to support the play of others, particularly at times when they may need support and encouragement themselves? and Is it appropriate to expect peer helpers to sustain helping roles during their play time?

### Prompting Data

Data collected during the prompting phase were compared with the baseline observations and the intervention phase to determine if there was any change in observed behaviors from previous conditions. The prompting data were collected by observing each child at intervals to code their behavior during the playgroup session and immediately following the playgroup during freeplay with the whole class. Each of these play sessions during the prompting phase was video taped so that observations could be coded and validated at a later time. In the section which follows, data from the prompting phase will be described for each child who took part in this phase of the study. This will include a description of the playmate interactions between the three children and a description of the validity test and summary of the prompting data.

### Prompting Data for Steven

During the playgroup in the prompting phase, 20 of the 25 observations, or 80% of Steven's observed behavior was that of group play, 4% was parallel, 8% solitary play and a further 8% that of non-play (see Figure 21). This shows an increase in Steven's group play of 27% from the intervention phase and 80% from the baseline condition. This corresponds with a decrease of 30% in non-play behaviors from the intervention phase and a decrease of 76% in non-play behaviors from the baseline condition to the prompting phase. In the affect category, positive behaviors accounted for 64% of the 25 scores during the prompting phase, this represents an increase of 39% from the intervention and 59% from the baseline condition.

The data during freeplay in the prompting phase (see Figure 22), indicate 10 of the 20 observations, or 50% of Steven's observed behavior are that of non-play, all of which is categorized as transition. The remaining 50% of Steven's observed behavior is play behavior, 40% of which is solitary play and 10% group play. In the affect category, 95% of the 20 observed behaviors were scored as neutral and 5% positive. These results show an increase of 38% in play behavior from the baseline condition and are similar to those taken in freeplay during the intervention phase.

To show playmate interaction, tallies of the number of times that Steven interacted with Ellen and Donald during the prompting phase were calculated from the Play Observation Scale. This included both the time in the playgroup and freeplay. Tallies showed an 88% increase in Steven's interactions with Ellen and an 89% increase in Steven's interaction with

Donald from the baseline condition to the prompting phase.

FIGURE 21 - DATA DURING PLAYGROUP WITH PROMPTING  
FOR STEVEN NOVEMBER 21-29

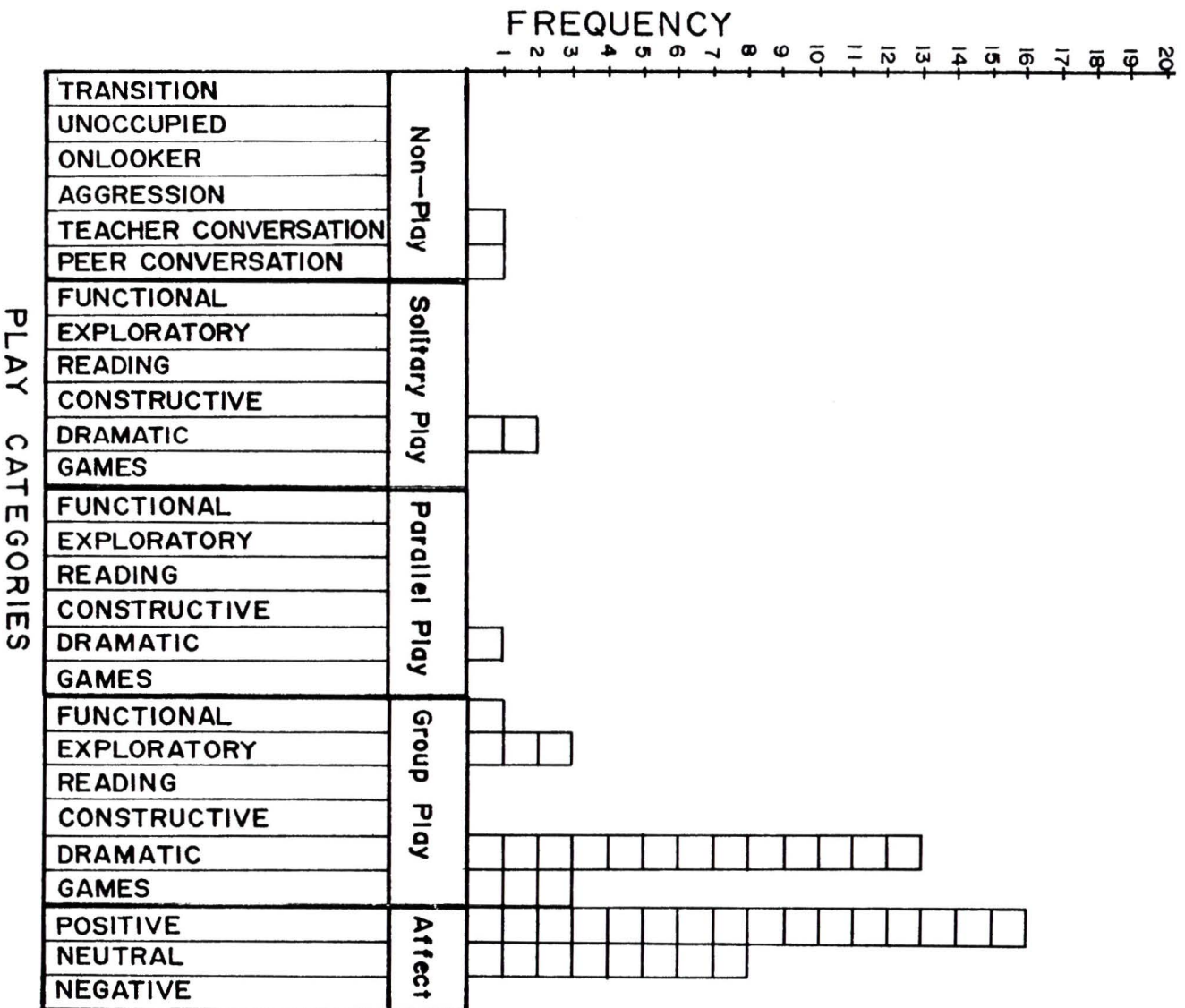
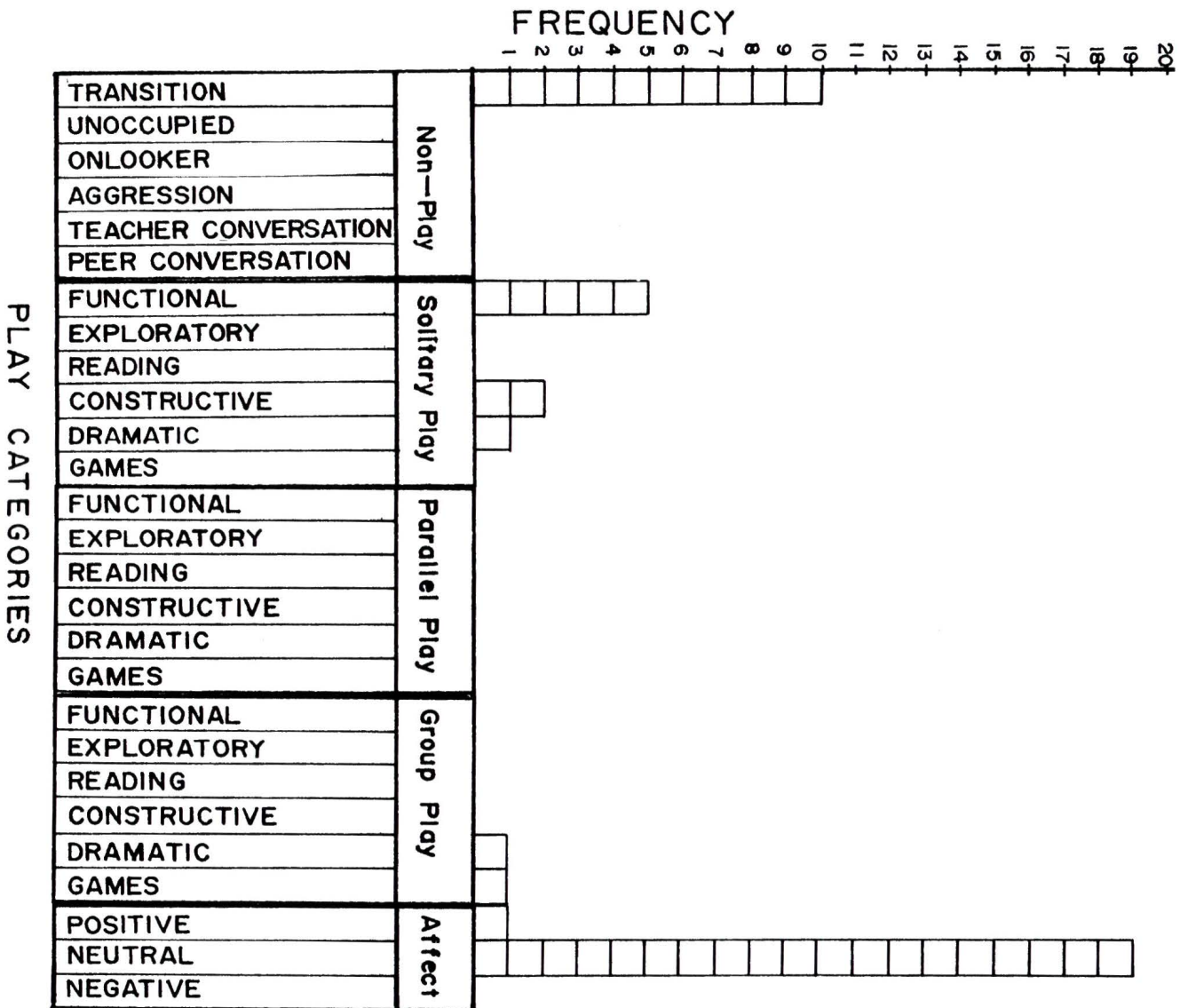


FIGURE 22 - DATA DURING FREEPLAY  
FOR STEVEN NOVEMBER 21-29



### Prompting Data for Ellen

During the prompting phase, 16 of the 28 observations of Ellen, or 57% were recorded as group play, a further 25% were that of solitary play and 18% non-play, (see Figure 23). In the affect category, 39% of Ellen's behaviors were scored as positive and 61% neutral. When comparing these data to the intervention phase, these results show a decrease of 5% in non-play, and a 22% increase in group play from the intervention to the prompting phase. In the affect category, there is a 20% increase in positive interaction from the intervention phase to the prompting phase.

