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The effect of video instruction on social interactions of children in the inclusive preschool

Catherine Doyle Lyons
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THE EFFECT OF VIDEO INSTRUCTION ON
SOCIAL INTERACTIONS OF CHILDREN
IN THE INCLUSIVE PRESCHOOL

by

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A dissertation submitted in partial fulfillment
of the requirements for the

Doctor of Philosophy Degree in Special Education
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Doctor of Philosophy Degree in Special Education


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ABSTRACT

The Effect of Video Instruction on Social Interactions of Children in the Inclusive Preschool

by

Catherine Lyons

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Social competence is an important consideration for early childhood education. Furthermore, young children with disabilities are increasingly being placed in community preschool programs therefore necessitating strategies to increase the number and quality of social interactions between young children with and without disabilities. Beginning at a very young age nearly all children have access to television, VCR or DVD, and cable or satellite. Therefore, media may serve as a vehicle to increase the number and quality of social interactions between young children with and without disabilities.

This study had two purposes. The first was to investigate the effect of scripted video instruction on the quantity of social interactions between young children with and without disabilities in an inclusive preschool classroom. The second purpose of this study was to investigate the effect of scripted video instruction on the quality of social interactions between young children with and without disabilities in an inclusive preschool classroom.

Eighteen four and five year-old children with and without disabilities were selected to participate in this study. The subjects were randomly selected from two classrooms at an

inclusive preschool program housed in the College of Education, on an urban university campus in the southwestern region of the United States. Upon selection of the participants, the subjects were randomly assigned to one of three groups, the intervention group, the parallel group, or the comparison group. Each group consisted of three males, three females, two children with a disability, and four children without a disability.

The results from this study indicated that scripted video instruction had a positive effect on the number and quality of social interactions between young children with and without disabilities in the inclusive preschool classroom. However, there were no significant differences indicated for disability status or gender regardless of group assignment or session

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CHAPTER 1

INTRODUCTION

Young Children and Inclusive Education

Special education and related services for young children with disabilities has grown significantly since the passage of Public Law 94-142 in 1975, and its subsequent reauthorizations, most recently the Individuals with Disabilities Education Act (IDEA) in 1997 (Smith & Dowdy, 1998). According to the Twenty-Third Annual Report to Congress on the Implementation of IDEA approximately 588,300 children from three to six years of age were served in the United States and its outlying areas or territories under IDEA during the 1999-2000 school years. This number represented approximately 5% of all preschoolers living in the United States and its outlying areas or territories at the time. As of September 25, 2000, 187,062 of these children were being served in early childhood settings versus other educational environments (i.e.: other educational environments; early childhood special education settings, home, part time early childhood special education settings, residential facilities, separate schools, itinerant services outside the home, and reverse mainstream) (U.S. Department of Education, 2001).

The practice of including young children with disabilities in programs with children without disabilities is not a recent one. For over 25 years, descriptions of these programs have appeared in the literature (Odom et al., 1996). Further, there is evidence that the numbers of inclusive early childhood programs are increasing (Lieber et al., 1998;

Wolery et al., 1993). In a 1993 survey of early childhood programs, Wolery et al found that 74.2% (483 of the 893 mailed questionnaires) of the responding programs served children with disabilities alongside children without disabilities. In 1997, McDonnell, Brownell, and Wolery found that 58% of early childhood programs accredited by the National Association for the Education of Young Children (NAEYC) included young children with disabilities.

When inclusion is practiced consistently in early childhood programs, young children with and without disabilities learn naturally to respect and value each other. Then, in later years as adults these same individuals learn to have respect for all people and an increased understanding and acceptance of individual differences (Galant & Hanline, 1993). Benefits of inclusion for children with disabilities are peer modeling, decreased rates of inappropriate behavior, increased amount of IEP objectives achieved, enhanced skill acquisition and generalization, increased inclusion in future environments, increased opportunities for interactions, increased social initiations, and friendships (Nevada Department of Education, 1995).

Inclusive education is supported by numerous professional organizations for example, the Division of Early Childhood (DEC) of the Council for Exceptional Children (CEC) recommends inclusive practices for young children arguing for participation of all children in natural environments within their communities. DEC also supports full access to other supports and services that promote full inclusion for children with disabilities. Additionally, DEC supports the role of the family in determining services, training for families, administrators, and service providers, collaboration among key stakeholders, research on state of the art services, and restructuring of supports and

services for the successful inclusion of all children. These practices were endorsed by the National Association for the Education of Young Children (NAEYC) in 1994 (DEC Recommended Practices, 1993).

The NAEYC also supports inclusive practices in early childhood settings. NAEYC published *Guidelines for Developmentally Appropriate Practices* (DAP) that endorsed inclusion of all children (with and without disabilities) in early childhood programs, child initiated activities across all domains of development, the instruction of children within the context of play, an environment that stimulates learning and exploration, and the necessity for the materials within that environment to be real, concrete, and relevant to young children's experiences. DAP refers to a practice that has two components, age appropriateness and individual appropriateness. The two components are:

Age Appropriateness: Knowledge of the typical development of children within the age span served by the program provides a framework from which teachers prepare the learning environment and plan appropriate experiences. Individual Appropriateness: Each child is a unique person with an individual pattern and timing of growth as well as an individual personality, learning style and family background. The program should be responsive to these individual differences (Bredekamp, 1997, p. 2).

Social Competence and Theories of Human Development

Social competence has emerged as an important construct to human development. Consequently, it became a central feature of early childhood education (Guralnick & Neville, 1997). Social competence is the ability to initiate and maintain satisfying reciprocal interactions with others, to work out conflict, and to build friendships (Grubbs

& Niemeyer, 1999; Guralnick & Neville, 1997; Katz & McClellan, 1997). Theorists such as Vygotsky, Piaget, and Erikson, maintained that the development of skills and subsequent learning have roots in interactions with the environment, families, caregivers, and peers (Grubbs & Niemeyer, 1999).

Vygotsky theorized that interactive, cognitive, and social development work together and build upon each other. He argued that much of children's learning takes place during play. For Vygotsky, one of the most important developments was the zone of proximal development. The zone is the distance between the child's actual development level reached and the higher level of potential development as determined through adult guidance or in collaboration with more capable peers (Vygotsky, ([1933] 1978). Vygotsky hoped that the construct zone of proximal development would offer educators a better understanding of children's potential (Crain, 2000).

Piaget theorized that children's cognitive development passed through stages, sensorimotor (birth to 18 months), preoperational (18 months to 6 years) concrete operational (6 to 12 years), and formal operational (12 years and older). In his theory of sensorimotor development curiosity drives learning and was expressed through play. Therefore, a child's interactions with their environment are what create learning (Crain, 2000).

Erikson's most important work *Childhood and Society* outlined eight stages of psychosocial development. His work is crucial to the field of early childhood education because it delineates a theory of how children develop the foundation for social-emotional development. He theorized that in the earliest years of life patterns develop that control an individual's actions and interactions for the rest of their life (Erikson,

1963). Erikson's first three stages of psychosocial development influence an individual's actions and interactions for the rest of their life, trust vs. mistrust (0-1 year) develops hope, autonomy vs. shame and doubt (2-3 years) develops willpower, initiative vs. guilt (4-5 years) develops purpose.

After several weeks of observing children two to five years of age at play, Parten (1932) developed a social play hierarchy. Parten's categories of social participation were defined as: unsocial play types (unoccupied behavior, onlooker, and solitary play), and social play types (parallel play, associative play, and cooperative or organized supplementary play). Parallel play was the most commonly observed play in the Parten study. Parallel play is defined as independent play, however the activity brings the child among other children using the same or similar materials, it resembles group play. Most educators and psychologists agree that play is critical to education of all young children because it facilitates children's development (Hughes, 1999).

Social Learning Theory

The social learning theory explains children's social development by focusing on learned behaviors known as observational learning or modeling. Modeling comes from actively imitating what an individual sees others do (Goin, 1998). One study that stands out above others is the bobo doll study. Bandura and Walters, (1959) made a film clip of a woman punching a bobo doll while yelling "sockeroo". This woman also kicked and hit the bobo doll with a hammer; basically, she beat up the bobo doll. Next, the film clip was shown to a group of kindergarteners. After watching the film, the children were led into a room with a brand new bobo doll and a few small hammers. The children began beating up the bobo doll. In other words, they imitated the woman in the film clip by

punching the bobo doll while yelling “sockeroo”, kicking it, and hitting it with hammers. These children changed their behavior without directly experiencing a consequence of the behavior. Bandura called this experience observational learning or modeling. His observations have formed the basis of what is widely referred to as social learning theory.

Inclusion

Current trends encourage inclusive settings for children with disabilities in natural or least restrictive environments. Therefore, families, early childhood professionals, and early childhood special education professionals need to work together to increase their knowledge of appropriate practices for all young children (Lowenthal, 1999).

Unfortunately, children with disabilities tend to have fewer friends and fewer social interactions with their peers than do children without disabilities. Because of this, it may be unreasonable to simply place children with disabilities in classrooms with children without disabilities and expect that social interactions and friendships will occur spontaneously. When young children with disabilities are included in early childhood programs, teachers need to facilitate interactions and the development of friendships across all ability levels (Guralnick, Connor, Hammond, Gottman, & Kinnish, 1995).

Several studies have demonstrated the positive impact inclusive settings have on social interactions versus self-contained classrooms (Guralnick & Groom, 1988; Guralnick et al., 1995; Hundert, Mahoney, & Hopkins, 1993; Sontag, 1997). Children with disabilities are “...engaged in a substantially higher rate of peer-related social behaviors and played more constructively” in inclusive early childhood settings (Guralnick & Groom, 1988, p. 418). Despite the social opportunities provided by the presence of children without disabilities in inclusive early childhood settings, children

with disabilities tend to interact more frequently with other children with disabilities in social play. Likewise, children without disabilities tend to play more often with children without disabilities (Hanline, 1993). Even with the positive impact and the presence of typical role models in inclusive environments, interactions among children with and without disabilities are not likely to occur due to proximity alone. Activities must be structured to encourage social interactions and initiations (Guralnick & Groom, 1988). According to Hundert and Hopkins (1992), the development of adequate levels of social competence for children with disabilities depends upon systematic procedures or strategies teachers utilize to promote peer interaction in inclusive preschools.

Media and Socialization of Young Children

According to the Center for Research on the Influences of Television on Children (CRITC) at the University of Kansas, both critics and defenders of television agree that it is a significant and pervasive part of modern day life. In 1948, there were 102,000 televisions sets in the United States, two thirds of them in New York City. By 1978, 98% of Americans owned a television set (Comstock, 1989). By 1999, nearly all children had a television, 97% of households with children had a VCR, and 74% had access to cable or satellite (Rideout, Foehr, Roberts, & Brodie, 1999). Children, beginning at birth, spend more time watching television than any other activity other than sleep and, other than the family; it is the main socializing agent for children (Huston & Wright, 1996). Beginning at age two, television viewing occupies a central place in the lives of most Americans. In the Topeka Study, a two year longitudinal study of children between the ages of 3 and 5 and 5 to 7 investigated age changes and environmental influences on television viewing. Children between the ages of 3 and 5 watched an average of 19-20 hours of

television per week. According to statistics, most American children will have watched more television by the time they graduate from high school than they will have spent in formal classroom instruction (Huston, Wright, Rice, Kerkman, & St. Peters, 1990).

Huston and Wright (1996) concluded that television, as a medium is neither bad nor good, rather, it depends on the types of programs broadcasted and the ways in which they are viewed. Television is not inherently passive; often children are cognitively active while viewing programs. Typically what children watch on television depends on their understanding and interests. The early years are critical times for the socialization of television viewing habits and typically children learn what to watch and how much to watch from the examples set by their families. If television is to become more of a positive force in children's development the industry needs to be responsible for supplying creative well designed programs rather than being a marketer for advertisers' products. Additionally, childcare settings and schools could use television in a positive manner, they could use it to enhance learning rather than for entertainment (or rather than ignore it altogether). After a review of the literature in 1986, Hearold concluded that pro-social television had as much effect, if not more effect, than violent television. Unfortunately, there are few pro-social programs on television (Hearold, 1986).

Purpose of the Study

The purpose of this study was to investigate the effect of scripted video instruction on the quantity and quality of social interactions between children with and without disabilities in the inclusive preschool classroom. In other words, after watching an adult scripted video activity did children with and without disabilities imitate or model the

behaviors of their peers in the video activity and increase their positive social interactions.

Null Hypotheses

The Null Hypotheses tested in this study are:

1. There will not be a difference in the quantity of social interactions between children with and without disabilities before and after scripted video instruction.
2. There will not be a difference in the quality of social interactions between children with and without disabilities before and after scripted video instruction.

Research Questions

The research questions focused on the use of media to increase the social interactions of young children with and without disabilities in the inclusive preschool setting.

1. Will there be a difference in the quantity of social interactions between children with and without disabilities before and after scripted video instruction?
2. Will there be a difference in the quality of social interactions between children with and without disabilities before and after scripted video instruction?

Significance of the Study

The practice of inclusion in early childhood education has found support from two very important groups – the legislative bodies of both federal and state governments and professional organizations. Therefore, young children with disabilities are increasingly being placed in community preschool programs (Burstein, 1986; Hundert, Mahoney, & Hopkins, 1993). Inclusive education for young children with disabilities provides increased opportunities for interactions, social initiations, and the option to participate in school and after-school activities. A great deal of research over the last decade has focused on measuring social interactions between children with and without disabilities. However, research has found that social interactions between mainstreamed children with disabilities and typically developing peers were limited if left to chance (Hanline, 1993). Therefore, research suggests the need for strategies to increase the quantity and quality of social interactions between young children with and without disabilities in inclusive programs. Nearly all children have access to a television, 97% of households with children have a VCR, and 74% have access to cable or satellite (Rideout, Foehr, Roberts, & Brodie, 1999). Therefore, media can be seen as a vehicle to develop cooperative interactions and to investigate socially positive attitudes and behavior (Graves, 1999).

The findings of this study will contribute to the knowledge base of effective strategies that may be utilized to (a) increase social interactions between young children with and without disabilities in the inclusive preschool classroom, (b) increase the quality of social interactions of young children with and without disabilities, and (c) demonstrate the positive function of media instruction in the inclusive preschool classroom.

Limitations of the Study

1. The research took place at UNLV/CSUN Preschool. The preschool is housed in the College of Education at the University of Nevada, Las Vegas on a metropolitan university campus in the southwestern region of the United States. The preschool is an inclusive child-centered early childhood program that is fully accredited by the National Association for the Education of Young Children (NAEYC). All children participating in the study were acquainted with each other prior to participating in the research. Either these children attended the same classroom or they shared playground time if in a different classroom. Consequently, the children may have developed positive or negative perceptions about each other prior to the commencement of the study.
2. Media instruction to increase the number and quality of social interactions between children with and without disabilities was an unorthodox style of training in this inclusive preschool because videos were not a part of the program's curriculum.
3. The research was conducted in an NAEYC accredited inclusive preschool program that advocates small group sizes; 20 children per classroom. Ten to fifteen percent of the children enrolled in the two four to five year old classrooms were children with disabilities. The population to draw from was a relatively small number; therefore the participants are twelve children without disabilities and six children with disabilities. Consequently, the generalizability of the results to other groups may be limited.

4. The preschool classrooms were large classrooms making videotaping impossible.

As a result, the research setting was limited to one room within the program.

Unfortunately, the room was licensed for only six children. Consequently, the study consisted of 3 separate groups of children; each group consisted of four young children without disabilities and two young children with disabilities.

Definition of Terms

The following terms were used in this study. The precise definitions of the terms follow:

Children with Disabilities

Children with disabilities were children who need special education and related services as outlined by P.L. 105-17, the Individuals with Disabilities Education Act (IDEA, 1997). These children had an Individualized Education Program (IEP).

Children without Disabilities

Children without disabilities were defined as children who were not eligible for special education and related services as outlined by P.L. 105-17, the Individuals with Disabilities Education Act (IDEA, 1997). These children did not have an IEP.

Inclusive Preschool

As it applied to this study, the inclusive preschool was a community based early childhood program that serves young children with and without disabilities twelve months through five years of age in one of six classrooms with no prerequisites for participation. Approximately 10 to 15 percent of the children in the six classrooms were children without disabilities.

Inclusive Targeted Classrooms

Eighteen children with and without disabilities were selected to participate in this study from 79 children in the two four to five year-old classrooms, also known as the Butterfly and Rainbow classrooms. The program follows the NAEYC recommended group size of a maximum of 20 for four and five-year-old classrooms. However, the program exceeds the NAEYC recommended staff-child ratios of 1:10. The staff-child ratios in each of these two classrooms range from 1:4 to 1:5.

Research Classroom

The research classroom is a separate 220 square foot classroom that is located on the first floor of the College of Education. This classroom is licensed to hold six children based on state licensing regulations and the NAEYC guidelines of 35 square feet of space for each child enrolled in a classroom. The limited square footage in the research classroom accounts for the small sample size in this study, the three groups were restricted to six children each.

General Education Preschool Teacher

The general education preschool teachers were individuals who were credentialed to teach early childhood education or who were currently enrolled in an early childhood degree program at the same university as the inclusive preschool program. The general education teachers team-teach and collaborate with the two early childhood special education teachers. They were fully participating members of the IEP team for the subjects with disabilities in the study.

Early Childhood Special Education Teacher

The two early childhood special education teachers were credentialed to teach early childhood special education. The special education teachers team-teach and collaborate with the early childhood general education teachers. They were full participating members of the IEP team for the subjects with disabilities in the study.

Social Competence

Social competence was the ability to initiate and maintain satisfying reciprocal interactions with others, to work out conflict, and to build friendships (Guralnick & Neville, 1997; Katz & McClellan, 1997).

Positive Social Behaviors

The positive social behaviors on the Social Interaction Observation System (SIOS) were: child engages in positive interaction with peers, child engages in parallel play, child engages in associative and/or cooperative play, child engages in positive linguistic interaction, peer(s) initiate interaction towards child, child responds positively to peer initiation, child initiates interaction towards peers, and peer(s) responds positively to child initiation (Kreimeyer, Antia, Coyner, Eldredge, & Gupta, 1991).

Parallel Play

Parten (1932) concluded that parallel play is a limited form of social participation, a child plays near other children with similar materials but does not try to influence their behavior. The SIOS defines parallel play as play that a child does independently alongside peers and engages in similar activities; social contact is only through gaze or imitation. Children do not interact with one another (Kreimeyer, Antia, Coyner, Eldredge, & Gupta, 1991).

Positive Social Interaction

A positive social interaction with a peer(s) occurred when the target child played or conversed with other children, showed physical signs of affection with a peer(s), and/or engaged in interactive games (Kreimeyer, Antia, Coyner, Eldredge, & Gupta, 1991).

Negative Social Interaction

A negative social interaction with a peer(s) occurred when the target child responded by overly refusing to interact with a peer(s), by not allowing the peer to join in play, or by directing negative verbal or physical behaviors toward a peer(s) (Kreimeyer, Antia, Coyner, Eldredge, & Gupta, 1991).

Positive Initiation

The target child attempted to begin a positive interaction with a peer(s); to join a peer(s) already engaged in play; to give instructions to a peer(s); or to modify the ongoing play activity (Kreimeyer, Antia, Coyner, Eldredge, & Gupta, 1991).

Negative Initiation

The target child attempted to begin a negative interaction with a peer(s) either verbally or physically; to join a peer(s) already engaged in play to give negative instructions to a peer(s); or to negatively modify the ongoing play activity (Kreimeyer, Antia, Coyner, Eldredge, & Gupta, 1991).

Social Learning Theory

Social learning theory explains individuals social development, in particular children's social development by focusing on learned behaviors acquired through observational learning or modeling (Goin, 1998).

Media

Media defined in this study referred to film, television, and videos. When used in this study the researcher noted whether the reference was to film, television, or videos.

Coalition for Quality Children's Media (CQCM)

CQCM was founded in 1991 as a national non-profit organization that was a voluntary collaboration between educators and child advocacy organizations and the media. The mission statement of CQCM is to enhance children's viewing experiences by making quality children's media more visible and more easily available. KIDS FIRST! is a proactive effort that supports the positive effects of media on children, based on the many studies that have shown how exposure to quality children's programming can enhance a child's self esteem, interpersonal relationships, cognitive skills and career aspirations. Locating quality programming is difficult and time consuming for families, caregivers and kids. KIDS FIRST! offers guidance for finding titles that have been adult-approved and kid tested. Every title recommended by KIDS FIRST! must meet or exceed their criteria including no gratuitous violence or sexual behavior, no physical or verbal abuse, no bias in terms of race, gender, culture or religion, no condescension toward children, and no unsafe behaviors. The titles that receive the highest scores receive an *All-Star* rating, titles that meet or exceed the criteria receive an *Endorsed Title*, and titles that meet the baseline criteria but require some extra thought on the part of the family or caregiver receive a *Qualified Endorsement rating*. The CQCM endorsement also includes a recommended age for their endorsed titles (CQCM, 2000). The National Association for the Education of Young Children endorses the CQCM (Horton & Zimmer, 1994).

National Association for the Education of Young Children (NAEYC)

The NAEYC is a voluntary membership supported organization of individuals committed to fostering the growth and development of all young children from birth through age 8 (Bredekamp & Copple, 1997).

Comparison Group

The comparison group was defined as four young children without disabilities and two young children with disabilities who were shown the video titled *Lady and the Tramp, II*, a video endorsed by the CQCM (2000). The *Lady and the Tramp, II* received an All Star rating and it was recommended for children 4-5 years of age. The video activity was scripted by the teacher facilitator using the *Video Observational and Modeled Play with Verbal Guidance Script* (see Appendix G).

Parallel Group

The parallel group was defined as a group of four young children without disabilities and two young children with disabilities who were shown a video by a teacher facilitator. The video portrayed one child with a disability and one child without a disability engaged in parallel play; a child playing independently alongside a peer(s) engaged in similar activities. Social contact was only through gaze or imitation. Children did not interact with one another (Kreimeyer, Antia, Coyner, Eldredge, & Gupta, 1991). The video was scripted by the teacher facilitator using the *Video Observational and Modeled Play with Verbal Guidance Script* (see Appendix G).

Interactive Group

The interactive group was defined as a group of four young children without disabilities and two young children with disabilities who were shown a video by a teacher

facilitator. The activity portrayed a child(ren) with a disability and a child(ren) without a disability positively interacting with one another. The video was scripted by the teacher facilitator using the *Video Observational and Modeled Play with Verbal Guidance Script* (see Appendix G).

CHAPTER 2

REVIEW OF RELATED LITERATURE

Children's efforts to form relationships with their peers and to develop friendships are evident at a very young age (Guralnick, 2001). The majority of children without disabilities are able to manage peer-interactions successfully in a socially competent way, to establish peer relationships, and to develop friendships (Asher, 1990). This is not true for children with disabilities (Guralnick, 2001). Children with disabilities exhibit: (a) less play that is maintained; (b) more solitary play; (c) display more negatively, particularly during conflicts; (d) have less success entering into peer group play; and (e) they seldom form reciprocal friendships. (Buysse, 1993; Guralnick, Connor, Hammond, Gottman, & Kinnish, 1996; Guralnick & Groom, 1987, 1988). This lack of peer related social competence is likely to lead to negative outcomes later in life (Parker & Asher, 1987) including social isolation (Taylor, Asher, & Williams, 1987; Williams & Asher, 1992).

The primary purpose of this chapter is to discuss the importance of social competence for young children with disabilities. Social competence has emerged as an important construct to human development. Consequently, it became a central feature of early childhood education (Guralnick & Neville, 1997). Unfortunately, children with disabilities tend to have fewer friends and fewer social interactions with their peers than do children without disabilities. These social competence problems exhibited by young children with disabilities have important implications for early childhood inclusion.

Therefore, strategies for improvements in social competence are needed to enhance the level of social integration in inclusive early childhood programs and the community for young children with disabilities (Guralnick, 2001).

In the first section of this chapter information outlining theories of development will be reviewed. Theories of development, such as, Vygotskys' social theory of cognitive development, Erikson's eight stages of life, and Parten's social play hierarchy help us organize and understand human development. The second section provides information on social learning theory. Bandura (1977) proposes that children learn by imitating and modeling observed behaviors of others. The third section, will discuss inclusive education and young children with disabilities. The fourth section is a review of strategies to promote social interactions between young children with and without disabilities, and the final section of this chapter will discuss media and its effect on the socialization of young children.

Theories of Development and Young Children

Clearly early childhood constitutes a very sensitive period within the entire developmental process; it is obviously notable by improved social and cognitive functioning (Goin, 1998). Since relationships saturate every aspect of human development it seems logical to have an understanding of the origin of play and social development.

In Vygotsky's sociocultural theory children's mental activities are constructed and transferred to them through dialogues with others. He believed that social experiences shape the way we think and interpret the world and, that communication plays a crucial

role in the socially formed mind (Berk, 1994). Vygotsky ([1933] 1978) theorized that pleasure is not the defining factor of play for a couple of reasons. First of all, children gain pleasure from many activities such as cuddling with a caregiver. And secondly, beginning at the end of preschool, many games with rules are not pleasurable unless the end result is favorable, for example winning the game. On the other hand, Vygotsky believed that play fulfills some of children's needs and that we need to gain knowledge about children's needs in order to understand children's development. For example the very young child wants its needs gratified immediately, however at the preschool age when a need cannot be realized immediately the child enters an imaginary world in which his desires can be realized, this imaginary world is what is referred to as play. In play, action arises from ideas rather than from things: a shovel becomes a sword and a stick becomes a magic wand. As play develops it moves towards purpose, the purpose decides the game and then it justifies the activity. At the end of development rules emerge causing play to become more tense and heightened.

Play creates a zone of proximal development of the child. In play a child always behaves beyond his average age, above his daily behavior; in play it is as though he were a head taller than himself. As in the focus of a magnifying glass, play contains all developmental tendencies in a condensed form and is itself a major source of development (Vygotsky, 1933, 1978, p. 102).

In other words, tasks that cannot be handled by a child alone can be accomplished with the help of adults or more skilled peers. The zone is the distance between the children's actual development level reached and the higher level of potential development as determined through adult guidance or in collaboration with more capable

peers. Vygotsky believed that measuring the child's potential level of development is just as important as measuring the actual level because instruction should be tied closely to the potential level of development. Vygotsky concluded that play is a leading factor of development rather than the main feature of childhood. Additionally, he demonstrated the significance of change in play from imagination to games and rules. And finally, he pointed out the importance of internal transformations in children's development due to play (Vygotsky, ([1933] 1978).

Erikson's psychosocial theory divided human development into eight stages of life. He theorized that these stages gradually lead to an understanding of the more crucial, between the child and the social world (Crain, 2000). The eight stages are trust vs. distrust, autonomy vs. shame and doubt, initiative vs. guilt, industry vs. inferiority, identity vs. role confusion, intimacy vs. isolation, generativity vs. stagnation, and integrity vs. despair. The three stages that apply to early childhood education are trust vs. distrust (0 to 1 year), autonomy vs. shame and doubt (1 to 2 years), and initiative vs. guilt (3 to 5 years).

Infants interact with caregivers to get what it is they need, for example they may cry when they are hungry, cold, or wet. Trust develops when the infant senses that the caregiver is consistent and dependable therefore trustworthy, however if the caregiver is unpredictable and unreliable the infant develops mistrust. Autonomy vs. shame and doubt is a stage of holding on and letting go, Autonomy comes from within, controlling one's own sphincter muscles, standing on their own feet, and so on. However, shame and doubt come from an awareness of social expectations and pressures. Initiative vs. guilt promotes curiosity, fantasy and bold imagination (Crain, 2000; Erikson, 1963). Unlike

Freud, Erikson believed that play has an ego building function and that it helps with the development of the physical and social skills necessary to enhance self-esteem. During the first year of life he believes that play focuses on one's own body until children have an understanding that they are different from other people. Erikson called this auto cosmic play. During the second year of life Erikson referred to play as micro sphere. During the preschool years children go beyond their own bodies and objects to master social interactions that are referred to as macro sphere play. These skills of playing with peers, sharing fantasy and reality with peers, and demonstrating skills in a social setting strengthen children's egos allowing them to realize they can be successful in the social world (Hughes, 1999).

Parten (1932) studied the social participation of 42 nursery school children. The subjects were 22 males and 20 females ranging in age from under 2 years to 4 years, 4 months. Based on the intelligence tests given to the subjects their average mental ability was above normal with an I.Q. range from 81 to 145; 30 of the children had an I.Q. range from 100-129. Based on their occupations, fathers were grouped into five categories ranging from the highest or professional class (group I) to semi-skilled laborers (group V). The children were of diverse national origin and they were from families that had one to five children. This study took place at the Nursery School of the Institute of Child Welfare at the University of Minnesota. The observation of the children took place over a period of 8 months, from October 26 to June 10 with the majority of the observations taking place from January to April. Most of the observations were taken inside because the researcher thought that inside and outside play differed enough that elements involved in one may not be involved in the other. Data were not kept daily during May and June

because the children played outside. However, some observations on outdoor play were made for subjects who enrolled in the nursery school late in the year so that they would have more complete data. Data were collected at the same time every day the children were in school, observations were during morning free play from 9:30 to 10:30.

After several weeks of observation, Parten (1932) classified social participation into categories of unoccupied, solitary play, onlooker, parallel group activity, associative group play, and organized supplementary or cooperative group play. Unoccupied behavior is described as not playing with any materials or peers. The child watches others and/or wanders about the room. Onlooker is when a child observes other children playing but he/she does not enter into the play activity. Solitary play is when a child plays alone, including when a child plays with different materials than peers in speaking distance, but makes no effort to talk to or play with the peers. Parallel play is when a child plays independently with the same or similar materials near others but he makes no attempt to join in play with others nearby. Parallel play is a more socialized form of play because it resembles group play. Associative play is when a child plays with other children sharing materials yet children do not subordinate their individual interest to that of the group. In Cooperative or organized supplementary play the child plays in a group where the children have a common goal for the play outcome (ex: build a sand castle, city, carwash, etc.). Parallel play, associative play, and cooperative or organized play are considered forms of group play; however, cooperative or organized play is considered the highest form of group play.

Children were observed three times during the seven five-minute sections of each play period for a total of 21 observation days. The average interrater agreement for the

three observers and the researcher was 89%. One observer agreed 92% of the time with the researcher, a second observer agreed 89% of the time with the researcher, and the third observer agreed 86% of the time with the researcher.

Teacher Estimates

Based on 60 one-minute observations of each subject (N=34) teacher's ratings correlated with social participation scores. In other words, teacher's impressions of the subject's social participation closely resembled that of the systematic observations. The ratings of one teacher correlated .79 with the scores of the 60 one-minute observations. And, the ratings of five of the teachers corresponded (correlation .88) more with the observations than with any teacher individually. Teacher's ratings on social participation could have been a substitute for the direct observations.

Amount of Social Participation

Forty-two children had anywhere from 12 to 100 one-minute observations completed on them. Because of the wide range of observations percentages were used to rate the amount of social participation. Only five children were observed in unoccupied behavior, three of them frequently and two of them not so frequently. The children who were observed in unoccupied behavior frequently were under three and half years of age, the least talkative in school, two were girls and one was a boy, all had older siblings, one also had a younger sibling, two had above average I.Q. scores, one had a slightly below average I.Q. score, and they all had as much nursery school experience as most of the other children enrolled in the nursery school. Solitary was the most common type of play, however there was a great deal of variation, one child participated in solitary play 1.2% of the time while four children participated in solitary play 33% of the time. The

child that spent the least amount of time in solitary play was an only child of young parents, he was older than 20 of the children enrolled in the nursery school, he had attended the program longer than 26 of the children enrolled, he had an above average I.Q. (111), he was a school leader and 90% of the time he played in extremely organized group play. The four children that spent a third of their time in solitary play were younger than the average children enrolled in the nursery school, all of the children had older siblings, their I.Q. scores were near or below average, and they had attended the nursery school longer than the average stay. Based on the above these children certainly did not spend a third of their time in solitary play because they were not familiar with their peers. Forty of the 42 children were observed in onlooker behavior. However, this behavior was not as popular as solitary and cooperative play. One child spent 35% of his time in onlooker behavior and a large part of his time in unoccupied behavior. This same child takes a long time adjusting to group situations, he did not begin playing with other children until he had been in the program for nine months, he was large for his age therefore he was sent to music and conversation with the older children and possibly he was intimidated by them, and last of all, he has 2 older brothers and 2 older sisters who "took care of him" at home. A common element was identified between unoccupied and onlooker behavior, if a child spent a great deal of time in one they usually spent a great of time in the other (Parten, 1932, p. 258). Parallel play was frequented by most children. It was most common with younger children than older children. Eight of the children observed spent more than 50% of their time in parallel play. One child who spent the majority of his time in organized group play spent very little time in parallel play (8%). Yet, two thirds of the children spent one third of their time in parallel play. There was

not a common denominator between sex or IQ and parallel play. The author concluded that parallel play was largely determined by age. Forty-one of the 42 children enrolled at the nursery school were observed in associative play. Sixteen of the children spent more than 33% of their time in associative play and one child spent 50% of the time in associative play. Twelve of the 16 children were over three years of age. Associative play appeared to be more common with older children. Observations of children in organized supplementary or cooperative play ranged from one to 57%. Six children were observed in this form of group play at least 30% of the time, three of these children were over three years old, two were girls, four were boys, and they had a mean I.Q. of 120. Five children were observed in cooperative play less than 2% of the time however they were all under two years 11 months of age with a mean I.Q. of 113. Based on the above observations the majority of the children who participate in social types of group play are older children and the children who participate in this type of play the least on the average have a lower I.Q.

Age and Social Participation

Parten (1932) found that age greatly influences social participation. The younger the child the more likely he will fall under the unsocial play type, the older the child the more sophisticated the play (group play). The two to three year old children were observed in unoccupied play during all sixty observations. Solitary play was most common at two and a half, but it declined at age 3 and for a second time at age 4. Onlooker play was most common among 30 to 36 month olds. The oldest children rarely involve themselves as onlookers. Parallel play was most common among the two year olds and least common among the 3 to 4 year olds. Associative play became more common as the

children aged. There was a marked increase in organized supplementary play at three years. The popularity of dramatic play with 3 year olds may have accounted for the interest in cooperative play. It was determined that there was a definite relationship between the age of the subjects and the degree to which they participated in social groups (correlation coefficient .61).

Intelligence Quotients and Social Participation

According to Parten (1932) parallel play is most popular among younger children and it is associated with intelligence (.69). Therefore, it is possible that young children who rank high in intelligence are more likely to play in groups even if it is a lower form of group play. However, group play by children over three years of age does not correlate with intelligence scores.

Nursery School Experience and Social Participation

There was no relationship found between nursery school experience and social participation (correlation coefficient .12).

Changes in Social Participation or "Socialization"

Continued attendance did seem to affect the degree to which subjects as a whole participated in groups. For example unoccupied, solitary and onlooker activity was less prevalent at the end of the observational periods than in the beginning. Associative and cooperative group play occurred more frequently with more exposure to nursery school. Finally, children were engaged in less parallel play as time elapsed, this of course could correlate with age or maybe it was because the children had become familiar with each other.

Research results were based on 60 observations for each subject. Parallel play was the most frequent form of play (range 1-24, mean 10.5, S.D. 7.8) while onlooker play was the least common (range 1-10, mean 4.5, S.D. 3.6). Approximately, 25% of the observations were the three unsocial play types, unoccupied, onlooker, and solitary. However, 75% of observations were of the social type, parallel (range 4-40, mean 19.0, S.D. 7.8), associative (range 0-27, mean 14.0, S.D. 6.6), and cooperative or organized supplementary (range 0-35, mean 9.5, S.D. 7.8).

In conclusion, Parten (1932) categorized social participation into the following categories: unoccupied, solitary, onlooker, parallel group activity, associative group play, and organized supplementary or cooperative group play. She believed that social participation mainly depended on the age of the child. Whereas, the youngest children played alone or in parallel play, the oldest children played in more organized groups.

Social Learning Theory

The social learning theory explains children's development by focusing on learned behaviors acquired through the process of observational learning. Modeling comes from actively imitating what an individual sees others do. "One reason why imitation repeatedly surfaces in studies on peer social development is because the act of mimicking clearly indicates a connection between the actions of others and the actions of self" (Goin, 1998, p. 2). Bandura (1977) argued that in social situations we learn a great deal through imitation, in other words children learn more rapidly simply by observing the behaviors of others. Bandura believes that learning through observation alone must involve cognition. According to Bandura we learn from many kinds of models, live

models, symbolic models such as what is seen on television, videos, verbal instruction or from what is read in a book. (Crain, 2000). Bandura divided the observational learning process into four subprocesses: attentional processes, retention processes, motor reproduction processes, and reinforcement and motivation processes.

Bandura, Ross, and Ross (1963) wanted to establish whether or not film-mediated aggressive models might be a main source of imitative behavior. The subjects were 96 children (48 boys and 48 girls) ranging in age from 35 to 69 months, with a mean age of 52 months. The children were enrolled in the Stanford University Nursery School.

One female and one male adult served as models, both in the aggressive film-condition and in real life. The 96 subjects were divided into four groups of 24 subjects each, three experimental groups and one control group. One experimental group observed real-life aggressive models, a second experimental group observed the same models and behavior on film, and a third group watched a film of an aggressive cartoon character. Then, the experimental groups were further divided so that half the subjects watching human models were exposed to same sex models and half were exposed to models of the opposite sex. The control was not exposed to aggressive models; they were only tested on generalization. The researcher and a nursery school teacher rated the subjects on their aggressive behaviors on four five-point rating scales (to what extent subject exhibited physical aggression, verbal aggression, aggression toward inanimate objects, and aggression inhibition). Based on these ratings of aggressive behaviors subjects were matched individually.

