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A comparison of social skills training approaches on preschool teacher and child behaviors

Keith J Hyatt

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A COMPARISON OF SOCIAL SKILLS TRAINING APPROACHES ON
PRESCHOOL TEACHER AND CHILD BEHAVIORS

By

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A dissertation submitted in partial fulfillment
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**Doctor of Education Degree
Department of Special Education
College of Education**

**Graduate College
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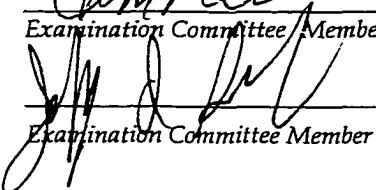
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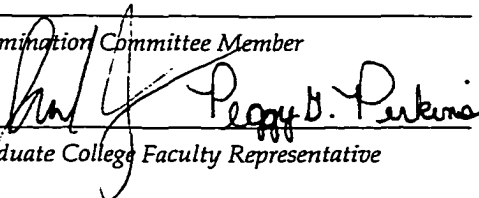
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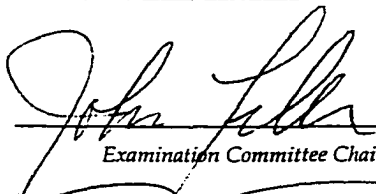
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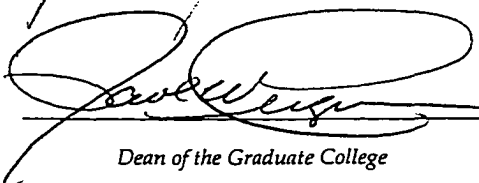
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ABSTRACT

A Comparison of Social Skills Training Approaches on Preschool Teacher and Child Behaviors

By

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Dr. John Filler, Examination Committee Chair
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The first purpose of this study was to determine whether instruction to teachers resulted in differences in their performance. The second purpose of this study was to compare the effectiveness of two social skill training methods, a proactive approach and a reactive approach, on increasing the "positive initiations" and/or "positive responses" of preschool children toward their peers during small group art activities. The proactive approach consisted of the teacher providing children with 5 minutes of instruction in specific social skills prior to the art activities, while the reactive approach consisted of the teacher providing verbal praise for "positive initiations" and "positive responses" during art activities.

Three teachers who taught at an inclusive university preschool program and twenty-four children between the ages of 4 years-old and 5 years-old participated in the study. The teachers and children were randomly assigned to one of three groups: reactive, proactive, or comparison. Each group of children included 8 children: 4 boys (1 with a disability) and 4 girls (1 with a disability).

Results indicated that teachers differed in their use of proactive and reactive strategies. The teacher trained in reactive strategies continued to use the strategies during a Follow-up Phase. The teacher trained in the proactive strategies used one of the four proactive strategies during the Intervention Phase, but her behavior during the Follow-up Phase returned to the level found during Pre-intervention. Teachers in each experimental group exhibited significant differences in behavior when compared with the performance of the teacher in the comparison group.

Results of analyses of child behaviors indicated that the performance of each group on "positive responses" increased throughout the study. The reactive and comparison groups also showed increases in "positive initiations;" however, the increases noted in the reactive group were significantly higher than those of the

comparison group. For children with disabilities, the results indicated that the children in the reactive group exhibited more "positive initiations" than did children in the comparison group.

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CHAPTER 1

INTRODUCTION

The importance of social skills and socially competent behavior has been documented in the literature (McFall, 1982; Parker & Asher, 1987). Poor social skills and the accompanying lack of social competence has been associated with later difficulties in life such as a failure to complete school, difficulties with the police, and unemployment (Sheridan, 1998). A lack of adequate social skills has also been identified as a barrier to the successful inclusion of children with disabilities in the general education setting (McGinnis & Goldstein, 1984).

Several researchers have found that children with disabilities exhibited more social behaviors when in programs with their typically developing peers. Guralnick, Connor, Hammond, Gottman, and Kinnish (1995) found that the social interactions of children with disabilities occurred at a higher frequency during integrated playgroups than during segregated playgroups. Similarly, Fryxell and Kennedy (1995) found that the social interactions of children with significant disabilities and their typically

peers were more frequent for children who attended an inclusive program than for children who attended segregated programs. While setting is an important consideration, future research should address strategies for building upon these interactions to increase the social competence of children with and without disabilities.