The data for Ellen taken in freeplay during the prompting phase show that 4 of the 20 observations or 20% were non-play behaviors, 10% solitary, 20% parallel and 50% group play, (see Figure 24). In the affect category, 95% of the scores were rated neutral and 5% positive. When comparing these results to the intervention and baseline conditions, the majority of the behaviors in each condition remained that of group play with an increase from the baseline condition in non-play of 23% and 20% during the intervention and the prompting phase respectively. Of these non-play behaviors, 71% in the intervention phase and 100% in the prompting phase were that of transition at snack time, which would indicate that Ellen may have been called to snack earlier than in the baseline phase or had chosen to go to snack earlier than in the baseline phase.

When comparing Ellen's interactions with Donald and Steven during the prompting phase, there is an 84% increase in Ellen's interactions with Steven (from 3 interactions scored during the baseline observations to 19

interactions during the prompting phase). There is also a shift in the percentage of interactions observed among Ellen, Donald and Steven. The baseline data show 80% of Ellen's interactions were with Donald and 20% with Steven. This changed to 39% and 61% for Donald and Steven respectively during the prompting phase.

FIGURE 23- DATA DURING PLAYGROUP WITH PROMPTING  
FOR ELLEN NOVEMBER 21-29

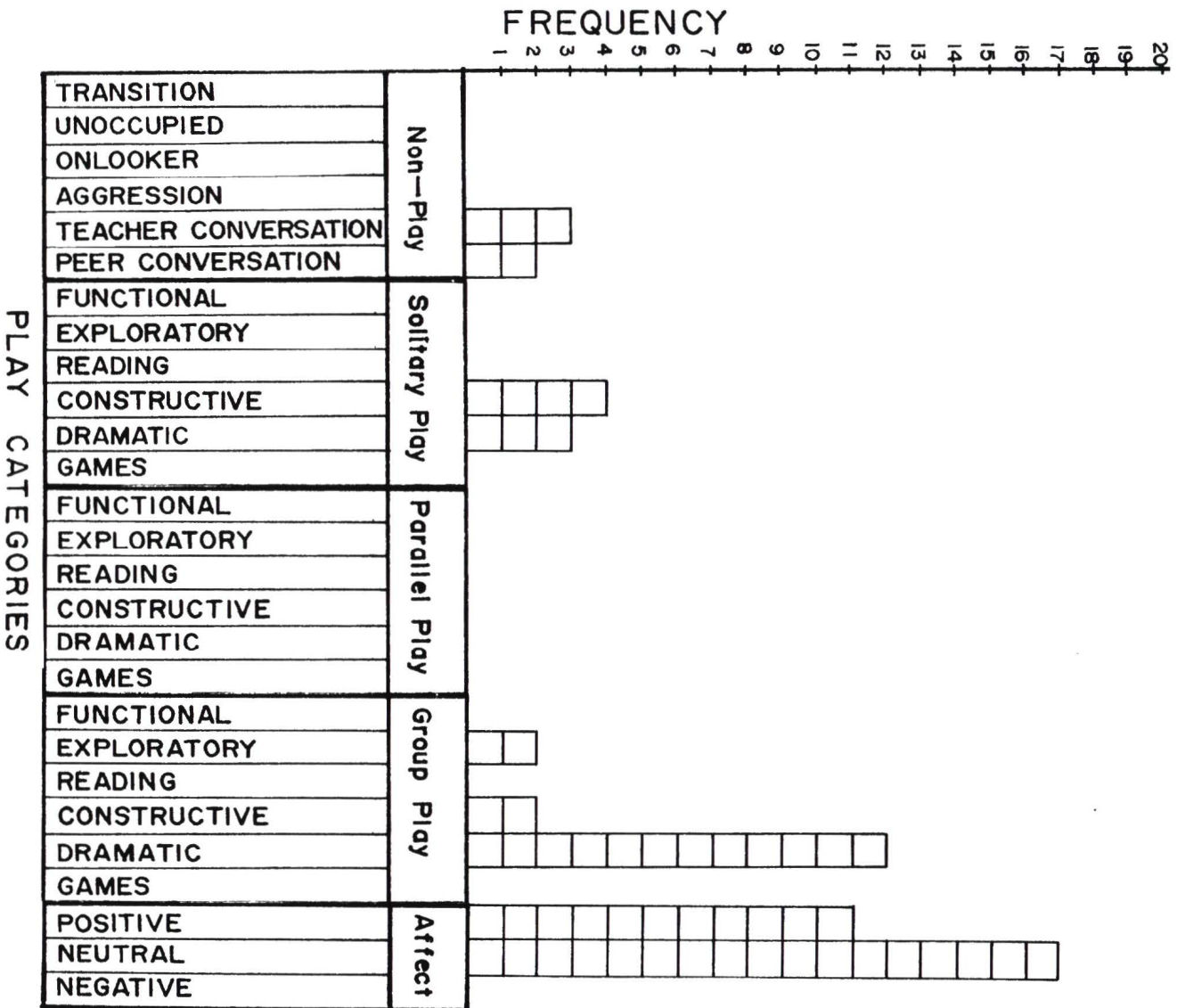
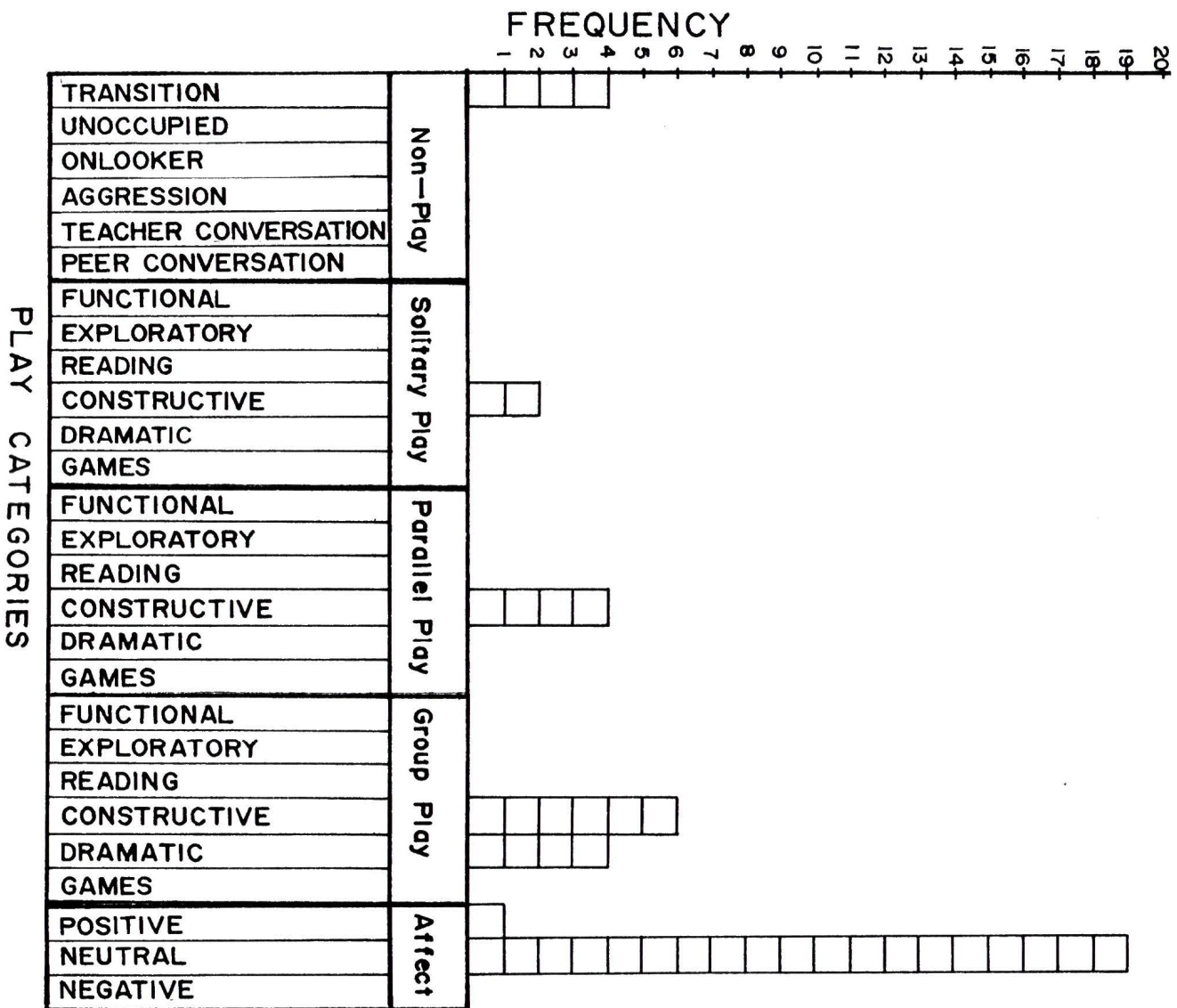


FIGURE 24- DATA DURING FREEPLAY

FOR ELLEN      NOVEMBER 21 - 29



### Prompting Data for Donald

In playgroup during the prompting phase, (see Figure 25), 19 of the 28 observations or 68% of Donald's observed behavior was that of group play, 4% parallel, and 7% solitary play. The remaining 21% was that of non play, the majority of which was peer conversation. This shows an increase in group play behavior of 24 % from the intervention phase. In the affect category, almost half, 46% of Donald's behaviors were rated as positive and the remainder neutral. This shows an increase in positive interactions of 24% from the intervention phase and 39% from the baseline condition.