Live Models

Subjects were individually led into the research room and the researcher invited the live model into the room to join them. The researcher led the subject to a small table and chair in a corner of the room that contained some materials to be used to design pictures. Next, the researcher led the model to an opposite corner of the room containing a small table and chair, a tinker toy set, a mallet, and a 5-foot Bobo doll. The researcher explained to the model that this was his play area and then the researcher left the room. After a minute of assembling the tinker toy the model started physically and verbally aggressing toward the Bobo doll, this behavior was repeated approximately three times.

Human Models in Film

The subjects were individually brought to a semi-darkened research room by the researcher. They were shown the picture materials and they were informed that while they were making prints a film would be shown in another corner of the room. The film began as soon as the researcher left the room. A 10 minute film clip of the live models was shown; the adult models and behaviors were the same as the previous group.

Cartoon Film Aggression

The subjects were individually brought into the research room by the researcher and seated in a chair at a table with the picture material. The researcher then walked over to a television and said "I guess I'll turn on the color TV," the researcher then left the room. A cartoon containing the adult female model dressed like a cat appeared modeling the same aggressive acts towards the Bobo doll (Bandura et al, 1963, p5)

Next, the researcher took the subjects individually to a room containing highly attractive toys. After the subject began playing with the toys the researcher told the

subject that she decided to save these toys for some other children to play with but that the subject could play with the toys in the next room. The researcher and the subject entered an adjoining room containing toys that could elicit both imitative and nonimitative aggression and others that would elicit nonaggressive behavior. Included were aggressive toys (3-foot Bobo doll, a mallet and peg board, two dart guns, and a tether ball hanging from the ceiling with a face painted on it) and non-aggressive toys (tea set, crayons and coloring paper, a ball, two dolls, three bears, cars and trucks, and plastic farm animals). The subjects spent 20 minutes in the research classroom. Through a one-way window the male model observed and coded the following responses in 5-second intervals which accounted for 240 responses for each subject: imitative aggression, partially imitative responses, mallet aggression, non-imitative aggression, and aggressive gun play. A second observer rated 40% of the subjects, interscorer reliability was .90 based on product-moment coefficients.

The results indicated that the main effect of treatment conditions were significant ($p < .05$). These results confirmed that subjects exposed to aggressive models will act aggressively at a later time if instigated. Additional analyses of pairs by the Wilcoxon matched-pairs signed-ranks test indicated that there was not a significant difference between the three experimental conditions, however there was a significant difference between the experimental conditions and the control group (total aggression: live vs. control, $p < .01$; film vs. control, $p < .01$; and cartoon vs. control, $p < .005$). Subjects who observed the human models (live and film) displayed significantly more imitative aggression behaviors than the subjects who watched the cartoon models. Boys exhibited significantly more total aggression ($t = 2.69, p < .01$) more imitative aggression ($t = 2.82,$

$p < .005$), more aggressive gun play ($z = 3.38, p < .001$) and more non-imitative aggressive behavior ($t = 2.98, p < .005$). Girls were more prone to sit on the Bobo doll but they did not punch it ($z = 3.47, p < .001$). Subjects exposed to the male model displayed significantly more aggressive gun play ($z = 2.83, p < .005$). Boys who were exposed to the female model were less likely to hit the Bobo doll and more likely to sit on it ($U = 33, p < .05$). Interestingly, exposure to humans on film was the most prominent in eliciting and shaping aggressive behavior from the child subjects. Also, the Friedman analysis revealed that exposing subjects to live and film mediated models turned out to be an extremely effective approach for shaping subjects' aggressive responsiveness ($p < .001$). For example, they displayed more imitative aggression, more partially imitative aggression (sitting on Bobo doll and mallet aggression and more aggressive gun play), and more total aggression.

Bandura et al., (1963) concluded that uncovering film aggressive models heighten aggressive behaviors in children. Children who watched aggressive cartoon and human models on film exhibited almost twice as much aggression than the control group. "The finding that children modeled their behavior to some extent after the film characters suggest that pictorial mass media, particularly television, may serve as an important source of social behavior" (Bandura et al., 1963, p. 9).

Inclusive Education and Young Children

Inclusion, ... is a term held by the special education community of researchers and practitioners to denote placement in the general education classroom with all supports and related services called for in the Individual Educational Plan (IEP), which is provided in a collaborative model of education (with different disciplines

working together). Inclusion is thus a compound treatment, not easily parsed into its separate elements (Filler, 1996, p.31).

The inclusion of young children with disabilities has been a leading topic in early childhood special education for more than 25 years (Kohler & Strain, 1999). According to Lowenthal (1999), there is a body of recent research that supports the efficacy of inclusion. Social benefits are one of many arguments that support the rationale for inclusion. Children with disabilities have more appropriate social interactions when they have the opportunity to imitate the behaviors of children without disabilities. Consequently, children without disabilities can act as appropriate models of more complicated social behaviors for children with disabilities (Buysse, 1993; Gurlanick & Groom, 1988).

Diamond, 2001 investigated the relationships among young children's ideas about helping others, their understanding of emotions, their acceptance of individuals with disabilities, and their social contact with classmates with disabilities. The subjects were 45 children (26 females and 19 males) ranging in age from 36 to 70 months from four preschool classrooms in an inclusive program. Seventy-two percent of the children were European American, 20% were Asian American, 5% were Hispanic American, and 3% were African American. All subjects were enrolled in their classrooms at least three months prior to participating in the study.

The setting was an inclusive early childhood program accredited by the NAEYC that followed developmentally appropriate practices (DAP). The class sizes ranged from 18 to 20 children with an adult to child ratio of 1:6. Each of the four classrooms included 3 or 4 children with disabilities who had an IEP because they needed special education and

related services. The disabilities represented were four children with pervasive developmental disorders or autism, two children with multiple cognitive and physical disabilities, two children with developmental delays, two children with communication delays, and one child with spina bifida.

Each subject participated in two individual interview sessions that lasted approximately 20 minutes each. Interviews took place in a small room outside the classroom over a period of two weeks. Dolls or drawings were used to exemplify the interview questions because they were familiar materials that attracted children's interest and processing demands.

Interviews included questions about children with and without disabilities. A doll in a wheelchair was used to illustrate questions that focused on physical disability (Conant & Budoff, 1983; Diamond, 1994). When the doll was introduced to a subject, the doll's physical disability was introduced (e.g., "This doll's sitting in a wheelchair because s/he can't walk; his/her legs don't work. I want you to pretend that this doll is a real girl/boy who can't walk.") (Diamond, 2001, p. 107). Children without disabilities rated their acceptance of a child with a disability on three items designed to measure social acceptance. The subject was shown a picture of a child on one side of the page that was apart from the group, and on the other side of the page was a picture of a child who was engaged in a play activity with other children. The location of the drawings on the left or right side of the paper were counterbalanced across the items to control for position preferences in children's selections.

The following items were used to measure social acceptance: (a) "Not many kids talk to this girl" versus "Lots of kids talk to this girl"; (b) "This girl plays with other kids all

the time” versus “This girl plays by herself because the other kids don’t want to play with her”; and (c) “This girl doesn’t have many friends to play with” (Diamond, 2001, p. 107).

Children’s social contacts with classmates with disabilities were observed in the spring using a procedure adapted from Ramsey (1995). Over a six-week period, each class was observed for no more than three hours at 10-minute intervals for an average of 49 observations per child ($SD = 4.1$, range = 43-54). Observations took place during free play, a time when children were allowed to choose their own activity and move freely about the classroom. During this time teachers did not direct children in a specific activity but they did support children’s play. Observers stood in the classroom quietly scanning the room from left to right while recording on a map each child and adult’s position in the classroom. Then, the observers circled the names of children and adults who were engaged in social contact. Social contact was defined as a verbal or physical exchange or prolonged visual regard demonstrating children were aware of and responsive to each other. This definition was identical to Ramsey’s (1995) definition of interaction which was, if four children were seated at an art table together and two of the children were talking to each other and a third child was watching the children who were talking, all three children were coded as engaging in peer social contact. The observations were completed by three observers, interrater agreement was 95%.

The Helping Strategies Interview utilized in this study was adapted from Rubin’s Social Problem Solving Task-Revised (1988). The interview consisted of six short vignettes focused on classroom dilemmas. Three of the vignettes consisted of a child with a disability in a wheelchair (e.g., the child with a disability reaching for a paint brush that had been dropped on the floor) and three of the vignettes consisted of a child

without a disability (e.g., a child without a disability attempting to open a heavy door.), Both children in these situations required assistance to complete an activity or task. The vignettes, presented in random order, were designed to look at children's ideas about strategies they might use to help a peer. After each story was presented to a child - the child was asked, "What will happen next?" Some children offered specific strategies (e.g., "I could pick the paint brush up for her.") whereas; others made more broad comments (e.g., "I could help her."). When no specific strategy was offered (e.g., "I could help her.") the interviewer asked "How would you help?" If a child did not offer ideas about helping the child in the vignette the interviewer prompted the child to think of something they might do (e.g., "Is there something you could do?" If the child's response was, "yes", then the child was asked to describe what they would do (Diamond, 2001, p. 107). Coding did not differentiate between prompted and spontaneous responses because it was felt that three-year-old children were more likely to need a prompt. Responses were recorded verbatim and the written record was verified by audio taping all responses. Children's responses were coded using a scheme similar to that used by Diamond and Carpenter (2000): (1) If the child said "I don't know" or gave no response. (2) For a strategy not appropriate to the story (e.g., offering to share an unrelated item) or an unelaborated helping response (e.g., "I would help him.") and, (3) For an appropriate helping strategy. Coding was completed by two coders; agreement was reached for 93% of the questions (Diamond, 2001, p. 107).

The measure for Emotion Situation Knowledge was adapted from Hoffner and Badzinski (1989). This measure focused on children's knowledge of two different emotions, sadness and happiness. Everyday events (e.g., birthday party) were outlined in

vignettes. The child was asked whether the same sex character was “sad” or “happy” and then whether the character was “a little bit happy,” “pretty happy,” or “very happy.” (Diamond, 2001, p. 107-108). Responses by children were either verbal or they pointed to one of three circles that were increasing in size, labeled with the same descriptions outlined above. Scores ranged from one to six for each vignette, one was given for the strongest version of an incorrect response (e.g., saying that a child was very happy to have lost a toy) and six was given for the strongest correct response (e.g., saying that a child was very sad to have lost a toy). Reliability was adequate, ($\alpha = .66$).

Based on the results of this study the only variable that was not normally distributed was the frequency of children’s social contact with children with disabilities. Across all observations approximately 40% of the children had no contact with a child with a disability during classroom time. Twenty-seven children were observed having at least one contact with a child with a disability while 18 children were never observed having contact with a child with a disability. Rates of contact for the children who had at least one contact with a child with a disability ranged from 2% to 18% of the observations ($M = 6$, $SD = .04$). There were no significant gender differences; however, there were significant correlations between age and children’s helping strategy score. Based on mean scores children were generally accepting of individuals with disabilities ($M = 2.9$, $SD = .94$), aware of normative emotional responses ($M = 5.0$, $SD = 1.06$), helping strategy scores suggested that children generally indicated that they would help ($M = 2.34$, $SD = .60$), and children’s helping strategy scores were significantly related to scores for emotional understanding.

The children observed interacting with their classmates with disabilities had higher social acceptance ratings and emotion knowledge scores than did the children who did not interact with their peers with disabilities. In this study more than half of the children without disabilities were observed at least once in social contact with their classmates with disabilities. The children without disabilities who were observed in social contact with their classmates with disabilities were found to be more accepting of individuals with disabilities, and more sensitive to cues associated with different emotions than their same peers who were not observed in social contact with their classmates with disabilities. The results of this study provide support for the idea that experiences in inclusive classrooms for young children support children's pro-social behaviors and positive attitudes (Diamond, 2001).

Guralnick and Groom (1988) investigated the social interactions of children with disabilities in a mainstreamed classroom versus a segregated classroom. The mainstreamed classroom was a playgroup containing children with and without disabilities. Teacher differences in the two classrooms were minimized by observing children during free play. Eight playgroups of male children with and without disabilities were formed over a two year period. Each playgroup consisted of three three-year old children with disabilities, three four-year olds without disabilities, and two four-year olds with mild developmental delays. The 11 children with disabilities that data was collected on had a mean chronological age of 53.64 months and the 24 children without disabilities had a mean chronological age of 53.75 months. None of the children who participated in the study were acquainted with each other prior to the start of the study. Playgroups were held five days per week for two hours a day over a four week period.

The number of individual social behaviors were analyzed using a separate ANOVA. The results indicated a significant effect [$F(1,20) = 15.80, p \leq .001$]. The number of positive social interactions by children with mild developmental delays in the mainstreamed setting was over double the number of positive social interactions that occurred in the segregated classrooms. This was true of negative interactions [$F(1,20) = 5.89, p < .05$]. Children with mild developmental delays were much more socially interactive with children without disabilities in the mainstreamed ($M = 80.55$) setting versus the segregated setting ($M = 43.00$). However, peer related social play was much more frequent for the children without disabilities than for the children with mild developmental delays.

In conclusion, children with mild developmental delays played more constructively in mainstreamed settings than in segregated settings. However, there was not a significant difference in group-play between the two settings (mainstreamed or segregated classrooms) for the children with mild developmental delays. Therefore, the social skills needed to participate in and maintain group play deserves further attention. Mainstreamed settings appear to serve as responsive social environments for more advanced social skills and generalization (Guralnick & Groom, 1988).

Buyse (1993) investigated friendships among preschoolers with and without disabilities in community-based child care programs. Two specific questions were asked: First, how many children with disabilities established mutual friendships with peers? Second, What aspects of the environment or social partner are associated with friendship status among children with and without disabilities? The subjects were 58 children with disabilities receiving early intervention or special education and related services in North

Carolina. Sixty-six percent of the subjects were male and they ranged in age from 2.2 to 5.5 years of age, mean age 4 years 2 months. Sixty-four percent of the subjects were Caucasian, 5% were Native American, and 31% were African American. The subjects were categorized as children with: a speech and language disability (n=29), mental retardation (n=11), a social/emotional disability (n=6), a developmental delay (n=3), autism (n=3), other health impairments (n=2), multiple disabilities (n=1), an orthopedic impairment (n=1), a visual impairment (n=1), and a learning disability (n=1).

The settings for the study were 27 community programs, daycare programs, private preschool centers, and head start. The mean adult to child ratios for all programs was 1:8 (range 1:4 to 1:12), and the majority of the children enrolled were children without disabilities (85%).

According to Buysse (1993), information provided by families and teachers of the majority of the children that participated in the study had at least one mutual friend. The study also found that families identified more (79% of sample) mutual friendships for their children than teachers did (55% of sample). The authors also found that families were more likely than teachers to report that their children did not have a friend or that children had unilateral relationships with peers. Families of 13 children reported that their child had at least one mutual friend yet the teachers reported no friendships or unilateral relationships for these same children. Both parents (or caregivers) and teachers of the subjects completed the Early Childhood Friendship Survey. Additionally, the families completed a family demographic form and the teachers completed a professional and child demographic form. The Early Childhood Friendship Survey (Buysse, 1991) consisted of open and closed-ended questions divided into three sections. The three

sections include: mutual friendships (mutual interest in spending time or playing together), type I unilateral relationships (child initiates with a peer who does not respond), and type II unilateral relationships (child is the recipient of a peer's initiations but does not respond). Two forms of this survey were developed, one for families and one for teachers. The two forms differed as follows: families were allowed to describe peer relationships outside of child care settings and teachers were not. Second, families were asked to identify factors that contributed to friendship formation using an open-ended format while teachers answered the same question using a close-ended format.

The results of this study addressed four questions. First, Families reported that 46 of the 58 children who participated in the study had mutual friends, three had Type I unilateral relationships, and one child had a Type II unilateral relationship. Two children had both types of unilateral relationships and six children had no friendships or unilateral relationships. Teachers reported that 32 children out of 58 had mutual friendships, four had Type I unilateral relationships, six had Type II unilateral relationships, one child had both unilateral relationships, and 15 children had no friendships or unilateral relationships. There was an exact agreement between families and teachers on 29 children having mutual friendships. There was low agreement on the no friendship category and no agreement on the three unilateral categories. Secondly, a univariate analyses did not result in significant differences between friendships based on gender, ethnic background, sibling status, chronological age, or the amount of time spent in the childcare setting. Although for teacher identified friendships there was a significant difference between friendships based on diagnostic categories, $p = .03$. The third questions addressed were what factors contribute to friendship formation according to

families and teachers. Families most frequently mentioned friend's characteristics (32%) and the opportunity to spend time together (27%). Teachers also listed friend's characteristics (84%) of the time. Characteristics that teachers mentioned were those that matched or complemented each other (quiet and shy, both demanding). Interestingly enough, families never mentioned adult involvement or adults as facilitators as a contributing factor of friendships and teachers mentioned them least often (44%). Teachers did mention that they felt that classroom activities (69%) and classroom materials (63%) were a contributing factor of friendships.

The study was subject to several limitations. The results of the study were based on caregiver report rather than direct observations of the children. Second, children were selected for participation in the study based on family wishes and the likelihood that the children would succeed, not based on random assignment. Consequently, the majority of the children would be considered to have mild disabilities therefore limiting the generative effects to all children with disabilities and other community based preschool programs. Lastly, the community childcare programs may have differed in a number of ways including program quality. In a final point, future studies should investigate friendship formations in children with severe disabilities including caregiver involvement in children's social interactions and adult's beliefs on the value of young children's friendships (Buysse, 1993).

The purpose of this study was to investigate spontaneous social interactions between children with profound disabilities and children without disabilities. The specific questions asked by Hanline (1993) were: Who initiates the interactions between children with and without disabilities? Who terminates the interactions between children with and

without disabilities? How long do the interactions between children with and without disabilities last? How often do spontaneous interactions occur between children with and without disabilities? And what behaviors occur within spontaneous social interactions between children with and without disabilities?

The subjects were three children with disabilities (2 boys and 1 girl) and three children without disabilities (2 boys and 1 girl). The subjects without disabilities were selected to participate in the study because they were typical in their overall development and social skills and they were the same gender and similar age of the children without disabilities. The subjects without disabilities were identified by the local school district as children with profound mental retardation. These children ranged in age from 46 to 59 months, and the children with disabilities ranged in age from 45 to 60 months. The setting was an eight-week inclusive preschool summer program at the Educational Research Center for Child Development on the campus of Florida State that served 46 children in two classrooms. The youngest classroom consisted of 21 children ranging in age from 2 years 6 months to approximately 3 years 6 months. The older of the two classrooms served 25 children ranging in age from 3 years 7 months to pre-kindergarten age. The preschool was a NAEYC accredited program that supported a play-based curriculum and a center-based environmental arrangement. The children without disabilities attended this program year round; however, the children with disabilities attended 3 different programs during the regular school year. Although the summer preschool was a full-day program the children with disabilities only attended half day at their families' request. The four male children with and without disabilities participated in the older classroom while the two girls with and without a disability participated in the

younger classroom. The morning program consisted of 45 minutes of outdoor play, 60 minutes of indoor play, 30 minutes of group activities (reading, music and movement, etc.), 15 minutes of snack, and 30 minutes of lunch. The left over 30 minutes consisted of hand washing, toileting, and typical preschool transitions. Each of the subjects were observed Monday through Thursday for 480 minutes over a 4-week period during the last 4 weeks of an 8-week summer session. Each child was observed each day for 15 minutes inside and 15 minutes outside at five minute intervals at a predetermined random schedule. Adults were not permitted to prompt or reinforce interactions during observation times. Interrater agreement ranged from 82 to 100%. Findings did not differ from the inside and outside settings.

Results indicated that all interactions occurred between children with and without disabilities. The majority of the interactions were initiated by children without disabilities. Children with disabilities responded to positive initiations by children without disabilities nearly 50% of the time. During an interaction, children with disabilities responded to positive initiations by children without disabilities more than half the time. Yet children without disabilities positively responded to positive initiations by children with disabilities less than half the time. However, positive responses of children with disabilities were followed by positive responses by children without disabilities for more than 50% of the time. And, children without disabilities were observed persisting at no responses from children with disabilities. Children without disabilities terminated a positive response by children with disabilities after a no response 5.97% of the time, after a negative response 40.74 percent of the time, and after a positive response 34.75% of the time. Children without disabilities engaged in more interactions

than children with disabilities and they responded to positive initiations more often. However, the percentage of positive responses were comparable by both groups of children. When children without disabilities interacted with other children without disabilities there were more positive responses to initiations. Yet children without disabilities had less no responses to positive initiations by children with disabilities. The research conducted by Hanline (1993) provided documentation that children with severe disabilities can have successful peer social interactions within the framework of play in general education early childhood programs if given the opportunity to do so.

Strategies to Promote the Social Interactions of Young Children With and Without Disabilities

Social play begins to emerge during the early years and most children without disabilities successfully learn to interact with their peers. However, this is not always true of children with disabilities. Children with disabilities tend to exhibit less play and have a more difficult time initiating and maintaining social interactions. The attainment of social competence is a fundamental step in early development for preschool age children (Odom et al., 1999). Turn taking, sharing, requesting to share, play organizing, agreeing, helping, and persistence are social skills that children use to begin or maintain social interactions with peers (Odom & McConnell, 1997). Fortunately, since the 1990s social competence has been addressed as an essential feature of successful inclusive early childhood programs (Guralnick, 1990). Consequently, social competence is an important focus of the early childhood curriculum. Unfortunately, young children with disabilities do not acquire social competence skills in the same manner as children without

disabilities (Odom et al., 1999). Approximately 75% of children enrolled in preschool early childhood special education programs have difficulties or delays in the acquisition of peer-related social competence (Odom, McConnell, & Chandler, 1994). Therefore, strategies to promote the social interactions of young children with and without disabilities are critical to the successful inclusion of young children with disabilities.

Teacher Facilitation

Butz (1999) investigated the efficacy of using adult facilitated playgroups to increase social interaction behaviors between young children with and without disabilities. The disabilities reported were autism, mental retardation, developmental delays, and orthopedic impairments, such as cerebral palsy. The subjects in this study were young children ages four to five years (mean age = 4 years, 5 months) from two classrooms at an inclusive preschool in the southwestern region of the United States. A total of 16 children participated in the study. Eight children each were assigned to two playgroups. Each playgroup consisted of four children with a disability and four children without a disability. The facilitated playgroup included three males and five females, while the nonfacilitated playgroup included four males and four females. The subjects participated in playgroups for 20 minutes a day, four days a week, for four weeks for a total of 16 sessions. The adult facilitator encouraged social and play interactions among the children in the facilitated playgroup using guided participation strategies adapted from the Integrated Play Groups Resource Manual (Wolfberg & Schuler, 1992). The adult facilitator guided the social behaviors of the children using the following guided participation strategies: a) modeling – when the adult actively sets the stage and actively participates in the play group by demonstrating appropriate social behaviors during play

group activities, b) coaching – the adult uses a direct verbal or gestural instruction technique that describes the behavior. In addition to monitoring the children, the adult modeled and/or coached the individual subjects and the group, as needed. The adult facilitator only intervened if safety was an issue. The same adult was used to monitor children in the nonfacilitated play group however, no adult facilitation took place. The adult only intervened with the children in the nonfacilitated play group if safety became an issue.

The playroom utilized in the study was a small playroom located in a larger classroom. The playroom resembled a center in a preschool classroom similar to dramatic play. The contents of the research playroom changed weekly depending on the classroom theme.

The subjects were videotaped for data collection purposes. However, only week one (initial measure) and week four (final measure) were observed and analyzed because of high absenteeism. All subjects were observed for a total of 36 minutes. Two scales were used to code the data by two trained observers. The Social Interaction Observation System (SIOS) (Kreimeyer et al., 1991) had 15 social behaviors and the Observer Manual (Antia, Kreimeyer, & Eldredge, 1990) focused on positive and negative behaviors. Interobserver agreement was 86.6% for the Observer Manual and 90% for the SIOS (Kreimeyer et al., 1991). The Social Skills Rating System (SSRS) (Gresham & Elliot, 1990) was completed by the classroom teacher for each subject prior to and after the study.

The pretest results from the SSRS showed that the subjects with and without disabilities indicated a statistically significant difference by disability status. Therefore,

children were assigned to the two groups using stratified sampling to ensure that children with similar pretest scores were assigned to each of the two play groups.

Research Question One

Does adult facilitation change the social interactive behaviors demonstrated by children with and without disabilities who participate in the groups? Paired t-tests were significant for two of the 15 measures as outlined by the SIOS (Kreimeyer et al., 1991), 1. initiate interaction towards child ($t(7) = 2.37; p = .05$) and 2. child initiates interaction toward peer ($t(7) = 2.63; p = .049$). No effect of adult facilitation was found for the remaining 13 behaviors.

Research Question Two

Do the social behavioral ratings of children with and without disabilities in facilitated and non-facilitated play groups change over time? Paired samples t-tests were conducted based on raw scores from the Social Skills Scale on the SSRS (Gresham & Elliot, 1990). The results were non-significant ($t(15) = 1.34; p = .203$).

Research Question Three

Do the problem behavior ratings of children with and without disabilities in facilitated and non-facilitated play groups change over time? The mean scores for the Problem Behavior Scale were lower at the end of the study than at the beginning of the study. This change indicated a significantly significant effect in spite of group assignment or disability status.

Butz (1999) concluded with recommendations for future research to determine: 1) if facilitated and non-facilitated play groups are appropriate for preschool age children, 2) if incentives for participation will improve attendance of the subjects, 3) what level of adult

facilitation is appropriate, 4) if children with higher social skills and less problem behaviors can teach similar skills (or if the children can assume the skills) to children with fewer skills during play groups, 5) if the reduction of problem behaviors of children in playgroups is or isn't dependent on adult monitoring and adult facilitation, and 6) can results be generalized to less structured settings and what intervention might produce such positive results.

In 2000, Hyatt conducted a study, which investigated a comparison of social skills training approaches on preschool teacher and child behaviors. Three general education teachers who worked at UNLV/CSUN preschool were randomly selected to participate in the study. Upon selection each teacher was randomly assigned to one of three groups, the comparison group or one of two experimental groups (proactive or reactive). Additionally, three groups of eight children each with and without disabilities were selected from classrooms serving children age four to five years. The classrooms were located in an inclusive preschool on a university campus in the southwestern region of the United States. Each group consisted of four boys and four girls, one boy and one girl with a disability and three boys and three girls without disabilities. During the intervention phase of the study the comparison group received no specific instructions. The teacher and researcher met each day before the session to discuss the art activity to be completed with the children that day. The teacher was told to continue to interact with the children in the same manner as the previous day. The proactive group teacher was taught to implement four instructional strategies to be used when teaching each of the four social skills. The strategies were: 1. discussing the importance of the skill, 2. identifying the steps necessary to complete the skill, 3. modeling the skill and, 4.

providing feedback to children as they role-play the skill. The skills taught were: 1. joining in, 2. sharing, 3. waiting your turn and, 4. asking someone to play. The strategies and skills taught were adapted from Skill streaming in Early Childhood (McGinnis & Goldstein, 1984). The researcher provided the teacher with a written description of the skills to be taught, and then he reviewed the description of the skill with the teacher while providing suggestions on how to teach the skill. The skills were taught as follows: 1. joining in was taught on days one and two of the intervention, 2. sharing was taught on days three and four, 3. waiting your turn was taught on days five and six and, 4. asking someone to play was taught on days seven and eight. Finally, the researcher and teacher viewed the video from the previous day. During this time the researcher praised the teacher for teaching the skill and he provided feedback on when the skill could have been taught during the art activity. After meeting with the researcher, the teacher met with the children in the proactive group for five-minutes prior to the art activity to teach the children the skill. The teacher in the reactive group was taught by the researcher to praise children after they exhibited a positive initiation towards peer or positively responded to a peer. Before the art activity the researcher met with that teacher to state the importance of praising the children for the above mentioned social behaviors, and then they viewed the previous day's video. While viewing the video the researcher complimented the teacher for praising the children, then he gave direct instruction (including modeling) on how she should praise the children in her group.

A total of 180 minutes (from 10 minute art activities) of data per group were collected. A visual inspection of the data revealed that the teachers did not exhibit the following behaviors: 1. discussing the importance of the skill, 2. identifying the steps

necessary to complete the skill, 3. modeling the skill, or 4. providing feedback to the children during role-play. For the remaining two behaviors: praising children for “positive initiations” and praising the children for “positive responses” two separate one-way analyses of variance (ANOVAs) were conducted to determine whether there were significant differences between the teachers. Both the first (positive initiations towards their peers) and the second ANOVA (positive responses to their peers) indicated that there was not a significant difference between teachers, $F(2,12) = 1.4$, $p > .05$, $F(2,12) = .667$, $p > .05$. A two-way ANOVA was conducted for each teacher to determine whether there were significant changes in individual teacher behaviors across phases. After a visual inspection of the behaviors by the researcher it was noted that none of the teachers exhibited the following behaviors: 1. discussing the importance of the skill, 2. modeling the skill, or 3. providing feedback to the children during role-play. For the teacher of the proactive group results revealed a significant main effect for Phases ($F(2,45) = 6.961$, $p < .05$), Behaviors ($F(2,45) = 4.826$, $p < .05$), and Phases by Behavior interaction ($F(4, 45) = 5.279$, $p < .05$). For the teacher of the comparison group results from the two-way ANOVA indicated there were no significant main effects for Phases ($F(2, 45) = 1.354$, $p > .05$), Behaviors ($F(2,45) = 1.429$, $p > .05$), and Phases x Behaviors interaction ($F(4,45) = 1.354$, $p > .05$). For the teacher of the reactive group results from the two-way ANOVA revealed a significant main effect for Phases ($F(2,45) = 17.138$, $p < .05$), Behaviors ($F(2,45) = 22.89$, $p < .05$), and Phases by Behaviors interaction ($F(4,45) = 4.543$, $p < .05$).

The performance of the subjects in each of the three groups did not differ significantly across phases. However, there was a difference among groups. Subjects in

the reactive group exhibited significantly more positive behaviors than the subjects in the comparison group. Also, the children in the reactive group exhibited significantly more negative initiations, positive responses, and negative responses than the subjects in the comparison or proactive group. The subjects in the reactive group exhibited more behaviors, both positive and negative than did the children in the comparison or proactive group. The researcher suggested that it was possible that the intervention provided by the reactive teacher had a positive effect on the children that resulted in increased behaviors (both positive and negative). Additionally, the researcher suggested that it might have had something to do with the fact that the verbal skills of one student in the proactive group were limited.

Hyatt (2000) offered the following recommendations: 1. future studies should measure the amount of time children with disabilities are engaged in associative or cooperative activities with peers without disabilities despite whether or not they are actively communicating and, 2. future research should compare the two experimental approaches (proactive and reactive) used in this study with an academically focused activity.

Lau (2001) investigated the impact of teacher facilitation during computer activities on the social skill development and concurrent interactions of young children. Nine dyads of children with and without disabilities received teacher facilitation during computer activities compared to a matched group of nine dyads of children who did not receive teacher facilitation. Thirty-six children (nine with disabilities and nine without disabilities) ranging in age from 3-to-6 years were selected from four different preschool classrooms to participate in this study. The two Clark County School District early

childhood special education teachers who were assigned to the program were the teacher facilitators in this study. The preschool was a community-based inclusive program on a university campus in the southwestern region of the United States.

The data from this study were analyzed using the Observer Manual (Antia et al., 1990) and the SIOS (Kreimeyer, et al., 1991). The Observer Manual data were analyzed using two-way ANOVA. The results from the ANOVA indicated that there was a significant main effect for the teacher facilitated group. Additionally, this same group had significantly more positive interactions. The SIOS were analyzed using two-way ANOVA to determine if there was a significant interaction effect between the intervention group and disability status. Results indicated significant main effects for the intervention group on six positive behaviors; positive interaction, associative and/or cooperative play, positive linguistic, child responds positively, child initiates interaction, and peer responds positively.

The teacher facilitators were asked the following three questions in pre and post intervention interviews: 1) What are the advantages of using teacher facilitation with a computer activity to teach social skills to children with and without disabilities? 2) What are the disadvantages of using teacher facilitation with a computer activity to teach social skills to children with and without disabilities? and 3) For what purposes would you use teacher facilitation and the computer as opposed to other activities to promote social interactions? The qualitative findings from the above three questions were positive for both pre and post interviews. There were fewer disadvantages listed by both teachers during post-interviews than during pre-interviews.

Lau (2001) concluded that computer activities paired with teacher facilitation seem to support effective social interactions between children with and without disabilities in the inclusive preschool classroom. Additionally, she suggested that future research is needed to expand the positive findings demonstrated in this study.

Peer Facilitation

Xu (2003) evaluated the effects of Classwide Peer Tutoring (CWPT) on social interaction behaviors of students in two general education second grade classrooms with Limited English Proficiency (LEP) and those who were native English Speakers (non-LEP). Fourteen subjects ranging from 7 to 8 years of age in an urban city from the southwestern part of the United States were selected to participate in the study. One classroom (class 1) included 13 students with LEP and one child with non-LEP and the second classroom (class 2) included 13 children with non-LEP and one child with bilingual language capabilities. There were an equal number of boys and girls from each of the two classrooms, four girls and 3 boys. Additionally, the two general education classroom teachers from class 1 and class 2 participated in the study. Teacher A (class 1) had a bachelor's degree and two years teaching experience, her first year in first grade and her subsequent year in second grade. Teacher B (class 2) also had a bachelor's degree and two years teaching experience, fifth grade her first year and then second grade. The setting was a year round elementary school in an urban city in the southwestern part of the United States. The school is an at-risk school with a high minority population including a high poverty level among families.

The experimental design was a single subject withdrawal design (ABA). Five phases were applied to class 1 (ABAB) over a period of three weeks and class 2 had three phases

(ABA) over a period of three weeks. Additionally, a group comparison design was applied to compare children with LEP (class 1) and with non-LEP (class 2). The group design consisted of comparing three weeks from class 1 (ABA) against three weeks of class 2 (ABA), A baseline, B intervention, and the final A was a return to baseline.

The results of the repeated measures of two-way ANOVA indicated that there was an overall significant main effect for eight of the 15 behaviors, seven of which were positive behaviors (positive interactions, $p < .000$; associative or cooperative play, $p < .000$; positive linguistic interactions, $p < .000$; peer initiations an interaction, $p < .004$, child responds positively, $p < .001$, child initiates interaction, $p < .000$; and peers respond positively, $p < .000$). There was no significant interaction effect indicating that the two groups did not perform differently during baseline and intervention. Additionally, the results indicated that there were no significant differences between boys and girls for 14 of the 15 behaviors as measured by the SIOS. The results for child initiates an interaction did show a significant difference for week and gender ($p < .001$). Based on the teacher satisfaction questionnaire both teachers felt that class wide peer tutoring (CWPT) had both social and academic benefits for the students in their class. The students from both classrooms were asked about their desire to participate in CWPT, all 28 of the students answered yes to all five questions.

Xu (2003) concluded that CWPT may be an effective teaching method for students with minority backgrounds in need of social skills training in general education classrooms. Additionally, she suggests that future studies need to generalize the strategy of CWPT to multiple settings including the home, community, and other places.

Garfinkle and Schwartz (2002) evaluated the effectiveness of a peer imitation intervention. The subjects were four male preschool children with disabilities ranging in age from three years seven months to five years five months who qualified for early childhood special education and related services. Three of the subjects were preschoolers with autism and the fourth subject was a child with a developmental delay. The subjects had social, cognitive, and communication delays. Their social skills were poor, they had minimal peer interactions, they had the ability to imitate adults, however, they were never observed imitating peers. All of the children who participated in the research attended the classrooms in this study for at least four months. The research took place in the children's classrooms in an inclusive university preschool during classroom activities. No changes were made to the classroom's curriculum or daily routine. The three classrooms had a head teacher, one assistant teacher who was responsible for implementing the intervention, and two classroom aides.

A multiple baseline design across participants was conducted. Baseline data were collected for the children at the same time. After a baseline period, the peer imitation training took place. During small-group time, data were collected five days a week for five minutes of the 10-minute training session; the five minutes were rotated across the 10-minute sessions. However, during free play time, data were collected four days per week for 10 minutes of the 30-minute free play session; the ten minutes were rotated across the 30 minutes throughout the study. Any imitations of peers or social interactions were recorded on video. Although the focuses of the observations were on the target children, any social interactions or imitations made by peers towards the target child were recorded.

Inter-observer agreement of all the observations on all behaviors across participants by two observers was 98% for small-group time, and 86% for free play time.

Additionally, inter-observer agreement for all behaviors for all contexts for each subject was a mean of: 1) 92% for Xanthus, 92% for Boyd, 91% for Oriel, and 93% for Rowen.

The target children did not exhibit any peer imitations during baseline. During small group time, all of the participants exhibited an increase in peer imitations. However, the social interactions remained low, and the target children required different levels of prompting to imitate their peers, higher levels of prompting were necessary for Oriel and Rowen. Follow-up findings indicated that only Boyd exhibited peer imitation during small-group time. Furthermore, the same amount of social interaction was observed of all participants across all phases.

During baseline in the generalization setting (free play) no peer imitations occurred by the target children. After intervention there was a minimal increase in peer imitations however, the numbers were low and not observed everyday. In fact, all participants except Oriel, were imitating peers who were not in their small-group intervention. The social interactions of all participants were very low during baseline. However, after the intervention training was implemented there was a minimal increase in social interactions. All children equally initiated social interactions during the intervention phase. Additionally, the changes of the participants' behaviors on the other dependent measures (engagement, proximity, and teacher prompt) were as follows: proximity to peers increased with the exception of Rowen, teacher prompts decreased during intervention and maintained across follow-up and nonsocial engagement levels increased from baseline to intervention and maintained above baseline during follow-up.