A variety of social skill intervention approaches have been discussed in the literature (Hundert & Houghton, 1992; McGinnis & Goldstein, 1984; Odom et al, 1999; and Sheridan, 1998). Research results indicated that directly training social skills to children with disabilities can be beneficial by increasing social interactions, but the studies were frequently conducted in segregated settings. There is a need to identify social skill facilitation approaches that can and will be used by general education teachers in inclusive settings (Guralnick, Connor, Hammond, Gottman, & Kinnish, 1995).

Purpose of the Study

The first purpose of this study was to determine whether or not instruction to teachers resulted in differences in their performance. The second purpose of this study was to compare the effectiveness of two social skill training methods, a proactive approach and a reactive approach, on increasing the "positive initiations" and

"positive responses" of preschool children. The proactive approach will consist of the teacher providing children with instruction in specific social skills. The reactive approach will consist of the teacher providing praise to children following either a "positive initiation" with a peer or a "positive response" to a peer.

Null Hypotheses

Based upon the areas to be investigated in this study, the null hypotheses are:

1. There will not be a difference in teacher behaviors during intervention in the following areas: 1) discussing the importance of the skill, 2) identifying the steps necessary to complete the skill, 3) modeling the skill, 4) providing feedback to the children during role-play, 5) praising students for "positive initiations" with peers, and 6) praising students for "positive responses" with peers.
2. There will not be a difference in teacher behaviors during follow-up in any of the six areas specified in null hypothesis number 1.
3. There will not be a difference in the social behaviors of children in the three groups during intervention in relation to either "positive initiations" or "positive responses" to peers.

4. There will not be a difference in the social behavior of children in the three groups in relation to "positive initiations" or "positive responses" with peers during follow-up.

Research Questions

1. Will there be a difference in the teacher behaviors during intervention in the following areas: 1) discussing the importance of the skill, 2) identifying the steps necessary to complete the skill, 3) modeling the skill, 4) providing feedback to the children during role-play, 5) praising children for "positive initiations" with peers, and 6) praising children for "positive responses" to peers.
2. Will there be a difference in teacher behaviors during follow-up in the six areas listed above?
3. Will there be a difference in the social behaviors of children in the three groups in relation to the "positive initiations" with peers and "positive responses" to peers during intervention?
4. Will there be a difference in the "positive initiations" and "positive responses" of children with their peers in the groups during a follow-up measure?

Significance of the Study

Given the importance of social skill development and the increasing number of children with disabilities

receiving their education in general education settings, it was important to identify social skill training approaches that will be used by general education teachers and provide benefits to the children with disabilities. The proactive approach was based upon the program, Skillstreaming in Early Childhood (McGinnis & Goldstein, 1984), which provided a sequential procedure for teaching specific social skills. During the literature review, research specifically related to this program was not located. In the revision of Skillstreaming the Elementary School Child, McGinnis and Goldstein (1997) provided a bibliography of studies conducted with the skillstreaming approaches. There were no references to studies involving preschool children. It was possible that none existed. However, some research had been conducted by other professionals using a similar approach and the results indicated that the method was effective but that the behaviors did not maintain or generalize (Hundert & Houghton, 1992; Odom et al., 1999).

The effectiveness of contingent praise used by teachers on increasing social behaviors has been discussed in the literature (Hundert & Houghton, 1992). However the changes in behavior did not maintain or generalize for either the children or the teachers. The results of

studies that investigated the maintenance of effective teacher behaviors have been mixed with some finding that teacher behavior did maintain with the use of coaching or consultative procedures (Hendrickson, Gardner, Kaiser, & Riley, 1993; Peck, Killen, & Baumgart, 1989) and others finding that consultation did not result in improved outcomes for children (Peterson & McConnell, 1996).

This study will add to the literature by determining whether instructing teachers in strategies to increase the social skills of children will result in differences in teacher performance. This study will also provide information comparing the effectiveness of a proactive approach to social skill instruction with a reactive approach on increasing the "positive initiations" and "positive responses" of preschool children with their peers during small group art activities. The groups will include children with and without disabilities and be conducted by general early childhood educators. Research has rarely been conducted on the efficacy of intervention programs implemented by early childhood teachers in inclusive programs.

Limitations of the Study

1. The children in the study attended the same preschool and may have already developed positive or negative

perceptions about each other (Guralnick, Connor, Hammond, Gottman, & Kinnish, 1995).

2. The skills selected from the Skillstreaming curriculum represent only 4 of 40 different skills covered in the curriculum. The only components of the curriculum used in the study were the steps for the four skills to be taught and the procedures to be followed by the teacher: 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 the children during role-play. The effectiveness entire curriculum was not addressed in this study.

3. The study was conducted with a relatively small number of subjects in an inclusive preschool and the generalization of results may be limited (Guralnick & Groom, 1998).