In freeplay during the prompting phase, (see Figure 26), 9 of the 20 observations or 45% of Donald's observed behavior was that of group play, 15% parallel, 5% solitary, and 35% non-play. Of the non-play behaviors, over half were that of transition during snack. In the affect category, 95% of the behaviors were rated as neutral and 5% positive. The slight increase in parallel and solitary play in both Donald's and Ellen's data during the intervention and the prompting phases can be explained by an increased interest in writing activities, where writing and drawing activities are scored as either solitary, parallel or group constructive. In both cases, these scores should not be seen as regressive play behavior but rather an emerging interest in writing activities.

Tallies comparing the number of times that Donald interacted with Ellen and Steven, taken from the Play Observation Scale, show that Donald went from 0 interactions with Steven during the baseline observations to 18 during the prompting phase. When comparing the percentage of Donald's

interactions between Steven and Ellen, 58% of Donald's interactions were with Steven and 42% were with Ellen during the prompting phase.

FIGURE 25-DATA DURING PLAYGROUP WITH PROMPTING  
FOR DONALD NOVEMBER 21-29

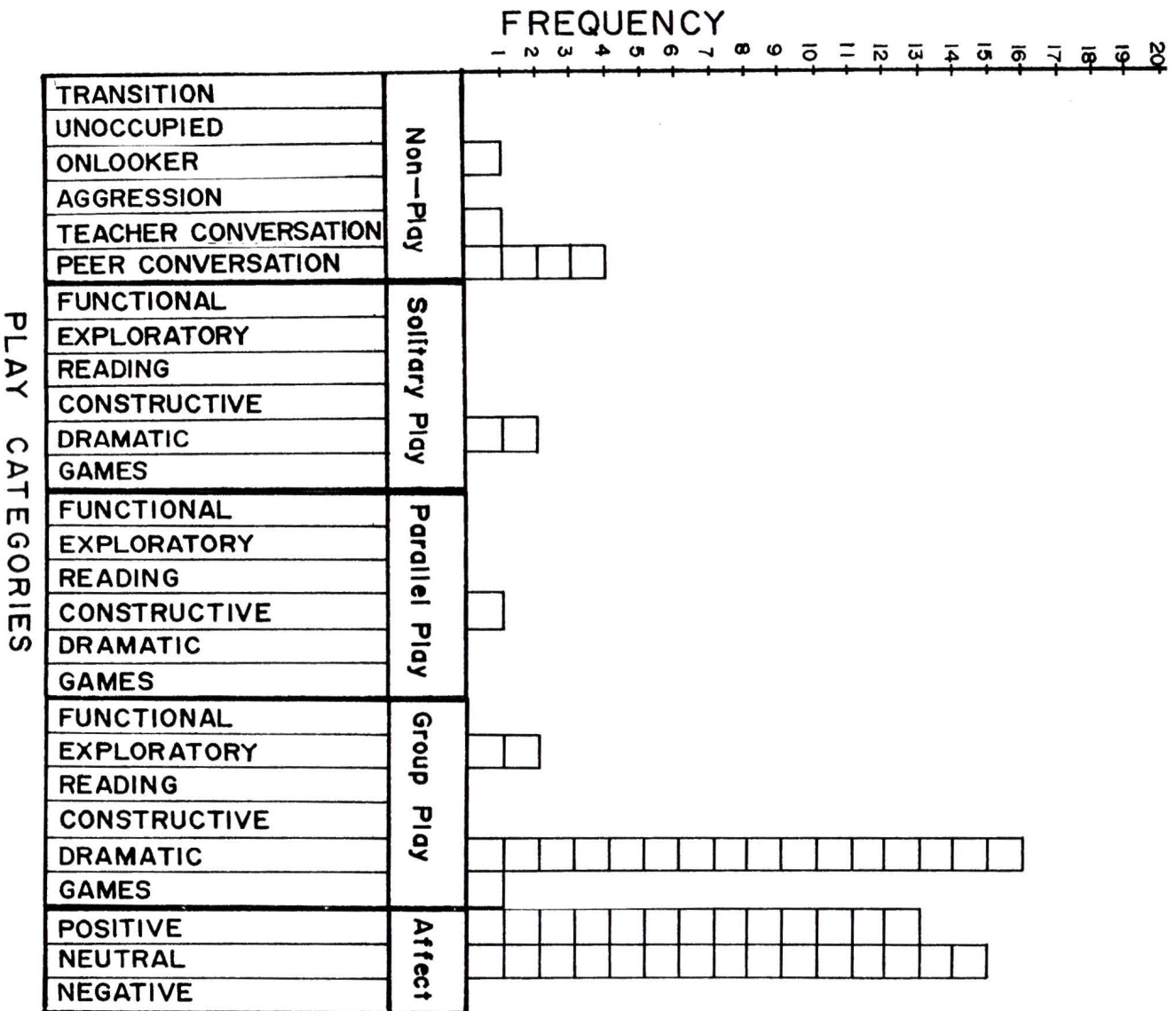
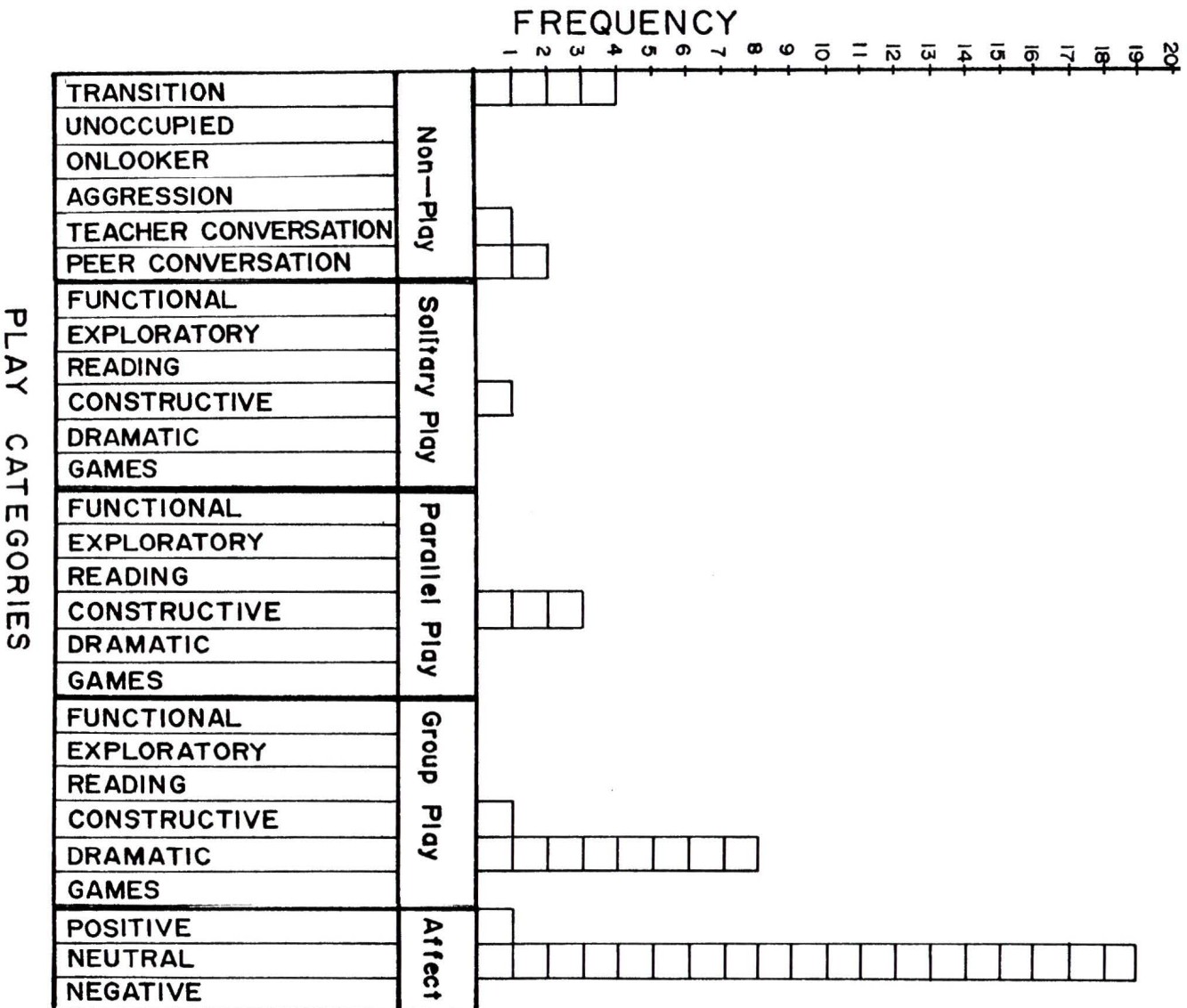


FIGURE 26 - DATA DURING FREEPLAY  
FOR DONALD NOVEMBER 21-29



### Validation of Prompting Data

An estimate of observer reliability was calculated by having another graduate student view a randomly selected video tape of the playgroup during the prompting phase to calculate play level and quality of interaction using the same interval observation procedure. A comparison was made between my observations of the same session. Using this procedure, agreement was found on 11 of the 12 or 92% of the observations coded.