Social validity was measured by five questions using a 5-point Likert-type scale. The questions were as follows: 1) Is the intervention something I could do in my classroom? 2) Could I implement the intervention into my regular curriculum? 3) Will the target child benefit from the intervention? 4) Will other children benefit from the intervention? and 5) Would I use this intervention again? The mean responses to the questions ranged from 4.5 to 5. The findings from this questionnaire showed that there was a high level of satisfaction with the intervention. In the open-ended response section of the questionnaire, the adult participants had the following to say: the four children with disabilities made more imitations of peers, made more social initiations towards peers, were more aware of peers, and they had better play skills; the children without disabilities became more aware of each other, had better imitation skills, were better at turn-taking, and they were more aware and accepting of the children without disabilities; and all the adult participants said they would use the intervention again. The adult participants suggested that the intervention take place at other times during the day, that it take place every other day, and that teachers need to be trained to carry out the skill.

Garfinkle and Schwartz (2002) concluded that, several of the teachers who were trained to use the intervention continued to use it. Garfinkle had several requests to train more teachers, and to teach other children how to imitate their peers. These facts further support the social validity of the questionnaire used by the authors.

Odom et al., (1999) investigated different treatment effects of four types of intervention approaches to promote social skills of children with disabilities.

Ninety-eight (males n=66, females n=32) children with disabilities were selected to participate in this study, 92 children remained in the study through the end of the year

and 83 participated in follow-up evaluations. The mean chronological age of the subjects was 58.5 months and the mean developmental was 32.2 months. The groups did not differ significantly on pretest and posttest scores. Based on teacher suggestion and researcher observations, children were selected from 10 segregated and two integrated special education classrooms in the Minnesota Twin Cities area. The remainder of the subjects were selected from 10 segregated special education classrooms in middle Tennessee.

Classrooms were randomly assigned to one of the following five conditions: control (C), environmental arrangement (EA), child specific (CS), peer-mediated (PM), and comprehensive (CP). The two integrated special education classes were assigned to the C and CM conditions. Teachers from each of the participating classrooms attended a full day workshop to learn how to implement the interventions, in addition to, receiving procedural manuals, descriptions of activities and scripted lessons depending on the intervention. The research supervisors visited the teachers weekly during the intervention phase (from November to April) of the study. Treatments ranged from 55 to 60 days. The treatment conditions were as follows: C, Teachers were asked to conduct their classroom as usual. Children without disabilities only shared outside play time with children with disabilities from time to time. EA, Teachers organized structured play groups for children with and without disabilities that lasted between 6 and 10 minutes. Half of the children in each group were children with disabilities and the other half were children without disabilities; there were four to six children in each group. The teacher introduced the play activity and suggested play ideas, but they were asked not to facilitate social interactions. CS, initially, children with disabilities participated in social skills

training during the first 25 days of the intervention. Teachers introduced the social skills concepts for a training period that lasted between five to 10 minutes. Upon completion of the training, the children with disabilities participated in structured playgroups (as outlined in the EA condition) with kindergarteners without disabilities. The teachers verbally prompted the children with disabilities to interact with their peers without disabilities and they praised the children if an interaction occurred. PM, Kindergarten children without disabilities were trained to make social initiations to their peers with disabilities that would result in social interactions for both children. For the CM group features of EA, CS, and PM were combined. Children with and without disabilities participated in social skills training. The skills introduced were the same as in the PM condition. Teachers prompted both groups of children and then eventually faded the prompts. Follow-up. Children were observed during free play time or center time at the beginning of the next school year.

The observers recorded social initiations and interactions, including the length of social interactions. Observers also coded whether or not teachers prompted the behavior. Interobserver agreement ranged from 91 to 96%.

Results of the study answered the three research questions proposed by the authors.

Question one. What are the differential effects of specific intervention strategies on the social competence of preschool children with disabilities, as measured directly after that intervention has been completed? The EA, CS, and PM conditions produced the highest frequency of social interactions. The CS and PM had the biggest impact on the quality of the interactions.

Question two. Are differential effects of intervention strategies maintained across time and do they generalize to other settings? The PM condition was the only condition that generated an effect size greater than the control group. The findings for question two may have been because the children without disabilities were kindergarten age. Therefore, more positive results may be found in inclusive preschool programs.

Question three. Does using a performance-based approach to assess social competence reveal different effects for specific interventions? Children without disabilities interacting with children with disabilities, were most affected by the PM, CM, and CS treatment.

Odom et al., (1999) concluded that peer related social competence is a concern for some young children with disabilities. Hence, strategies to promote the social skills and acceptance of children with disabilities are a concern for many early childhood programs. The results of this study imply that intervention strategies that teach socially capable peers without disabilities to engage children with disabilities in positive play activities may have significant effects on the social skills of children with disabilities. This study emphasizes the importance of children with and without disabilities spending their time together.

Media and Socialization of Young Children

Development of Television Viewing Patterns in Early Childhood

By the time most American children have graduated from high school they have spent more time watching television than they have in any other activity other than sleep. Children's experiences with television begin long before their experience with school and

for many it is the main socialization agent other than the family. The television set is an ever-present part of most children's environments beginning at birth; therefore, preschool years are a likely time for socialization of television habits. However, less is known about the kind of programs children watch than the amount of time they spend watching them (Huston, Wright, Rice, Kerkman, & St. Peters, 1990).

Young children spend a great deal of their time watching television during the first 5 or 6 years of life, a time when many of their habits and skills are being formed, resulting in important consequences for social and intellectual development (Huston, Wright, Rice, Kerkman, & St. Peters, 1990; Huston et al., 1999).. Huston et al., (1999) investigated how young children spend their time (watching television or in other activities) by asking the following questions: (a) How does children's use of time change during the preschool years, from ages two to seven? Are there sex differences in patterns of time use? If so, do these sex differences increase with age? (b) Is time spent watching television related to time spent in other activities? Do the relations of television viewing to other activities depend on the type of program? (c) Do characteristics of the home environment predict television viewing patterns? Do they predict the relations of television viewing to other activities?

There were 118 two-year-old and 118 four-year-old children in the initial sample size. The subjects were children of families with low to moderate incomes who were recruited in Kansas City, Missouri; Kansas City, Kansas; and Lawrence, Kansas through (a) word of mouth from other participants, (b) community agencies, and (c) announcements on radio and local access cable channels. Approximately 40% of the subjects were European American, 38% were African American, and 18% were Hispanic American;

Spanish was the primary language spoken in the home for approximately 16% of the families. The parents of the subjects, one third of which were single-parent families, had an average of about 13 years of education and an average job rating of about 27, blue-collar level according to the Census Bureau's Occupational Scale – 0 to 100 (Nakao & Treas, 1990). Public assistance was received by 46% of the families in the previous three years and the demographic indicators remained fairly steady throughout the study.

Seventy four percent of the subjects who were in the initial sample had complete data for three years. The retained sample size was: (a) more likely to have higher incomes, (b) more likely to be married, (c) less likely to receive public assistance, (d) less likely to be African American, (e) they had higher incomes, and (f) they had higher scores on the Home Observation Measure of the Environment (HOME; Caldwell & Bradley, 1984). The HOME was administered at each annual visit to assess the families' emotional support and discipline, cognitive stimulation, and the quality of the physical environment (Huston et al., (1999).

The following are answers to questions posed in this study:

- (a) How does children's use of time change during the preschool years, from ages two to seven? Are there sex differences in patterns of time use? If so, do these sex differences increase with age?

Viewing children's informative programs on weekdays declined with age, viewing animated entertainment on weekdays declined a little after age 4 or 5 with no change in weekend viewing, there was a noticeable decline in viewing general audience programs as a secondary activity with age, educational activity including reading increased with age on weekdays when children entered school (between 5 and 6 years). A consequence

of age changes might be due to changes in children's lives, starting school would be a notable one. Girls spent more time in personal care, social interactions, and chores by age 3 or 4. On weekends boys spent more time watching cartoons and playing video games while girls spent more time in educational activities like music and art. Video-game play increased more with age for boys than girls, as did computer usage (Huston et al., (1999).

- (b) Is time spent watching television related to time spent in other activities? Do the relations of television viewing to other activities depend on the type of program?

This study found no evidence that increases or decreases in viewing children's informational programs were linked to increases or decreases in time spent in other activities. Possibly because children spend more time watching TV at home and more time in other activities while at school. Television and play seem to facilitate each other; children often play while watching TV (Huston et al., (1999).

- (c) Do characteristics of the home environment predict television-viewing patterns? Do they predict the relations of television viewing to other activities?

The quality of the home environment and parents' educational level were positively linked with individual differences in the time children spent viewing educational programs.

Huston et al., (1999) concluded that although there is a negative trade off between educational activity, social interaction, and video game play compared to viewing entertainment programming, these results support the hypothesis that television can support play.

Huston et al., (1990) conducted a longitudinal investigation on the development of television viewing patterns in early childhood. The subjects were within three months of their third birthday at the onset of the study. The initial sample size, predominantly white was 326 children and their families in Topeka, Kansas. At the beginning of the study all but 18 children had both parents living in the home. The educational level of the parents was coded on a scale of one to six, one equals less than high school, two equals high school graduate, three equals some post high school training, four equals bachelor's degree, five equals some postgraduate training, and six equals graduate or professional degree. The mean for mothers was 3.35 and the mean for fathers was 3.78. The occupational status of parents was rated on the Duncan scale; this scale has a range from 1 to 99. On the Duncan scale, mothers had a mean of 52.18 and fathers had a mean of 52.73. One criterion for the study was the intention on the part of the families to stay in Topeka for at least 2 years. Forty one children were recruited at the end of the study to test for the effects of repeated diary collection. The demographics of their families were similar; mothers' mean education 3.14, fathers' mean education 3.70, mothers' Duncan 54.37, and fathers' Duncan 55.72. Parents and their children were seen for four office and home visits over a three-year period. Time use and television viewing were measured during the annual contact and bimonthly during telephone interview on intervening months.

Each cohort had two sub cohorts who began the study at different times; children with birthdays from February through August began in the spring and children with birthdays from September through the following February began in the fall. Viewing was measured from diaries maintained by parents or childcare providers for one week in the

spring and one week in the fall for two years. Winter and summer recordings were avoided to stay away from heavy television viewing during the winter and lighter television viewing during the summer. Television viewing of all household members was recorded in 15-minute intervals daily during recording weeks from 6:00 AM to 2:00 AM. However, only those individuals who were present for more than half of the 15-minute interval were recorded as a viewer. Validity was assessed by examining errors in the diaries (e.g., program title and channel don't match up); two children were eliminated from the study because of a large number of errors in their diaries. Two hundred seventy one subjects returned four (n=27) or five (n=244) diaries (Huston et al., 1990).

The study emphasizes the types of television programs viewed by children at home rather than, the total viewing time. However, total viewing times were recorded by age and by cohort. Television viewing times increased slightly from ages three to five in the younger cohort (19.2 to 20.8 average hours viewed per week), then declined from ages five to seven in the older cohort (19.2 to 15.5 average hours viewed per week). However, a variation among the viewers was a range of 0 to 75.75 hours in one week. The average child in the study watched between two and three hours of television a day by their third birthday (Huston et al., 1990).

Although recent research has emphasized which children are active viewers of television Huston et al., (1990) suggests that although most television viewing by children is active, passive programming does occur. Furthermore, they propose that children make choices to view child audience programs and the least demanding adult programs because they can understand it (for their age). And, as children's comprehension abilities develop they select programs that match their abilities. Boys

watched more television than girls in four program types; cartoons, adult audience informational action adventure, and miscellaneous. Age related programming changes occurred on four program types; child informative, child animated, general audience informative, and comedy. Child informative programs increased to a peak at three and four years of age. Children watched fewer adult informational programs as they got older, and cartoon viewing increased from age three to five. Additionally, most television viewing was with family members; therefore, viewing that younger children are exposed to beginning early in life might be the stable habits of adults or older siblings in the family. Also, program viewing depends on family schedules and what's available at the time. Hence, what children watch also depends on the family, broadcasters, and cable companies alike.

In summary, Huston et al., (1990), concluded that, "The results support the role of cognitive development and individual interests in the development of children's viewing patterns and make clear the importance of temporal and social influences within and outside the family" (p. 419).

Pro-social Cartoons

Forge and Phemister (1987) investigated the effects of pro-social cartoons on preschool children's behavior. The subjects were 40 children (21 boys and 19 girls) ranging in age from three to five years. The subjects were from middle-income families from four different classrooms in a private preschool. The materials and apparatus used were four 15 minute prerecorded videos from network programs. The videotapes consisted of the following recordings: 1) Pro-social animated, *The Get-along Gang* - theme: characters make friends with newcomers to their neighborhood, 2) Neutral

animated, *Alvin and the Chipmunks* – theme: Alvin enters a motorcycle race to impress a girl but his brothers convince him that he should be himself, 3) Pro-social non-animated, *Mr. Rogers Neighborhood* – theme, Mr. Rogers welcomes a new person to the neighborhood and talks about the importance of being friendly, and 4) Neutral non-animated, *Animal Express* - theme: a trip to Sea World to see how whales and dolphins are fed.

Their classroom teacher brought the subjects to the youth lounge to watch the videotape. The subjects were randomly assigned by classroom to one of four experimental conditions. After watching one of the four programs the children were returned to their classrooms by their teacher. The teacher then introduced the children to a visitor. The visitor was an observer who was waiting in the classroom. Next, the teacher left the classroom while the observer sat at a table and observed each child for 3 minutes. The children were given one point for each pro-social behavior observed. Pro-social behavior was defined as follows: (a) sharing: toys, play space, equipment, and other objects; (b) cooperation: entering a group, allowing someone to enter group, following directions, cooperative play, and helping behaviors; (c) delay of gratification: taking turns; (d) social contacts: positive verbal or physical contact (Forge & Phemister, 1987).

The observers repeated this entire procedure for each classroom that participated in the study; the observers were unaware of which program the individual classrooms had seen. The researchers acted as observers with inter-observer agreement of 98%. The data was analyzed using a 2 x 2 between subjects analysis of variance with the between subjects factors of presentation mode (animated, non-animated) and program model (pro-

social, neutral). The program model factor had a significant main effect, $F(1,36)=7.31, p < .05$. The pro-social behaviors for the pro-social program models were higher, ($M=2.4$) (Forge & Phemister, 1987).

Forge and Phemister (1987) concluded that pro-social programming elicited more pro-social behaviors than neutral programming. Additionally, they assert that both families and producers of children's programming should be made aware of the potential benefits pro-social programming can have on young children's behavior. The researchers also concluded that further research could include pro-social, neutral, as well as, aggressive cartoons. Further research should also include children of heterogeneous peer groups, including children of varying abilities.

In the following study, Watkins, Calvert, Huston-Stein, and Wright (1980) investigated children's recall of television material by viewing an edited pro-social cartoon in one of four viewing conditions. The effects of presentation mode and adult labeling were assessed based on recall of central versus incidental television material. Central television viewing assessed recall with questions that recalled events, inferences, and character behaviors precisely associated with the program theme.

One hundred sixty subjects (80 males and 80 females) from preschool, kindergarten, and grades three and four were randomly assigned to four different treatment conditions. Children were taken from their classroom in same sex pairs to a mobile viewing laboratory. The setting contained a television set against one wall and a table and two chairs opposite it; the table had a variety of playthings on it. Children in all four groups watched the same edited pro-social cartoon. The children in the three experimental groups watched the pro-social cartoon with three 30 second camera freezes inserted into

the tape. The freezes were inserted just after illustrative examples of the program theme were presented. Children in the pause only experimental condition received no additional information during the pause. Children in the audio label experimental condition heard the researcher's voice dubbed onto the audio track of the pro-social cartoon. The researcher explained the importance of the event just watched and its relationship to earlier events. The researcher viewed the pro-social cartoon with the children in the adult label experimental condition. The children in this condition heard the same information from the researcher as the children in the audio label condition, however in this condition the researcher spoke directly to the children in person. The control group watched the same pro-social cartoon with no interruptions (Watkins et al., 1980).

Children's recall was assessed using 60 questions to represent content types of central versus incidental material. Three of the 60 questions were eliminated due to low or inconsistent correlations. The number correct for each of the four question conditions divided by the final number of questions possible? These scores were then analyzed with a 4 (condition) x 2 (age = preschool/kindergarten or grades three and four) x (sex) x 2 (presentation mode = verbal or visual) x 2 (content type = incidental or central) analysis of variance. Main effects obtained were condition, $F(3, 144) = 5.11, p < .01$, age, $F(1, 144) = 405.28, p < .001$, and presentation mode, $F(1, 144) = 42.34, p < .001$.

In conclusion, children in the adult label group correctly recalled more items than children in the control group or other two experimental groups. Older children performed better than younger children, visual presentation of material was recalled better than verbal presentation of material, and a presentation mode x content type interaction supported the findings that visual presentation was superior to verbal for central content

type, $F(1, 1244) = 41.94, P < .001$. A significant interaction was present for content type x age, $F(1, 144) = 10.28, p < .01$, however, incidental recall was greater for younger children than older children. As the researchers expected, elaboration and labeling facilitated recall performance. However, these results were limited to the children who had the content structured by an adult who viewed the pro-social cartoon with them. Children at both age levels benefited from the adult label viewing condition (Watkins et al., 1980).

In summary, television is an extremely influential factor in both the social and cognitive development of young children (Forge & Phemister, 1987). Families and publishers of cartoons should be aware of the importance of the presentation mode and its potential positive effects on young children (Forge & Phemister, 1987; Watkins et al., 1980). Pro-social cartoons have the potential of facilitating positive behaviors in young children (Forge & Phemister, 1987).

Pro-Social Commercial Programming

Larson (2001) investigated the nature of interactions and activities of girls and boys portrayed in television commercials to be found in television programming targeting young children. This study is based on the social learning theory and the cultivation theory. The present study addressed the following questions: What is the proportion of girls to boys in commercials aimed at children? What is the proportion of commercials that feature girls only, boys only and boys and girls together?; Are there differences in the settings of commercials that portray girls only, boys only, or boys and girls together?; Are there differences in the types of interactions featured in commercials that depict girls only, boys only, and boys and girls together?; Are there differences in the types of

activities featured in commercials that depict girls only, boys only, and girls and boys together?; Are there differences in the nature and amount of aggression in commercials that depict girls only, boys only, and boys and girls together?; Are there differences in the types of products featured in commercials that depict girls only, boys only, and boys and girls together?

Children's commercial programming was recorded by research assistants beginning in July 1997 and ending in July 1998. Commercials were recorded Saturday mornings and weekday afternoons between 2 and 5PM. A total of 13 ½ hours of commercial programming was recorded from the months of July and August 1997, October and November 1997, February 1998, and May and July 1998. All seasons of the year were included so that the commercials were not biased in favor of holiday gift items and summer toys. All commercials with at least one real or animated child under the age of approximately 12 were in the sample. All commercials were rated TvY, suitable for all children including young viewers 2-6 or Tv7, directed at children 7 to 14 (TV Parental, 1999). Commercials directed at teens were not included in the sample. NBC was not part of the sample size because all of NBC's Saturday programming is targeted at teens. ABC, CBS, Fox and Nickelodeon were included in the weekend sample. Only Fox and Nickelodeon featured weekday programming with children's commercials. All commercials with the above identifiable features were coded, even if they ran more than once. The number of girls and boys in commercials were counted to determine whether a dominant presence occurred (only commercials with fewer than five children were coded for the number of boys and girls). Secondly, the setting was coded to determine whether girls were more likely to be publicized in a domestic setting and what setting was

dominant when girls and boys were shown together. Settings included: home/indoors (kitchen, bedroom), home/outdoors (driveway, backyard), other/indoors (haunted house, warehouse, Fruit Loop factory), other/outdoors (park, water slide), fantasy (raspberry water slide, an animated sea monster that becomes a tropical island), limbo (any setting with a plain light or patterned background), no dominant setting (several settings of equal duration). When there was more than one setting the primary setting was determined by timing the amount of time the target child spent in each setting with a stopwatch. Then the dominant interaction was coded: cooperative, competitive, parallel, independent, and no dominant interaction (commercials with many scenes so that no interaction could be considered dominant). Also the type of activities girls and boys were engaged in during the commercial were coded (e.g. playing/having fun, eating, athletic play, stealing, productive/educational, and other. Commercials with more than one aggression were coded: physical, verbal, object (hitting or attacking an object, shooting), fortuitous destruction, more than one type of aggression in a given commercial, no aggression. Finally, the commercials were coded for the type of product being advertised: toy, food/groceries, food/restaurants, clothing/accessories, educational, entertainment (movies, water slide), and other (medicine, vacuum cleaners).

Inter-coder reliability was determined using the main researcher and a research assistant. Coding 35 commercials, reliability was. The main researcher coded all commercials after inter-coder reliability was reached. Five hundred ninety five commercials featured at least one real or animated child. Using a chi square test of association procedure data were analyzed. There was no significant difference in the proportion of boys ($n=435$) to girls ($n=457$) ($X^2(1, N = 892) = .542, ns$). There were

significantly more single-gender commercials ($N=284$) with boys-only ($n=167$) compared to girls-only ($n=117$) ($X^2(1, N=284) = 8.80, p < .05$). Girls and boys were portrayed together in 292 of the 595 commercials, yielding no significant differences ($X^2(1, N=892) = .112, ns$).

Types of settings. The second research question found statistically significant differences, 39% of girls-only commercials featured them in the home while only 12% of the boys-only commercials featured them in the home. Boys and girls found together in commercials were featured away from the home one-third of the time.

Types of interactions. There were statistically significant differences between boys and girls in the types of interactions portrayed. Overwhelmingly, girls-only commercials featured cooperative interactions. Competitive interactions were only featured in boys-only commercials. Interactions were predominantly cooperative when girls and boys were featured together in commercials.

Types of activities. In activities that girls and boys were featured in there were statistically significant differences. For example, playing was the primary activity in all commercials, 75% of girls-only commercials featured playing, 45% of the boys-only commercials features playing, and 33% of the commercials with boys and girls together featured playing. Boys together were featured eating more and girls together less. Athletic play was featured by all groups.

Presence of aggression. Aggression was portrayed in 35% of the commercials most of which were in commercials where both and girls and boys were featured together. Commercials with aggression portrayed in them contained more than one type of

violence when boys-only were featured. Commercials with girls-only featured minimal violence.

Types of products advertised. Finally, in the types of products advertised there were statistically significant differences. Cereal was the product most advertised, and the product where girls and boys were featured the majority of the time together. Food commercials (including restaurants) were over half of the total commercials; toys were second (although girls and boys were rarely featured together). Approximately half of boys-only commercials were for toys compared to approximately 70% of girls-only commercials.

Larson (2001) concluded that there were almost an equal number of boys and girls featured in the commercials targeted towards children and they were often featured together in a cooperative manner. Single gender commercials portrayed girls in stereotypical domestic settings and the primary activity of all children was non-creative play with substantial aggression and violence.

In terms of social learning theory, girls have many more role models acting in commercials than they did just a few years ago. Further, in terms of cultivation theory, current viewers may cultivate expectations that girls are an active presence in situation. Also, these portrayals may well contribute to the development of viewers' expectations that girls are an active presence in situations. Also, these portrayals may well contribute to the development of viewers' expectations that it is as natural for boys and girls to interact together as with only their own gender (Larson, 2001, p. 11).

The authors concluded that there were almost an equal number of boys and girls in commercials, however single-gender commercials portrayed girls primarily in domestic

settings. Most commercials of all children mainly consisted of non-creative play with substantial violence and aggression. Although the authors listed several avenues for future research, the one that stands out is that we should try to determine what young children take from these commercials other than simply wanting to buy a product (Larson, 2001). Both qualitative and quantitative research should be conducted to determine what exactly young children take away from these commercials. Do the speculations about the social learning theory and the cultivation theory hold true for young viewers? (Larson, 2001).

Pro-Social Television Programming and Young Children

There is a large body of research that documents the way in which exposure to television influences children, much of which relates to the effects of exposure to violent subject matter in programming (Ledingham, Ledingham, & Richardson, 1993).

Unfortunately, there are few pro-social programs on television (Hearold, 1986). In spite of that, Hearold concluded his review of the literature by stating that pro-social television had at least as much effect, if not more effect, than violent television (Hearold, 1986; Huston & Wright, 2001). In the 1970s and 1980s several studies investigated children's response to the television program titled *Mr. Rogers' Neighborhood* (Friedrich & Stein, 1973; Singer & Singer, 1981). *Mr. Rogers' Neighborhood* was proven to be beneficial by portraying positive interactions and adaptive ways of dealing with emotions (Friedrich & Stein, 1973; Hearold, 1986; Huston & Wright, 2001; Singer & Singer, 1981).

Rosenkoetter (1999) investigated television situation comedy and children's pro-social behavior. This study sought to determine if children are able to comprehend moral lessons presented by sitcoms and the frequency which children watch pro-social sitcoms

and then perform pro-social acts. There were two reasons that Rosenkoetter selected situation comedy as a vehicle to measure pro-social behavior. The researchers based this study on a perspective of Bandura. He called for research that focused on a particular content of television so that one could investigate television's effect by way of abstract modeling.

Study One

The purpose of study one was to determine if children are able to obtain moral lessons from adult sitcoms. Eighty-one subjects participated in this study, 19 first graders, 32 third graders, and 30 fifth graders. The subjects attended an urban school, 81% of the subjects were Euro-American and approximately 20% were African American. Girls dominated the first grade subjects, while girls and boys were similarly represented in the third and fifth grades.

Five or six subjects at one time from the same classroom were taken to a vacant room with an equal number of research assistants to watch an episode of *The Cosby Show* that contained a series of moral lessons. There were three moral lessons in the show: 1) Vanessa borrowed Denise's sweater after she refused to lend it, 2) the sisters had a disagreement about it and the parents had to intervene to resolve the conflict and 3) Vanessa and her boyfriend studying together resulted in both of them getting Ds. When Vanessa showed her parents her D they prevented her from studying with her boyfriend until she could prove she could do better. Subjects were told that after the show they were going to be asked some questions regarding what they thought about the show. After the show each subject was individually interviewed. But first they were read a revised version of Aesop's Fable "The Tortoise and the Hare" and then they were asked

if the story had a lesson. The research assistant described the lesson if the subject could not. Next, the subject was asked if *The Cosby Show* had a lesson, and, if it did, what was it. The subject was then asked if the show had a second lesson. The open-ended lessons were then followed by three specific questions about the show. Ninety-four percent of the subjects expressed a moral lesson to the first questions, only 53% responded with a second lesson. When asked pointed questions to see if the subjects understood the episode's lessons, 93% responded appropriately about what Vanessa should have learned about other people's clothes. When asked what Denise should have learned about getting along with her sister, 85% articulated an acceptable lesson. Finally, 96% of the subjects correctly answered the question regarding Vanessa and her boyfriend.

In conclusion, the results support the fact that young children can understand the moral lessons of a particular sitcom, in this case, *The Cosby Show*. It was suggested that further research investigate moral lessons from a variety of sitcoms, and sitcoms that contain only one lesson.

Study Two

The purpose of study two was to determine if an association exists between young children's home television viewing and their pro-social behavior. Sixty-six subjects (29 first graders and 37 third graders) attending the same school from a small midwestern town participated in the study. Girls and boys were similarly represented. When presented with a list of 10 highly varied programs, subjects were asked which program he or she watched most often. Subsequently, they were asked if they watched this program every time it was on, a lot but not always, or once in a while. This procedure was continued until a total of 30 sitcoms were included on eight lists. Next, 109

undergraduates were asked to rate the sitcoms for promoting positive values and behaviors on a five-point scale. Pro-social sitcoms were then assigned a weight of greater than 2.5. Finally, mothers were asked to complete a questionnaire on a six-point Likert scale. The questionnaire asked how often their child engaged in pro-social behaviors.

The findings of this study indicated that pro-social sitcom viewing was a predictor of pro-social behavior. The results of this relationship were strong and they were not influenced by gender. Future research should look at other variables to strengthen pro-social viewing and pro-social behavior.

Study Three

The purpose of study three was to determine if subjects were presented with a sitcom episode with one moral lesson, would they comprehend the lesson presented? Seventy-three subjects from four classrooms in a small midwestern town (34 first graders and 39 third graders) participated in the study. First graders equally represented gender and there were 25 males and 14 females in the third grade. In the first phase of the study, the subjects were asked to list their favorite television programs and the frequency with which they viewed them. The same procedure was used in this study as in study two. In phase two, children were taken from the classroom (similar procedure as in study one) to view the following episode of *Full House*: Stephanie meets a boy and develops a common interest in baseball. Additionally, she discovers that she can pitch a “breaking ball”. Before the big game with her boyfriend’s team, he asks Stephanie for help. Finally, during the game at a crucial point Stephanie realizes that if she gives her boyfriend any more special treatment her team will lose. Stephanie strikes her boyfriend

out after considerable conflict with herself. At the end of the episode her boyfriend comes calling and all ends on a perfect note. As in study one the subjects were individually interviewed. The questions asked of the subjects were: (a) Do you think there was a lesson in the program you just watched? (b) if yes, what was the lesson? Responses to questions were given an acceptability rating (Stephanie would have been cheating if she continued to help her boyfriend) to unacceptable (no answer, I don't know, etc.). In phase three of the study mothers were asked to answer the questionnaire used in study two via the telephone.

Results of the study indicated that 78% of the subjects answered the question affirmatively as to whether or not the *Full House* episode contained a lesson. If the subject answered affirmatively they were asked to describe the lesson. Only 40% of the subjects correctly identified the moral lesson. In this study, pro-social sitcom viewing did not appear as a statistically significant forecaster of pro-social behavior. Further studies may clarify how well children process moral lessons in sitcoms. Does a sitcom with only one correct answer vs. a sitcom with several correct answers to moral lessons require greater comprehension levels? In conclusion, however, these studies support the findings that young children are able to process at least some of the moral messages portrayed by sitcoms.

Zielinska and Chambers (1995) investigated the integration of television into day-care settings to enhance children's social education. The subjects were 150 children (68 boys and 82 girls) ranging in age from 36 to 76 months from eight English day-care centers in Montreal. The materials used were two VHS videotapes. One videotape consisted of a pro-social theme and the second tape consisted of a cognitive theme. Programming in

these two videotapes were from a collection of segments from the Children's Television Workshop. The pro-social videotape consisted of 28 segments that were socially oriented. Four pro-social behaviors ranging from abstract to realistic presentations were addressed: helping, sharing, turn taking, and cooperation. Using a mosaic format, the assembled videotape provided ample variation from segments targeting pro-social behaviors. The neutral videotape consisted of segments of cognitive content, letter or number identification, show-and-tell about the environment, word acquisition, and understanding of concepts. Most of the cognitive segments were animated. Two classes from different settings matched by age and socioeconomic status were assigned to one of four conditions. The subjects (classes) took part in eight days of intervention that consisted of 10 minutes of group daily viewings of either neutral or pro-social videotaped segments of *Sesame Street*. The group viewings were followed by 15 minutes of either neutral (individualistic) or pro-social (cooperative) activities directed by the classroom teacher. The four treatments administered were as follows: 1) pro-social video, pro-social (cooperative activity); 2) neutral (individualistic) activity; 3) neutral (cognitive) video, pro-social (cooperative activity); and 4) neutral (cognitive) video, neutral (individualistic) activity. The classroom teachers that participated in the study were trained and given a sheet outlining the detailed procedure to walk children through the post video activity. First, children were led in discussion about what they had seen. Next, children participated in one of two sets of activities, one cooperative or one individualistic. For example, children were asked to either paint a group picture (cooperative), or their own picture (individualistic). A pre post-test measurement was used to assess the effects of the program. Objective-trained observers looked at each

child participant during two intervals. Observations were collected for three successive days prior to the intervention, and for three successive days post intervention, resulting in six minutes of data per child. Four antisocial and eight pro-social behaviors were coded. The antisocial behaviors coded were grabbing, verbal aggression, physical aggression and excluding. The pro-social behaviors coded were positive interaction, cooperation, helping, giving, sharing, turn taking, comforting and affection. The 12 behaviors had to meet the following criteria in order to be coded: demonstrated by the target child unrelated to a teacher-directed activity, unprompted by the teacher or other adult, and clear to the observer whether the intent of the child was pro-social or antisocial. Inter-observer agreement was 94%.

A significant main effect was revealed, $F(1,120) = 5.40, p < .05$. Children who viewed pro-social video content were significantly more pro-social after treatment compared to children who viewed neutral video content. Gender and activity-type were not significant and between the three factors there were no significant interactions.

Zielinska and Chambers (1995) concluded that instructional programs using television can easily be integrated into day-care settings and that teachers should consider using pro-social videotapes just prior to children engaging in small group activities. Pro-social content was effective in encouraging pro-social behavior during free play and when paired with cooperative activities, it discouraged antisocial behavior. Pro-social behaviors modeled from the pro-social video segments generalized to children's free play. The pro-social videotapes may be an advance organizer for the children's social behavior; in other words, teachers can enhance children's social programs if designed to do so.

Silverman and Sprafkin (1980) conducted two studies with very young children to clarify the effectiveness of conflict situations being resolved in a pro-social way, other presentation of pro-social situations to set the scene for promotion desirable behaviors. In both studies, pairs of children viewed a short television program consisting mainly of segments from "Sesame Street". After which, they were observed while playing. The marble game developed by Millard Madsen to assess cooperative play between children. Two children sitting on opposite sides of the game pull the marble holder to their respective sides to obtain a marble. If the children pull the marble holder at the same time, the game breaks apart; the marble rolls out, and is put out of play by the adult supervising the game. However, through cooperative play (turn taking) the children can obtain any of the ten marbles available.

Study One

Ninety children from middle to upper-middle class backgrounds representing a variety of racial groups, the majority of which were Caucasian, participated in the study. There were 30 pairs of children from each age level (three, five, and seven year-olds). Each age level had 15 male pairs and 15 female pairs. The pairs were randomly assigned to the three experimental conditions; each treatment condition contained five pairs of children of each sex and age. The seven year-old children attended three different public schools and the three and five year-olds were enrolled in several different types of preschools in and around Palo Alto, California. The eight researchers and observers in the two studies were Caucasian. The research took place in a room at the participating schools that contained a color television, a Sony videotape recorder, a game table and two children's chairs located approximately six feet from the television. While the researcher

was preparing the marble game, the children were brought to the research classroom and introduced to the researcher by an observer. Next, the researcher left the room to get the marbles and the observer turned on the television and asked the children to watch the prepared program. The researcher then returned with the marbles and directed play of the marble-pull game while the observer recorded the children's performance. The videotaped programs were 16 minutes and 38 seconds long, beginning and ending with the theme song from "Sesame Street". Five and a half minutes of socially neutral material were edited into the experimental program. The experimental programming was matched across conditions for production style (animation, live) and character type (human, animal, muppet). Approximately 11 minutes were dedicated to educationally social material, using either the pro-social-only or the conflict-resolution procedures of social teaching in the two experimental conditions. The control condition consisted of socially neutral spots throughout the entire program.

Results (age x condition x sex) revealed a significant effect of age. The older children obtained significantly less marbles (averaging 2 out of 10) than the five year olds (averaging 6 out of 10), or the 3 year olds (averaging 8 out of 10). In other words, the older children were less likely to use the turn taking strategy and play cooperatively. Sex and treatment condition showed no effect. In contrast, there was a significant treatment effect ($F = 3.25, p < .05$) in the number of marbles won by each member of a pair for the children who viewed the program segments containing conflict resolution. There was also a significant effect of age x treatment for three year olds in the conflict resolution condition ($F = 3.26, p < .025$). The oldest children played the marble game as if it were a test of skill or chance. The majority of the three year-olds took the turn taking strategy

demonstrated to heart and readily modeled it. However, the alternate models presented in the conflict resolution programming may have affected the behavior for some of the three year-olds. The conflict resolution material viewed did not significantly decrease the average number of marbles obtained by the three year-olds, but it did seem to influence the equitable division of the marbles. Therefore, a second study comparing the conflict was conducted to evaluate the conflict resolution programming.

Study Two

The treatment for study two was social material edited into a 6.33-minute program of socially neutral "Sesame Street". The material consisted of: 1) the resolution portion of the "Sesame Street" conflict-resolution spots, 2) the conflict portion of the "Sesame Street" conflict-resolution spots, 3) public service spots, or 4) neutral "Sesame Street" material serving as the control condition.

Three year-old children served as subjects in this study. Prior to the study, the majority of the children were playmates (83%) while the remainder of the children were strangers. Families of the subjects answered ads placed in several local newspapers recruiting children to participate in a television study. Parents were paid five dollars for their cooperation. The subjects consisted of 24 same sex pairs. The pairs were randomly assigned to one of four conditions, each treatment group contained three girl and three boy pairs. The researcher was not aware of the subject's treatment condition. The pairs were brought into a room by the researcher who then turned on the television and asked the children to watch "Sesame Street" while she prepared a game for them. Next, she left the room and did not return until the program was over. The children then accompanied the researcher to the game room and they were told that after the game they could

exchange the marbles for small prizes, the more marbles they obtained the better their prizes would be. The researcher recorded the number of marbles obtained by each subject.

The four by two (condition x sex) analysis of variance for total marble scores indicated a slightly significant treatment effect ($F = 3.03, p < .06$). The three year olds in study two were less cooperative than in study one. The average marbles obtained in study two was four compared to eight in study one. Most likely the explanation for the decreased cooperation was the incentive to obtain marbles in exchange for prizes.

Silverman and Sprafkin (1980) concluded that there were no positive benefits of televised pro-social teaching for young viewers in the two studies. Additionally, they suggested that if young children are the intended audience, caution should be taken when designing pro-socially educational material containing conflict. There were no other significant effects, children in the neutral condition obtained more marbles than those in the conflict-only condition.