4. No attempt was made to separate children with disabilities on the basis or severity of disability or diagnosis, so the results may be difficult to compare with other studies that have grouped children by disability category.

5. Health status of students was screened to determine whether they met the criteria of 9 or fewer absences during the previous semester required for inclusion in the study.

Definition of Terms

1. Children with disabilities - Were defined as children in the study who were eligible for and received special education services due to a developmental delay. These children had a current Individualized Education Program (IEP).
2. Children without disabilities and typically developing peers - Were defined as children in the study who were not been identified as having a disability and did not receive special education services. These children did not have an IEP.
3. Positive Initiations - Were defined as a verbal or nonverbal behaviors toward a peer that were not preceded by a verbal or nonverbal behavior from that peer within the previous 3 seconds.
4. Positive Responses - Were defined as ongoing verbal or nonverbal interactions between children, exhibited within 3 seconds of the previous interaction.
5. Praise - Was defined as a teacher's positive verbal statement or physical touch following the child's "positive initiation" or "positive response" with a peer.
6. Reactive Group - Was defined as the group of children who participated in small group art activities with the teacher who received training in the reactive approach,

providing praise following "positive initiations" and "positive responses" with peers.

7. Proactive Group - Was defined as the group of children who participated in a small group art activities and social skill instruction lessons with the teacher who received training in the proactive approach which consisted of direct skill instruction.

8. Comparison Group - Was defined as the group of children who participated in small group art activities with the teacher who received neither proactive nor reactive training from the researcher.

9. Social Skills to be Taught - Were identified as joining in, waiting your turn, sharing, and asking someone to play.

CHAPTER 2

LITERATURE REVIEW

Introduction

Research and position papers regarding the education of young children with disabilities have frequently addressed the importance of social skills and social competence. McFall (1982) differentiated social skills from social competence by describing social skills as the specific behaviors required to complete a social task and social competence as an evaluative term regarding the acceptability of the performance of those social skills. The lack of social competence has been associated with negative outcomes for children as they mature into adolescence and adulthood (Berler, Gross, & Drabman, 1982; McFall, 1982, and Parker & Asher, 1987). Some of these outcomes included social isolation, depression, juvenile delinquency, and unemployment.

Information regarding the social competence of young children with disabilities will be presented in the following review. In the first section, legislative, judicial, philosophical, and demographic influences

effecting the inclusive education of children with disabilities is discussed. The importance of all school staff working to enhance the social competence of children with disabilities could be inferred from this information which demonstrated that schools can expect to serve greater numbers of children with disabilities in inclusive settings. The second section provides information regarding inclusive educational settings. Inclusion of children required social involvement as well as physical proximity, and the development of effective school structures to foster inclusive practices and increase the opportunities for children with disabilities to develop meaningful relationships with their typically developing peers. The third section includes information describing characteristics of children's friendships. The fourth section is a review of studies describing social behaviors and social skills of young children. The fifth section provides information regarding social skill intervention strategies, and the final section discusses approaches that have been used to train teachers to teach social skills. Taken together, the information contained in the literature review highlights the importance of developing social skill interventions for children with disabilities and providing

teachers with the training needed to implement those interventions in inclusive settings.

Recent Factors Impacting the Education of Young Children

In a 1980 paper describing the relationship between curriculum and instruction in early childhood special education programs, Vincent et al., (1980), discussed the importance of considering the environmental demands that would be encountered by children with disabilities as they transitioned from special education programs to the general education kindergarten classrooms. The academic and social success of these children was deemed a major concern that should be addressed by parents, teachers, researchers, and politicians. In a follow-up paper written a decade later, Salisbury and Vincent (1990) re-asserted the belief that the general education setting was the most appropriate setting in which to meet the educational and social needs of children with disabilities. They noted that the research conducted during the 1980s supported the placement of children with disabilities in the general education setting. This research had essentially affirmed that the general education classroom was the correct educational placement for young children with disabilities (e.g., Guralnick & Groom, 1988; Walter & Vincent, 1982). The focus on placement issues shifted from questioning whether

children with disabilities should be educated in inclusive settings to a determination of how to provide the necessary services in complex inclusive settings. While placement was a central issue in the 1980s, the method of service delivery became the issue of the 1990s. To meet this challenge, professionals and parents were required to work together to creatively plan educational opportunities for young children.