### Summary of Prompting Data

During the prompting phase, Steven's play behavior re-emerged at higher levels than during the intervention phase. Group play increased in the playgroup sessions by 27% and positive affect increased by 39% from the intervention. During freeplay Steven's play behavior and positive affect score were 2% and 5% higher than the intervention phase respectively. The interactions among Steven, Ellen and Donald that took place during the intervention phase were also re-established in the prompting phase. Ellen and Donald's group play scores increased by 23% and 24% and positive affect scores by 20% and 24% from the intervention phase.

Within the design of the present study it is difficult to isolate the significance of teacher prompting. Prompting was used during the intervention phase to reinforce the playgroup lessons and it is not clear whether teacher encouragement during the prompting phase triggered and re-established the behaviors taught earlier or if the prompting had a

significant impact of its own. It would seem that prompting does impact the children's interactions, particularly given the change in play behavior that occurred during the no-lesson-no-prompting phase and throughout the study during freeplay where no teacher prompting occurred, however, it is unclear whether prompting alone or the combination of the playgroup lessons with prompting promoted the change in play behavior found at the time of the prompting phase.

The inclusion of prompting within the intervention phase seemed both a natural part of my role as a teacher and necessary within the present study, to meet the playgroup objective of increasing the positive social interaction between Steven and the peer helpers and increasing Steven's play level. To determine the precise relationship between play behavior and the playgroup lessons, or play behavior and prompting, further research involving the playgroup lessons with and without prompting would be necessary.

#### Patterns in Playgroup and Freeplay

In the following section observations taken during all phases of the playgroup will be compared to observations taken during all phases of freeplay with the whole class. These two conditions will be examined to determine differences in peer conversation, play levels, the affect category and playmate choice during the children's time in the playgroup and their time in freeplay.

### Peer Conversation During the Playgroup and Freeplay

An interaction between peers was scored as peer conversation when the conversation involved a transfer of information between children, or if the child being observed was engaged in active listening for the purpose of obtaining information or replying to the other child. Communication between children would be scored as peer conversation when the children were talking about something that happened to them or if they were explaining or describing something outside the context of play. It would not be scored as peer conversation if the communication involved dialogues during role playing in dramatic play or communication for the purposes of organizing a play episode.

Peer conversation occurred more frequently during the playgroup sessions than during freeplay with the whole class. For Steven, peer conversation occurred on average 7% more during the playgroup than during freeplay with the whole class. For Ellen, peer conversation occurred on average 20% more during the playgroup than during the freeplay condition. For Donald this average increase was 9% during the playgroup compared with the freeplay condition. This may be explained in part by the more intimate atmosphere created during the playgroup sessions which may have allowed the children to converse more.

Play Levels During Playgroup and Freeplay

To compare the play levels for each child during the playgroup and during freeplay, an average percentage of group play was determined over the four phases of the study. For Steven, an average increase of 43% in group play occurred during Steven's time in the playgroup compared to freeplay, (see Table 1).

Table 1: Average Percentage of Group Play for Steven

Playgroup				
Baseline	Intervention	N-l-n-p*	Prompting	average:
0%	53%	50%	80%	45.75%
Freeplay				average:
0%	3%	0%	10%	3.25%

\*N-l-n-p = No-lessons-no-prompting

As shown in Table 2, an average decrease occurred in group play of 31% for Ellen and an average decrease in group play of 21% occurred for Donald during the playgroup compared with the freeplay condition, (see Table 3).

Table 2: Average Percentage of Group Play for Ellen

Playgroup				
Baseline	Intervention	N-l-n-p*	Prompting	average:
47%	35%	13%	57%	38%
Freeplay				average:
88%	61%	75%	50%	68.5%

\*N-l-n-p = No-lessons-no-prompting

Table 3: Average Percentage of Group Play for Donald

Playgroup				
Baseline	Intervention	N-l-n-p*	Prompting	average:
60%	44%	46%	68%	54.5%
Freeplay				average:
83%	73%	100%	45%	75.25%

\*N-l-n-p = No-lessons-no-prompting

For Steven the contrast in group play behavior between the playgroup and freeplay was most apparent after the intervention, particularly near the end of the study in the prompting phase. The playgroup lessons and prompting within the playgroup allowed Steven to interact with Ellen and Donald at higher levels than baseline and higher levels in general compared with the freeplay observations. It should be noted that during the freeplay observations, no prompting or sharing of the playgroup objectives took place and that it would have been difficult to prompt for interaction during the freeplay period when the children are free to go between activities and may not gather in the same area. The playgroup provided Steven with a more focused play environment. The smaller group size allowed him to participate at higher levels. This in combination with the playgroup lessons and prompting provided a more supported play setting.

For Donald and Ellen, the decreases in group play during their time in the playgroup can also be explained by the atmosphere created within the playgroup. The limited number of play partners in the playgroup changed the type of play in which the children participated. Following the

intervention, Steven's play often involved simple repetitive games with turn taking between himself and one other child. This limited the other child's ability to join in. This type of play, however, created the opportunity for Ellen and Donald to take turns playing with Steven and created higher play levels for Steven but lowered interaction and group play between Ellen and Donald.

#### Positive Affect Scores during Playgroup and Freeplay

The playgroup setting was also more conducive to positive interactions between the peers. As shown in Table 4, positive affect ranged from 5-64% during Steven's time in playgroup and from 0-5% in freeplay. The range in positive affect for Ellen during playgroup was 0-39% and 0-6% during freeplay (see Table 5). For Donald, this range in positive affect was 7-46% during playgroup and 0-5% during freeplay (see Table 6). The opportunity for pro-social behaviors was greater during the children's time in the playgroup and these behaviors were encouraged through teacher prompting.

Table 4: Positive Affect Rating for Steven

Playgroup				
Baseline	Intervention	N-l-n-p*	Prompting	
5%	25%	40%	64%	5-64% range
Freeplay				
0%	0%	0%	5%	0-5% range

\*N-l-n-p = No-lessons-no-prompting

Table 5: Positive Affect Rating for Ellen

Playgroup	Intervention	N-l-n-p*	Prompting	
Baseline	19%	0%	39%	0-39% range
Freeplay	0%	0%	5%	0-6% range

Table 6: Positive Affect Rating for Donald

Playgroup	Intervention	N-l-n-p*	Prompting	
Baseline	22%	38%	46%	7-46% range
Freeplay	0%	0%	5%	0-5% range

\*N-l-n-p = No-lessons-no-prompting

#### Interaction Ratings during Playgroup and Freeplay

To determine changes in the interaction between the children during their time in the playgroup and their time in freeplay a cumulative tally of the number of times each child interacted with each of the other children was taken from data collected at each of the interval observations. As shown in Table 7, Steven interacted with Donald 33 more times during the playgroup than during freeplay and with Ellen 25 more times during the playgroup than during freeplay. Ellen interacted with Steven 21 more times during the playgroup than during freeplay, and with Donald 7 more times during the playgroup than during freeplay, (see Table 8). Donald interacted with Steven 33 more times during the playgroup than during freeplay and with Ellen 13 more time during the playgroup than during freeplay, (see Table 9).

Table 7: Cumulative Interaction Scores during Playgroup and Freeplay for Steven

Donald	Ellen
Playgroup	
34 interactions	25 interactions
Freeplay	
1 interaction	0 interactions

Table 8: Cumulative Interaction Scores during Playgroup and Freeplay for Ellen

Steven	Donald
Playgroup	
25 interactions	20 interactions
Freeplay	
4 interactions	13 interactions

Table 9: Cumulative Interaction Scores during Playgroup and Freeplay for Donald

Steven	Ellen
Playgroup	
33 interactions	27 interactions
Freeplay	
0 interactions	14 interactions

Summary of Results and Discussion

The percentages of positive affect scores and play and non-play behavior are summarized per condition below for each child. Steven's play levels per condition, indicate an overall increase in group play behavior from the baseline condition to the intervention and the prompting phases. The data also shows an overall increase in play level during the playgroup compared with the freeplay condition, (see Table 10).

Table 10: Percentage of Play Levels Per Condition for Steven

Baseline: Playgroup				
Non-play	Solitary	Parallel	Group	Affect
84%	11%	5%	0%	5% positive
Baseline: Freeplay				
Non-play	Solitary	Parallel	Group	Affect
88%	13%	0%	0%	0% positive
Intervention: Playgroup				
Non-play	Solitary	Parallel	Group	Affect
38%	9%	0%	53%	25% positive
Intervention: Freeplay				
Non-play	Solitary	Parallel	Group	Affect
52%	42%	3%	3%	0% positive
No Lessons No Prompting: Playgroup				
Non-play	Solitary	Parallel	Group	Affect
40%	0%	10%	50%	40% positive
No Lessons No Prompting: Freeplay				
Non-play	Solitary	Parallel	Group	Affect
75%	13%	13%	0%	0% positive
Prompting: Playgroup				
Non-play	Solitary	Parallel	Group	Affect
8%	8%	4%	80%	64% positive
Prompting: Freeplay				
Non-Play	Solitary	Parallel	Group	Affect
50%	40%	0%	10%	5% positive

This increase in group play is most pronounced during Steven's time in the playgroup and during the intervention and prompting phases. Positive affect scores are highest for Steven during the playgroup condition and in the prompting phase. When looking at patterns during freeplay, a decrease in non-play behaviors and a corresponding increase in solitary play occurs during freeplay in the intervention phase and again in the prompting phase. Interactions among Steven, Ellen and Donald also were found to be more frequent during Steven's time in the playgroup compared to the freeplay condition.