Friedrich and Stein (1975) investigated the performance and acquisition of pro-social television content. Additionally, the researchers designed their study to ascertain whether the subjects could generalize the program's subject matter to situations in their own life. The study also looked at methods of training that might improve the effects of television programming. Training methods were selected with two thoughts in mind: 1) they had foundation in imitation theory and empirical support, and 2) they could be used in group settings with children. Due to the complexity of television, it is possible that verbal labeling will allow a child to generalize the content appropriately to new situations (e.g., generalize helping behaviors seen on television). The second training method used was

role-playing. Based on the social learning theory, it is expected that role-playing will increase learning because it is a personally involved form of rehearsal. In addition, asking a child to take on the role of another may be a way of increasing children's understanding of others feelings.

The subjects were 73 kindergarten children (28 boys and 35 girls) ranging in age from five years-three months to six years-three months. The majority of the subjects were Caucasian from middle or lower middle class families. All of the subjects were from the Lemont School in State College, Pennsylvania. The subjects were randomly assigned to one of five groups of three or four children, groups were balanced for gender as much as possible. The subjects were shown a series of four television programs, each followed by activity training sessions. Four groups watched pro-social programs from "Mister Rogers Neighborhood" and a fifth group watched neutral television. After watching the pro-social programs, each of the four groups received a different training session. One group received activities unrelated to the program, one group received verbal labeling (themes from the program were labeled in picture books), one group received role playing rehearsing the themes using hand puppets, and one group received both verbal labeling and role playing. The fifth group received activities unrelated to the neutral programs watched. An analysis of variance of sex x conditions was applied. All five training sessions were compared for differences, and then the pro-social television conditions combined was compared to the neutral television condition. The subjects that participated in the pro-social conditions had significantly higher scores than the subjects in the neutral condition, $F(1, 62) = 8.21, p < .01$. There was a significant interaction effect for sex x verbal labeling x role playing, $F(1, 49) = 4.99, p < .05$. Friedrich and Stein

(1975) concluded that the subjects (equally boys and girls) learned the pro-social content of the television program and that they generalized what they learned to a number of real life situations. The results also offered some support that the pro-social programs led to increased helping behaviors in situations similar to the program and situations very different. An analysis of variance of sex x conditions was used to analyze the results. Subjects in the pro-social conditions scored significantly higher than those children in the neutral conditions, $F(1,62) = 8.21, p < .01$.

Coates, Pusser, and Goodman (1976) investigated the effects of "Sesame Street" and "Mister Rogers' Neighborhood" on children's social behavior in the preschool. The subjects were 26 children (11 boys and 15 girls) ranging in age from three years eight months to five years seven months. Two of the children were children of Chinese-American origin, three were Asian origin, two were children of African American and Caucasian parents, and one was African American, the remaining children were Caucasian. The children in this study attended the Washington State University Nursery School during the morning and afternoon. Children who attended nursery school in the morning were randomly assigned to the "Sesame Street" programs, while the children who attended nursery school in the afternoon were randomly assigned to "Mister Rogers' Neighborhood" programs.

Four three-minute observations were made of each child during baseline. Observations were made during free play at nursery school; the observers recorded the frequency of positive reinforcement and punishment behaviors by the target child to other children and adults. The intervention phase consisted of four 15-minute sessions of either "Mr. Rogers' Neighborhood" or "Sesame Street" at the start of the free play period by the

two senior researchers. The researchers were unaware of which group of children watched which program. Next, each child was observed during three minutes of free play; the frequency of positive reinforcement and punishment behaviors by the target child to other children and adults were recorded. Finally, during posttest, the target child to other children and adults observed each child for four days, three minutes each day for the frequency of positive reinforcement and punishment behaviors. The frequency of these behaviors was recorded. Observational categories were: 1) positive reinforcement, 2) punishment, 3) reinforcement and punishment given by a child to another child, 4) reinforcement and punishment given by a child to an adult, and 5) social contact, any verbal or physical contact between children or between a child and an adult.

One between subject factor ("Mister Rogers' Neighborhood" and "Sesame Street") and one within subject factor (baseline, intervention, and posttest) accounted for the experimental design. Baseline scores were significantly higher (positive reinforcement) (t 's = 2.09 and 2.99, $df = 24$, both $p < .05$) for children who watched "Mister Rogers' Neighborhood" than for children who watched "Sesame Street". Follow-up data for positive reinforcement indicated strong support for the hypothesis that an increase in children's positive reinforcement would be a result of watching "Mr. Rogers' Neighborhood". This was true from baseline to intervention ($p < .05$) and baseline to posttest ($p < .05$). However, the difference between intervention and posttest were not significant. None of the three tests comparing phases for "Sesame Street" were significant. There was also a greater amount of positive reinforcement and punishment to adults by girls ($M = 3.49$) than by boys ($M = 1.97$), $F(1,22) = 12.99$, $p < .01$. The

difference was mainly due to the girls giving a greater amount of positive reinforcement to adults.

Coates et al., (1976) concluded that “Sesame Street” could influence children’s social behavior in the preschool setting. In a previous study, Ball and Bogatz (1970) also demonstrated that children’s cognitive development was positively effected by their exposure to “Sesame Street”.

There were two Friedrich and Stein (1973, 1975) studies that extended findings regarding “Mister Rogers’ Neighborhood (Coates et al., 1976). First, Friedrich and Stein (1973) found that watching “Mister Rogers’ Neighborhood” increased pro-social behaviors for lower-socioeconomic-status children, but not for high-socioeconomic-status children. However, based on the findings of Coates et al., (1976) pro-social interpersonal behavior increased for high-socioeconomic-status children. Additionally, their study had a much broader category of positive reinforcement (verbal praise and affection, affectionate physical contact, and tangible reinforcement) than Friedrich and Stein (1973) (cooperation, nurturance, and verbalization of feeling). And, finally, their study found that “Mister Rogers’ Neighborhood” increased children’s social contact with their peers and adults in the preschool setting, Friedrich and Stein (1973) did not address this in their study.

Second, Coates et al., (1976) found that children’s giving of positive reinforcement and engagement increased in social contact after viewing “Mr. Rogers’ Neighborhood”. This was also in line with the findings of Friedrich and Stein (1975). They found that children not only learned the pro-social content, they also showed pro-social behavior in real-life and fantasy situations. The pro-social behavior was in part due to verbal labeling

and role-playing training. Future studies should further increase our knowledge of the effects of television on children's social interactions.

Effects of Video Modeling on Individuals with Disabilities

Video modeling has been demonstrated to be an effective strategy to teach individuals with disabilities. Norman, Collins, and Schuster investigated the effects of video modeling and video prompting to teach self-help skills to elementary students with mental retardation; the treatment proved effective. Mechling, Gast, and Langone (2002) evaluated video instruction to teach generalized reading of grocery store aisle signs and the location of grocery items to students with mental retardation ranging in age from nine to 17. The video program was effective in teaching generalization of reading grocery store aisle signs and the location of groceries. Xin and Herbert (2001) investigated the effects of video instruction to teach vocabulary acquisition and reading comprehension skills to fourth, fifth, and sixth graders with learning disabilities. The students using video instruction had statistically significant higher word acquisition scores.

There is limited research available using video modeling to teach social skills to young children with and without disabilities. However, video modeling has been proven to be an effective teacher for young children with autism (Charlop-Christy, Le, & Freeman, 2000; Quill, 2000; Taylor, Levin, & Jasper, 1999). In her book DO-WATCH-LISTEN-SAY, Quill (2000) discusses a framework for designing social intervention for children with autism based on video modeling. The main function of video modeling is to teach social and communication skills to young children with autism. The child learns what to do, watch, listen and say, by viewing natural social events.

Taylor et al., (1999) investigated the effects of video modeling to teach children with autism to engage in play with their siblings in the home. The two participants were male students enrolled in the Alpine Learning Group, a center-based education program for children with autism. The participants were six and nine years old at the time of the study. Jack, the six year-old male, and his eight year-old sister, participated in the video modeling and play sessions. Jack was capable of labeling nouns and verbs, imitating responses demonstrated by adults, requesting three to four word sentences, completing a number of academic tasks, and playing appropriately with toys. However, he did not play with his sibling or make play comments toward her. Nine year-old Manuel and his six year-old brother also participated in video modeling and play sessions. Manuel participated in academic activities such as reading, writing, and math, he spoke in seven to ten word sentences, and he had been observed to engage in simple exchanges of conversation. Additionally, he played beside his brother at times; he rarely initiated play or commented appropriately about the play.

The subjects watched the videos in family rooms in their perspective homes. However, baseline and probes (practice and retention) took place in either the subject's bedroom or playroom. The percentage of scripted comments for Jack, and the number of unscripted and scripted comments for Manuel were the dependent measures. Unscripted comments were any play related comments made in a complete sentence. Jack and Manuel's siblings were asked by their parents if they would like to help teach their brothers how to talk about their play, both agreed to participate. Prior to the experimental sessions the video taping procedures were reviewed with the siblings. Jack's sister, Shari, also studied the script she was to read for the videotape. Next, role-play activities

were used to teach the siblings how to engage in play activities for the play sessions and videotaping. Manuel's sibling was told to play with his brother as usual, however if Manuel talked to him he was to talk back. One to three play sessions were conducted each day, each lasting 5 minutes (study one and two). In study one three different videos were made with an average of six play comments for the participant to imitate. However, in study two three tapes were made with an average of 10 comments for the participant to imitate.

A multiple baseline probe design across three play activities was used for both studies. Inter-observer agreement for baseline was 100% and mean agreement for probe sessions was 97%.

Study one

During baseline play activities Jack and his sister were given the instruction "play together". During these sessions Jack's sister Shari read her script pausing after each statement giving Jack time to comment (e.g., "These hotdogs taste yummy."). The adult collected data on Jack's responses and any independent comments. During intervention Jack watched the entire video three consecutive times. Next, an adult read Shari's script and if Jack stated one of the scripted play comments he was praised verbally and given a tangible reward. If Jack did not state any of the scripted play comments the researcher continued to read Shari's script and then Jack viewed the video one more time practicing with an adult. Probe sessions took place each day prior to intervention. Once Jack and his sibling Shari were seated they were provided with toys and the instruction "play together". Shari read her script pausing to allow Jack to comment if he did not comment she continued to read from the script. Rewards (verbal praise and tangible rewards) were

not provided during probe sessions. Directly after the probe sessions the video modeling intervention and practice sessions were conducted.

During baseline Jack did not state any scripted or unscripted play comments. However, following intervention he learned to say most of the play comments stated in the video. The results indicated that the video modeling intervention was effective in teaching Jack to make scripted play comments to his sister. There were no unscripted comments made during either baseline or intervention.

Study Two

During baseline Manuel and his brother were presented with three play activities: batman color forms, cars and loops track, and marines. Then they were instructed to “play together”. Observers recorded play comments made by Manuel. During baseline, Manuel watched the first four comments on the video. Next, an adult sat next to Manuel playing with the toys stating unscripted comments related to the play. If Manuel stated any scripted or unscripted play comments from the video, he received verbal praise and a tangible reward. The length of the video watched was increased as Manuel’s performance increased. Probe sessions were conducted after forward chain procedure and once he met criteria during practice sessions. The mean number of statements made by Manuel during baseline, for each of the three activities was 0, 2.5, and .6. However, the mean number of statements made during intervention probe sessions was 8.3, 9.4, and 8.6 respectively. Manuel learned to make play comments towards his brother after the video modeling intervention was applied. Manuel’s brother did not provide scripted comments during play in study two. Therefore, Manuel’s comments, it was ascertained, were due to the play materials or the mere presence of his sibling.

The authors concluded that video modeling has been an effective tool to engage children with autism in reciprocal social interactions. Future studies may want to select children without disabilities who have similar expressive language abilities to truly assess the different video modeling interventions (Taylor et al., 1999).

Summary

Based on P.L. 105-17, the Individuals with Disabilities Education Act (IDEA, 1997), children with disabilities have a right to free appropriate public education in the least restrictive environment; the same environment that they would attend if they did not have a disability. However, the literature has shown that many children with disabilities have a difficult time managing peer interactions and developing friendships. The results of these studies suggest that there is a need for strategies to successfully include young children with disabilities into general education settings with their peers without disabilities (Butz, 1999; Buysee, (1993); Diamond, 2001; Hanline, 1993; Hyatt, 2000; Guralnick & Groom, 1988; Lau, 2001 Odom et al., 1990, 1999; Xu, 2003). Additionally, the results of these studies support the hypothesis that media can facilitate pro-social behavior, and that it can encourage play in young children (Friedrich & Stein, 1975; Forge & Phemister, 1987; Larson, 2001; Silverman & Sprafkin, 1980; Zielinska & Chambers, 1995). However, the question still remains as to whether these findings can generalize to other populations and settings.

This study will contribute to the existing body of literature by adding a new population and setting, young children with and without disabilities in the inclusive preschool program. Specifically, it will look at the effect of scripted video instruction on

social interactions between young children with and without disabilities in the inclusive preschool classroom.

CHAPTER 3

METHODOLOGY

Setting of Study

Program Overview and Preschool Setting

This study took place at the University of Nevada, Las Vegas (UNLV) /Consolidated Students of the University of Nevada (CSUN) Preschool program. The preschool is housed in the College of Education, on a metropolitan university campus in the southwestern region of the United States. The preschool is an inclusive child-centered early childhood program accredited by the National Association for the Education of Young Children (NAEYC). The program promotes the physical, social, emotional, and intellectual growth and language development of young children while responding to the needs of families. The preschool serves 212 children, 12 months through five years of age. Grouping is facilitated according to chronological age in six separate classrooms. Sixteen of the 212 children are receiving special education and related services or early intervention services. The children with disabilities have an Individualized Educational Program (IEP) or an Individualized Family Service Program (IFSP).

Each child in the preschool is seen as an individual who takes an active role in his/her own learning by selecting activities from a variety of educational centers. Teachers provide the time and opportunities for children to explore and make decisions, learn through spontaneous active play in ways appropriate to each child's age and individual

developmental needs with appropriate adaptations and accommodations. Children begin and end each day with large group time; center choices take place after the initial large group activity. During the large group activity, teachers lead children in stories, finger plays, and music and movement before transitioning children to centers. Center choices include blocks, art, dramatic play, manipulative, music and movement, writing, library, science, computer, snack, and the sensory table. At each center the teacher facilitates the child's development in a variety of areas, guiding the child to complete the task, observe, explore, problem solve, create, communicate, discover, and interact with their peers. Center time includes a balance of child-directed and teacher-directed activities.

Classrooms

The subjects were selected from two of the six classrooms in the preschool, the four to five year-old classrooms. The approximate group size for each classroom is 20 to 23 children with an adult to children ratio of 1:4. The NAEYC recommends a group size of 20 and an adult to child ratio of 1:10. Each classroom has a general education teacher, a special education teacher, and three teaching assistants assigned to the classroom at all times.

Research Classroom

The study took place in a separate 300 square foot preschool classroom that was housed on the first floor of the College of Education. The research classroom's room arrangement was consistent with the larger classrooms in the preschool. The physical environment of the research classroom was designed to enhance cognitive, communication, physical, adaptive, and social emotional development and to use all senses in learning (Dodge & Colker, 1996).

Subjects

Eighteen children with and without disabilities from UNLV/CSUN Preschool were selected to participate in this study. The subjects were selected from 79 children with and without disabilities enrolled in the two four to five year-old classrooms, the butterfly and rainbow classrooms (see Table 1 and Table 2).

Table 1

Demographics of Students in the Butterfly and Rainbow Classrooms

Class	Age Range	Children with Disabilities	Children without Disabilities	Total
Butterflies	4.1 – 4.10	7	33	40
Rainbows	4.4 – 5.3	7	32	39

Note. Age range is in years and months (4 years 1 month to 4 years 10 months age range for the children in the butterfly classroom and 4 years 4 months to 5 years 3 months age range for the children in the rainbow classroom). Total represents all the children enrolled in the perspective classrooms.

Table 2

Demographics of Children With and Without Disabilities

Characteristics	Butterflies	Rainbows
Gender		
Male	20	19
Female	20	20
Total	40	39
Age		
Mean	4.5	4.11
Range	4.1 to 4.10	4.4 to 5.3
Ethnicity		
Caucasian	23	21
African American	3	2
Asian American	2	8
Hispanic	4	4
Bi-racial	8	3
Native America	0	1
Disability		
Autism	0	3
Cerebral Palsy	0	0
Developmental Delay	5	3
Down Syndrome	2	1

Children with Disabilities

The preschool has an inter-agency agreement with the local school district; Clark County School District (CCSD), the sixth largest school district in the country. Under the terms of this agreement, 18 enrollment slots are held each year for children three to five years of age with an IEP. The proportion of children with disabilities is approximately 10 to 15% of the total number of children enrolled in the program each semester. Under Section 619, Part B of P.L. 105-17 the Individuals with Disabilities Education Act (IDEA, 1997), a child with a disability is a child three to six years of age who has been evaluated as having one of 14 different disabilities and, because of the disability, needs special education and related services. Disabilities that are included are autism, deaf-blindness, deafness, emotional disturbance, hearing impaired, mental retardation, multiple disabilities, orthopedic impairment, other health impairment, specific learning disability, speech or language impairment, traumatic brain injury, visual impairment or developmental delay.

The six children with disabilities had a mean chronological age of four years five months. Three of the six children with disabilities showed developmental delays in five domains, social-emotional development, cognitive development, physical development including vision and hearing, communication development, and adaptive development. Two of the children had developmental delays in three domains; cognitive, communication, and social-emotional development. The sixth child with a disability demonstrated delays in four domains, communication development, cognitive development, physical development and social-emotional development. All of the children with disabilities had delays in the area of social-emotional development. Table 3

presents the mean standard score across all deficit domains on the Vineland Adaptive Behavior Scales for the children with disabilities who participated in the study (Sparrow, Balla, & Cicchetti, 1985). The mean standard score for social-emotional development using the same instrument for these children was 76.

Table 3

Child Characteristics by Disability Status on the Vineland Adaptive Behavior Scales and Mean Scores for Eligible and Social Domains

Child	Group	Eligibility	Initial Referral	Score for 5 Domains	Score Social Domain
1	Comparison	DD	All 3 Domains	81	74
2	Comparison	AUTISM	All 5 Domains	80	72
3	Parallel	DD	All 5 Domains	95	72
4	Parallel	MR	All 3 Domains	66	83
5	Interactive	DD	All 4 Domains	87	82
6	Interactive	DD	All 5 Domains	81	73

Note. DD indicates developmentally delayed. MR indicates Mental Retardation. All five domains indicate communication, cognitive, physical including vision and hearing, adaptive, and social-emotional development.

Children without Disabilities

The twelve children without disabilities did not qualify for special education and related services and they did not have an IEP. The children without disabilities had a mean chronological age of four years six months compared to the mean for children with disabilities of four years five months.

Selection of Subjects

Prior to selecting subjects the researcher received human subject approval from the Office of the Protection of Research Subjects (OPRS) (see Appendix A). Next, written informed consent forms were received from the families of the children in the Butterfly and Rainbow classrooms (see Appendix B). The UNLV/CSUN Preschool has several different enrollment plans families can select. Only those children who were enrolled on Monday, Wednesday, and Friday at a minimum were considered for this study.

Children with disabilities. Criteria for participation in the study for children with disabilities were children who qualified for early childhood special education and related services and who had an individualized educational plan (IEP). Six of the 14 children with disabilities in the Butterfly and Rainbow classrooms were randomly selected to participate in the study. Prior to selection, five children with disabilities were excluded from participation because they did not attend on Monday, Wednesday, and Friday and a third child was excluded due to excess absences (14 absences) the previous semester.

Children without disabilities. Children without disabilities were children who did not qualify for special education and related services and did not have an IEP. The children who were enrolled in the preschool on Monday, Wednesday, and Friday at a minimum were randomly selected to participate in the study.

Pre-Intervention Group Assignment

Upon selection all participants were randomly assigned to one of three groups, the interactive group, the parallel group, or the comparison group. Each group consisted of two children with a disability and four children without a disability. The names of each of the eighteen subjects were placed in one of four boxes, male children without disabilities, female children without disabilities, male children with disabilities, and female children with disabilities.

Children without disabilities. Observer B a doctoral student in the Department of Special Education at the same university that this study was conducted was asked to draw the names of male and female subjects from two boxes containing the names of the children without disabilities. The first and fourth subjects drawn from each of the two boxes were assigned to the comparison group (see Table 4). Next, the second and fifth subjects drawn from each of the two boxes were assigned to the parallel group (see Table 5). Finally, the third and sixth subjects drawn from each of the two boxes were assigned to the interactive group (see Table 6).

Children with disabilities. Observer B was asked to draw the names of male and female subjects from two boxes containing the names of the children with disabilities. The first subject drawn from each of the two boxes were assigned to the comparison group (see Table 4). Next, the second subject drawn from each of the two boxes was assigned to the parallel group (see Table 5). Finally, the third subject drawn from each of the two boxes was assigned to the interactive group (see Table 6).

Following the selection of subjects the preschool director sent a letter to the families of each child with and without a disability selected to participate in the study. The letter

stated the beginning and anticipated ending date of this study and it encouraged regular attendance by the children selected to participate (see Appendix C).

Table 4

Children With and Without Disabilities Comparison Group

Class	Gender	Age	W/D	W/O D	Disability
Butterfly	Female	4.8	Child 1		DD
Rainbow	Male	5.0		Child 2	
Butterfly	Female	4.10		Child 3	
Rainbow	Male	4.6		Child 4	
Butterfly	Female	5.1		Child 5	
Rainbow	Male	4.5	Child 6		AUTISM

Note. Mean age for comparison group is 4 years 7 months. Age is indicated in years and months. W/D indicates children with disabilities. W/O D indicates children without disabilities. DD indicates developmentally delayed.

Table 5

Children With and Without Disabilities Parallel Group

Class	Gender	Age	W/D	W/O D	Disability
Butterfly	Female	4.10	Child 1		DD
Rainbow	Male	4.3		Child 2	
Butterfly	Female	4.9		Child 3	
Rainbow	Male	4.10		Child 4	
Butterfly	Female	4.8		Child 5	
Rainbow	Male	4.2	Child 6		MR

Note. Mean age for parallel group is 4 years 4 months. Age is indicated in years and months. W/D indicates children with disabilities. W/O D indicates children without disabilities. DD indicates developmentally delayed. MR indicates mental retardation.

Table 6

Children With and Without Disabilities Interactive Group

Class	Gender	Age	W/D	W/O D	Disability
Butterfly	Female	4.10	Child 1		DD
Rainbow	Male	4.10		Child 2	
Butterfly	Female	5.2		Child 3	
Rainbow	Male	4.8		Child 4	
Butterfly	Female	5.1		Child 5	
Rainbow	Male	5.0	Child 6		DD

Note. Mean age for the interactive group is four years seven months. Age was indicated in years and months. W/D indicates children with disabilities. W/O D indicates children without disabilities. DD indicates developmentally delayed.

Teacher Facilitator

The teacher facilitator was selected from one of three preschool teachers in the program, the ladybug teacher, the butterfly teacher, or the rainbow teacher. She was selected because she was most typical of preschool teachers in community daycare programs, minimal teaching experience and without a bachelor's degree (see Table 7). Staff was informed at the time of hire that as part of their daily responsibilities they might be involved in research during the course of their employment at the preschool. Nonetheless, the teacher facilitator was asked to sign a written informed consent form prior to participating in this study (see Appendix D).

Table 7

Demographics of the Early Childhood General Education Teachers and the Teacher Facilitator

Characteristic	Butterfly Teacher	Rainbow Teacher	Ladybug Teacher
	General Ed.	General Ed.	General Ed. Teacher Facilitator
Gender	Female	Female	Female
Degree	Associate Early Childhood	BS Early Childhood	Associate Business
Enrolled in Program	ECE Bachelors Masters Program	Special Ed. Bachelors Program	ECE
Years Teaching	19	26	3.5
Years Teaching in Inclusive Preschool	3	5	2 ½ years
Age	44	49	24
Ethnicity	Caucasian	Caucasian	Caucasian

Interrater Observers

Two doctoral students in the department of special education at the University of Nevada, Las Vegas, were enlisted to assist the researcher in verifying the data for reliability purposes. These two individuals assisted in observing and rating 25% of the

videotaped sessions for each of the 18 subjects using the Social Interaction Observation System (SIOS) (Kreimeyer, Antia, Coyner, Eldredge, Gupta, 1991).

Instrumentation and Equipment

Social Interaction Observation System

Permission was granted to use the Social Interaction Observation System (*SIOS*) (Kreimeyer et al., 1991) as the coding instrument (see Appendices E and F). The purpose of the SIOS was to provide descriptive information on social behaviors. The SIOS was designed to discriminate 15 social interaction behaviors that may occur during the observational interval: (1) child engages in positive interaction with peers, (2) child directs negative behaviors to peer(s), (3) child engages in nonplay behavior, (4) child engages in solitary play, (5) child engages in parallel play, (6) child engages in associative and or cooperative play, (7) child engages in positive linguistic interaction, (8) peer(s) initiate interaction towards child, (9) child responds positively to peer initiation, (10) child responds negatively to peer interaction, (11) child makes no response to peer initiation, (12) child initiates interaction towards peers, (13) peer(s) respond positively to child's initiation, (14) peer(s) respond negatively to child's initiations, and (15) peers makes no response to child's initiation.

Video Observational and Modeled Play with Verbal Guidance Script

The Video Observational and Modeled Play with Verbal Guidance Script were three short scripts consisting of statements to be read to the children in the interactive, parallel, and comparison groups just prior to showing them a video. The scripts contain questions to ask the children after showing the video (see Appendix G).

Videotaping Equipment

A video camera, videotapes, and a video camera wall mount were used during observations. The video camera was mounted on the wall about six feet from the floor in the right rear corner of the 300 square foot research classroom on a video camera wall mount about 18 inches long allowing for the best visibility of the children by the video camera. The video camera was a Sony Digital Hi 8 Handycam Vision DCR-TRV140 Video Camera Recorder. Attached to the video camera recorder was an Ai digital AF X14 Power Zoom Lens with a Flying Erase Head, AB188.

Videos

Three separate videotapes were shown to the children during the intervention phase of the study by the teacher facilitator. Each group (the interactive, parallel, and comparison groups) saw a different videotape over a period of five weeks on Mondays, Wednesdays, and Fridays for a total of 15 sessions. Each video session was followed by eight minutes of structured play that closely modeled the activities shown in the intervention video. A video depicting children with and without disabilities in parallel play was shown to the parallel group, a video depicting children with and without disabilities positively interacting with one another was shown to the interactive group, and *Lady and the Tramp, II*, a video endorsed by the Coalition for Quality Children's Video (CQCM, 2000; NAEYC, 1994) was shown to the children in the comparison group.

Training

Teacher Facilitator

The researcher, who is also the director of the preschool and a doctoral student in the department of special education at the same university, had nine years of experience in staff development and working with children with and without disabilities in an inclusive preschool setting served as trainer of the teacher facilitator using *Integrated Play Groups* (Wolfberg & Schuler, 1992) and *Play Time Social Time: Organizing Your Classroom to Build Interaction Skills* (Odom & McConnell, 1997). The teacher facilitator was asked to read each of three chapters, in the *Integrated Play Groups Resource Manual* (Wolfberg & Schuler, 1992) and the chapter titled *Using Play Time/Social Time in Play Time/Social Time: Organizing Your Classroom to Build Interaction Skills* (Odom & McConnell, 1997) during the first week of the two-week pre-intervention phase of the study. Next, the researcher trained the teacher facilitator in the research classroom during the second week of the pre-intervention observations using these same two manuals and a brief prepared script (see Appendix G) to be used with the videos just prior to, during and after the children view the videos. The training consisted of three individual 30-minute training sessions over a period of three days discussing the four chapters read and using the prepared script titled *Directed and Modeled Play with Verbal Guidance Script* (see Appendix G). One training session took place on Monday immediately after the last baseline observation and the next two sessions took place at the same time the following Wednesday and Friday. The training sessions were intended to remind the teacher facilitator of her role in the study and to emphasize the importance of social competence during the preschool years. The second and third training sessions were a duplication of

the first. Teacher training sessions involved the following: (a) a discussion of why social interactions are important in the early years for all young children; (b) a discussion of why educators need to place greater importance on social skills during the early years in particular for children with disabilities; (c) a discussion of some important social interaction skills (helping, turn taking, persistence, requesting to share, play organizing, and agreeing); and (d) a discussion of how to recognize social cues of children with and without disabilities (eye regard, verbal and non-verbal cues, and body language). Finally, each training session concluded with the teacher facilitator role-playing (see Appendix G) with the *Observation and Modeled Play with Verbal Guidance Scripts*, while showing the same videos that were shown to the children in each of the three groups followed by a discussion (question answer format) between the teacher facilitator and the researcher. In addition to the three training sessions, the teacher facilitator was asked to re-read the prepared scripts (see Appendix G) to refresh her memory daily during the five-week intervention phase, prior to the start of each scheduled work day and to initial and date the bottom of the script each time she re-read it. And, prior to each session, the teacher facilitator was reminded not to facilitate social interactions during structured play activities.

Interrater Observers

There were three observers (A, B, and C) in this study. Observer A was the researcher and trainer of observer B and C. Observers B and C, doctoral students in the Department of Special Education, were trained in the use of the SIOS (Kreimeyer et al., 1991) in two separate sessions each. The first sessions lasted approximately 60 minutes and the second sessions lasted approximately 120 minutes.

Session one observer B and C. The purpose of the SIOS was discussed with Observers B and C and then they silently read the instructions for the SIOS (Kreimeyer et al., 1991). Next, the researcher and the two trained observers discussed the definitions of each of the 15 social interaction behaviors and how to rate each behavior. Finally the use of the SIOS was demonstrated using the first of three practice tapes of children in the research classroom.

Session two observer B and C. Observers B and C and the researcher independently but simultaneously used the SIOS to rate the social interaction behaviors of three groups of children in the research classroom on a second and third practice videotape. After viewing the second practice videotape the two trained observers and the researcher compared their observations. Any disagreements were discussed and resolved through consensus. Next, observer B and C and the researcher continued to rate the children's behaviors using the third practice videotape until 100% agreement was reached. One hundred percent agreement was reached after viewing the third practice videotape for the third time.

Procedures of the Study

Baseline observations

Baseline observations consisted of video taped recordings of structured play activities in the research classroom (see Appendix H). The teacher facilitator accompanied the children in each group from their classrooms to the research classroom while the researcher was preparing the room. The comparison group and the teacher facilitator entered the research classroom Monday, Wednesday, and Friday mornings at 10:00 A.M.

for two weeks. The parallel group and the teacher facilitator entered the research classroom Monday, Wednesday, and Friday mornings at 10:30 A.M. for two weeks. The interactive group and the teacher facilitator entered the research classroom Monday, Wednesday, and Friday afternoons at 2:00 P.M. for a period of two weeks. Upon entry into the research classroom the teacher facilitator read a book to the children (see Appendix I). The story was broken down into 3 segments (beginning, middle, and end); each segment was one minute and 40 seconds in length. One minute and 40 seconds into the story (after the beginning of story) the teacher stopped and asked the children questions about the story. This sequence was repeated two more times (after the middle and end of story) consisting of a total reading time of five minutes. This five minute story time with a question and answer format every one minute and 40 seconds was so that the children were used to sitting and attending prior to structured play. Eight minute structured play sessions followed the reading. Eighteen eight-minute (6 sessions for each group) baseline structured play activity sessions were video taped for data collection purposes and inter-rater reliability (see Table 8). Child participants were unaware of the purpose of the video camera during baseline observations; picture taking and videotaping was not uncommon at the preschool. The teacher facilitator was instructed not to facilitate social interactions during structured play activity.

Table 8

Total Number of Subjects by Group and by Sessions

	Pre-Intervention	Post-Intervention	Follow-Up
Sessions	6	15	3
Comparison Group	N=6	N=6	N=6
Parallel Group	N=6	N=6	N=6
Interactive Group	N=6	N=6	N=6

Note. There were four children without disabilities and two children with disabilities in each of the three groups. There were an equal number of males (n=3) and females (n=3) in each of the three groups.

At the end of baseline, data relative to student behaviors were checked by conducting an analyses of variance (one-way ANOVA) to verify that no significant differences existed among groups. If no difference was found then group assignment was to remain the same for the intervention phase of the study. If differences exist, students were to be grouped differently in the intervention phase so that no significant difference existed among groups during the baseline phase of the study.

Intervention Observations

The intervention phase was five weeks in length, 3 times per week totaling 15 sessions for each group. The teacher facilitator was asked to re-read the prepared script entitled *Video Observational and Modeled Play with Verbal Guidance Script* (see Appendix G) prior to the start of each scheduled workday during the five week

intervention phase and to initial and date the bottom of the script each time she re-read it. The daily review of the prepared script by the teacher facilitator was to remind her of her role in the study, in particular the importance of social competence during the preschool years.

Comparison group. Each of the 15 sessions consisted of 3 segments, each segment was one minute and 40 seconds in length. Prior to showing the first five minute session of the video titled the *Lady and the Tramp, II* to the subjects the teacher facilitator told the children the name of the video they were about to watch. During and after showing the *Lady and the Tramp, II* at one minute and 40 second intervals, the teacher facilitator discussed with the children what it was they just watched. At the end of each of the three segments the teacher facilitator asked the children the question: "Did you see anyone being friendly to each other in the video?" If children gave a yes response to the question they were asked, "Tell me how?" If the children gave a no response to the question they were asked, "Tell me how?" In response, the teacher facilitator only discussed with the children what was depicted in the video, in other words, how were the characters (or not) being friendly to each other. Just prior to and during the showing of the second through the fifteenth sessions of the *Lady and the Tramp, II* to the subjects the teacher facilitator discussed with the children what they watched on the video during the previous session. At the end of each session the teacher facilitator was required to recapture with the children what they just finished watching in the video the *Lady and the Tramp, II*.

Parallel group. Subjects were shown a five-minute videotape of children playing. Each of the 15 sessions consisted of 3 segments; each segment was one minute and 40 seconds in length, the segments consisted of children with and without disabilities in

parallel play. Just prior to being shown the videotape the teacher facilitator explained to the children that they were about to watch a video of children playing. During and after viewing the video the children were asked the question "Did you see children being friendly to each other in this video?" If the response was a positive response to the question the children were asked, "Tell me how the children were being friendly to one another?" The teacher facilitator was allowed to discuss the fact that children were playing near each other but they were not playing with each other. If the response was a negative response to the question the children were asked, "What were the children doing in the video?" The teacher facilitator was allowed to interject how the children were playing (sitting near each other but not playing and interacting with one another).

Interactive group. Subjects were shown a five-minute videotape of children playing. Each of the 15 sessions consisted of 3 segments; each segment was one minute and 40 seconds in length, the segments consisted of children with and without disabilities interacting with one another during play. Just prior to showing the children the video the teacher facilitator explained to the children that they were going to watch a video that depicts children playing. During and after viewing the video the children were asked "Did you see children being friendly to each other in this video?" If the response was a positive response to the question the children were asked, "Tell me how the children were being friendly to one another?" The teacher facilitator was allowed to interject how the children were acting friendly to each other (passing the paint brush, smiling, etc.). If the response was a negative response to the question the children were asked, "What were the children doing in the video?" The teacher facilitator was allowed to interject how the children were playing (interacting with each other during play).

Follow-Up observations

One week after the end of the intervention phase of the study the follow-up phase was implemented. The follow-up phase consisted of three sessions that took place on a Monday, Wednesday, and Friday of the same week (see Table 8). The follow-up sessions took place in the same research classroom as the baseline and intervention phases of the study.

Grouping of children (in the comparison, parallel, and interactive groups) was the same for the follow-up phase as in the intervention phase of this study. Follow-up observations consisted of video taped recordings of structured play activity in the research classroom. Structured play activities were representative of the activities portrayed in the parallel and interactive videos. Child behaviors were video taped for one week, totaling three sessions during the follow-up phase of this study (see Table 8). Sessions took place during the same times as in the baseline and intervention phases. The eight-minute follow-up structured play activity sessions were video taped.

As part of their routine, staff members facilitate social interactions throughout the course of their scheduled workday at all traditional preschool centers. The teacher facilitator was not permitted to facilitate interactions during the baseline, intervention, or follow-up phases of the study. The current study was concerned with the effect treatment had on social behaviors by examining the changes in social interactions of young children with and without disabilities in the inclusive preschool research classroom using the SIOS. This study was not concerned with investigating the facilitation skills of the staff.

Data Collection

Social Interaction Observation System

The social interactions of children with and without disabilities were videotaped using a camcorder mounted on a video camera wall mount. A total of 192 minutes of data were collected for each subject (less absences) during the study, 48 minutes of baseline data, 120 minutes of intervention data, and 24 minutes of follow-up data. The Social Interaction Observation System (SIOS) (Kreimeyer et al., 1991) was used to code 15 social interaction behaviors. Observer B conducted observations for 25% of the sessions for 5 of the 18 subjects. Observer C conducted observations for 25% of the sessions for 13 of the 18 subjects. Observer A, the researcher completed an SIOS for each subject for 100% of the sessions. Before each observation, the observers completed the following identifying information: (a) Observer, (b) School, (c) Target Child, (d) Date, (e) Time begin, and (f) Time end for each subject observed for each session observed. Next, the observers started the videotape and let it run for one minute. They began their observations and coding at the start of the two-minute segment of the session. The observers coded the target child's behavior during four consecutive one-minute intervals for each session observed. After each one minute observation they stopped the videotape and read the 15 behaviors listed, next, they recorded a (+) if the behavior occurred during the observational interval and a (0) if it did not. This procedure was repeated three more times totaling four minutes for each observation.

Interrater Reliability

Twenty-five percent of the sessions were randomly selected from each phase of the study for inter-rater observations. Inter-rater observations included one baseline, four

intervention, and one follow-up session for each child selected. The three raters independently but simultaneously recorded the social behaviors of the target child. Interrater reliability was calculated by comparing the ratings of Observer A to Observer B then Observer A to Observer C on 25% of the videotaped sessions. Interscorer reliability on the SIOS was determined by $[\text{agreements} / (\text{agreement} + \text{disagreements})] \times 100 = \text{percent of agreement}$ (Kreimeyer et al., 1991).

Treatment of the Data

Data from the SIOS were analyzed to answer the following questions:

Research Question One: Will there be a positive change in the quantity of social interactions between children with and without disabilities before and after scripted video instruction?

Analysis: Children were divided into three groups, a comparison group, a parallel group, and an interactive group. There were six children in each group, four children without disabilities and two children with disabilities. Each group consisted of three males and three females. In order to establish significant differences among the number of positive social interactions between children with and without disabilities among the three groups a repeated measure of two-way analyses of variance (ANOVA) was conducted using the SIOS. An alpha level of .05 was set. Research Question Two: Will there be a positive change in the quality of social interactions between children with and without disabilities before and after scripted video instruction? Analysis: Children were divided into three groups, a comparison group, a parallel group, and an interactive group. There were six children in each group, four children without disabilities and two

children with disabilities. Each group consisted of three males and three females. In order to establish significant differences of the quality of social interactions among children with and without disabilities among the three groups a repeated measure of two-way ANOVA was conducted using the SIOS. An alpha level of .05 was set.

CHAPTER 4

RESULTS

The first purpose of this study was to investigate the effect of scripted video instruction on the quantity of social interactions between young children with and without disabilities enrolled in an inclusive preschool program. The second purpose of this study was to investigate the effect of scripted video instruction on the quality of social interactions between the same group of children.

Interrater Reliability

The social behaviors of children with and without disabilities were observed and coded by three trained observers, using the SIOS, after watching videotapes of the subjects during structured play for all three phases of the study (baseline, intervention, & follow-up). The target child was observed for a one-minute interval, then all of the 15 listed measures that occurred during that interval were recorded. Using the SIOS, the observers coded data for the target child for four consecutive one-minute intervals (Kreimeyer, Antia, Coyner, Eldredge, & Gupta, 1991).

Observer A viewed 24 sessions of videotapes (baseline $n=6$, intervention $n=15$, and follow-up $n=3$) for the 18 children participating in the study. Observer A and Observer B then viewed test videotapes until they reached a criterion of 100%. Subsequently, Observer B independently watched 25% of the sessions for 5 of the 18 subjects.

Interrater agreement was 92% for Observer B on the SIOS. Next, Observer A and Observer C viewed test videotapes of the subjects during structured play until they reached a criterion of 100%. After that, Observer C independently watched 25% of the sessions for the 13 remaining subjects. Interrater agreement was 87% for Observer C on the SIOS (Kreimeyer, Antia, Coyner, Eldredge, & Gupta, 1991). Interrater agreement for Observer B and Observer C combined were 88% (see Table 9).

Table 9

Interrater Reliability for the SIOS

Observer A	Observer B	Observer C	Total B & C	% Agreement
1908/25920	1746/25920			1746/1908 = 92%
4413/25920		3840/25920		3840/4413 = 87%
5586/25920			5580/25920	5580/6315 = 88%

Baseline Phase

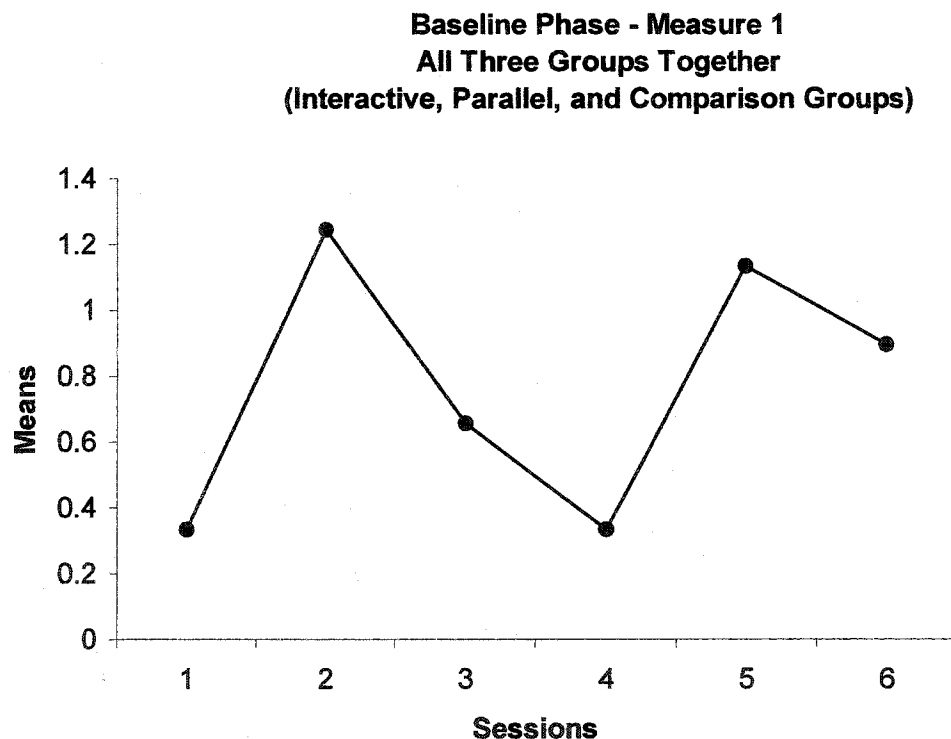
A repeated measures two-way analysis of variance (ANOVA) (6 Sessions x 3 Groups) was performed and the data were analyzed using the SIOS ratings to determine these findings. The results of the two-way ANOVA indicated that tests of between-subjects effects for *Group* were not significantly different during baseline.

Measure 1, Child Engages in Positive Interaction with Peers

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 5) = .664, p = .66$] or main effect of *Group*, [$F(2, 5) = .608, p = .56$]. However, there was a main

effect of *Session*, [$F(2, 5) = 2.940, p = .05$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect for *Session*. Results indicated a significant difference, [$F(2, 5) = 3.061, p = .05$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results of the ANOVA were non significant ($p > .05$). The performance, collapsing across groups, indicated the mean differences across sessions; the *Session* effects are represented in Figure 1.

Figure 1, Baseline Phase, No Group Effect - Session Effect, Mean Scores for Measure 1, Positive Interaction.



Measure 2, Child Directs Negative Behaviors to Peer(s)

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 5) = .291, p = .92$]. The two-way ANOVA also indicated that there were no main effects for either *Session*, [$F(2, 5) = 2.459, p = .09$] or *Group*, [$F(2, 5) = .040, p = .96$].

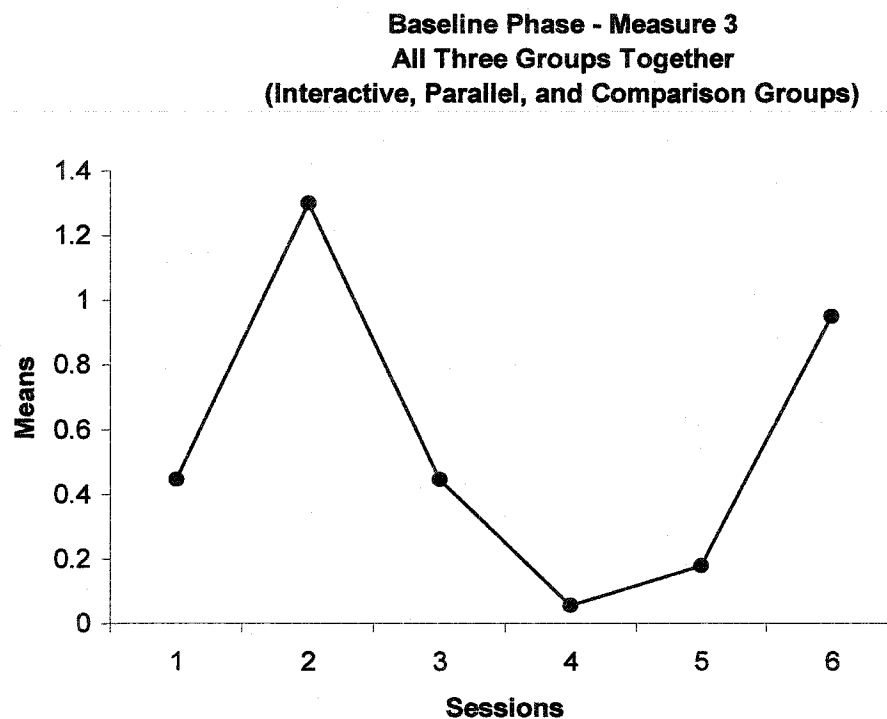
Measure 3, Child Engages in Non-Play Behavior

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 5) = 1.831, p = .11$] or main effect of *Group*, [$F(2, 5) = .362, p = .70$]. However, there was a main effect of *Session*, [$F(2, 5) = 5.675, p = .00$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect for *Session*. Results indicated a significant difference, [$F(2, 5) = 5.170, p = .00$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean scores for session six ($\underline{M} = .9500$) and two ($\underline{M} = 1.3000$) were significantly different ($p = .05$) from sessions four ($\underline{M} = .0556$), five ($\underline{M} = .1778$), one ($\underline{M} = .4444$), and three ($\underline{M} = .4444$). The results also indicated that the mean scores for session four ($\underline{M} = .0556$) and two ($\underline{M} = 1.3000$) were significantly different ($p = .05$) from the mean scores for sessions five ($\underline{M} = .1778$), one ($\underline{M} = .4444$), three ($\underline{M} = .4444$) and six ($\underline{M} = .9500$). Finally, sessions four ($\underline{M} = .0556$), five ($\underline{M} = .1778$), one ($\underline{M} = .4444$), and three ($\underline{M} = .4444$) were significantly different ($p = .05$) from the mean scores for session six ($\underline{M} = .9500$) and two ($\underline{M} = 1.3000$). The

performance, collapsing across groups, indicated the mean differences across sessions.

The session effects are represented in Figure 2.

Figure 2, Baseline Phase, No Group Effect - Session Effect, Mean Scores for Measure 3, Non-Play Behavior.



Measure 4, Child Engages in Solitary Play

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 5) = 1.297$, $p = .28$] or main effect of *Group*, [$F(2, 5) = 2.873$, $p = .09$]. However, there was a main effect of *Session*, [$F(2, 5) = 4.689$, $p = .01$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect for *Session*. Results

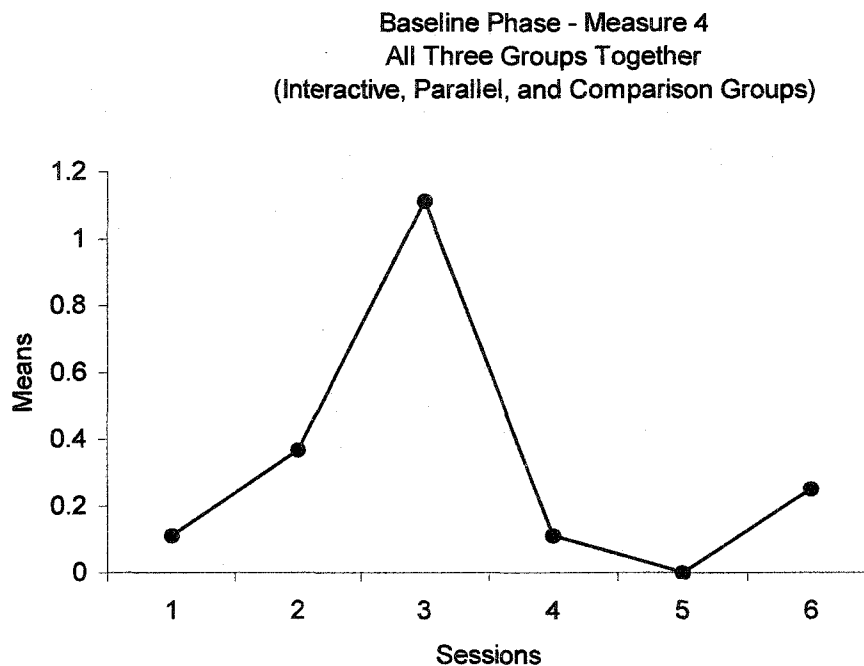
indicated a significant difference, [$F(2, 5) = 4.531, p = .01$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean score for session three ($\bar{M} = 1.1111$) was significantly different ($p = .05$) from the mean scores for sessions five ($\bar{M} = .0000$), one ($\bar{M} = .1111$), four ($\bar{M} = 1.1111$), six ($\bar{M} = .2500$), and two ($\bar{M} = .3667$). Additionally, the results indicated that the mean scores for sessions five ($\bar{M} = .0000$), one ($\bar{M} = .1111$), four ($\bar{M} = 1.1111$), six ($\bar{M} = .2500$), and two ($\bar{M} = .3667$) were significantly different ($p = .05$) from session three ($\bar{M} = 1.1111$). The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 3.

Measure 5, Child Engages in Parallel Play

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 5) = .242, p = .95$] or main effect of *Group*, [$F(2, 5) = .826, p = .46$]. However, there was a main effect of *Session*, [$F(2, 5) = 8.381, p = .00$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of *Session*. Results indicated a significant difference, [$F(2, 5) = 9.202, p = .00$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean score for session six ($\bar{M} = 1.9000$) was significantly different ($p = .05$) from the mean scores for sessions three ($\bar{M} = 3.2778$), two ($\bar{M} = 3.4000$), five ($\bar{M} = 3.7444$), one ($\bar{M} = 3.7500$), and four ($\bar{M} = 3.8889$). The

performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 4.

Figure 3, Baseline Phase, No Group Effect - Session Effect, Mean Scores for Measure 4, Solitary Play.



Measure 6, Child Engages in Associative and/or Cooperative Play

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant Sessions by Groups interaction, [$F(2, 5) = 1.215$, $p = .32$] or main effect of Group, [$F(2, 5) = 1.324$, $p = .30$]. However, there was a main effect of Session, [$F(2, 5) = 6.882$, $p = .00$]. Because there was no Group effect, but there was a Session effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of Session. Results indicated a significant difference, [$F(2, 5) = 6.712$, $p = .00$]. The Newman-Keuls

multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean score for session six ($\bar{M} = 1.9444$) was significantly different ($p = .05$) from the mean scores for sessions one ($\bar{M} = .3333$), four ($\bar{M} = .3333$), three ($\bar{M} = .6556$), five ($\bar{M} = 1.1333$), and two ($\bar{M} = 1.2444$). Additionally, the results indicated that the mean scores for sessions one ($\bar{M} = .3333$), four ($\bar{M} = .3333$), and three ($\bar{M} = .6556$), were significantly different ($p = .05$) from the mean scores for sessions five ($\bar{M} = 1.1333$), two ($\bar{M} = 1.2444$), and six ($\bar{M} = 1.9444$). The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 5.

Figure 4, Baseline Phase, No Group Effect - Session Effect, Mean Scores for Measure 5, Parallel Play.

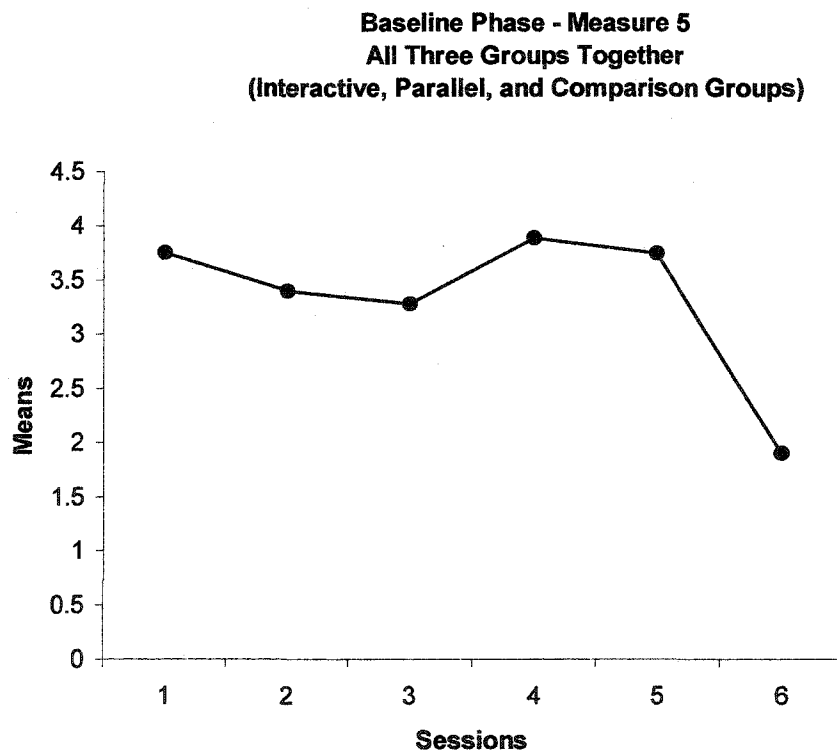
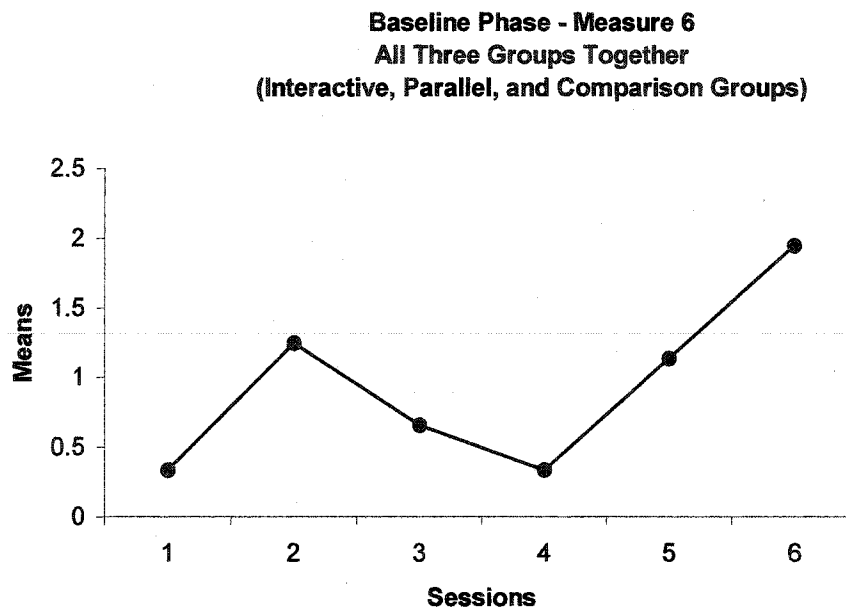


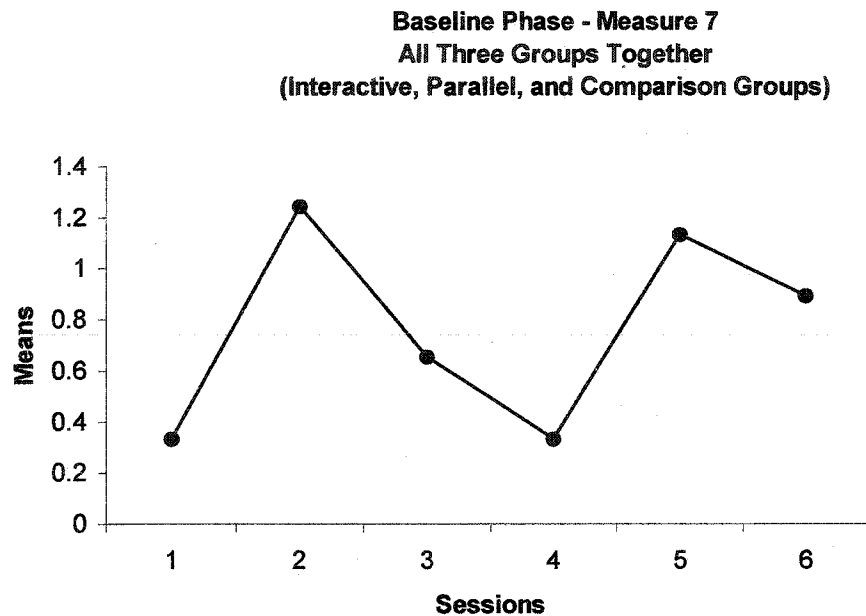
Figure 5, Baseline Phase, No Group Effect - Session Effect, Mean Scores for Measure 6, Associative and/or Cooperative Play.



Measure 7, Child Engages in Positive Linguistic Interaction

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 5) = .664, p = .66$] or main effect of *Group*, [$F(2, 5) = .608, p = .56$]. However, there was a main effect of *Session*, [$F(2, 5) = 2.940, p = .05$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of *Session*. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results were not significant ($p > .05$). The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 6.

Figure 6, Baseline Phase, No Group Effect - Session Effect, Mean Scores for Measure 7, Positive Linguistic Interaction.



Measure 8, Peer(s) Initiate Interaction Towards Child

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant Sessions by Groups interaction, [$F(2, 5) = 2.059$, $p = .06$]. The two-way ANOVA also indicated that there were no main effect for either Session, [$F(2, 5) = .947$, $p = .44$] or Group, [$F(2, 5) = 1.555$, $p = .24$].

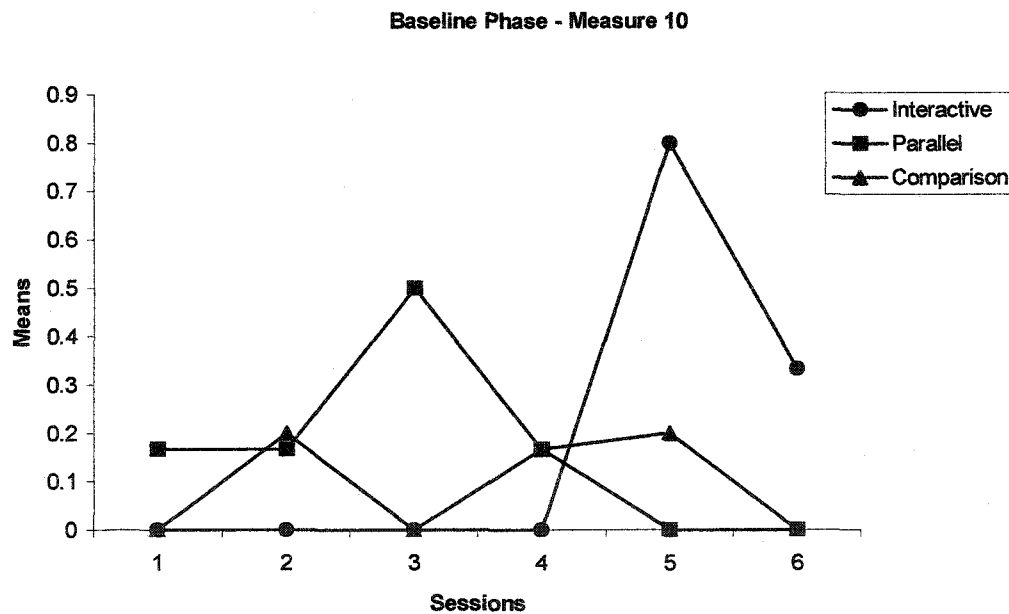
Measure 9, Child Responds Positively to Peer Initiation

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant Sessions by Groups interaction, [$F(2, 5) = .877$, $p = .52$]. The two-way ANOVA also indicated that there were no main effects for either Session, [$F(2, 5) = 1.794$, $p = .16$] or Group, [$F(2, 5) = 2.020$, $p = .17$].

Measure 10, Child Responds Negatively to Peer Initiation

Results of the two-way ANOVA indicated a *Session by Group* interaction for measure 10, child responds negatively, [$F(2, 5) = 2.228, p = .05$]. However, two-way ANOVAs indicated that there were no main effects for either *Session*, [$F(2, 5) = 1.008, p = .40$] or *Group*, [$F(2, 5) = .633, p = .55$]. To locate the source of the interaction for *Session by Group*, a Test of Simple Effects was conducted to determine where the differences existed. The results were significant for the interactive group [$F(2, 5) = 8.8181, p = .04$], but not for the parallel or comparison groups. Figure 7 is a graphic depiction of the mean scores for child responds negatively.

Figure 7, Baseline Phase, Mean Scores for Measure 10, Child Responds Negatively to Peer Initiation.



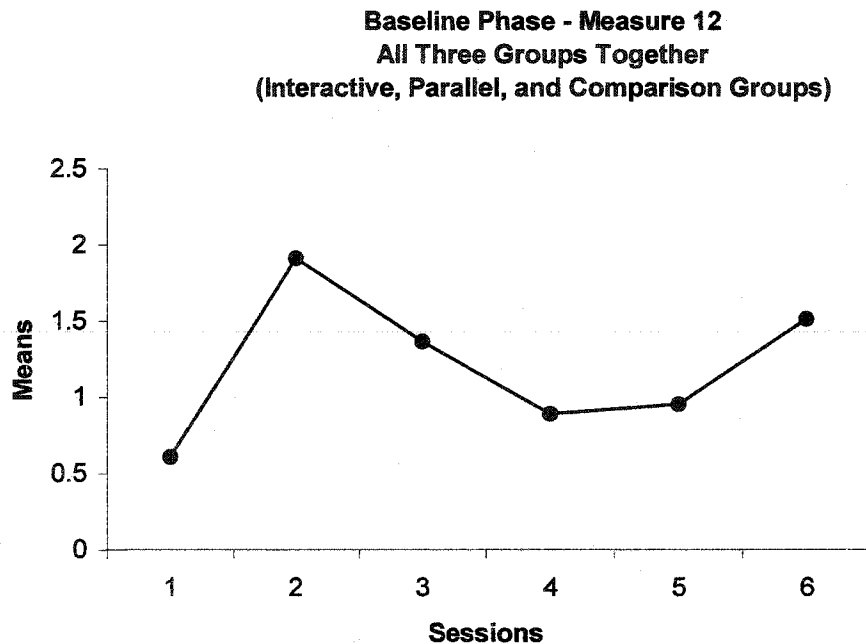
Measure 11, Child Makes No Response to Peer Initiation

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 5) = 1.320$, $p = .27$]. The two-way ANOVA also indicated that there were no main effects for either *Session*, [$F(2, 5) = .305$, $p = .83$] or *Group*, [$F(2, 5) = .362$, $p = .70$].

Measure 12, Child Initiates Interaction Towards Peers

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 5) = 1.361$, $p = .26$] or main effect of *Group*, [$F(2, 5) = .086$, $p = .92$]. However, there was a main effect of *Session*, [$F(2, 5) = 3.839$, $p = .02$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of *Session*. Results indicated a significant difference, [$F(2, 5) = 3.683$, $p = .02$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that session two ($\underline{M} = 1.9111$) was significantly different ($p = .05$) from sessions one ($\underline{M} = .6111$), four ($\underline{M} = .8889$), five ($\underline{M} = .9556$), three ($\underline{M} = 1.3667$), and six ($\underline{M} = 1.5111$). Additionally, the results indicated that the mean score for session one ($\underline{M} = .6111$) was significantly different ($p = .05$) from the mean scores for sessions four ($\underline{M} = .8889$), five ($\underline{M} = .9556$), three ($\underline{M} = 1.3667$), six ($\underline{M} = 1.5111$) and two ($\underline{M} = 1.9111$). The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 8.

Figure 8, Baseline Phase, No Group Effect - Session Effect, Mean Scores for Measure 12, Child Initiates Interaction.



Measure 13, Peer(s) Respond Positively to Child's Initiation

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 5) = 1.047$, $p = .41$]. The two-way ANOVA also indicated that there were no main effects for either *Session*, [$F(2, 5) = 2.217$, $p = .10$] or *Group*, [$F(2, 5) = .225$, $p = .80$].

Measure 14, Peer(s) Respond Negatively to Child's Initiations

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 5) = 1.121$, $p = .37$]. The two-way ANOVA also indicated that there were no main effects for either *Session*, [$F(2, 5) = 2.132$, $p = .12$] or *Group*, [$F(2, 5) = .575$, $p = .57$].

Measure 15, Peers Make No Response to Child's Initiation

Results from the repeated measures two-way ANOVA (6 Sessions x 3 Groups) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 5) = .787, p = .59$]. The two-way ANOVA also indicated that there were no main effects for either *Session*, [$F(2, 5) = 2.485, p = .07$] or *Group*, [$F(2, 5) = .370, p = .70$].

Intervention Phase

It was predicted that there would be a difference between groups because of scripted video instruction (interactive, parallel, and comparison video instruction) during the intervention phase. Repeated measures two-way ANOVAs analyses were performed to determine if there was a significant difference between the interactive, parallel, and comparison groups during intervention. If a significant difference between groups was found, then one could surmise that the difference was because of scripted video instruction. Alpha level was set at .05. The p values were calculated using the conservative Greenhouse-Geisser adjustment for non-sphericity. The Greenhouse-Geisser applies an adjustment correction to the degrees of freedom. However, the F ratio statistic stayed the same.

There were eight positive social play behaviors, four nonsocial play behaviors, and three negative play behaviors listed on the SIOS. The eight social play behaviors were: child engages in positive interaction with peers, child engages in associative and/or cooperative play, child engages in positive linguistic interaction, peer(s) initiate interaction towards child, child responds positively to peer to initiation, child initiates interaction towards peers, peer(s) respond positively to child's initiation, and child

engages in parallel play. The four nonsocial play behaviors were: child engages in non-play behavior, child engages in solitary play, child makes no response to peer initiation, and peer(s) makes no response to child's initiation. Finally, the three negative play behaviors were: child directs negative behaviors to peer(s), child responds negatively to peer initiation, and peer(s) respond negatively to child's initiations.

Measure 1, Positive Interaction with Peers

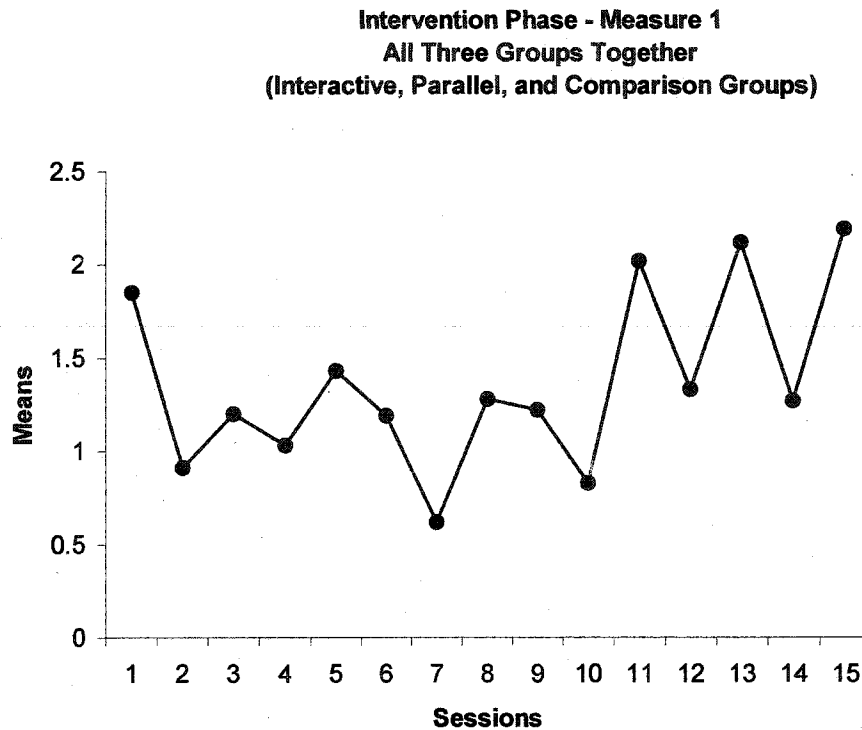
A repeated measures two-way ANOVA (15 Sessions x 3 Groups) was performed to determine if there was an interaction effect for the measure child engages in positive interaction, to analyze the intervention scores. Results indicated that there was a Sessions by Groups interaction [$F(2, 14) = 2.401, p = .00$] and a main effect for Session, [$F(2, 14) = 4.253, p = .00$]. However, there was no significant main effect for Group, [$F(2, 14) = .410, p = .67$]. To locate the source of the interaction for Sessions by Groups, a Test of Simple Effects was conducted to determine where the differences existed. For measure one, the results were significant for the comparison [$F(2, 14) = 4.5701, p = .04$], the interactive [$F(2, 14) = 7.5137, p = .01$], and the parallel groups [$F(2, 14) = 6.0137, p = .02$]. Because there was no Group effect, but there was a Session effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of Session. Results indicated a significant difference, [$F(2, 14) = 3.651, p = .00$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean scores for sessions one ($\underline{M} = 1.85$), eleven ($\underline{M} = 2.02$), thirteen ($\underline{M} = 2.12$), and fifteen ($\underline{M} = 2.19$) were significantly different ($p = .05$) from the mean scores of sessions seven ($\underline{M} = .62$), ten ($\underline{M} = .83$), two ($\underline{M} = .91$), four ($\underline{M} = 1.03$), six ($\underline{M} = 1.19$), three (\underline{M}

= 1.20), nine ($\underline{M} = 1.22$), fourteen ($\underline{M} = 1.27$), eight ($\underline{M} = 1.28$), twelve ($\underline{M} = 1.33$), and five ($\underline{M} = 1.43$). The results also indicated that the mean scores for sessions seven ($\underline{M} = .62$), thirteen ($\underline{M} = 2.12$), and fifteen ($\underline{M} = 2.19$) were significantly different ($p = .05$) from the mean scores of sessions ten ($\underline{M} = .83$), two ($\underline{M} = .91$), four ($\underline{M} = 1.03$), six ($\underline{M} = 1.19$), three ($\underline{M} = 1.20$), nine ($\underline{M} = 1.22$), fourteen ($\underline{M} = 1.27$), eight ($\underline{M} = 1.28$), twelve ($\underline{M} = 1.33$), five ($\underline{M} = 1.43$), one ($M = 1.85$), and eleven ($M = 2.02$). Finally, the results indicated that the mean scores for sessions seven ($\underline{M} = .62$), ten ($\underline{M} = .83$), and two ($\underline{M} = .91$) were significantly different ($p = .05$) from the mean scores for sessions four ($\underline{M} = 1.03$), six ($\underline{M} = 1.19$), three ($\underline{M} = 1.20$), nine ($\underline{M} = 1.22$), fourteen ($\underline{M} = 1.27$), eight ($\underline{M} = 1.28$), twelve ($\underline{M} = 1.33$), five ($\underline{M} = 1.43$), one ($\underline{M} = 1.85$), eleven ($\underline{M} = 2.02$), thirteen ($\underline{M} = 2.12$), and fifteen ($\underline{M} = 2.19$). The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 9.

Measure 2, Child Directs Negative Behaviors to Peer(s)

Results from the repeated measures two-way ANOVA (15 Sessions x 3 Groups) indicated that there were no significant *Sessions* by *Groups* interaction [$F(2, 14) = 1.640$, $p = .11$], and no main effect for *Group*, [$F(2, 14) = .364$, $p = .70$] for measure two as listed on the SIOS. Results from the two-way ANOVA indicated that there was a significant main effects for *Session*, [$F(2, 14) = 3.210$, $p = .01$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of *Session*. Results indicated a significant difference, [$F(2, 14) = 2.985$, $p = .02$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the

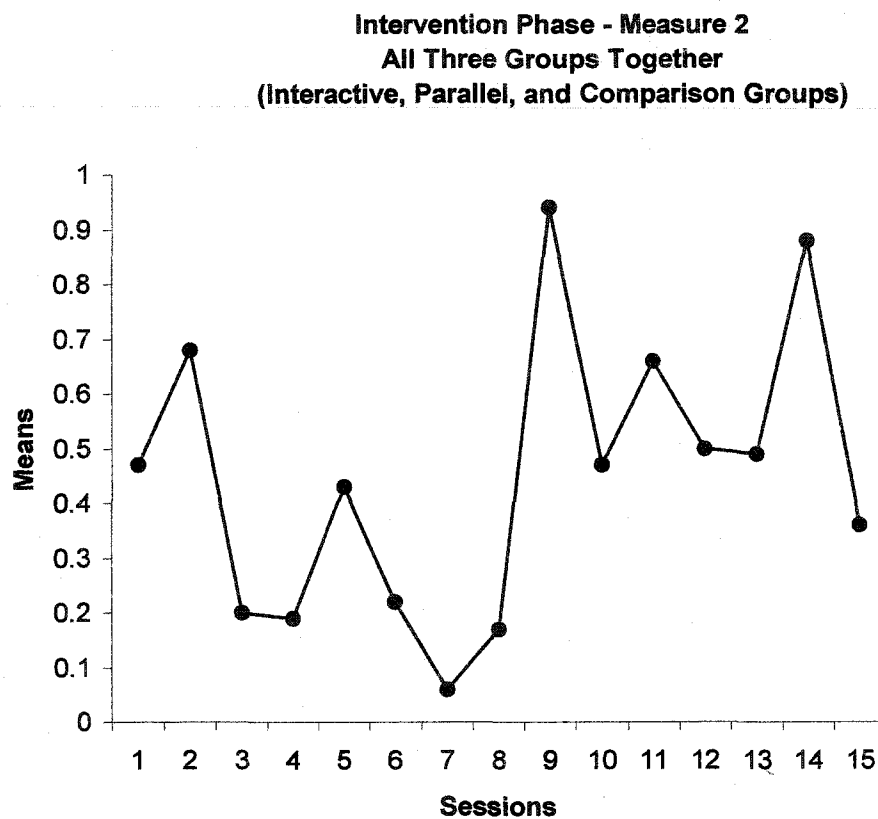
Figure 9, Intervention Phase, No Group Effect - Session Effect, Mean Scores for Measure 1, Positive Interaction.



differences existed. The results indicated that the mean scores for session nine ($\underline{M} = .94$) was significantly different ($p = .05$) from sessions seven ($\underline{M} = .06$), eight ($\underline{M} = .17$), four ($\underline{M} = .19$), three ($\underline{M} = .20$), six ($\underline{M} = .22$), fifteen ($\underline{M} = .36$), five ($\underline{M} = .43$), one ($\underline{M} = .47$), ten ($\underline{M} = .47$), thirteen ($\underline{M} = .49$), twelve ($\underline{M} = .50$), eleven ($\underline{M} = .66$), two ($\underline{M} = .68$), and fourteen ($\underline{M} = .88$). Additionally, the results indicated that the mean scores for session seven ($\underline{M} = .06$) was significantly different ($p = .05$) from sessions eight ($\underline{M} = .17$), four ($\underline{M} = .19$), three ($\underline{M} = .20$), six ($\underline{M} = .22$), fifteen ($\underline{M} = .36$), five ($\underline{M} = .43$), one ($\underline{M} = .47$), ten ($\underline{M} = .47$), thirteen ($\underline{M} = .49$), twelve ($\underline{M} = .50$), eleven ($\underline{M} = .66$), two ($\underline{M} = .68$), fourteen ($\underline{M} = .88$), and nine ($\underline{M} = .94$). The performance, collapsing across groups,

indicated the mean differences across sessions. The session effects are represented in Figure 10.