Percentages of play levels per condition for Ellen, (see Table 11), indicate an overall higher percentage of group play during the freeplay condition than during the playgroup. This pattern is similar for Donald, (see Table 12). The percentage of positive affect for both Ellen and Donald is higher during their time in the playgroup than freeplay.

Table 11: Percentage of Play Levels Per Condition for Ellen

Baseline: Playgroup				
Non-play	Solitary	Parallel	Group	Affect
26%	21%	5%	47%	21% positive
Baseline: Freeplay				
Non-play	Solitary	Parallel	Group	Affect
0%	0%	13%	88%	6% positive
Intervention: Playgroup				
Non-play	Solitary	Parallel	Group	Affect
23%	32%	10%	35%	19% positive
Intervention: Freeplay				
Non-play	Solitary	Parallel	Group	Affect
23%	6%	10%	61%	0% positive
No Lessons No Prompting: Playgroup				
Non-play	Solitary	Parallel	Group	Affect
50%	38%	0%	13%	0% positive
No Lessons No Prompting: Freeplay				
Non-play	Solitary	Parallel	Group	Affect
25%	0%	0%	75%	0% positive
Prompting: Playgroup				
Non-play	Solitary	Parallel	Group	Affect
18%	25%	0%	57%	39% positive
Prompting: Freeplay				
Non-Play	Solitary	Parallel	Group	Affect
20%	10%	20%	50%	5% positive

Table 12: Percentage of Play Levels Per Condition for Donald

Baseline: Playgroup				
Non-play	Solitary	Parallel	Group	Affect
7%	27%	7%	60%	7% positive
Baseline: Freeplay				
Non-play	Solitary	Parallel	Group	Affect
17%	0%	0%	83%	0% positive
Intervention: Playgroup				
Non-play	Solitary	Parallel	Group	Affect
34%	19%	3%	44%	22% positive
Intervention: Freeplay				
Non-play	Solitary	Parallel	Group	Affect
13%	13%	0%	73%	0% positive
No Lessons No Prompting: Playgroup				
Non-play	Solitary	Parallel	Group	Affect
15%	31%	8%	46%	38% positive
No Lessons No Prompting: Freeplay				
Non-play	Solitary	Parallel	Group	Affect
0%	0%	0%	100%	0% positive
Prompting: Playgroup				
Non-play	Solitary	Parallel	Group	Affect
21%	7%	4%	68%	46% positive
Prompting: Freeplay				
Non-Play	Solitary	Parallel	Group	Affect
35%	5%	15%	45%	5% positive

The supportive atmosphere created by the playgroup allowed Steven to interact more positively with the other children and at higher levels than during freeplay. These interactions were not forthcoming during the baseline phase despite the controlled environment of the playgroup where (a) group size was limited, (b) no other interruptions occurred in the play setting (such as other children entering or leaving the play room), and (c) the children present all demonstrated an interest in one or more of the other children.

The baseline findings for the children requiring extra support were consistent with the findings of the Brophy and Stone-Zokowski (1984), toddler study. Different from the Brophy and Stone-Zokowski study, however, the onlooker and solitary play behavior of the children requiring extra support in the present study occurred within the controlled environment of the playgroup during the baseline phase. Findings from the present study also supported finding of the Dodge, Schlundt and Delugach (1983), who reported that the complexity of the play entry skill acts to inhibit play interactions among children. The present study also found that Ellen and Donald did not have the necessary skills to invite John or Steven into their activities, during the baseline condition, or that they did not perceive the helping roles which they had demonstrated at other times to be warranted during the time in the playgroup.

Throughout the intervention phase, a growth in Steven's play behavior was evident. This was most apparent during Steven's time in the playgroup where increases of 53% in group play, and 22% in peer conversation were recorded. The number of interactions that Steven had with Ellen and Donald also increased by 86% and 88% from the baseline condition. These outcomes were found to be consistent with findings from other peer helping studies (Kohler & Fowler, 1985; Strain & Odom, 1986). The increases reported in the present study, however, occurred without the use of a token reward system. Spillover effects in positive initiations reported by Strain, Shores and Timm (1977) and Strain Shores, and Kerr, (1976) were not found in the present study. Higher positive affect scores reported during the playgroup for all three children did not occur during freeplay following the playgroup intervention sessions.

In the no-lesson-no-prompting phase of the study, the percentage of Steven's onlooker behavior grew to 75% of his non-play behaviors and the percentage of peer conversation dropped by 33%. Observations of Steven during freeplay showed a 23% increase in non-play and a 29% decrease in solitary play behavior compared to the intervention. This change points toward the importance of teacher involvement during play time in monitoring and helping promote positive interactions between or among the children. These findings indicate the difficulty that children with special needs have in entering play.

Ellen's absence and re-entry into the playgroup during the no-lesson-no-prompting phase and consequent changes in play behavior during this time indicate the difficulty that children may have sustaining peer helping roles during play, following an absence from the playgroup, or at times when they may feel ill and in need of support themselves. At such times the need for a re-entry strategy into the playgroup and a contingency plan for absenteeism should be considered. In addition, the following two questions concerning teacher expectations should be considered: (a) Are we placing too much pressure on children to support the play of others, particularly at times when they may need support and encouragement themselves? and (b) Is it appropriate to expect peer helpers to sustain helping roles during their play time? The development of techniques to monitor the feelings of the peer helpers concerning their roles and responsibilities may aid teachers and researchers in assessing the impact of the peer helping role on the peer helpers. In addition, a set of indicators to monitor the impacts, both positive and negative, of the peer helping roles may be valuable to assess the impact of such interventions.

Findings during the prompting phase indicated that Steven's play behavior re-emerged at higher levels than the intervention phase. The interactions among Steven, Ellen and Donald were also re-established in the prompting phase. Ellen and Donald's group play scores increased by 23 and 24% and positive affect scores by 20 and 24% from the intervention phase.

The causal variable responsible for increases in play levels and interaction during the intervention and prompting phases was not isolated in the present study. However, significant increases were found in the play behavior and interaction during both the intervention phase and prompting phases and a corresponding decrease was found during the baseline, the no-lesson-no-prompting phase, and in freeplay throughout the study in the absence of prompting and lessons.

## Chapter 5

### Summary and Conclusions

The present study began by posing the general question: How can teachers in integrated early childhood settings promote inclusion? In Chapter one, this question was examined in the context of the traditional curriculum orientations of Early Childhood Educators and Early Childhood Special Educators looking at differences between the two disciplines in child-directed and teacher-directed approaches, extrinsic and intrinsic motivators, and whole group and individualized programming. The peer interaction of children in integrated early childhood settings was also examined, citing studies which indicated the need to both assess the social competencies of children within integrated early childhood settings and actively plan strategies to promote social interactions.

The purpose of the present study has been to assess one method of peer training, adapted for practical use in an early childhood setting and designed to promote social interactions between a child with special needs and two peer helpers. This concluding chapter will summarize the literature reviewed, the methodology used, and the results and discussions of the present study. This will be followed by a discussion of the conclusions in answer to the three research questions posed in Chapter 3, the limitations of the present study, and the implications of this research for future study.

## Summary

### Literature Reviewed

The literature reviewed was organized into the four areas of (a) peer relationships, (b) play, (c) play characteristics of children with special needs, and (d) methods of enhancing play and social development. In the area of peer relationships, studies were cited which pointed out the importance of establishing reciprocal relationships between peers. Social competency was also examined including the skills required by a child to enter into communication, comply with a request, resolve conflicts during play, gain entry into peer groups and maintain play for a sustained period of time.

In the area of play, the interpretation of play behaviors was examined in the context of child development, citing the work of Jean Piaget (1962), and Mildred Parten (1932). Stages of play behavior, were also examined in more recent studies by Rubin and Watson (1978) and Rubin (1982). Rubin (1982), combined Parten's play categories with Piaget's developmental descriptors to assess play behavior and to create a more comprehensive play observation scale. Rubin found that the least mature forms of play and those most predictive of "at risk" behavior were those of solitary functional and solitary dramatic play. The classroom environment was also found to influence play. Following this, the play characteristics of children with special needs were examined to provide a greater understanding of how a child's challenging condition may influence his/her ability to interact in

peer play.

Three methods used to enhance play and social development of children with special needs were also reviewed. These methods included, (a) play training, (b) script training, and (c) peer training. Play training methods, where adults model play for children with special needs, were seen as beneficial to orient a child with special needs to a play setting, but failed to teach skill development to enhance peer interaction. Studies using script training, where simple scripts were taught to small groups of children for role enactment were also reviewed. These studies cited improvements in sociodramatic play during free play following the intervention but only when the children were prompted to stay in their roles. Researchers also noted a "fatigue" factor on the part of the participants who complained of having to "play this again". The third method reviewed was that of peer training, where a series of skills are taught to typically developing peers to increase social initiations toward children with special needs. In these studies, initiations between children were usually reinforced by a token reward system and training sessions were conducted on a one-to-one basis targeting the peer confederate and not the child with special needs.