Figure 10, Intervention Phase, No Group Effect - Session Effect, Mean Scores for Measure 2, Negative Behaviors.

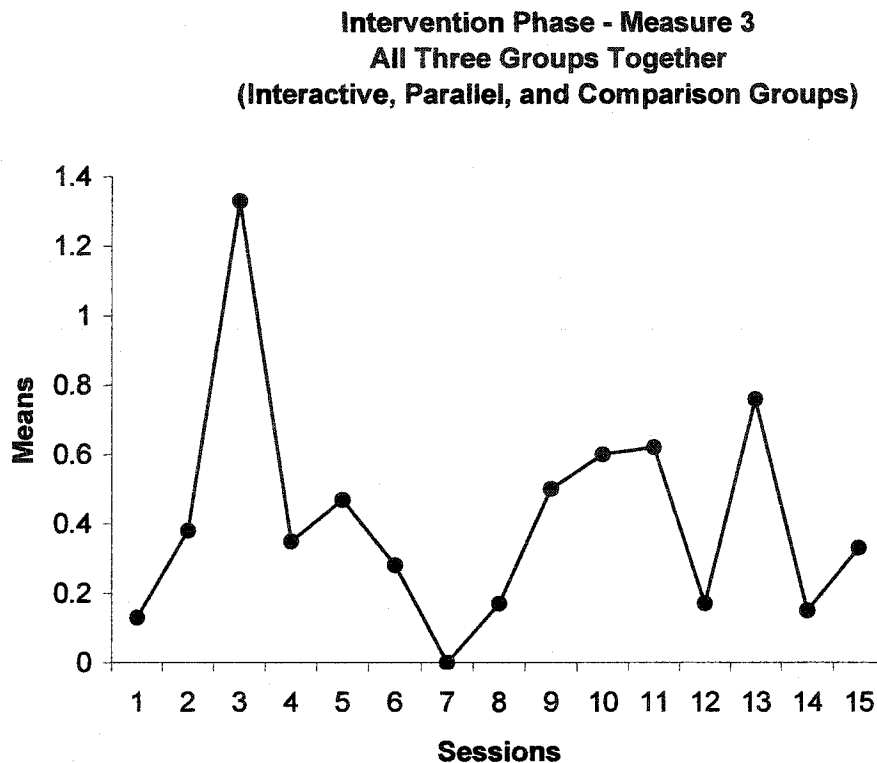


Measure 3, Child Engages in Non-Play Behavior

Results from the repeated measures two-way ANOVA (15 Sessions x 3 Groups) indicated that there was not a significant *Sessions* by *Groups* interaction [$F(2, 14) = 1.455, p = .17$], and there was no main effect for *Group*, [$F(2, 14) = .010, p = .99$] for

measure two from the SIOS. Results from the two-way ANOVA indicated that there was a significant main effect for *Session*, [$F(2, 14) = 3.117, p = .01$]. Because there was no *Group* effect, but there was a *Session* effect, repeated measures one-way ANOVA was performed for measure three to locate the source of the main effect of *Session*. Results indicated a significant difference, [$F(2, 14) = 2.959, p = .01$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean score for session three ($\underline{M} = 1.33$) was significantly different ($p = .05$) from sessions seven ($\underline{M} = .00$), one ($\underline{M} = .13$), fourteen ($\underline{M} = .15$), twelve ($\underline{M} = .17$), eight ($\underline{M} = .17$), six ($\underline{M} = .28$), fifteen ($\underline{M} = .33$), four ($\underline{M} = .35$), two ($\underline{M} = .38$), five ($\underline{M} = .47$), nine ($\underline{M} = .50$), ten ($\underline{M} = .60$), eleven ($\underline{M} = .62$), and thirteen ($\underline{M} = .76$). Additionally, the results indicated that the mean scores for sessions seven ($\underline{M} = .00$), one ($\underline{M} = .03$), fourteen ($\underline{M} = .15$), twelve ($\underline{M} = .17$), eight ($\underline{M} = .17$), six ($\underline{M} = .28$), fifteen ($\underline{M} = .33$), four ($\underline{M} = .35$), two ($\underline{M} = .38$), five ($\underline{M} = .47$), and nine ($\underline{M} = .50$) were significantly different ($p = .05$) from sessions ten ($\underline{M} = .60$), eleven ($\underline{M} = .62$), thirteen ($\underline{M} = .76$), and three ($M = 1.33$). The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 11.

Figure 11, Intervention Phase, No Group Effect - Session Effect, Mean Scores for Measure 3, Non-Play Behaviors.



Measure 4, Child Engages in Solitary Play

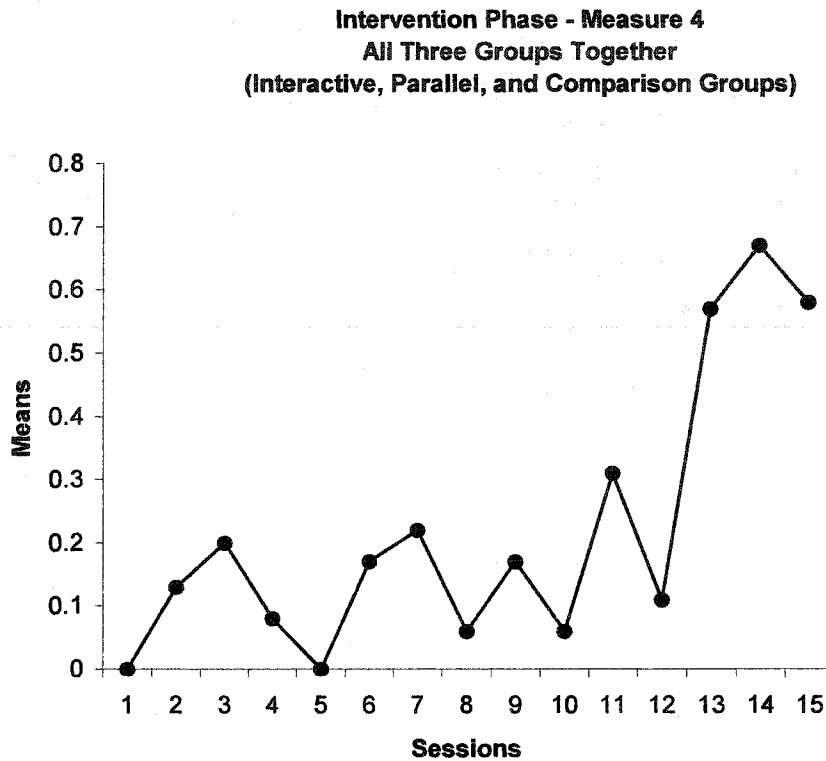
Results from the repeated measures two-way ANOVA (15 Sessions x 3 Groups) indicated a *Sessions by Groups* interaction [$F(2, 14) = 3.963, p = .00$], and main effect for *Session*, [$F(2, 14) = 2.774, p = .03$] for measure four as listed on the SIOS. Results from the ANOVA indicated that there was no significant main effects for *Group*, [$F(2, 14) = 3.280, p = .07$]. To locate the source of the interaction for *Sessions by Groups*, a Test of Simple Effects, was conducted to determine where the differences existed during intervention. On measure four, the parallel group was significant [$F(2, 14) = 16.2725, p = .00$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated

measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of *Session*. Results indicated a significant difference, [$F(2, 14) = 2.057, p = .11$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean scores for session fourteen ($\underline{M} = .67$) was significantly different ($p = .05$) from sessions one ($\underline{M} = .00$), five ($\underline{M} = .00$), eight ($\underline{M} = .06$), ten ($\underline{M} = .06$), four ($\underline{M} = .08$), twelve ($\underline{M} = .11$), two ($\underline{M} = .13$), six ($\underline{M} = .17$), nine ($\underline{M} = .17$), three ($\underline{M} = .20$), seven ($\underline{M} = .22$), eleven ($\underline{M} = .31$), thirteen ($\underline{M} = .57$), and fifteen ($\underline{M} = .58$). Additionally, the results indicated that the mean scores for session one ($\underline{M} = .00$) and five ($\underline{M} = .00$) were significantly different ($p = .05$) from sessions, eight ($\underline{M} = .06$), ten ($\underline{M} = .06$), four ($\underline{M} = .08$), twelve ($\underline{M} = .11$), two ($\underline{M} = .13$), six ($\underline{M} = .17$), nine ($\underline{M} = .17$), three ($\underline{M} = .20$), seven ($\underline{M} = .22$), eleven ($\underline{M} = .31$), thirteen ($\underline{M} = .57$), fifteen ($\underline{M} = .58$), and fourteen ($\underline{M} = .67$). The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 12.

Measure 5, Child Engages in Parallel Play

Results from the repeated measures two-way ANOVA (15 *Sessions* x 3 *Groups*) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 14) = 1.772, p = .08$]. Also, there were no main effect for either *Session* [$F(2, 14) = 2.053, p = .08$] or *Group*, [$F(2, 14) = 1.211, p = .33$].

Figure 12, Intervention Phase, No Group Effect - Session Effect, Mean Scores for Measure 4, Solitary Play.

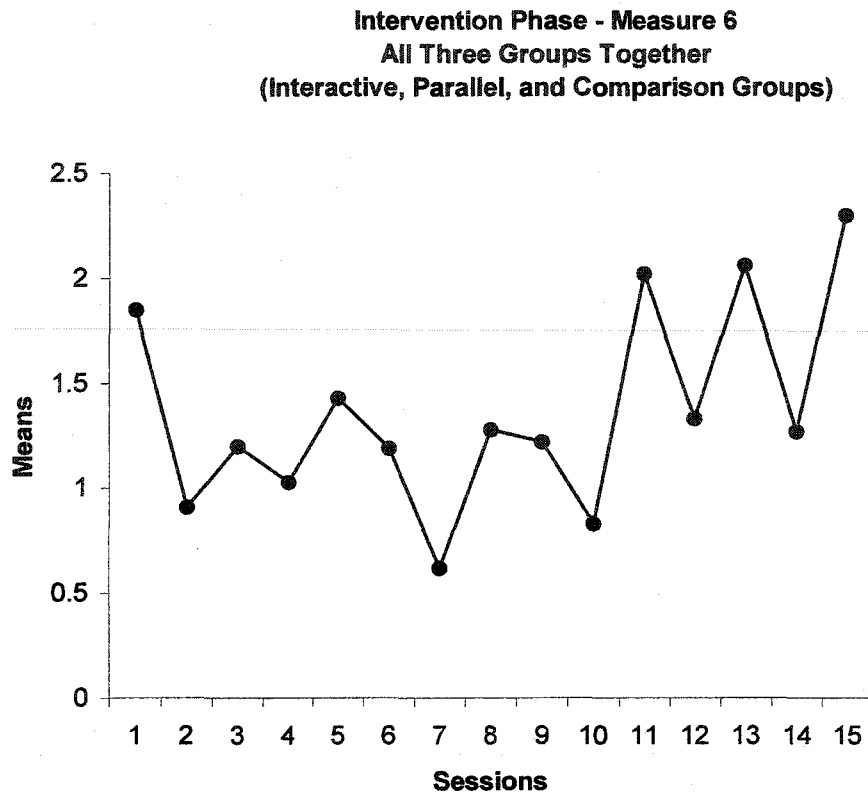


Measure 6, Child Engages in Associative and/or Cooperative Play

Results from the repeated measures two-way ANOVA (15 Sessions x 3 Groups) indicated that there were significant *Sessions by Groups* interaction, [$F(2, 14) = 2.238, p = .01$] and a main effect of *Session*, [$F(2, 14) = 4.309, p = .00$]. However, there was no significant main effect of *Group* [$F(2, 14) = .430, p = .66$]. To locate the source of the interaction for *Sessions by Groups* a Test of Simple Effects was conducted to determine where the differences existed during intervention. The results were significant for the interactive [$F(2, 14) = .73553, p = .01$] and the parallel groups [$F(2, 14) = 5.8869, p = .02$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated

measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of *Session*. Results indicated a significant difference, [$F(2, 14) = 3.761, p = .00$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean scores for sessions one ($\underline{M} = 1.85$), eleven ($\underline{M} = 2.02$), thirteen ($\underline{M} = 2.06$), and fifteen ($\underline{M} = 2.30$) were significantly different ($p = .05$) from sessions seven ($\underline{M} = .62$), ten ($\underline{M} = .83$), two ($\underline{M} = .91$), four ($\underline{M} = 1.03$), six ($\underline{M} = 1.19$), three ($\underline{M} = 1.20$), nine ($\underline{M} = 1.22$), fourteen ($\underline{M} = 1.27$), eight ($\underline{M} = 1.28$), twelve ($\underline{M} = 1.33$), and five ($\underline{M} = 1.43$). And, the results indicated that the mean scores for session seven ($\underline{M} = .62$) and fifteen ($\underline{M} = 2.30$) were significantly different ($p = .05$) from sessions, ten ($\underline{M} = .83$), two ($\underline{M} = .91$), four ($\underline{M} = 1.03$), six ($\underline{M} = 1.19$), three ($\underline{M} = 1.20$), nine ($\underline{M} = 1.22$), fourteen ($\underline{M} = 1.27$), eight ($\underline{M} = 1.28$), twelve ($\underline{M} = 1.33$), five ($\underline{M} = 1.43$), one ($\underline{M} = 1.85$), eleven ($\underline{M} = 2.02$), and thirteen ($\underline{M} = 2.06$). The results also indicated that the mean scores for sessions seven ($\underline{M} = .62$), ten ($\underline{M} = .83$), two ($\underline{M} = .91$), and four ($\underline{M} = 1.03$) were significantly different ($p = .05$) from sessions, six ($\underline{M} = 1.19$), three ($\underline{M} = 1.20$), nine ($\underline{M} = 1.22$), fourteen ($\underline{M} = 1.27$), eight ($\underline{M} = 1.28$), twelve ($\underline{M} = 1.33$), five ($\underline{M} = 1.43$), one ($\underline{M} = 1.85$), eleven ($\underline{M} = 2.02$), thirteen ($\underline{M} = 2.06$), fifteen ($\underline{M} = 2.30$). The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 13.

Figure 13, Intervention Phase, No Group Effect - Session Effect, Mean Scores for Measure 6, Child Engages in Associative and/or Cooperative Play.



Measure 7, Child Engages in Positive Linguistic Interaction

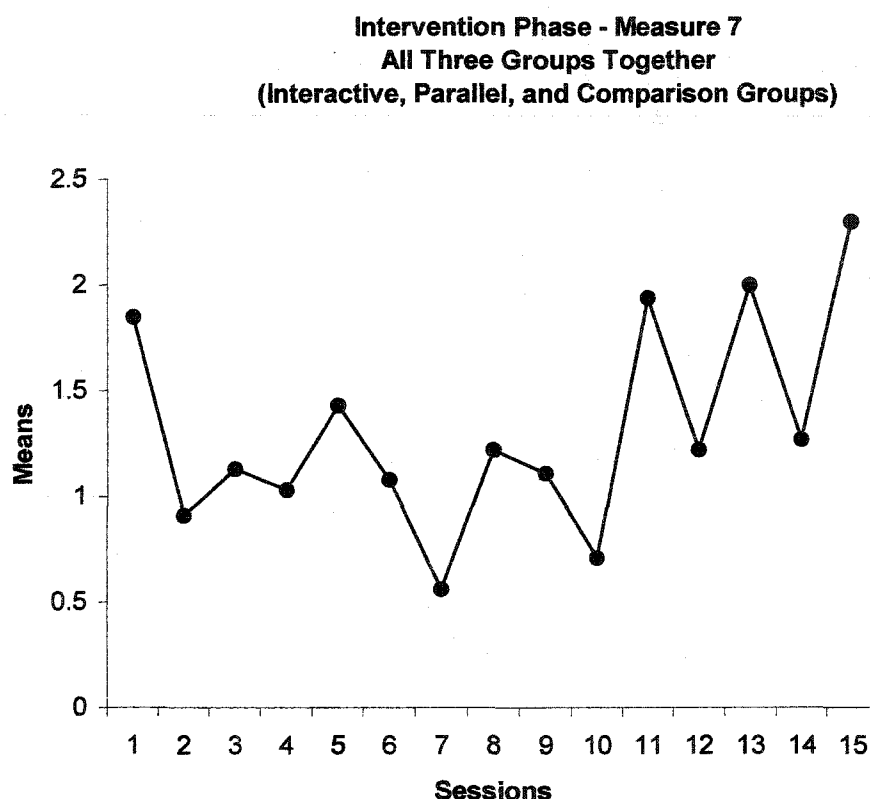
Results from the repeated measures two-way ANOVA (15 Sessions x 3 Groups) indicated that there were significant *Sessions* by *Groups* interaction, [$F(2, 14) = 2.267, p = .01$] and significant main effect for *Session*, [$F(2, 14) = 4.643, p = .00$]. Results also indicated that there was no main effect for *Group*, [$F(2, 14) = .433, p = .66$].

To locate the source of the interaction for *Sessions* by *Groups*, a Test of Simple Effects, was conducted to determine where the differences existed during intervention. The results were significant for the interactive [$F(2, 14) = 8.4973, p = .01$] and the

parallel groups [$F(2, 14) = 6.7003, p = .01$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of *Session*. Results indicated a significant difference, [$F(2, 14) = 4.040, p = .00$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean scores for sessions one ($\bar{M} = 1.85$), eleven ($\bar{M} = 1.94$), thirteen ($\bar{M} = 2.00$), and fifteen ($\bar{M} = 2.30$) were significantly different ($p = .05$) from sessions seven ($\bar{M} = .56$), ten ($\bar{M} = .71$), two ($\bar{M} = .91$), four ($\bar{M} = 1.03$), six ($\bar{M} = 1.08$), nine ($\bar{M} = 1.11$), three ($\bar{M} = 1.13$), twelve ($\bar{M} = 1.22$), eight ($\bar{M} = 1.22$), fourteen ($\bar{M} = 1.27$), and five ($\bar{M} = 1.43$). And, the results indicated that the mean scores for sessions seven ($\bar{M} = .56$), eleven ($\bar{M} = 1.94$), thirteen ($\bar{M} = 2.00$), and fifteen ($\bar{M} = 2.30$) were significantly different ($p = .05$) from sessions, ten ($\bar{M} = .71$), two ($\bar{M} = .91$), four ($\bar{M} = 1.03$), six ($\bar{M} = 1.08$), nine ($\bar{M} = 1.11$), three ($\bar{M} = 1.13$), twelve ($\bar{M} = 1.22$), eight ($\bar{M} = 1.22$), fourteen ($\bar{M} = 1.27$), five ($\bar{M} = 1.43$), one ($\bar{M} = 1.85$). The results also indicated that the mean scores for sessions seven ($\bar{M} = .56$), ten ($\bar{M} = .71$), and fifteen ($\bar{M} = 2.30$) were significantly different ($p = .05$) from sessions, two ($\bar{M} = .91$), four ($\bar{M} = 1.03$), six ($\bar{M} = 1.08$), nine ($\bar{M} = 1.11$), three ($\bar{M} = 1.13$), twelve ($\bar{M} = 1.22$), eight ($\bar{M} = 1.22$), fourteen ($\bar{M} = 1.27$), five ($\bar{M} = 1.43$), one ($\bar{M} = 1.85$), eleven ($\bar{M} = 1.94$), and thirteen ($\bar{M} = 2.00$). Finally, The results also indicated that the mean scores for sessions seven ($\bar{M} = .56$), ten ($\bar{M} = .71$), two ($\bar{M} = .91$), and four ($\bar{M} = 1.03$), six ($\bar{M} = 1.08$), nine ($\bar{M} = 1.11$), three ($\bar{M} = 1.13$) were significantly different ($p = .05$) from sessions, twelve ($\bar{M} = 1.22$), eight ($\bar{M} = 1.22$), fourteen ($\bar{M} = 1.27$), five ($\bar{M} = 1.43$), one ($\bar{M} = 1.85$), eleven ($\bar{M} = 1.94$), thirteen

(\bar{M} = 2.00), fifteen (\bar{M} = 2.30). The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 14.

Figure 14, Intervention Phase, No Group Effect - Session Effect, Mean Scores for Measure 7, Positive Linguistic Interaction.

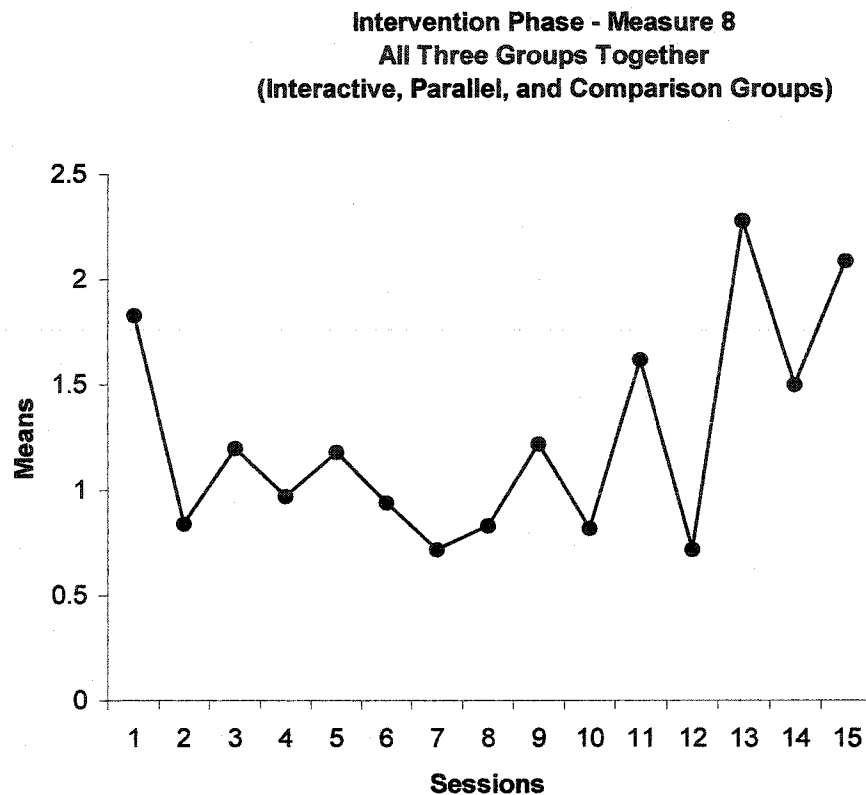


Measure 8, Peer(s) Initiate Interaction Toward Child

Results from the repeated measures two-way ANOVA (15 Sessions x 3 Groups) indicated that there were no significant Sessions by Groups interaction, [$F(2, 1) = 1.332$, $p = .21$] or main effect of Group, [$F(2, 1) = .507$, $p = .61$]. But there was significant main effect of Session, [$F(2, 1) = 4.897$, $p = .00$]. Because there was no Group effect,

but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of *Session*. Results indicated a significant difference, [$F(2, 14) = 4.713, p = .00$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean scores for session fifteen ($\underline{M} = 2.09$) and thirteen ($\underline{M} = 2.28$), were significantly different ($p = .05$) from sessions seven ($\underline{M} = .72$), twelve ($\underline{M} = .72$), ten ($\underline{M} = .82$), eight ($\underline{M} = .83$), two ($\underline{M} = .84$), six ($\underline{M} = .94$), four ($\underline{M} = .97$), five ($\underline{M} = 1.18$), three ($\underline{M} = 1.20$), nine ($\underline{M} = 1.22$), fourteen ($\underline{M} = 1.50$), eleven ($\underline{M} = 1.62$), and one ($\underline{M} = 1.83$). And, the results indicated that the mean scores for sessions seven ($\underline{M} = .72$), twelve ($\underline{M} = .72$), ten ($\underline{M} = .82$), eight ($\underline{M} = .83$), two ($\underline{M} = .84$), six ($\underline{M} = .94$), and four ($\underline{M} = .97$) were significantly different ($p = .05$) from sessions five ($\underline{M} = 1.18$), three ($\underline{M} = 1.20$), nine ($\underline{M} = 1.22$), fourteen ($\underline{M} = 1.50$), eleven ($\underline{M} = 1.62$), one ($\underline{M} = 1.83$), and fifteen ($\underline{M} = 2.09$). The results also indicated that the mean scores for sessions seven ($\underline{M} = .72$), twelve ($\underline{M} = .72$), ten ($\underline{M} = .82$), eight ($\underline{M} = .83$), two ($\underline{M} = .84$), six ($\underline{M} = .94$) and four ($\underline{M} = .97$) were significantly different ($p = .05$) from sessions five ($\underline{M} = 1.18$), three ($\underline{M} = 1.20$), nine ($\underline{M} = 1.22$), fourteen ($\underline{M} = 1.50$), eleven ($\underline{M} = 1.62$), one ($\underline{M} = 1.83$), and fifteen ($\underline{M} = 2.09$). The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 15.

Figure 15, Intervention Phase, No Group Effect - Session Effect, Mean Scores for Measure 8, Peer(s) Initiate Interaction Toward Child.

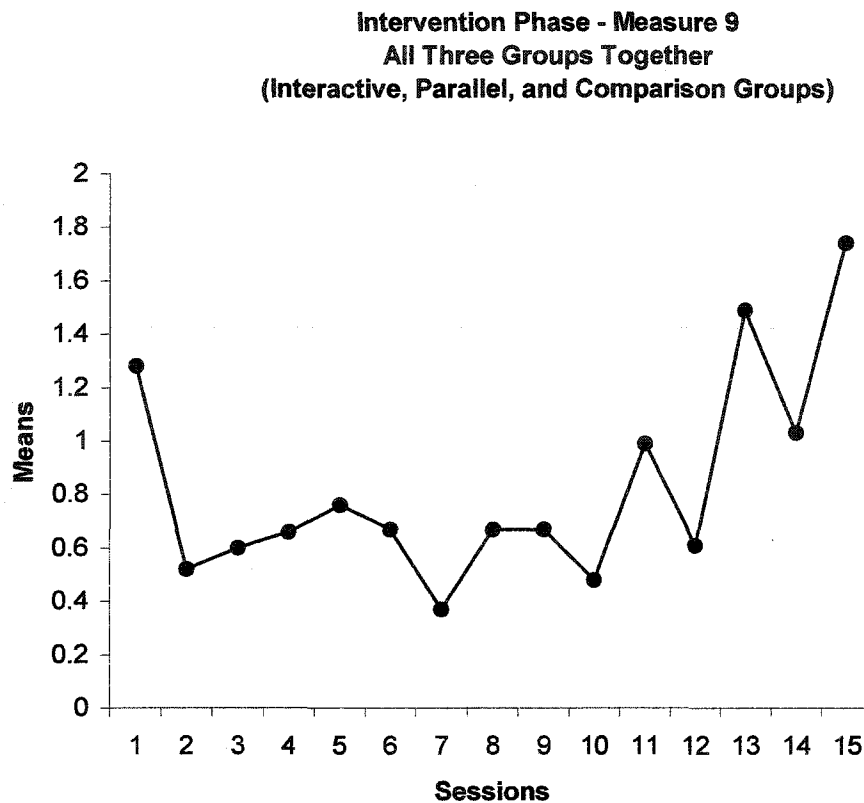


Measure 9, Child Responds Positively to Peer Initiation

Results from the repeated measures two-way ANOVA (15 Sessions x 3 Groups) indicated that there was a significant *Sessions* by *Groups* interaction, [$F(2, 14) = 2.136, p = .02$] and a main effect for *Session*, [$F(2, 14) = 3.918, p = .00$]. However, there was no significant main effect for *Group*, [$F(2, 14) = .333, p = .72$]. To locate the source of the interaction for *Sessions* by *Groups*, a Post Hoc procedure called the Test of Simple Effects, was conducted to determine where the differences existed during intervention. The results were significant for the comparison [$F(2, 14) = 6.3341, p = .02$], the

interactive [$F(2, 14) = 7.3300, p = .01$], and the parallel groups [$F(2, 14) = 5.3226, p = .04$]. Because there was no *Group* effect, but there was a *Session* effect, repeated measures one-way ANOVA was performed to locate the source of the main effect of *Session*. Results indicated a significant difference, [$F(2, 14) = 3.456, p = .00$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean scores for session thirteen, ($\underline{M} = 1.49$) and fifteen ($\underline{M} = 1.74$) were significantly different ($p = .05$) from sessions seven ($\underline{M} = .37$), ten ($\underline{M} = .48$), two ($\underline{M} = .52$), three ($\underline{M} = .60$), twelve ($\underline{M} = .61$), four ($\underline{M} = .66$), nine ($\underline{M} = .67$), six ($\underline{M} = .67$), eight ($\underline{M} = .67$), five ($\underline{M} = .76$), eleven ($\underline{M} = .99$), fourteen ($\underline{M} = 1.03$), and one ($\underline{M} = 1.28$). And, the results indicated that the mean scores for sessions seven ($\underline{M} = .37$), ten ($\underline{M} = .48$), and fifteen ($\underline{M} = 1.74$) were significantly different ($p = .05$) from sessions, two ($\underline{M} = .52$), three ($\underline{M} = .60$), twelve ($\underline{M} = .61$), four ($\underline{M} = .66$), nine ($\underline{M} = .67$), six ($\underline{M} = .67$), eight ($\underline{M} = .67$), five ($\underline{M} = .76$), eleven ($\underline{M} = .99$), fourteen ($\underline{M} = 1.03$), one ($\underline{M} = 1.28$), and thirteen ($\underline{M} = 1.49$). The results also indicated that the mean scores for sessions seven ($\underline{M} = .37$), ten ($\underline{M} = .48$), two ($\underline{M} = .52$), three ($\underline{M} = .60$), twelve ($\underline{M} = .61$), four ($\underline{M} = .66$), nine ($\underline{M} = .67$), six ($\underline{M} = .67$), eight ($\underline{M} = .67$), and five ($\underline{M} = .76$) were significantly different ($p = .05$) from sessions, eleven ($\underline{M} = .99$), fourteen ($\underline{M} = 1.03$), one ($\underline{M} = 1.28$), thirteen ($\underline{M} = 1.49$), and fifteen ($\underline{M} = 1.74$). The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 16.

Figure 16, Intervention Phase, No Group Effect - Session Effect, Mean Scores for Measure 9, Child Responds Positively to Peer Initiation.



Measure 10, Child Responds Negatively to Peer Initiation

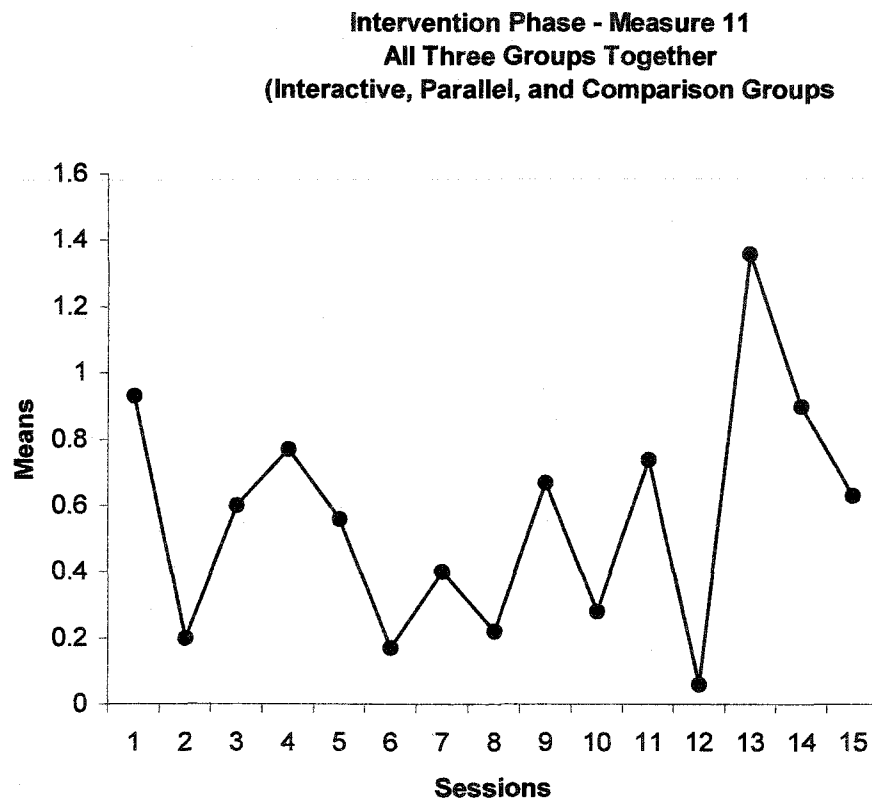
Results from the repeated measures two-way ANOVA (15 Sessions x 3 Groups) indicated that there were no significant Sessions by Groups interaction, [$F(2, 14) = 1.549, p = .17$]. Also, results revealed no significant main effect for either Session, [$F(2, 14) = 1.258, p = .30$] or Group, [$F(2, 14) = 1.371, p = .28$].

Measure 11, Child Makes No Response to Peer Initiation

Results from the repeated measures two-way ANOVA (15 Sessions x 3 Groups) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 14) = 1.052, p = .41$] nor was there a main effect for *Group* [$F(2, 14) = .647, p = .54$]. However, there was a main effect for *Session*, [$F(2, 14) = 4.403, p = .00$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of *Session*. Results indicated a significant difference, [$F(2, 14) = 4.376, p = .00$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean scores for sessions fourteen ($\underline{M} = .90$), one ($\underline{M} = .93$), and thirteen ($\underline{M} = 1.36$), were significantly different ($p = .05$) from sessions twelve ($\underline{M} = .06$), six ($\underline{M} = .17$), two ($\underline{M} = .20$), eight ($\underline{M} = .22$), ten ($\underline{M} = .28$), seven ($\underline{M} = .40$), five ($\underline{M} = .56$), three ($\underline{M} = .60$), fifteen ($\underline{M} = .63$), nine ($\underline{M} = .67$), eleven ($\underline{M} = .74$), and four ($\underline{M} = .77$). And, the results indicated that the mean scores for session twelve ($\underline{M} = .06$) and thirteen ($\underline{M} = 1.36$) were significantly different ($p = .05$) from sessions six ($\underline{M} = .17$), two ($\underline{M} = .20$), eight ($\underline{M} = .22$), ten ($\underline{M} = .28$), seven ($\underline{M} = .40$), five ($\underline{M} = .56$), three ($\underline{M} = .60$), fifteen ($\underline{M} = .63$), nine ($\underline{M} = .67$), eleven ($\underline{M} = .74$), four ($\underline{M} = .77$), fourteen ($\underline{M} = .90$), and one ($\underline{M} = .93$). The results also indicated that the mean scores for sessions twelve ($\underline{M} = .06$), six ($\underline{M} = .17$), two ($\underline{M} = .20$), eight ($\underline{M} = .22$), ten ($\underline{M} = .28$), seven ($\underline{M} = .40$), and five ($\underline{M} = .56$) were significantly different ($p = .05$) from sessions three ($\underline{M} = .60$), fifteen ($\underline{M} = .63$), nine ($\underline{M} = .67$), eleven ($\underline{M} = .74$), four ($\underline{M} = .77$), fourteen ($\underline{M} = .90$), one ($\underline{M} = .93$), and thirteen ($\underline{M} = 1.36$). The performance, collapsing

across groups, indicated the mean differences across sessions. The session effects are represented in Figure 17.

Figure 17, Intervention Phase, No Group Effect - Session Effect, Mean Scores for Measure 11, Child Makes No Response to Peer Initiations.