#### Procedures in the Present Study

To promote greater use of peer training methods, an adapted peer training design was tested under normal teaching conditions in an early childhood centre serving children from 4 to 6 years old. The peer training method was adapted by (a) teaching both the peer helpers and the child with special needs simultaneously, (b) conducting the lessons in the block room

where the children would be playing following the lessons and, (c) eliminating extrinsic rewards. This was done to answer the following three questions:

1. Are the interaction patterns of the children changed following the peer training intervention as measured by the frequency of contact among the children?
2. Are the play levels of the children in the playgroup changed by the peer training intervention as measured by changes in play behavior?
3. Did the effects of the peer training playgroup generalize to other free play sessions in the presence of other children in an integrated early childhood setting?

The study began with a pilot study, conducted to test the procedural and organizational aspects of the present study. From the pilot study, methods for easing the transition from outside playtime to inside playtime were worked out, as were observational methods and video taping of the play sessions. A single subject research design was used in the present study where the participants served as their own controls. This was done by comparing observations before and after the intervention. Data were also collected during a third stage when there were no lessons and no prompting, and a fourth stage when prompting was re-introduced.

A play observation scale designed by Rubin (1989) was chosen to frame the observations and provide information on each child's play level,

interaction pattern, and type of affect at the time of each observation. The scale was selected because of its ability to categorize a wide variety of play and non-play behaviors typically found in an early childhood setting. The observation scale had also been used in other similar studies (e.g. Guralnick & Groom, 1987; Guralnick & Weinhouse, 1984) to assess the play behavior of special needs children in integrated settings. Throughout the study, observations were taken both during the children's time in the playgroup and during freeplay with the whole class. This provided data in eight possible conditions for each of the three children who completed the study.

### Results and Discussion

The results and discussion will be summarized for each of the following conditions, (a) baseline, (b) intervention, (c) no-lessons-no-prompting, (d) prompting, and (e) playgroup and freeplay.

Baseline data. It was found during the baseline data collection, that both John and Steven were engaged primarily in non-play and solitary play. During the baseline observations neither child displayed any group play behaviors. Of the non-play behaviors, both children exhibited higher percentages of onlooker behavior during the playgroup than during freeplay with the whole class. This was found to be consistent with other studies which reported that toddlers with special needs were more inclined to engage in solitary and parallel play and spent more time looking at and listening to the other children than did non-special needs toddlers (Brophy & Stone-Zokowski, 1984). Different from the findings in the toddler study, however, the present study noted these onlooker and solitary play behaviors

occurred in a controlled environment where (a) group size was limited, (b) no other interruptions in the play setting occurred (such as other children entering or leaving the room), and (c) the children in the playgroup all demonstrated an interest in one or more of the other children. The higher percentage of onlooker behavior in the playgroup indicated an interest on the part of John and Steven in the play of the other children, but pointed out the difficulty of entering into play even under controlled conditions. It also pointed out that Ellen and Donald did not have the necessary skills to invite John or Steven into their activities, or that they may not have perceived the helping roles that they had demonstrated at other times to be warranted during play.

Intervention data. During the intervention phase, it was found that a growth in Steven's play behavior occurred. This increase in play behavior was greatest during Steven's time in the playgroup where increases of 53% in group play and 11% in peer conversation were reported. During freeplay, Steven's play behavior also increased by 29% in solitary play and 3% each in parallel and group play. Following the intervention, an 86% and 88% increase also occurred in Steven's interaction with Ellen and Donald respectively.

These outcomes were found to be consistent with findings reported in other peer helping studies (Kohler & Fowler, 1985; Strain & Odom, 1986). Different from these other studies, however, the increases reported in the present study occurred without the use of a token reward system. Reports of spillover effects in positive initiations reported by Strain, Shores and Timm (1977) and Strain, Shores, and Kerr, (1976) were not supported in the present

study. Although some increases in Steven's play level were maintained between the playgroup condition and freeplay, it was found that the higher positive affect scores reported during the playgroup for all three children did not "spillover" to freeplay time.

No-lessons-no-prompting Data. The intent of the No-lesson-no-prompting phase of the study was to establish a new baseline of play levels and play interactions prior to the prompting phase. This phase of the research was shortened, however, when it was found that Ellen was unable to sustain supportive peer interactions following an absence from the playgroup. Without being able to encourage play interactions through prompting, many of the opportunities to stimulate more positive play behavior among the children were lost.

During this phase of the playgroup sessions, Steven's onlooker behavior increased by 17% and peer conversation decreased by 12% from the intervention phase. Steven's non-play behavior also increased during freeplay by 23% from the intervention phase. This change in Steven's observed behavior from the intervention phase indicates the importance of teacher involvement during play time in monitoring play behavior and helping to promote positive interactions among the children. It again points out the difficulty of play entry for children with special needs.

Half of Ellen's observed behavior during the playgroup sessions of the No-lesson-no-prompting phase, was that of non-play and none of the interactions recorded were positive. This lack of positive interaction was not consistent with any other phase of the study and serves as a reminder of the difficulty of sustaining positive interactions when feeling ill, or re-adjusting to a situation. From this, two questions were raised regarding

teacher expectations of peer helpers: Are we placing too much pressure on children to support the play of others, particularly at times when they may need support and encouragement themselves? and Is it appropriate to expect peer helpers to sustain helping roles during their play time?

Although a contingency plan for re-entry into the playgroup following absence was not developed prior to the present study, and the issue of absenteeism did not arise in the pilot study, a re-entry strategy was suggested in the present study given the play behavior following Ellen's absence. Such a strategy may include: (a) providing the opportunity for the children to play informally in the playgroup to get re-acquainted, and (b) providing a review of the playgroup objectives and the lessons once the formal playgroup had resumed.

Prompting. During the prompting phase, positive peer interactions resumed. Steven's play behavior re-emerged at higher levels than during the intervention phase. His group play increased by 27% and positive affect increased by 39% from the intervention. Ellen and Donald's group play scores also increased by 22% and 24% respectively and their positive affect scores by 20% and 24% from the intervention phase.

Patterns in Playgroup and Freeplay. Peer conversation, play levels, the affect category and playmate choice were examined during playgroup sessions and compared with freeplay throughout the study. It was found that peer conversation was higher during the playgroup sessions, by 20% for Ellen, 9% for Donald and 7% for Steven. During the playgroup sessions, Steven's group play behavior was on average 43% higher than his group play behavior during freeplay. The playgroup was seen as a more focused play environment for Steven than freeplay with the whole class. In

combination with the lessons and prompting, the smaller group size allowed him to play at higher play levels.

For Ellen and Donald, the smaller group size of the playgroup limited their selection of play partners and changed the type of play that the children engaged in. The type of play that Steven was able to engage in often involved simple repetitive games involving one or the other child. This created much higher play levels for Steven, but lowered interaction and group play between Ellen and Donald once the intervention took place.

The playgroup setting was also seen as more conducive to positive interactions between peers than freeplay with the whole class. A range of 5-64% of Steven's interactions during the playgroup were scored as positive compared with a range of 0-5% during freeplay. Ellen's positive affect range was between 0-39% during playgroup and between 0-6% during freeplay. For Donald this range was 7-46% during playgroup and 0-5% during freeplay.

During the playgroup sessions, higher levels of interaction among the peers were also reported. Steven interacted with Donald 33 more times, and with Ellen 25 more times in the playgroup sessions than freeplay. Ellen interacted with Steven 21 more times, and with Donald 7 more times, and Donald interacted with Steven 33 more times, and with Ellen 13 more times in the playgroup than during freeplay.

### Conclusions

In this section, the conclusions will be placed in the context of the three research questions that the present study sought to answer. This will then be followed by conclusions concerning (a) the role of the teachers in supporting peer interactions and, (b) the role of the peer helpers.

1. Are the interaction patterns of the children changed following the peer training intervention as measured by the frequency of contact among the children?

The present study did find that the interaction patterns of the children participating in the study were changed following the peer training intervention. The frequency of contact between Steven and Ellen, and Steven and Donald increased dramatically from the time of the baseline observations. Increases in the interaction patterns among the children also occurred during the prompting stage near the end of the study where all three children were engaging in group play. Inversely, the interaction between Ellen and Donald decreased during the peer training intervention as they engaged in more turn taking games involving Steven.

2. Are the play levels of the children in the playgroup changed by the peer training intervention as measured by changes in play behavior?

Increases in Steven's play levels occurred following the peer training

intervention. Prior to the peer training, Steven's behaviors were primarily non-play and solitary play. Following the intervention Steven's play levels increased to include group play during the playgroup and some solitary play during freeplay following the playgroup sessions. These increases occurred during the intervention and prompting phases. For Ellen and Donald, play patterns during their time in the play group became more diverse, although this was not seen as regressive play behavior but as an increase in their ability to adapt to different play situations.

3. Did the effects of the peer training playgroup generalize to other free play sessions in the presence of other children in an integrated early childhood setting?

The present study did not find a generalized effect in positive initiations following the peer training playgroup. The higher levels of peer interaction and positive affect reported among the children during the playgroup was limited to the playgroup sessions and did not carry over to the freeplay period to any extent. Slight increases were reported however, in Steven's play level during freeplay following the peer training intervention. During this time, Steven showed an increase in solitary play behavior.

### The Role of the Teacher in Supporting Peer Interactions

The importance of teacher support to promote the inclusion of children with special needs was identified early in the study. It was found that prior to the peer training intervention, even when placed in a controlled play environment, a limited number of interactions took place. Higher levels of onlooker behavior for both children with special needs during the baseline data collection and again for Steven during the no-lesson-no-prompting phase signaled an interest on the part of the children with special needs in the play activities of the other children, but indicated the presence of skill barriers to play entry.