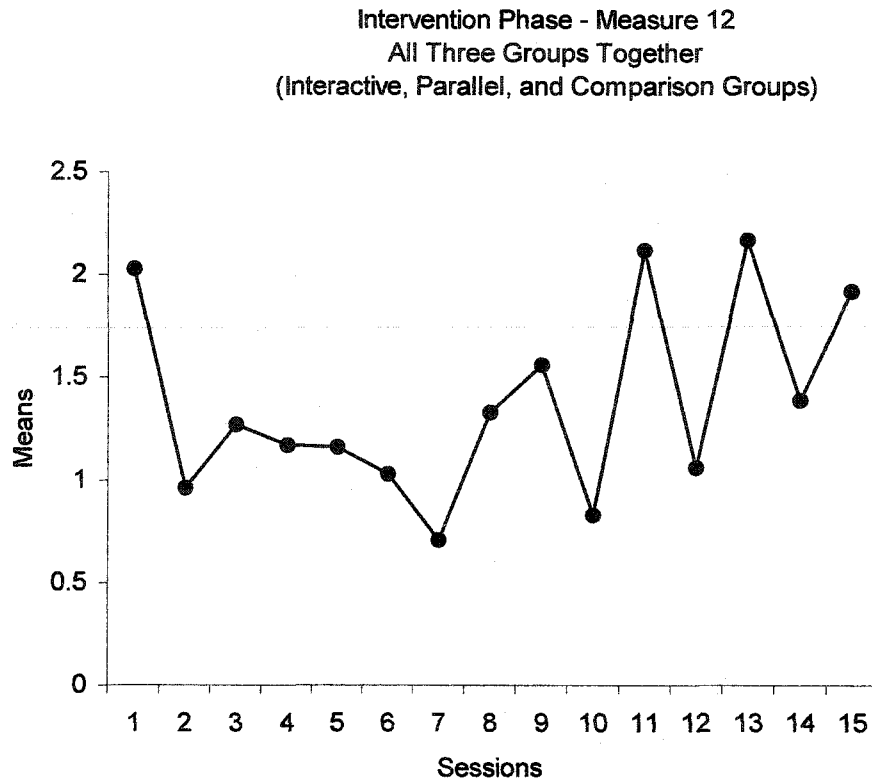


Measure 12, Child Initiates Interaction Towards Peers

Results from the repeated measures two-way ANOVA (15 Sessions x 3 Groups) indicated that there was a significant *Sessions* by *Groups* interaction, [$F(2, 14) = 2.071, p = .02$] and a significant main effect of *Session* [$F(2, 14) = 4.320, p = .00$]. Two-way ANOVA results revealed no significant main effect for *Group*, [$F(2, 14) = .072, p = .93$]. To locate the source of the interaction for *Sessions* by *Groups*, a Post Hoc procedure

called the Test of Simple Effects, was conducted to determine where the differences existed during intervention. The results were significant for the comparison [$F(2, 14) = 5.3240, p = .02$], the interactive [$F(2, 14) = 4.4031, p = .04$], and the parallel groups [$F(2, 14) = 5.0015, p = .02$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect for *Session*. Results indicated a significant difference, [$F(2, 14) = 3.836, p = .00$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean scores for sessions one ($M = 2.03$), eleven ($M = 2.12$), and thirteen ($M = 2.17$) were significantly different ($p = .05$) from sessions seven ($M = .71$), ten ($M = .83$), two ($M = .96$), six ($M = 1.03$), twelve ($M = 1.06$), five ($M = 1.16$), four ($M = 1.17$), three ($M = 1.27$), eight ($M = 1.33$), fourteen ($M = 1.38$), nine ($M = 1.56$), and fifteen ($M = 1.92$). And, the results indicated that the mean scores for sessions seven ($M = .71$), eleven ($M = 2.12$), and thirteen ($M = 2.17$) were significantly different ($p = .05$) from sessions ten ($M = .83$), two ($M = .96$), six ($M = 1.03$), twelve ($M = 1.06$), five ($M = 1.16$), four ($M = 1.17$), three ($M = 1.27$), eight ($M = 1.33$), fourteen ($M = 1.38$), nine ($M = 1.56$), fifteen ($M = 1.92$), and one ($M = 2.03$). The results also indicated that the mean scores for sessions seven ($M = .71$) and ten ($M = .83$) were significantly different ($p = .05$) from sessions two ($M = .96$), six ($M = 1.03$), twelve ($M = 1.06$), five ($M = 1.16$), four ($M = 1.17$), three ($M = 1.27$), eight ($M = 1.33$), fourteen ($M = 1.38$), nine ($M = 1.56$), fifteen ($M = 1.92$), one ($M = 2.03$), eleven ($M = 2.12$), and thirteen ($M = 2.17$). The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 18.

Figure 18, Intervention Phase, No Group Effect - Session Effect, Mean Scores for Measure 12, Child Initiates Interaction Towards Peers.

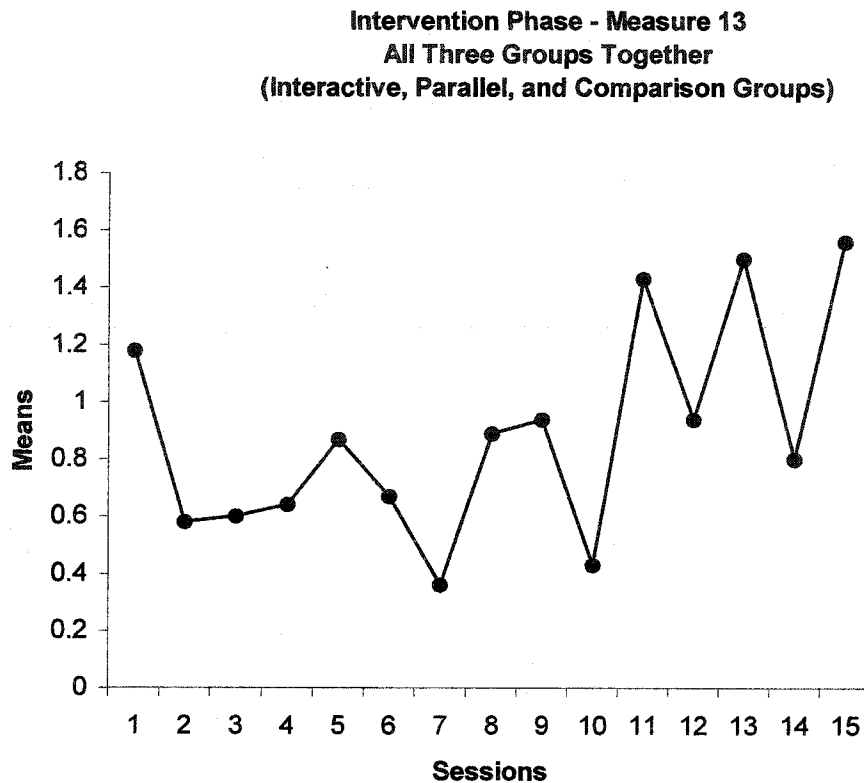


Measure 13, Peer(s) Respond Positively to Child's Initiation

Results from the repeated measures two-way ANOVA (15 Sessions x 3 Groups) indicated that there was a significant *Sessions* by *Groups* interaction, [$F(2, 14) = 2.193, p = .02$] and a significant main effect for *Session* [$F(2, 14) = 3.183, p = .00$]. But no effect of *Group*, [$F(2, 14) = .076, p = .93$]. To locate the source of the interaction for *Sessions* by *Groups* a Test of Simple Effects was conducted to determine where the differences existed during intervention. The results were significant for the comparison [$F(2, 14) = 5.9394, p = .02$], the interactive [$F(2, 14) = 4.9755, p = .03$], and the parallel groups [F

(2, 14) = 5.3798, $p = .03$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect for *Session*. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean scores for session thirteen ($\underline{M} = 1.50$) and fifteen ($\underline{M} = 1.56$) were significantly different ($p = .05$) from sessions seven ($\underline{M} = .36$), ten ($\underline{M} = .43$), two ($\underline{M} = .58$), three ($\underline{M} = .60$), four ($\underline{M} = .64$), six ($\underline{M} = .67$), fourteen ($\underline{M} = .80$), five ($\underline{M} = .87$), eight ($\underline{M} = .89$), twelve ($\underline{M} = .94$), nine ($\underline{M} = .94$), one ($\underline{M} = 1.18$), and eleven ($\underline{M} = 1.43$). And, the results indicated that the mean scores for session seven ($\underline{M} = .36$) and fifteen ($\underline{M} = 1.56$) were significantly different ($p = .05$) from sessions ten ($\underline{M} = .43$), two ($\underline{M} = .58$), three ($\underline{M} = .60$), four ($\underline{M} = .64$), six ($\underline{M} = .67$), fourteen ($\underline{M} = .80$), five ($\underline{M} = .87$), eight ($\underline{M} = .89$), twelve ($\underline{M} = .94$), nine ($\underline{M} = .94$), one ($\underline{M} = 1.18$), eleven ($\underline{M} = 1.43$), thirteen ($\underline{M} = 1.50$), and fifteen ($\underline{M} = 1.56$). The results also indicated that the mean scores for session seven ($\underline{M} = .36$) and ten ($\underline{M} = .43$) were significantly different ($p = .05$) from sessions two ($\underline{M} = .58$), three ($\underline{M} = .60$), four ($\underline{M} = .64$), six ($\underline{M} = .67$), fourteen ($\underline{M} = .80$), five ($\underline{M} = .87$), eight ($\underline{M} = .89$), twelve ($\underline{M} = .94$), nine ($\underline{M} = .94$), one ($\underline{M} = 1.18$), eleven ($\underline{M} = 1.43$), thirteen ($\underline{M} = 1.50$), and fifteen ($\underline{M} = .67$). Results indicated a significant difference, [$F(2, 15) = 2.791, p = .013$]. The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 19.

Figure 19, Intervention Phase, No Group Effect – Session Effect, Mean Scores for Measure 13, Peer(s) Respond Positively to Child’s Initiation.



Measure 14, Peer(s) Respond Negatively to Child’s Initiation

Results from the repeated measures two-way ANOVA (15 Sessions x 3 Groups) indicated that there were no significant Sessions by Groups interaction, [$F(2, 14) = 1.818, p = .07$]. Also, there were no main effect for either Session [$F(2, 14) = .858, p = .52$] or Group, [$F(2, 14) = .643, p = .54$].

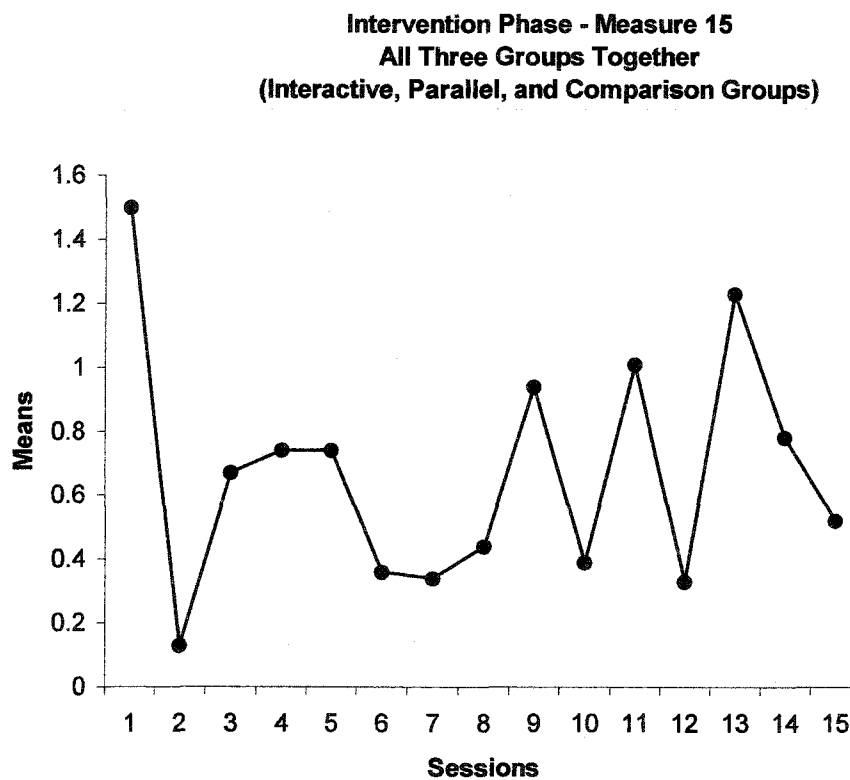
Measure 15, Peer(s) Make No Response to Child’s Initiation

Results from the repeated measures two-way ANOVA (15 Sessions x 3 Groups) indicated that there was a significant Sessions by Groups interaction, [$F(2, 14) = 1.827, p$

= .05] and a main effect of *Session* [$F(2, 14) = 5.100, p = .00$]. But no significant main effect for *Groups*, [$F(2, 14) = .105, p = .90$]. To locate the source of the interaction for *Sessions by Groups*, a Test of Simple Effects, was conducted to determine where the differences existed during intervention. The results were significant for the comparison [$F(2, 14) = 7.7657, p = .01$] and parallel groups [$F(2, 14) = 7.1305, p = .02$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of *Session*. Results indicated a significant difference, [$F(2, 14) = 4.648, p = .00$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean scores for session thirteen ($\underline{M} = 1.23$) and one ($\underline{M} = 1.50$) were significantly different ($p = .05$) from sessions two ($\underline{M} = .13$), twelve ($\underline{M} = .33$), seven, ($\underline{M} = .34$), six ($\underline{M} = .36$), ten ($\underline{M} = .39$), eight ($\underline{M} = .44$), fifteen ($\underline{M} = .52$), three ($\underline{M} = .67$), four ($\underline{M} = .74$), five ($\underline{M} = .74$), fourteen ($\underline{M} = .78$), nine ($\underline{M} = .94$), and eleven ($\underline{M} = 1.01$). And, the results indicated that the mean scores for sessions two ($\underline{M} = .13$), twelve ($\underline{M} = .33$), seven ($\underline{M} = .34$), six ($\underline{M} = .36$), and ten ($\underline{M} = .39$) were significantly different ($p = .05$) from sessions eight ($\underline{M} = .44$), fifteen ($\underline{M} = .52$), three ($\underline{M} = .67$), four ($\underline{M} = .74$), five ($\underline{M} = .74$), fourteen ($\underline{M} = .78$), nine ($\underline{M} = .94$), eleven ($\underline{M} = 1.01$), and thirteen ($\underline{M} = 1.23$). The results also indicated that the mean scores for sessions two ($\underline{M} = .13$), twelve ($\underline{M} = .33$), seven ($\underline{M} = .34$), six ($\underline{M} = .36$), ten, ($\underline{M} = .39$), eight ($\underline{M} = .44$), fifteen ($\underline{M} = .52$), and three ($\underline{M} = .67$) were significantly different ($p = .05$) from sessions, four ($\underline{M} = .74$), five ($\underline{M} = .74$), fourteen ($\underline{M} = .78$), nine ($\underline{M} = .94$), eleven ($\underline{M} = 1.01$), thirteen ($\underline{M} = 1.23$), one ($\underline{M} = 1.50$). The performance, collapsing across

groups, indicated the mean differences across sessions. The session effects are represented in Figure 20.

Figure 20, Intervention Phase, No Group Effect - Session Effect, Mean Scores for Measure 15, Peers Make No Response to Child's Initiation.



Follow-Up Phase

Measure 1, Positive Interaction with Peers

A repeated measures two-way ANOVA (3 Sessions x 3 Groups) was performed for measure one, child engages in positive interaction, to analyze the follow-up results.

Results indicated that there were no significant *Sessions* by *Groups* interaction [$F(2, 2) =$

1.494, $p = .24$]. Additionally, there were no main effect for either *Session*, [$F(2, 2) = 1.757, p = .20$] or *Group* [$F(2, 2) = .665, p = .53$].

Measure 2, Child Directs Negative Behaviors to Peer(s)

Results from the repeated measures two-way ANOVA (3 *Sessions* x 3 *Groups*) indicated that there were no significant *Sessions* by *Groups* interaction [$F(2, 2) = 1.780, p = .18$], and no main effect for *Group*, [$F(2, 2) = 1.605, p = .23$] for measure two as listed on the SIOS. But there was a significant main effect for *Session*, [$F(2, 2) = 4.006, p = .04$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of *Session*. Results indicated a significant difference, [$F(2, 2) = 3.669, p = .05$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results were non significant. The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 21.

Measure 3, Child Engages in Non-Play Behavior

Results from the repeated measures two-way ANOVA (3 *Sessions* x 3 *Groups*) indicated a *Sessions* by *Groups* interaction [$F(2, 2) = 2.998, p = .04$]. Results from two-way ANOVAs indicated that there were no main effect for *Session*, [$F(2, 2) = .022, p = .97$] or *Group*, [$F(2, 2) = .793, p = .47$]. To locate the source of the interaction for *Session* by *Group*, a Test of Simple Effects, was conducted to determine where the differences existed during follow-up. The results were non significant. Figure 22 is a graphic depiction of the mean scores for measure three.

Figure 21, Follow-Up Phase, No Group Effect - Session Effect, Mean Scores for Measure 2, Child Directs Negative Behaviors Towards Peer(s).

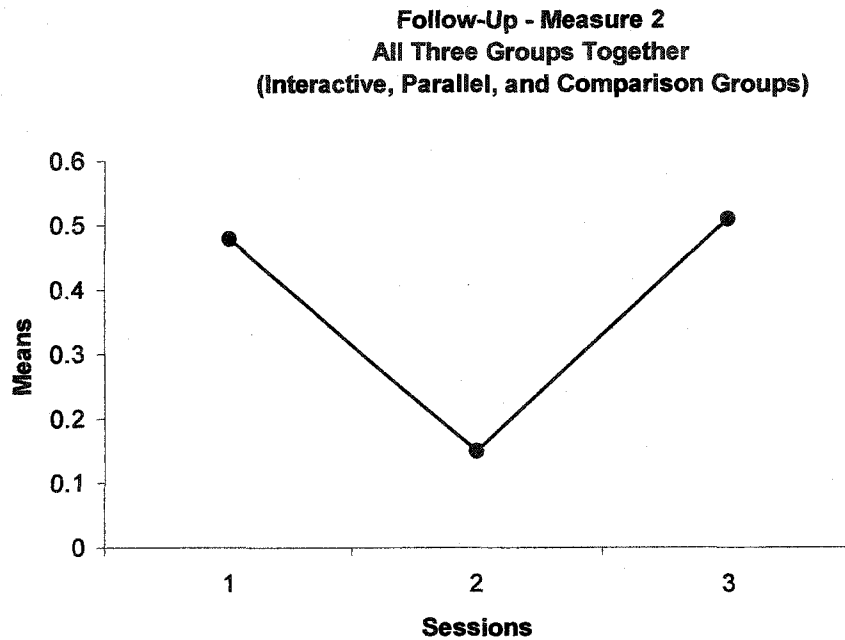
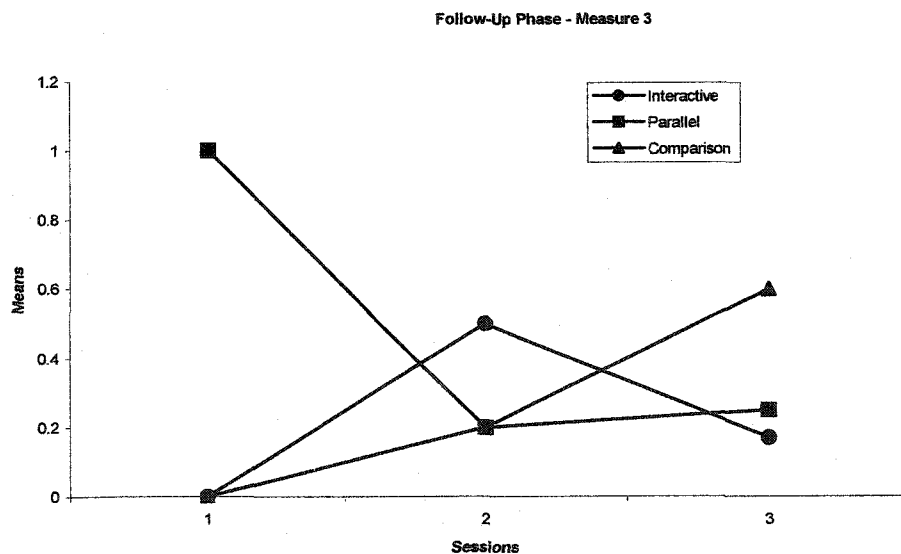


Figure 22, Follow-Up Phase, Mean Scores for Measure 3, Child Engages in Non-Play Behavior.



Measure 4, Child Engages in Solitary Play

Results from the repeated measures two-way ANOVA (3 *Sessions* x 3 *Groups*) indicated that there were no significant *Sessions* by *Groups* interaction [$F(2, 2) = 1.914$, $p = .15$], or main effect for *Sessions*, [$F(2, 2) = 1.881$, $p = .18$] for measure four as listed on the SIOS. However, there was a significant main effect for *Groups*, [$F(2, 2) = 4.624$, $p = .03$]. Because there was no *Session* effect, but there was a *Group* effect, a one-way ANOVA was conducted collapsing across sessions to locate the source of the main effect of *Group*. The results of the analysis was significant [$F(2, 2) = 4.624$, $p = .03$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean score for the parallel group ($\bar{M} = 1.58$) was significantly different ($p = .05$) from the mean scores for the interactive ($\bar{M} = .22$), and parallel groups ($\bar{M} = .96$). Additionally, the results indicated that the mean score for the interactive group ($\bar{M} = .22$) was significantly different ($p = .05$) from the comparison ($\bar{M} = .96$) and parallel groups ($\bar{M} = 1.58$). Figure 23 is a graphic depiction of the above.

Measure 5, Child Engages in Parallel Play

Results from the repeated measures two-way ANOVA (3 *Sessions* x 3 *Groups*) indicated a *Sessions* by *Groups* interaction, [$F(2, 2) = 3.058$, $p = .05$]. There were no significant main effect for either *Session*, [$F(2, 2) = 2.833$, $p = .09$] or *Group*, [$F(2, 2) = 1.990$, $p = .17$]. To locate the source of the interaction for *Session* by *Group*, a Test of Simple Effects, was conducted to determine where the differences existed during follow-up. The results were non significant. Figure 24 is a graphic depiction of the mean scores for child engages in parallel play.

Figure 23, Follow-Up Phase, Mean Scores for Measure 4, Solitary Play.

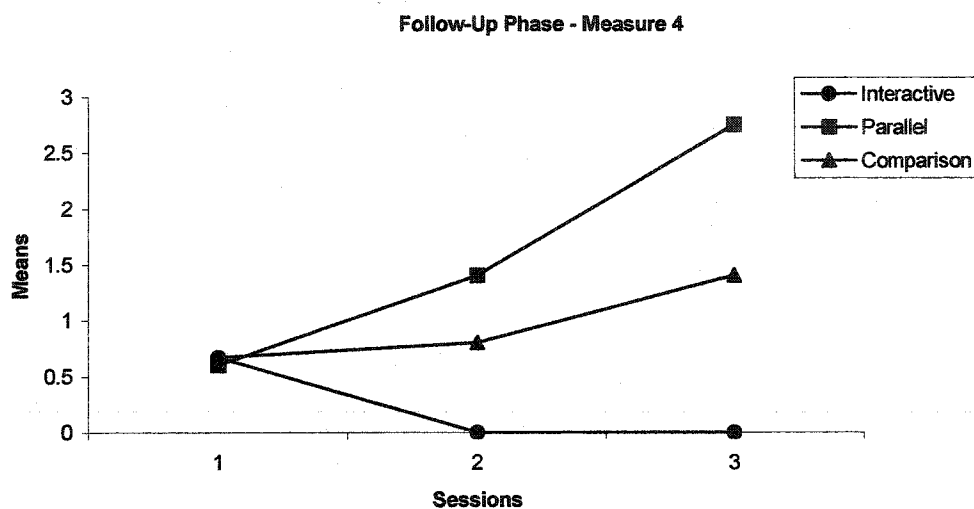
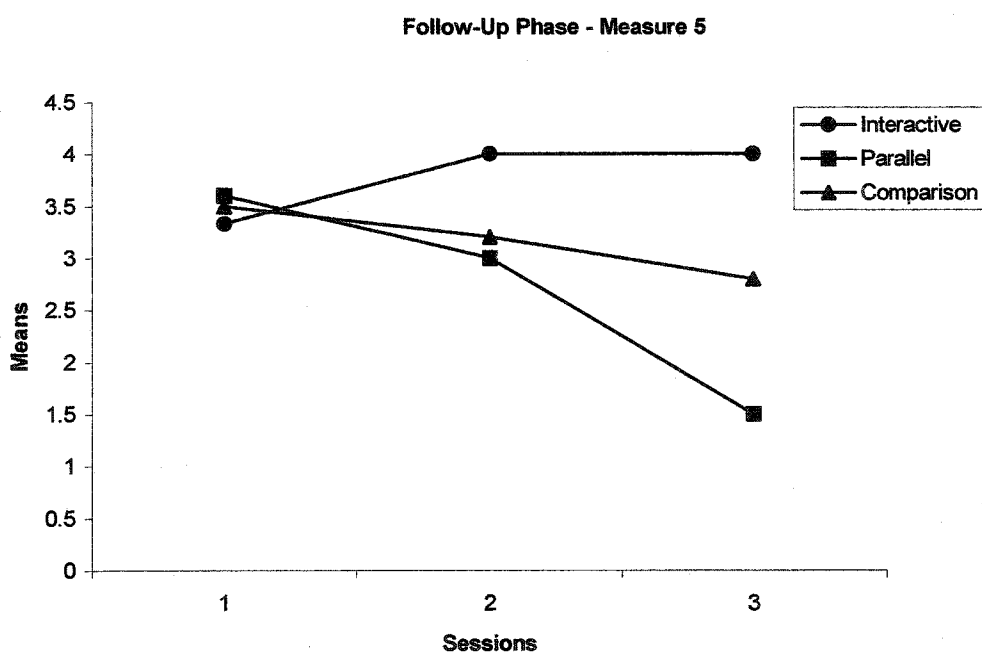


Figure 24, Follow-Up Phase, Mean Scores for Measure 5, Parallel Play.



Measure 6, Child Engages in Associative and/or Cooperative Play

Results from the repeated measures two-way ANOVA (3 Sessions x 3 Groups) indicated that there were no significant Sessions by Groups interaction, [$F(2, 2) = 1.494, p = .24$]. The two-way ANOVA also indicated that there were no main effects for either Session, [$F(2, 2) = 1.757, p = .20$] or Group, [$F(2, 2) = .665, p = .53$].

Measure 7, Child Engages in Positive Linguistic Interaction

Results from the repeated measures two-way ANOVA (3 Sessions x 3 Groups) indicated that there were no significant Sessions by Groups interaction, [$F(2, 2) = 1.494, p = .24$]. The two-way ANOVA also indicated that there were no main effects for either Session, [$F(2, 2) = 1.757, p = .20$] or Group, [$F(2, 2) = .665, p = .53$].

Measure 8, Peer(s) Initiate Interaction Towards Child

Results from the repeated measures two-way ANOVA (3 Sessions x 3 Groups) indicated that there were no significant Sessions by Groups interaction, [$F(2, 2) = .690, p = .60$]. The two-way ANOVA also indicated that there were no main effects for either Session, [$F(2, 2) = .446, p = .62$] or Group, [$F(2, 2) = .333, p = .72$].

Measure 9, Child Responds Positively to Peer Initiation

Results from the repeated measures two-way ANOVA (3 Sessions x 3 Groups) indicated that there were no significant Sessions by Groups interaction, [$F(2, 2) = .581, p = .67$]. The two-way ANOVA also indicated that there were no main effects for either Session, [$F(2, 2) = .019, p = .98$] or Group, [$F(2, 2) = 1.108, p = .36$].

Measure 10, Child Responds Negatively to Peer Initiation

Results from the repeated measures two-way ANOVA (3 Sessions x 3 Groups) indicated that there were no significant Sessions by Groups interaction, [$F(2, 2) = 1.426,$

$p = .25$]. The two-way ANOVA also indicated that there were no main effects for either *Session*, [$F(2, 2) = .733, p = .48$] or *Group*, [$F(2, 2) = .596, p = .56$].

Measure 11, Child Makes No Response to Peer Initiation

Results from the repeated measures two-way ANOVAs (3 *Sessions* x 3 *Groups*) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 2) = .389, p = .81$] or main effect of *Session* [$F(2, 2) = 1.875, p = .17$]. However, results revealed a significant main effect for *Group*, [$F(2, 2) = 5.668, p = .02$]. Because there was no *Session* effect, but there was a *Group* effect, a one-way ANOVA was conducted collapsing across sessions to locate the source of the main effect of *Group*. Results indicated a significant difference [$F(2, 2) = 5.660, p = .02$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed. The results indicated that the mean score for the parallel group ($\bar{M} = 1.08$) was significantly different ($p = .05$) from the mean scores for the interactive ($\bar{M} = .31$) and the comparison groups ($\bar{M} = .50$). Figure 25 is a graphic depiction of the mean scores for child makes no response.

Measure 12, Child Initiates Interaction Towards Peer

Results from the repeated measures two-way ANOVA (3 *Sessions* x 3 *Groups*) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 2) = 2.219, p = .10$]. The two-way ANOVA also indicated that there were no main effects for either *Session*, [$F(2, 2) = 1.818, p = .18$] or *Group*, [$F(2, 2) = .652, p = .54$].

Measure 13, Peer(s) Respond Positively to Child's Initiation

Results from the repeated measures two-way ANOVA (3 *Sessions* x 3 *Groups*) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 2) = 1.596,$

$p = .21$] and main effect for *Group* [$F(2, 2) = .272, p = .77$]. However, results revealed significant main effect for *Session*, [$F(2, 2) = 5.085, p = .02$]. Because there was no *Group* effect, but there was a *Session* effect, a repeated measures one-way ANOVA was performed collapsing across groups to locate the source of the main effect of *Session*. Results indicated a significant difference, [$F(2, 2) = 4.752, p = .02$]. The Newman-Keuls multiple comparison procedure was conducted to determine where the differences existed, the results were non significant ($p > .05$). The performance, collapsing across groups, indicated the mean differences across sessions. The session effects are represented in Figure 26.

Figure 25, Follow-Up Phase, Mean Scores for Measure 11, Child Makes No Response to Peer Initiation.

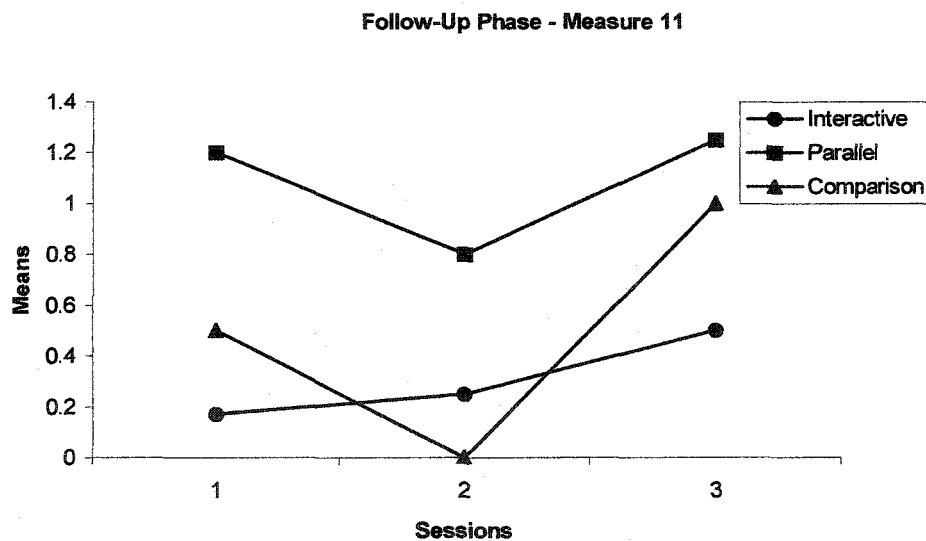
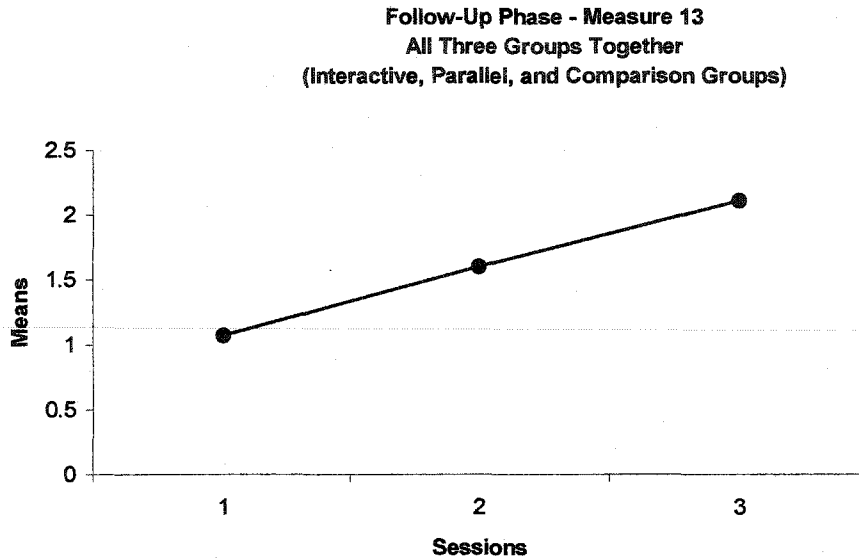


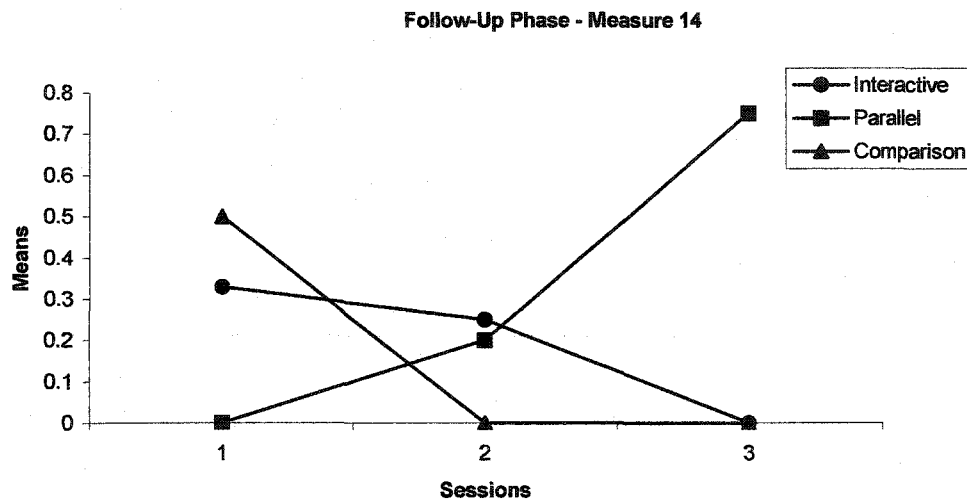
Figure 26, Follow-Up Phase, No Group Effect - Session Effect, Mean Scores for Measure 13, Peer(s) Respond Positively to Child's Initiations.



Measure 14, Peer(s) Respond Negatively to Child's Initiation

Results from the repeated measures two-way ANOVA (3 Sessions x 3 Groups) indicated a *Sessions* by *Groups* interaction, [$F(2, 2) = 5.387, p = .00$]. But there were no main effect of either *Session* [$F(2, 2) = .582, p = .54$] or *Group*, [$F(2, 2) = .584, p = .57$]. To locate the source of the interaction for *Session* by *Group*, a Post Hoc procedure called the Test of Simple Effects, was conducted to determine where the differences existed during follow-up, the results were non significant. Figure 27 is a graphic depiction of the mean scores for peer(s) responds negatively to child's initiation.

Figure 27, Follow-Up Phase, Mean Scores for Measure 14, Peer(s) Respond Negatively to Child's Initiations.



Measure 15, Peer(s) Make No Response to Child's Initiations

Results from the repeated measures two-way ANOVAs (3 *Sessions* x 3 *Groups*) indicated that there were no significant *Sessions* by *Groups* interaction, [$F(2, 2) = .244, p = .91$]. Additionally, there were no significant main effects for either *Session* [$F(2, 2) = 2.049, p = .15$] or *Group*, [$F(2, 2) = .347, p = .71$].

There were no significant differences indicated for disability status or gender regardless of group assignment or session.

CHAPTER 5

DISCUSSION

Social competence has been defined as an individual's ability to initiate and maintain satisfying reciprocal relationships with peers. Unfortunately, children with disabilities exhibit peer related social competency difficulties that are likely to lead to later adjustment difficulties (Parker & Asher, 1987) and social isolation (Guralnick, 2001; Taylor, Asher, & Williams, 1987; Williams & Asher, 1992). Peer related social competence problems for young children with disabilities have had negative implications for early childhood inclusion. Therefore, improved social competence for young children with disabilities will most likely enhance their level of inclusion in early childhood programs (Guralnick, 2001).

The purpose of this study was to investigate the effect of scripted video instruction on increasing the quantity and quality of social interactions between children with and without disabilities in the inclusive preschool classroom. In other words, after watching an adult scripted video activity would children with and without disabilities imitate or model the behaviors of their peers in the video activity thereby, increasing the quantity and quality of their social interactions.

The following discussion was based on these research questions:

1. Will there be a difference in the quantity of social interactions between children with and without disabilities after scripted video instruction?

2. Will there be a difference in the quality of social interactions between children with and without disabilities after scripted video instruction?

Results of this study that follow supported the hypotheses that there will be a difference in the quantity and quality of social interactions between children with and without disabilities because of scripted video instruction.

Baseline Phase

Results of measure 10, Child Responds Negatively to Peer Initiation, indicated an interaction effect of *Session by Group*. Although the Negative responses were minimal for all three groups, the interactive group had an increase in the number of negative responses for one session. This may have been because one child with a disability in the interactive group had an increase in negative behaviors on that particular day. This increase may have been due to the fact that a favorite peer was absent on that day.

Intervention Phase

Eight measures indicated a significant interaction effect in the quantity of social interactions between children with and without disabilities after scripted video instruction; interestingly, six of the eight measures were positive behaviors. Therefore, the results also indicated that there were differences in the quality of social interactions because of scripted video instruction.

Results for measure one, Positive Interaction with Peers, indicated an interaction effect of *Session by Group* and a main effect of *Session*. Possibly, the mean for session one was high because the children were excited about participating in the research project

and/or the play activity or perhaps video instruction has an immediate effect rather than a lasting effect. There wasn't a main effect of *Group*; however, the parallel group appeared to have the greatest number of positive interactions. The parallel group increased in the number of positive interactions. The comparison group increased in the number of positive interactions from session one to session 11 and 13. Compared to session one, sessions two through 15 had a decrease in the number of positive interactions for the interactive group. The intervention did not appear to have a positive impact on the intervention group.

On the other hand, if session one had been eliminated, there would have been a clear trend for positive interactions with the exception of sessions seven and 10. Sessions two, seven and 10 had a decrease in the number of positive interactions. Clearly, sessions 11, 13, 15 had the highest mean scores across the 15 sessions, including session one. Post hoc there does not appear to be any discernable reason as to why sessions 11, 13, and 15 had such positive increases.