Although limited interactions took place between the children with special needs and the peer helpers in the playgroup prior to the intervention, it was found that the controlled environment of the playgroup did create an effective atmosphere for social skills instruction and teacher prompting. The small group size created a quieter atmosphere where activity levels were lower and there were less audio and visual distractions. The selection of peer helpers with age appropriate social skills who had shown an interest in the child with special needs also contributed to the success of the intervention by providing positive peer models who were able to support a range of play activities and subordinate their own play interests to the interests of others. As well, by having the playgroup lessons take place in the familiar context of the blockroom, transitions were minimized.

The quieter atmosphere of the playgroup also made it possible to provide suggestions to the children which helped promote inclusion. By

following the play interactions within the playgroup, opportune moments could be selected to provide suggestions which helped the children engage in play or sustain play episodes for longer periods of time. This included such things as sharing an object, getting one child to show another child a toy, or suggesting ways of including a child in a game. This type of guidance through prompting can occur incidentally throughout the day when children are interacting during freeplay, but it does not usually take place as comprehensively.

#### The Role of the Peer Helpers

The problem of re-entry following absence from the playgroup was identified during the No-lesson-no-prompting phase. A re-entry strategy was suggested to ease children back into the playgroup should absenteeism occur. This strategy included allowing the children to play together informally to get re-acquainted, followed by a review of the playgroup objective and previous lesson(s) once the formal playgroup had resumed. During such times, and throughout the playgroup sessions, it is also essential that teachers monitor each child's level of interest in the playgroup and watch for the signs of "fatigue" reported in other studies. This should be done to ensure that the peer helping role does not interfere with the children's own play time but compliments it. If teachers are sensitive to the needs of the peer helpers, they can avoid placing unnecessary pressure on children to support the play of others when they may need support and encouragement themselves. As well, by allowing the peer helpers free choice in play activities following the playgroup sessions, as was done in the

present study, the peer helpers are able to pursue their own play interests.

### Limitations of the Present Study

The present study was limited in its ability to (a) measure the specific impact of the prompting phase, (b) determine longitudinal effects of the peer training intervention, (c) limited by the specific characteristics of the children in the group and by the skill instruction used, and (d) limited by the unequal length of the no-lesson-no-prompting phase of the study.

Prompting was included within the design of the present study during both the intervention phase where skill instruction was introduced and separately in a prompting phase. Prompting was included in the skill instruction phase to reinforce skill objectives and normalize the intervention, but has made it difficult to determine whether teacher encouragement during the prompting phase triggered and re-established the behaviors taught earlier or if prompting had a significant impact of its own.

Within the design of the present study, it is not possible to measure the long term effects of the play training intervention on interaction patterns, play levels or positive affect. At this time, ten weeks after the completion of the study, Steven does seem to be more engaged in play activities at the centre and seeks out other children more readily, but no formal assessment of play level or interaction patterns have been done with him or the other two children.

As well, it should be noted that given the specific characteristics of the children in the study and the skill instruction used, the results of the

present study will be limited to the children in this group and may not generalize to other children with special needs or other peer helpers.

The study was also limited by the differences in the lengths of the four phases of the study. The shorter length of the no-lesson-no-prompting phase relative to the other phases of the study limits the internal validity of the study.

### Implications for Future Research

In this final section, the implications of this study for future research will be investigated in the areas of (a) prompting, (b) longitudinal studies, (c) the assessment of peer training on peer trainers, (d) increasing the number of children in the study, (e) using a wider variety of participants requiring extra support, and (f) using different teachers to conduct the intervention.

In the present study prompting did seem to impact the children's interactions, particularly given the drop in interaction during the no-lesson-no-prompting phase and throughout the study during freeplay where no teacher prompting occurred. To determine the precise relationship between play behavior and the playgroup lessons, or play behavior and prompting, further research involving the playgroup lessons with and without prompting would be necessary in order to isolate the prompting variable.

In addition, the longitudinal impact of the present peer training study has not been measured. Further research where the effects of peer training interventions are measured after a several months would be beneficial to our

understanding of the impact of such interventions on the ongoing play interactions of children with special needs and the peer helpers. To do this the playgroup could be re-established to determine a baseline of play interactions and play levels after a sustained period of time. Following this, a maintenance intervention to review the social skills lessons may be added to maintain the skill levels of the children.

The question of the impact of the peer training intervention on the attitudes of the peer helpers would also be of interest for future research. Measures of the children's attitudes towards the playgroup and their role as peer helpers would help determine how peer training playgroups impact on peer helpers. This could be done by combining qualitative studies using interviewing techniques to determine any change in affect on the part of the peer helpers following the peer training intervention.

Other studies using a slightly larger group of children would also be of interest to future research to test the effects of the peer training intervention in playgroups with from four to six children. This would extend the peer training lessons to other children and provide other models who could support play and social interaction.

Replications of the peer training intervention would also be of interest to test the effects of a peer training intervention with children who had different types of special needs and were playing at different levels. This may include groups of toddlers, or groups of three and four year olds. This may also include using participants, for example, who have hearing impairments and language delay, or visual impairments. Further study may also include testing the peer training intervention on children of different gender to determine if the effects of the intervention were consistent across

gender lines. Studies using other teachers, to conduct the peer training intervention would also be of interest to assess the impact that the teacher has on the delivery of the intervention.

This study began by asking the general question of: How can teachers improve the social skills of young children within mainstreamed early childhood settings to promote inclusion? From this study, it has been determined that one way that teachers may achieve this is by directly teaching social skills to child(ren) with special needs and peer helpers. This can be done to promote inclusion by providing the children with a greater understanding of how to play together.

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APPENDIX A

Permission Forms and Letters

Dear Parent:

I am a graduate student in the Faculty of Education at the University of Victoria. I am interested in conducting a study on play and social skills. The study will involve organizing a playgroup designed to increase the quality of play between children in a playgroup. The playgroup sessions will be conducted daily from approximately 9:30 until 10:00 am for six weeks beginning in October. During the playgroup sessions I will teach social skills to the children such as establishing eye contact, using a friend's name to get attention, and sharing.

The study involves video taping the playgroup sessions and conducting observations of the children for approximately 20 minutes during free play with the whole class. Pseudonyms will be used in all written documentation and oral discussion of the study so that the children cannot be identified. Confidentiality will also be ensured by destroying all video tapes upon completion of the study. During the study, the video tapes will be stored in a locked file cabinet and will only be viewed by myself, one other graduate student and the four members of my graduate committee.

Your child's participation in the study will have no effect upon his/her evaluation in the kindergarten program. Participation in the study is voluntary and your child may withdraw from the study at any time.

I would appreciate receiving your permission to let your child participate in the study. If you are willing to do so, please complete the attached consent form and return it as soon as possible. If you have any further questions about the study or your child's participation in the study I can be reached at 721-7766.

Thank you for your cooperation.

Sincerely,

Margaret MacDonald

I, \_\_\_\_\_,  
parent/guardian of \_\_\_\_\_ Date of  
Birth \_\_\_\_\_ am willing to have this child participate in the  
study of Margaret MacDonald, graduate student in the Faculty of Education at  
the University of Victoria. I have read the attached letter and understand  
that the study involves teaching social skills in a playgroup designed to  
increase the quality of play between the children in the study. I understand  
that the study involves video taping of playgroup sessions and observations  
of social interactions. I also understand that pseudonyms will be used in all  
written documentation and oral discussion of the study so that the children  
cannot be identified, and that the video tapes will be destroyed upon  
completion of the study.

S i g n a t u r e \_\_\_\_\_

Date \_\_\_\_\_

APPENDIX B  
Social Skills Lessons

### Example of Peer Training Lessons:

#### Lesson 1: Establishing Eye Contact

Lesson Objective: To teach the children to use their peer partner's name and touch their peer partner on the arm to get their attention before talking to them.

#### Introduction:

The children will come into the block/housekeeping room from outside playtime. To establish contact between the peer partners, one child from each dyad will be asked to invite their partner in. This procedure has been used successfully at other times in the Centre to invite other children into a play Centre or to the snack table. Once the children are inside the block/housekeeping room a seating pattern will be established to encourage proximity between the peer partners. This pattern will be maintained throughout the training sessions to structure the routine.

The playgroup objective will then be shared as follows: I will tell the children that they will be learning how to play with their partner by getting their partner to look at them when they are talking.

I will then act out the skill using a puppet to model establishing eye contact, and tapping the puppet on the arm to get attention. I will do this several times where the puppet does not respond to my attempts but where I persist in trying to get the puppet's attention so that the children can see that their attempts may not always be successful.

I will then demonstrate and model the same procedure on each of the children. With each child this will be done until I have been successful in getting the children to look at me.

Following this, the children will be asked to practise this same skill with their partner using the same method. During these practice sessions, I will shape approximations of the skill by praising attempts that are accurate and correct those attempts which are not. Shaping the skill may also include hand over hand guidance to demonstrate appropriate actions, and verbal prompting to remind the children of what they should say.

Once the children are demonstrating proficiency in the skill, that is they are able to successfully get eye contact with their partner approximately 80% of the time, the children will be told that they are ready to play together in the play Centre and can use their new skill when they want to talk to their friend. During this time, I will continue to encourage the use of the skill by prompting the children to use it with their peer partner.

## Lesson 2: Establishing A Joint Focus of Attention

Lesson Objective: To teach the children to invite others to play by showing them a toy or inviting them to participate in an activity

### Introduction:

The children will come into the block/housekeeping room from outside playtime and invite their partner in as described in lesson 1.