Results of measure two, Child Directs Negative Behaviors to Peer(s), indicated a main effect of *Session*. Session nine had the largest number of negative behaviors. This increase may have had a lot to do with one particular child with a disability in the interactive group who had a behavior plan. Initially, this child appeared to enjoy his time in the research classroom, then, he appeared to become bored with the classroom and the activities. Consequently, he sought out attention from his peers via inappropriate behavior. His inappropriate behaviors escalated during session nine. Session seven had the largest decrease in negative behaviors, this same child was absent during session seven.

Results of measure three, Non-Play Behaviors, indicated an interaction effect of *Session by Group* and a main effect of *Session*. Session three had a large increase in non-play behaviors. This may have been due to the structured play activity. The structured play activity was a floor puzzle that the children had a difficult time assembling. Several children, with and without disabilities, either sat back and watched shortly after making an attempt to assemble the puzzle, or they made no attempt at all.

Results of measure four, Child Engages in Solitary Play, indicated an interaction effect of *Session by Group* and a main effect *Session*. There was an increase in solitary play during the last three intervention sessions, in particular session 14. Absenteeism may have affected this finding (Session 13: two children without disabilities absent, Session 14: three children without disabilities absent and one child with a disability absent, Session 15: six children without disabilities absent). Additionally, the structured play activities may have had an affect on the increase in solitary play. The children were very interested in the structured play activities on days 13 and 14 (worms, and digging for dinosaurs), and they appeared bored with the activity on day 15 (mural painting). Although there was no group effect, the parallel group had a significant *Session* effect. The last three sessions of the parallel group had substantially higher mean scores than the previous 12 sessions resulting in an increase in solitary play; this was not true of the interactive or comparison groups. The findings suggest that the intervention may have been successful for the parallel group. Solitary play was non-existent during session one and five. This may be due to the fact that children were excited about the introduction of video during session one or the video had an immediate effect but not a lasting effect and they were excited about the structured play activity during session four (washing clothes).

Results of measure six, Child Engages in Associative and/or Cooperative Play, indicated an interaction effect of *Session by Group* and a main effect of *Session*. The first intervention session was higher than sessions two through 10 and sessions 12 and 14. Possibly, the mean for session one was high because the children were excited about participating in the research project and/or the play activity or perhaps video instruction has an immediate effect rather than a lasting effect. Sessions 11, 13, and 15 had higher mean scores than the other 12 sessions. This may have been due to the structured play activities (Sessions 11: worms and 13 digging for dinosaurs). Although there was no *Group* effect, the parallel group had a significant *Session* effect. Sessions 11, 13, and 15 had an increase in the number of associative and/or cooperative play behaviors over and above session one. The parallel group was the only group that had a steady increase in the number of associative and/or cooperative play from sessions 11 to 13 and from 13 to 15. If session one was eliminated there would have been a positive trend for *Session*. The results suggest that the intervention was successful and/or the children interacted more often after having spent a substantial amount of time together.

Results of Measure seven, Child Engages in Positive Linguistic Interaction, indicated an interaction effect of *Session by Group* and a main effect of *Session*. The mean score for session one was higher than the mean scores for the most successful sessions, sessions 11, 13, and 15. Possibly, the mean for session one was high because the children were excited about participating in the research project and/or the play activity or perhaps video instruction has an immediate effect rather than a lasting effect. Sessions 11, 13, and 15 had an increase in the number of positive linguistic interactions compared to session one. However, the parallel group was the only group that had an increase in the

number of positive linguistic interactions from session 11 to 13 and from session 13 to 15. By eliminating the first session, there would have been a positive trend for *Session* with the exception of sessions seven and 10. The results suggest that the intervention was successful and/or the children interacted more often after having spent a substantial amount of time together.

Results of measure eight, Peer(s) Initiate Interaction Toward Child, indicated a main effect for *Session*, in particular for sessions 13 and 15. The interactive and comparison groups had the highest mean scores for session 13 while the interactive and comparison groups had the highest mean scores for session 15. Other than session one, only two sessions had an increase in positive linguistic interactions, sessions 13 and 15. The results suggest that the intervention was successful and/or the children interacted more often after having spent a substantial amount of time together.

Results of measure nine, Child Responds Positively to Peer Initiation, indicated an interaction effect of *Session by Group* and a main effect of *Session*. Only sessions 13 and 15 had higher mean scores than session one. Possibly, the mean for session one was high because the children were excited about participating in the research project and/or the play activity or perhaps video instruction has an immediate effect rather than a lasting effect. If session one were eliminated there would have been an overall positive trend in the number of positive responses from session 2 through 15 other than sessions seven and 10. The comparison group had the highest mean score for session 13. The results suggest that the intervention was successful and/or the children interacted more often after having spent a substantial amount of time together.

Results of measure 11, Child Makes No Response to Peer Initiation, indicated a main effect of *Session*. The mean score for session one was higher than all other sessions with the exception of session 13. Possibly, the mean for session one was high because the children were excited about participating in the research project and/or the play activity or perhaps video instruction has an immediate effect rather than a lasting effect. Two children with disabilities (one from the comparison group and one from the parallel group) made no responses to peer initiations during play. This may have accounted for the increase in no responses during session 13.

Results of measure 12, Child Initiates Interaction Towards Peers, indicated an interaction effect of *Session by Group* and a main effect of *Session*. Sessions 11 and 13 were the only two sessions that had higher mean scores than session one. Possibly, the mean for session one was high because the children were excited about participating in the research project and/or the play activity or perhaps video instruction has an immediate effect rather than a lasting effect. Sessions 11 and 13 may have had higher mean scores because the children especially enjoyed the structured play activities (worms and digging for dinosaurs).

Results of measure 13, Peer(s) Respond Positively to Child's Initiation, indicated an interaction effect of *Session by Group* and a main effect of *Session*. Sessions 11, 13, and 15 were the only sessions with higher mean scores than session one. The parallel group was the only group that had a steady increase in positive responses from session 11 to 13 and from session 13 to 15. Sessions 11, 13, and 15 suggest that the intervention was successful and/or the children interacted more often after having spent a substantial amount of time together.

Results of measure 15, Peer(s) Make No Response to Child's Initiation, indicated an interaction effect of *Session by Group* and a main effect of *Session*. Session 13 was the only session that had an increase in the number of no responses to child's initiations other than session one. The comparison group had the largest decrease in the number of no responses from session one to session 13, followed by the parallel group.

In summary, the parallel group indicated significance for the six positive measures listed above. The comparison group indicated significance for two of the positive measures listed above and the interactive group indicated significance for one of the positive measures listed above. Perhaps the video shown to the subjects in the comparison group was well received by the children because the video was a pro-social animated movie. Additionally, perhaps the video shown to the subjects in the parallel group was well received by the children because they considered the video to be more child friendly than the children did in the interactive group.

Four measures indicated no significant *Session by Group* interaction and no main effect of *Group*. However, they did indicate a main effect of *Session*. The four measures were measure two, child directs negative behaviors; three, non-play behavior; eight, peer(s) initiate interaction toward child; and 11, child makes no response to peer initiation.

Three measures indicated no *Session by Group* interaction and no main effect for either *Session* or *Group*. The three measures were measure five, parallel play; measure 10, child responds negatively to peer initiation; and measure 14, peer responds negatively to child initiation.

Follow-Up Phase

Results for measure two, Child Directs Negative Behaviors to Peer(s), indicated a main effect of *Session*. Although non-significant, the parallel group had the largest increase in the number of negative behaviors during session three. The findings of the parallel group may have been because two children without disabilities argued about materials the majority of session three. Two children without disabilities and one child with a disability were absent during session three.

Results for measure three, Child Engages in Non-Play Behavior, indicated an interaction effect of *Session by Group*. These findings suggested that there was no group effect because the interaction was barely significant. In other words, the effect was spread equally across all groups (interactive, parallel, and comparison).

Results for measure four, Solitary Play indicated a significant main effect of *Group*. The source of the main effect of Group indicated that solitary play was virtually non-existent during sessions two and three for the interactive group. These findings suggest that the intervention was successful for the interactive group.

Results for measure five, Child Engages in Parallel Play, indicated an interaction effect of *Session by Group*. There was a decrease in parallel play by the parallel group. Although there was a decrease in parallel play by the comparison group, it was not significant. Other than absenteeism (two children during session one and two, and one child during session three) the parallel group did not display anything unusual. A factor may have been the structured play activity introduced - dinosaurs.

Results for Measure 11, Child Makes No Response to Peer Initiation, indicated a main effect of *Group*. All three groups had an increase in the number of no responses

from session two to session three. However, the results of the parallel group were significantly different from the interactive and comparison groups. Absenteeism may negatively effect all three sessions (absences: 2 for session 1 and 3 for session 3).

Results for measure 13, Peer(s) Respond Positively to Child's Initiation, indicated a main effect of *Session*. The average of each session for all three groups indicates a steady increase in the number of positive responses by peers. Although, the comparison group was the only group that had an increase from session one to two and from session two to three.

Results for measure 14, Peer(s) Respond Negatively to Child's Initiation, indicated an interaction effect of *Session by Group*. Yet, no groups were significant. The interactive and comparison groups showed a decrease in the number of negative responses by peers to the target child's initiations. However, the parallel group showed a slight increase in the number of negative responses by peers to the target child's initiations.

Summary

In summary, during intervention, six of the eight *Session by Group* interactions were positive behaviors; this was not true of either baseline or follow-up. These findings suggested that the intervention did not significantly impact positive behavior over time; rather, they increased with time. In other words, it may have been a natural outcome of children spending more time together. Additionally, the intervention findings suggested that the videos may have had an immediate impact; rather than a lasting impact. Session one (during the intervention phase) typically indicated a high number of positive interactions. Initially, these findings suggest that video instruction had an immediate

positive impact on the subjects. Negative behaviors were minimal throughout the study. These findings may suggest that the intervention had a positive impact on negative behaviors.

Conclusions

Four conclusions may be drawn from this study.

1. During the intervention phase of the study, there was a significant *Session x Group* interaction for eight of the 15 measures; six of the measures were positive behaviors. Therefore, scripted video instruction increased not only the quantity but the quality of social interactions between children with and without disabilities in the inclusive preschool classroom.
2. The length of the intervention may have been too short. This may have been especially true for the follow-up phase of the study because of the frequency of absenteeism.
3. The videos may have not been an effective intervention because they were originally designed as training instruments for adults rather than children. An animated or child friendly non-animated pro-social video may have been a more effective intervention tool.
4. A fourth factor in this study that may have negatively affected the data analysis and the results was absenteeism in each of the three groups. Butz (1999) investigated the efficacy of using facilitated and non-facilitated playgroups as an intervention for facilitating the social interactive behaviors of young children with and without disabilities. In her study,

she also concluded that a high degree of absenteeism of the subjects was a factor that negatively affected the data analyses and, in all likelihood, the results.

Although absenteeism may have negatively affected the results of this research, it is not possible to determine the effect of absenteeism on the outcome of the study.

Questions and Recommendations for Further Research

At a very young age, children's efforts to establish peer relationships and to develop friendships are apparent (Guralnick, 2001). Typically, young children without disabilities are successful in their efforts to establish peer relationships and to develop friendships (Asher, 1990). However, past research indicates that this is not true for young children with disabilities (Guralnick, 2001). Therefore, researchers need to investigate alternative approaches to promote social competence in the early years among and between children with and without disabilities. One approach that warrants further research is pro-social programming. Based on the results of this study, there are five questions:

1. If the intervention findings suggest that the videos had an immediate impact rather than a lasting impact, would the intervention be more effective if children were shown a different video clip each day of the study?
2. Due to the fact that most early childhood programs do not have mandatory attendance requirements, researchers may want to consider incentives to motivate families to bring their children to school on the days they are scheduled to participate in a study. In other words, if there were

incentives for families to bring their children to school during research would it positively affect the attendance of the subjects?

3. Would the interactive group have had greater gains in the quantity and quality of social interactions in this study if more time had been allocated to the intervention and follow-up phase of the study?
4. Do preschool age children with disabilities have the cognitive ability to understand and benefit from scripted video instruction as a learning tool?
5. Would the intervention be less or more effective for participants who rarely watched television or videos in the home?

Based on the results of this study, the following seven areas are suggested for future research:

1. Show children with and without disabilities a different video each day during the intervention phase of the study to increase the quantity and quality of social interactions among children with and without disabilities in the inclusive preschool classroom.
2. Perhaps pro-social behavior is learned through live interactions with others and the contribution of pro-social television viewing is secondary (Rosenkoetter, 1999). To increase the quantity and quality of social interactions we must teach preschool children with and without disabilities pro-social play behaviors, prior to showing them pro-social videos.
3. Show children with and without disabilities non-animated pro-social videos portraying their peers, rather than complete strangers, to increase the quantity and quality of social interactions.

4. Show children with and without disabilities animated pro-social videos to increase the quantity and quality of social interactions because of scripted video instruction.
5. Future research might pair pro-social animated and non-animated videos with positive reinforcement (Bandura et al., 1963). In other words, will there be a difference in the number and quality of social interactions among children with and without disabilities because of scripted video instruction that is paired with positive reinforcement (verbal and/or tangible)?
6. Implement free play rather than structured play immediately following intervention videos. Then, videotape the social behaviors of children with and without disabilities during free play activities. Finally, observe and code the 15 measures for each child during all three phases of the study utilizing the SIOS (Kreimeyer, Antia, Coyner, Eldredge, & Gupta, 1991).
7. The comparison group entered the research classroom at 10:00 AM on Monday, Wednesday, and Friday. The parallel group entered the research classroom at 10:30 AM on Monday, Wednesday, and Friday. The interactive group entered the research classroom at 2:00 PM on Monday, Wednesday, and Friday. The children in the interactive group may have been tired by mid-afternoon. Staggering the group times so that each group is exposed to all three time slots each week may have a more positive impact on scripted video instruction.

Summary

Television, videos, and DVDs play a significant role in the development of young children's social and cognitive skills. Nearly all children have access to these media and statistics tell us that most American children will have watched more television by the time they graduate from high school than they will have spent in formal classroom instruction (Huston et al., 1990). Therefore, it is unrealistic to expect children to give up their viewing habits completely (Forge & Phemister, 1987). Broadcasters, advertising sponsors, families, educators, and researchers must work and plan together for the benefit of all young children. Because television is such a powerful teacher, developers of educational television need to expand and improve pro-social programming for young children with and without disabilities. Families and educators should preview and plan what children watch, they should take the time to watch the planned programs with their children or students, and they should discuss with them what has been viewed. Past research indicates that television can be used to socialize young children (Coates et al., 1976; Forge & Phemister, 1987; Friedrich & Stein, 1975; Huston et al., 1990; Rosenkoetter, 1999; Zielinska & Chambers, 1995). Given the widespread popularity of television and other media, more research needs to be conducted to support the use of pro-social programming for young children. In particular, to investigate the effect videos (including film, television, and DVDs) have on increasing the quantity and quality of social interactions between children with and without disabilities.

APPENDICES

APPENDIX A

APPROVAL LETTER FROM THE OFFICE OF THE PROTECTION OF RESEARCH

SUBJECTS (OPRS)

UNLV

UNIVERSITY OF NEVADA LAS VEGAS

DATE: March 3, 2003

TO: Catherine Lyon, Special Education
John Filler (Advisor)
M/S 3004

FROM: Dr. Fred Preston, Chair JK
UNLV Social Behavioral Institutional Review Board

RE: Status of Human Subject Protocol Entitled: The effect of Video Instruction on
Social Interactions of Children in the inclusive Preschool Classroom

OPRS# (old) 305S0102-230
OPRS# (new) 305S00203-024E

The UNLV Social Behavioral Institutional Review Board reviewed your request for an extension of the subject protocol on **February 20, 2003**. The extension was approved and work on the project may continue.

Should the involvement of human subjects described in this protocol continue beyond **February 20, 2004**, it will be necessary to request an extension. Should you require any change(s) to the protocol, it will be necessary to request such change through the Office for the Protection of Research Subjects in writing.

If you have any questions or require assistance, please contact the Office for the Protection of Research Subjects at 895-2794

cc: OPRS File


UNLV

UNIVERSITY OF NEVADA, LAS VEGAS

Social Behavioral Sciences Institutional Review Board Approval Notice

DATE: February 19, 2002

TO: Catherine Lyons
Dr. John Filler, Faculty Advisor
Special Education
M/S

FROM: Dr. Fred Preston, Chair 
for UNLV Social Behavioral Sciences Institutional Review Board

RE: Status of Human Subject Protocol Entitled: *The Effect of Video Instruction on Social Interaction of Children in the Inclusive Preschool Classroom*

OPRS# 30580102-230

This memorandum is official notification that the UNLV Social Sciences Institutional Review Board has **approved** the protocol for the project listed above and research on the project may proceed. This approval is effective from the date of this notification and will continue through February 19, 2003, a period of one year from the initial review.

Should the use of human subjects described in this protocol continue beyond a one-year period from the initial review, it will be necessary to request an extension. Should you initiate any change(s) to the protocol, it will be necessary to request additional approval for such change(s) in writing through the Office for the Protection of Research Subjects.

If you have any questions or require any assistance, please contact Brenda Durosinmi, in the Office for the Protection of Research Subjects at 895-2794.

cc: OPRS file

APPENDIX B
PARENTAL CONSENT FORM

To The Parent(s)/Guardian(s) of _____

My name is Catherine Lyons, and I am a doctoral student in the Department of Special Education at UNLV. I will be conducting my doctoral research at the UNLV/CSUN Preschool located on the UNLV campus.

The purpose of this study is to investigate the use of scripted video activities to facilitate positive social interactions among children with and without disabilities. All the participants will be videotaped while they view selected videos and while they engage in play activities immediately following the intervention. The children's social skills and social interactions will be assessed before, during, and after the video intervention.

Anticipated benefits would be to validate the use of scripted video instruction as an effective method to increase social interactions among children. Since this study involves naturalistic observation using video of children in the preschool setting there is minimal risk to the children from participation (Physical, psychological, social or legal). All information gathered in this study will be kept completely confidential. To ensure confidentiality, names and any other identifying information will not be used in any reports generated from this research. There will be no compensation for participation in this study because all activities and observations will take place during the normal course of the child's day at the UNLV/CSUN preschool.

Your child's participation in this study is voluntary. You may refuse to allow your child to participate in this study or in any part of this study. You may withdraw your child at any time without prejudice to your relations with the university. You are encouraged to ask questions about this study at the beginning or any time during the research study. All records will be stored in a locked facility at UNLV for at least 3 years after completion of the study.

Please check and initial one of the following:

_____ I hereby authorize Catherine Lyons to observe my child and allow her access to my child's portfolio and other files contained within the preschool for the purpose of conducting research at the UNLV/CSUN Preschool. Further, I understand that my child's first name and information such as age, number of siblings, and other non-identifying information will be provided to the investigator because she has a legitimate need to know for educational and related purposes, such as research.

_____ I do not wish my child to participate in the study described at this time.

Signature of parent or guardian _____ Date _____

For further information about this study, please contact:

Catherine Lyons at (702) 895-1322

Dr. John Filler at (702) 895-1105

For information of Rights of Subjects, please contact the Office of Sponsored Programs at (702) 895-2794.

APPENDIX C

FAMILY SUPPORT LETTER

February 19, 2002

Dear Parent(s)/Guardian(s) of _____

Thank you for giving permission for your child to participate in the social skills study at the UNLV/CSUN Preschool. Your child was randomly selected to participate in the activity, and this note is meant to update you on the study. It is scheduled to begin on Wednesday, February 20th and continue through May 10, 2002. With the exception of spring break, the groups will be conducted on Monday, Wednesday, and Friday of each week. During this time, regular preschool attendance will have a significant impact on the results of the study. Please do your best to ensure that absences are kept to a minimum. Thank you for your support. We are expecting to obtain information that will help us increase the effectiveness of our program.

Sincerely,

Catherine Lyons, Preschool Director

APPENDIX D

TEACHER CONSENT FORM

Dear _____

My name is Catherine Lyons, and I am a doctoral student in the Department of Special Education at UNLV. I will be conducting my doctoral research at the UNLV/CSUN Preschool located on the UNLV campus.

You are invited to participate in this research study, *The Effect of Video Instruction on Social Interactions of Children in the Inclusive Preschool Classroom*. The purpose of this study is to investigate the use of scripted video activities to facilitate positive social interactions among children with and without disabilities. All the participants will be videotaped during the course of the study. All information gathered in this study will be kept completely confidential. No reference will be made in written or oral materials that could link you to this study. All records will be stored in a locked facility at UNLV for at least 3 years after completion of the study.

If you volunteer to participate in this study, you will be asked to show selected videotapes to the child participants and read the prepared script just prior to and after each video presentation. Additionally, you will be asked to oversee the structured play activities following each video presentation.

By participating in this study, you will receive an increased understanding of social skills and their effects on social interactions of young children with and without disabilities in the inclusive preschool classroom. Since this study involves naturalistic observation using video in the preschool setting, there is minimal risk to you for participation (Physical, psychological, social or legal). There will be no compensation for participation in this study because all activities and observations will take place during the normal course of the teacher's workday at the UNLV/CSUN preschool.

If you have any questions about the study or if you experience harmful effects as a result of participation in this study, you may contact Dr. John Filler at 895-1105 or me at 895-1322. For questions regarding the rights of research subjects, you may contact the UNLV Office for the Protection of Research Subjects at (702) 895-2794.

Your participation is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice to your relations with the university. You are encouraged to ask questions about this study at the beginning or any time during the research study.

I have read the above information and agree to participate in this study. I am at least 18 years of age. A copy of this form has been given to me.

Signature of Participant

Date

Participant Name (Please Print)

APPENDIX E

PERMISSION LETTER FOR THE SOCIAL INTERACTION OBSERVATION SYSTEM

Permission to Use Copyrighted Material

University of Nevada, Las Vegas

I, Shirin Antia, Ph.D. holder

of copyrighted material entitled Social Interaction Observation System,

1990-1991

authored by Kathryn Kreimeyer, Ph.D., Shirin Antia, Ph.D., Lisa Coyner, M.S.
Nancy Eldredge, Ph.D., and Abha Gupta, M.A.

and originally published in Social Interaction Observation System,

Project Interaction, University of Arizona, 1990-1991

hereby give permission for the author to use the above described material in total or in part
for inclusion in a master's thesis/doctoral dissertation at the University of Nevada, Las
Vegas.

I also agree that the author may execute the standard contract with University Microfilms,
Inc. for microform reproduction of the completed dissertation, including the materials to
which I hold copyright.

Signature

Date

Shirin Antia

April 17 03

Name (typed)

Title

Shirin Antia, Ph.D.

Professor

Representing

APPENDIX F

SOCIAL INTERACTION OBSERVATION SYSTEM

SOCIAL INTERACTION OBSERVATION SYSTEM

PROJECT INTERACT

UNIVERSITY OF ARIZONA

1990 – 1991

Kathryn Kreimeyer, Ph.D.

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Complete section A before beginning the observation.

SECTION A. IDENTIFYING INFORMATION

Observer _____ School _____

Child _____ Date _____

first name

last name

Observation #1 2 3 (circle)

Time begin _____ Time end _____

OF AGREEMENTS OF _____

Complete Section B after completing Section A.

Read each behavior and record a (+) if the behavior occurred during the observational interval and a (0) if it did not occur.

SECTION B. OBSERVATIONAL DATA

	Tim e 1	Tim e 2	Tim e 3	Tim e 4
1. CHILD ENGAGES IN POSITIVE INTERACTION WITH PEERS (Playing or conversing with other children, physical signs of affection, engaging in interactive games such as “catch”, “chase”.)				
2. CHILD DIRECTS NEGATIVE BEHAVIORS TO PEER(S) (Hits, kicks, throws toys, bites, pushes, shouts, takes material or toys without permission, disrupts or interferes with play activity, uses negative sign or oral communication such as “no”, “don’t do that”, “stop it”, “dumb you”, “I’m not your friend”, “hate you”; or displays negative inflection in gestures, voice or signs.)				

3. CHILD ENGAGES IN NONPLAY BEHAVIOR (Watches peers, wanders, sits or stands away from other children; does not engage in play behaviors; no social contact with peers.)				
4. CHILD ENGAGES IN SOLITARY PLAY (Plays alone and with materials that are different from those of other children or plays alone and uses same materials as peers but in a very different manner; no social contact with peers <u>while playing</u> .)				
5. CHILD ENGAGES IN PARALLEL PLAY (Plays independently beside peers and engages in similar activities; social contact is only through gaze or imitation. Children do not interact with one another.)				
6. CHILD ENGAGES IN ASSOCIATIVE AND/OR COOPERATIVE PLAY (Plays with peer(s) and communicates with them about the play activity (gesture, speech				

or sign); engages in a cooperative project (i.e. building a block castle); or engages in formal games or dramatic play.)				
7. CHILD ENGAGES IN POSITIVE LINGUISTIC INTERACTION (Uses recognizable words or signs during interaction, does not include unintelligible vocalizations, gestures or listening/watching.)				
8. PEER(S) INITIATE INTERACTION TOWARDS CHILD (Peer attempts to begin POSITIVE interaction with child; to join child when he/she is already engaged in play; to give instructions to child; or to modify the ongoing play activity. This item does not assess the appropriateness at these attempts.)				
*9. CHILD RESPONDS POSITIVELY TO PEER INITIATION (When peer(s) attempt to POSITIVELY interact with the child, child responds by interacting positively with the peer OR				

by attempting to follow instructions given by peer(s).)				
<p>*10. CHILD RESPONDS</p> <p>NEGATIVELY TO PEER INITIATION</p> <p>(When peer(s) attempt to POSITIVELY interact with the child, child responds by overtly refusing to interact with peer(s); by not allowing peer(s) to join the play; OR by directing negative behaviors toward peer(s).)</p>				
<p>*11. CHILD MAKES NO</p> <p>RESPONSE TO PEER INITIATION</p> <p>(When peer(s) attempt to POSITIVELY interact with the child, child looks at the initiator but does not interact/respond.)</p>				
<p>*12. CHILD INITIATES</p> <p>INTERACTION TOWARDS PEERS</p> <p>(Child attempts to begin POSITIVE interaction with peers; to join peer(s) already engaged in play to give instructions to peer(s); OR to modify the ongoing play activity. (This item does <u>not</u> assess the appropriateness of these</p>				

attempts.)				
*13. PEER(S) RESPOND POSITIVELY TO CHILD'S INITIATION (When child attempts to begin POSITIVE interaction, peer(s) respond by interacting with the child OR by attempting to follow instructions given by the child.)				
*14. PEER(S) RESPOND NEGATIVELY TO CHILD'S INITIATIONS (When child attempts to begin POSITIVE interaction, peer(s) respond by overtly refusing to interact with the child; by not allowing the child to join the play; OR by directing negative behaviors toward the child.)				
*15. PEERS MAKE NO RESPONSE TO CHILD'S INITIATION (When the child attempts to POSITIVELY interact with peer(s), peer(s) look at child but do not interact or respond.)				

***ACKNOWLEDGING AN INITIATION BY LOOKING AT THE INITIATOR IS NOT
CONSIDERED A RESPONSE.**

APPENDIX G

VIDEO OBSERVATIONAL AND MODELED PLAY WITH VERBAL GUIDANCE SCRIPT

INTERACTIVE GROUP
VIDEO OBSERVATIONAL AND MODELED PLAY
WITH VERBAL GUIDANCE SCRIPT

Explain to the children that they are about to watch a video of children playing.

Next, tell the children that you will discuss the video with them after they watch it and then they will be able to play for a while in the research classroom before going back to their own classrooms.

Show First Minute and Forty Second of Video

“Did you see children being friendly to each other in the video?”

Allow children to respond to your question.

If children give a yes response, say, **“Tell me how?”**

If children give a no response, say, **“Tell me how?”**

The teacher facilitator will only be allowed to discuss exactly how the children were or were not interacting with each other during the video using examples on attached sheet (children building blocks together).

“Let’s watch the next part of the video and then you can tell me if you saw children being friendly to each other?”

Show Second Minute and Forty Seconds of Video

“Were the children being friendly to each other in the video?”

Allow children to respond to your question.

If children give a yes response, say, **“Tell me how?”**

If children give a no response, say, **“Tell me how?”**

The teacher facilitator will only be allowed to discuss exactly how the children were or were not interacting with each other during the video using examples on attached sheet (sitting near each other but not playing and interacting with one another).

“Let’s watch the last part of the video before play to see if the children were being friendly to each other.”

Show Last Minute and Forty Seconds of Video

“The next time you meet with me in this room we will watch the video again and talk more about it.”

PARALLEL GROUP
VIDEO OBSERVATIONAL AND MODELED PLAY
WITH VERBAL GUIDANCE SCRIPT

Explain to the children that they are about to watch a video of children playing.

Next, tell the children that you will discuss the video with them after they watch it and then they will be able to play for a while in the research classroom before going back to their own classrooms.

Show First Minute and Forty Second of Video

“Did you see children being friendly to each other in the video?”

Allow children to respond to your question.

If children give a yes response, say, **“Tell me how?”**

If children give a no response, say, **“Tell me how?”**

The teacher facilitator will only be allowed to discuss exactly how the children were or were not interacting with each other during the video using examples on attached sheet (sitting near each other but not playing and interacting with one another).

“Let’s watch the next part of the video and then you can tell me if you saw children being friendly to each other?”

Show Second Minute and Forty Seconds of Video

“Were the children being friendly to each other in the video?”

Allow children to respond to your question.

If children give a yes response, say, **“Tell me how?”**

If children give a no response, say, **“Tell me how?”**

The teacher facilitator will only be allowed to discuss exactly how the children were or were not interacting with each other during the video using examples on attached sheet (sitting near each other but not playing and interacting with one another).

“Let’s watch the last part of the video before play to see if the children were being friendly to each other.”

Show Last Minute and Forty Seconds of Video

“The next time you meet with me in this room we will watch the video again and talk more about it.”

COMPARISON GROUP
VIDEO OBSERVATIONAL AND MODELED PLAY
WITH VERBAL GUIDANCE SCRIPT

Explain to the children that they are about to watch a video titled *The Lady and the Tramp II: Scamp's Adventure*.

Next, tell the children that you will discuss the video with them during video break times and then they will be able to play for a while in the research classroom before going back to their own classrooms.

Show First Minute and Forty Second of Video

“Did you see anyone being friendly to each other in the video?”

Allow children to respond to your question.

If children give a yes response, say, **“Tell me how?”**

If children give a no response, say, **“Tell me how?”**

The teacher facilitator will only be allowed to discuss exactly how the characters were or were not being friendly to each other during the video using examples from the video (see attached sheet for video examples).

“Let’s watch the next part of the video and then you can tell me if you saw children being friendly to each other?”

Show Second Minute and Forty Seconds of Video

“Were the children being friendly to each other in the video?”

Allow children to respond to your question.

If children give a yes response, say, **“Tell me how?”**

If children give a no response, say, **“Tell me how?”**

The teacher facilitator will only be allowed to discuss exactly how the children were or were not interacting with each other during the video using examples on attached sheet (sitting near each other but not playing and interacting with one another).

“Let’s watch the last part of the video before play to see if the children were being friendly to each other.”

Show Last Minute and Forty Seconds of Video

“The next time you meet with me in this room we will watch the video again and talk more about it.”

APPENDIX H

DESCRIPTION OF STRUCTURED PLAY ACTIVITIES

Structured Group Activities

Baseline

Activity 1 Shoe collage painting.

Materials: butcher paper, variety of shoes/boots glue (used like paint), food coloring (to color glue), glitter, beads, ribbon, buttons.

Activity 2 Building animal hospital.

Materials: variety of blocks, animals, vet. kit, animal carriers, Vet. doctor kit.

Activity 3 Building barn for animals. Caring for animals.

Materials: animals, variety of blocks, 2 large buckets of water, Wash clothes (wash animals), towels.

Activity 4 I Spy Bottles.

Materials: empty plastic bottles, water, food coloring, oil, and Variety of materials to put in bottle (erasers, paper clips, buttons, etc).

Activity 5 Birthday I Spy Bottles.

Materials: empty plastic bottles, rice, candles, dice, coins, etc.

Activity 6 Wet chalk painting.

Materials: variety of construction paper, butcher paper, variety of Chalk, water, and tins.

Intervention

Activity 1 Does it float?

Materials: 2 large containers of water, boats, funnels, tin cups, Scoops, plastic bottles, small wooden blocks.

Activity 2 Dishwashing.

Materials: real dishes, pans, 2 large containers of soapy and clear Water, wash clothes, towels, dish strainer, and shelf.

Activity 3 Floor puzzle.

Materials: dinosaur floor puzzle, 3D glasses, small dinosaurs, Rulers to measure puzzle when complete and the dinosaurs.

Activity 4 Washing clothes.

Materials: clothes line, clothes pins, variety of clothes, 2 large Containers of soapy and clear water, clothes baskets.

- Activity 5 Color mixing.
Materials: food coloring, water, variety of containers, variety Of eye droppers, large pieces of foam, and Tupperware.
- Activity 6 Painting and building a car wash.
Materials: large box, paint, paint brushes, large container of water, Ramps, bridges, cars, trucks, towels, plastic tablecloth.
- Activity 7 Shaving cream painting.
Materials: shaving cream, food coloring (color shaving cream), variety Of painting utensils, butterfly and rainbow cut out of butcher paper.
- Activity 8 Making, decorating, and eating cupcakes.
Materials: cake mix, frosting, food coloring, sprinkles, large bowls, small bowls, knives, electric mixer, oven, large spoons, cupcake liners, cupcake tins, napkins, and plates.
- Activity 9 Bug painting and building house for bugs.
Materials: large sheets of butcher paper, variety of bugs, paint, Paint tins.
- Activity 10 Planting flowers and strawberries.
Materials: pails and shovels, dirt, flowers, strawberry plants, large Planter pots, water, and watering tins.
- Activity 11 Finding, counting and measuring worms.
Materials: worms, 2 large containers, water, spray bottles, rulers, Tins, magnifying glasses.
- Activity 12 Painting.
Materials: painting tins, paint brushes, variety of paper, markers.
- Activity 13 Archeological dig.
Materials: dinosaurs (variety of shapes), plaster of paris, hard hats, Hammers, goggles, dinosaur mat, brushes, sand, large containers.
- Activity 14 Sticky Styrofoam construction.
Materials: variety of Styrofoam of different colors, water, sponges, Tins, and butcher paper.
- Activity 15 Sponge mural painting.
Materials: paint, butcher paper, and a variety of sponges.

Follow-Up

Activity 1 Dishwashing.

Materials: real dishes, large containers with soapy and clear water, wash
Clothes, towels, dish strainer, shelf.

Activity 2 Finding and matching objects.

Materials: 2 large pieces of butcher paper, all research play materials
Used outlined on butcher paper, variety of materials (blocks, bowls,
Paint brushes, animals, etc.)

Activity 3 Rainbow art.

Materials: butcher paper cut in the shape of a rainbow, variety
of markers, and stickers.

APPENDIX I

LIST OF BOOKS USED DURING BASELINE

List of Books

<i>Baseline</i>	<i>Title/Author(s)/Illustrator(s)</i>
Activity 1	<i>I Spy Extreme Challenger!: A Book of Picture Riddles</i> Riddles by Jean Marzollo Photographs by Walter Wick
Activity 2	<i>The Gruffalo</i> Julia Donaldson Pictures by Axel Scheffler
Activity 3	<i>Wilfrid Gordon McDonald Partridge</i> Written by Mem Fox Illustrated by Julie Vivas
Activity 4	<i>Tough Boris</i> Mem Fox Illustrated by Kathryn Brown
Activity 5	<i>Koala Lou</i> Written by Mem Fox Illustrated by Pamela Lofts
Activity 6	<i>Possum Magic</i> Written by Mem Fox Illustrated by Julie Vivas

Donaldson, J. (1999). *The gruffalo*. New York, NY: Penguin Putnam Inc.

Fox, M. (1983). *Possum magic*. New York, NY: Harcourt Brace & Company.

Fox, M. (1985). *Wilfrid Gordon McDonald Partridge*. New York, NY: Harcourt

Brace & Company.

Fox, M. (1988). *Koala Lou*. New York, NY: Harcourt Brace & Company.

Fox, M. (1994). *Tough Boris*. New York, NY: Harcourt Brace & Company.

Wick, W. (2000). *I spy extreme challenger!: A book of picture riddles*. New York, NY: Scholastic Inc.

APPENDIX J

HUMAN SUBJECTS ASSURANCE CERTIFICATES



**OFFICE FOR THE PROTECTION
OF RESEARCH SUBJECT**

This will certify

Catherine Lyons

has completed the

Human Subjects Assurance Workshop.

The certificate is valid for 3 years from date of issue

Oct. 25-2001
Date


Brenda Dufosinimi, MPA

OPRS Director/Human Protections Administrator

Office for the Protection of Research Subjects
4505 Maryland Parkway • Box 451046 • Las Vegas, Nevada 89154-1046
(702) 895-2794 • FAX (702) 895-0805

Jan. 14 2002 11:09AM P1

FAX NO.: 702 895

PDF: UNLV OPRS



Human Participant Protections Education for Research Teams

Completion Certificate

This is to certify that

John Filler

has completed the **Human Participants Protection Education for Research Teams** online course, sponsored by the National Institutes of Health (NIH), on 01/14/2002.

This course included the following:

- key historical events and current issues that impact guidelines and legislation on human participant protection in research.
- ethical principles and guidelines that should assist in resolving the ethical issues inherent in the conduct of research with human participants.
- the use of key ethical principles and federal regulations to protect human participants at various stages in the research process.
- a description of guidelines for the protection of special populations in research.
- a definition of informed consent and components necessary for a valid consent.
- a description of the role of the IRB in the research process.
- the roles, responsibilities, and interactions of federal agencies, institutions, and researchers in conducting research with human participants.

National Institutes of Health
<http://www.nih.gov>

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