The playgroup objective will then be shared as follows: I will tell the children that they will be learning how to play with their partner by showing them something that they might like to play with and inviting them to join in.

I will then model the skill by acting out the joint focus of attention and the invitation to play using the blocks as a play prop. The actions and dialogue may be as follows: Walk over and touch one of the children on the arm or tap their shoulder and say their name to establish contact, "Susan" Once the child is looking at me I will then ask, "Would you like to come and build a house with me?" Then I will elaborate on where I'm playing and what materials I am working with, "I'm building with the blocks over here" pointing or leading the child to the area where I am building. If the child I am modeling this skill with uses facilitative communication I will use basic sign language at the same time that I am speaking throughout this lesson and other lessons.

I will then play with the blocks and the child I have invited for a few minutes before repeating the exercise with another child. I will then ask one of the children to start the game again and invite their partner to join them. This will later be repeated with the other child so that both children have had the chance to practice inviting their partner to play with them and have shown their partner where they are playing and what they are playing with.

During this practice session, I will shape approximations of the skill by praising attempts that are accurate and correct those attempts which are not. Shaping the skill may also include hand over hand guidance to demonstrate appropriate actions and verbal prompting to remind the children of what they should say.

Once the children are demonstrating proficiency in the skill, that is they are able to successfully get eye contact with their partner approximately 80% of the time, the children will be told that they are ready to play together in the play Centre and can use their new skill when they want to talk to their friend. During this time, I will continue to encourage the use of the skill by prompting the children to use it with their peer partner.

### Lesson 3: Describing One's Own Play and the Play of Others

Lesson Objective: To teach the children to share their play ideas by telling their partner what they are doing and commenting on their partner's play.

#### Introduction:

The children will come into the block/housekeeping room from outside playtime as described in lesson 1. Once the children are inside I will share the playgroup objective as follows: I will tell the children that they will be learning how to play together by telling their partner what they are doing during a game and also talking about what their partner is doing.

I will then act out the skill using one of the children as a play partner. I will begin as in lesson 2 by going over to the child and touching them on the arm or tapping them on the shoulder and using their name. Once I have established eye contact I will invite them to play with the dolls in the crib in the housekeeping area and show the child where I am playing by pointing or leading him/her over to the area. I will then tell the child that I am dressing the dolls and that I have put on the baby's hat and sweater and that I am going to put on her pants now. If the child has not already joined in, I will invite them again to change one of the dolls and then begin to comment on what they are doing. For example, I may say, "Oh you are going to put a hat on your baby". This can also be elaborated by saying "Oh you are going to put the blue hat on your baby" etc. I will then comment on any other actions that the child is doing with the doll by taking the child's lead. These comments will be interspersed with a commentary on my own actions so that the play can develop between us.

I will then prompt the child to tell me what he/she is doing by asking "What are you doing now?" and later prompt the child to comment on what I am doing by asking them to "Guess what I'm doing". I will then repeat the exercise with the other child and again model commenting on my own actions and the actions of the child and later prompt the commentary by asking questions about what they are doing and asking them to guess what I am doing.

Following this, the children will be asked to practise this same skill with their partner using the same method. During these practice sessions, I will shape approximations of the skill by praising attempts that are accurate and correct those attempts which are not. Shaping the skill may also include hand over hand guidance to demonstrate appropriate actions, and verbal prompting to remind the children of what they should say.

Once the children are demonstrating proficiency in the skill, that is they are able to successfully get eye contact with their partner approximately 80% of the time, the children will be told that they are ready to play together in the play Centre and can use their new skill when they want to talk to their friend. During this time, I will continue to encourage the use of the skill by prompting the children to use it with their peer partner.

#### Lesson 4: Prompting Requests Through a Series of Steps

Lesson Objective: To teach the children to invite other children to play by offering their peer partner a choice of play activities

##### Introduction:

The children will come into the block/housekeeping room from outside playtime as described in lesson 1. The playgroup objective will then be shared as follows: I will tell the children that they will be learning how to invite another child to play with them by offering them a choice of games to play together.

I will then act out the skill using one of the children as a play partner. This will be done by beginning with the same procedure described in lesson 2, establishing contact by touching the child on the arm or tapping them on the shoulder and using their name. Once eye contact has been established I will tell the child what game I am playing and where I am playing, for example, "I am playing with the dolls in the housekeeping area, do you want to play with the new born baby or the little girl doll?" I will then show the child each doll and again refer to each doll and restate the question by holding up each doll and saying "This is the newborn doll and this is the girl doll, which would you like to play with?"

Once the child has responded and chosen which doll they would like to play with I will then show the child where I am playing and point or lead them to the housekeeping area. During our playtime with the dolls I will reinforce the commentary skills that were introduced in lesson 3 by commenting on what I am doing with the doll and what the child is doing with his/her doll. At this time I will also prompt the child to comment on what they are doing by asking them to tell me what they are doing and prompt them to talk about what I am doing by asking them to guess what I am doing. The exercise will then be repeated with the other child following the same procedure.

Following this, the children will be asked to practise this same skill with their partner using the same method. During these practice sessions, I will shape approximations of the skill by praising attempts that are accurate and correct those attempts which are not. Shaping the skill may also include hand over hand guidance to demonstrate appropriate actions, and verbal prompting to remind the children of what they should say.

Once the children are demonstrating proficiency in the skill, that is they are able to successfully get eye contact with their partner approximately 80% of the time, the children will be told that they are ready to play together in the play Centre and can use their new skill when they want to talk to their friend. During this time, I will continue to encourage the use of the skill by prompting the children to use it with their peer partner.

## Lesson 5: Responding to the Speech of Others

Lesson Objective: To teach the children to listen to their peer partner's requests or comments and restate the requests to clarify intent or ask questions to clarify meaning.

### Introduction:

The children will come into the block/housekeeping room from outside playtime as described in Lesson 1. The playgroup objective will then be shared as follows: I will tell the children that we will be practicing how to ask our partner what they mean if we don't understand what they are saying.

I will then act out the skill using one of the children as a play partner. I will begin as in lesson 1 by establishing contact with the child tapping them on the shoulder or touching their arm and using their name. I will then establish a joint focus of attention by telling the child that I am building a house with the blocks and invite them to come and help build it. I will then point in the direction of the block area or lead the child to the block area. At this point, I will comment on what I am doing by saying such things as "I am going to stack these long blocks to make a wall" I will also prompt the child to comment on his/her actions by asking "What are you doing?" When the child responds I will clarify the response by restating it. For example if the child says that they are stacking the blocks I will say "Oh you are stacking the blocks on that side." I may also further prompt elaboration by asking them if they are going to use all the long blocks or if they are going to build a wall. To prompt the child to request clarification from me on what I have stated, I will mumble one of my responses to get them to ask me to repeat it. If I don't get them to respond in this way, I will model a request for clarification by asking them to repeat something that they said so that they hear the question and know how it may be used. I will then demonstrate and model the same procedure with the other child.

Following this, the children will be asked to practise this same skill with their partner using the same method. During these practice sessions, I will shape approximations of the skill by praising attempts that are accurate and correct those attempts which are not. Shaping the skill may also include hand over hand guidance to demonstrate appropriate actions, and verbal prompting to remind the children of what they should say.

Once the children are demonstrating proficiency in the skill, that is they are able to successfully get eye contact with their partner approximately 80% of the time, the children will be told that they are ready to play together in the play Centre and can use their new skill when they want to play with their friend. During this time, I will continue to encourage the use of the skill by prompting the children to use it with their peer partner.

Lesson 6: Redirecting the play activity by suggesting a joint play activity

Lesson Objective: To teach the children to join together in play activities

Introduction:

The children will come into the block/housekeeping room from outside playtime as described in lesson 1. The playgroup objective will then be shared as follows: I will tell the children that they will be learning how to join two games together or start a new game with each other.

I will begin by having one of the children play in the housekeeping room while I am playing in the puppet theatre. I will then prompt the child for dialogue and comment both on what the child is doing and what I am doing in the puppet theatre. I will then elaborate on what the child is playing in the housekeeping room by suggesting a joint activity that will include her/his activity. For example if the child is playing with the dolls I will invite her/him and the dolls to come over and watch the puppet show. Or if the child is dressing up or has assumed a role I will ask them to join in while in that role. For example if they have dressed up as a doctor, I may say "Dr. you had better come over one of my puppets has a nose bleed".

I will then demonstrate and model the same procedure with the other child. Following this, the children will be asked to practise this same skill with their partner using the same method. During these practice sessions, I will shape approximations of the skill by praising attempts that are accurate and correct those attempts which are not. Shaping the skill may also include hand over hand guidance to demonstrate appropriate actions, and verbal prompting to remind the children of what they should say.

Once the children are demonstrating proficiency in the skill, that is they are able to successfully get eye contact with their partner approximately 80% of the time, the children will be told that they are ready to play together in the play Centre and can use their new skill when they want to talk to their friend. During this time, I will continue to encourage the use of the skill by prompting the children to use it with their peer partner.

VITA

Surname: MacDonald

Given Names: Margaret Joan

Place of Birth: Burnaby, British Columbia, Canada

Educational Institutions Attended:

University of Victoria 1982 to 1995

Simon Fraser University 1979 to 1982

Douglas College 1977 to 1979

Degrees Awarded:

B.Ed University of Victoria 1990

B.A. (Honours) Simon Fraser University 1982

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Title of Thesis:

Increasing the Social Interaction of Preschool Children with  
Special Needs through a Peer Training Playgroup

A u t h o r

Margaret Joan MacDonald

April 20, 1995