As researchers and educators evaluated the status of early childhood education and early childhood special education during the 1980s and 1990s, important legislative, judicial, philosophical, and demographic changes occurred that increased the likelihood of children with disabilities attending inclusive educational programs. In the legislative area, the Congress of the United States amended Public Law 94-142, the Education for All Handicapped Children Act, with Public Law 99-457 and Section 602. These additions had the effect of providing federal recognition of the importance of early intervention services to children with disabilities and required that children age 3-5 be educated in the least restrictive environment and eligible children from birth through two be educated in natural environments. The regulatory language describing the least restrictive environment and natural

environments clearly delineated the congressional intent that children with disabilities be educated with their typically developing peers. The reauthorization of the act in 1997 provided additional impetus for school personnel to consider general education placement for children with disabilities. For example, the requirement that children have access to the general education curriculum and be included in state and district mandated assessments was added.

In the judicial area, two major cases regarding the education of children with disabilities were decided by the Third and Ninth Circuit Courts of Appeals. In 1994, the Ninth Circuit Court of Appeals decided the Sacramento City Unified District v. Holland. In this case, the parents of Rachael Holland, an eleven year-old child with mental retardation, Down syndrome, and communication difficulties, filed a suit against the Sacramento City Unified School District challenging their assertion that Rachael must be educated in a self-contained special education setting. The Court developed a four pronged test to determine whether an inclusive setting was appropriate for a child. The four factors to be considered were 1) whether the child received academic benefit from the inclusive placement, 2) whether the child received social benefits, 3) whether the

cost of providing the necessary supports and services in the inclusive setting was prohibitive, and 4) the impact on the education of other children in the classroom. When applying the test, the Court determined that Rachel received academic and social benefits in the inclusive setting, the cost of providing the necessary supports and services was not prohibitive, and her inclusion in the class did not adversely affect the learning of other children. The Court also noted that the social benefits a child receives in an inclusive setting are of such importance that removal for academic purposes alone would not be supported. The district was ordered to provide an inclusive educational program for Rachael. Following this decision, the district filed an appeal with the United States Supreme Court. The Supreme Court refused to review the findings of the Circuit Court.

In 1993, the Third Circuit Court of Appeals conducted a hearing *Oberti v. Board of Education* and made a decision similar to *Holland*. According to court records, the Clementon School District had sought to place Rafael Oberti, an eight year-old child with mental retardation, Down syndrome, communication limitations, and behavioral problems, in a segregated special education classroom. The parents filed suit on behalf of Rafael and sought an

inclusive placement with the appropriate supplementary aids and services. The Court found that the school district had not met its legal obligation to educate Rafael in the Least Restrictive Environment. The findings favored Oberti, and the school district was directed to provide the needed special education aids and services to Rafael in the general education classroom.

While the legislative mandates and judicial decisions of the 1980s and 1990s supported the concept of inclusive education, professionals continued to debate both sides of the issue. The debate was not a new one, for example, Dunn (1968), Lily (1970), and Bruininks and Rynders (1971) argued for the elimination of self-contained special education programs for students with mild disabilities three decades ago. They argued that special class placement did not improve the academic achievement of children with disabilities; instead, it isolated them from typically developing peers and reinforced the notion that school failure was a direct result of disability, rather than inappropriate programming or failure to provide the necessary special education supports and services. In 1986, Will also recognized the lack of academic progress made by children who received pull-out special education services. She argued for a partnership between special

education and general education in which children who needed services, regardless of whether they had a disability or not, would receive those services. By providing those services to all children in a collaborative manner, the dual system of special and regular education could be restructured to better serve all children.

Stainback and Stainback (1984) made a similar argument for the merger of special and regular education. They stated that the instructional needs of students did not require a dual system, the maintenance of a dual system was inefficient, and a dual system was no longer needed now that children with disabilities had access to the general classroom setting.

A common similarity among those calling for inclusive programming was the belief that heterogeneous groupings of students better served the needs of all students (Putnam, 1993; Falvey, Givner, & Kimm, 1995). Gamoran (1992) noted that grouping and tracking in secondary schools had failed to produce overall increases in achievement but did appear to promote inequity. Practices, such as cooperative learning, have demonstrated utility in educating children with disabilities, children at-risk of failure, and children with high levels of academic achievement while

maintaining heterogeneous classroom groupings (Slavin, 1991; Putnam, 1993).

In addition, general educators had called for changes in the education of young children. The 1987 publication of the first position statement on Developmentally Appropriate Practice (DAP) by the National Association for the Education of Young Children (NAEYC) was completed in response to the growing practice of increasing academic instruction in kindergartens (Shepard & Smith, 1988). The curricular and instructional focus of DAP emphasized the use of child-centered learning activities based on the child's level of development. In the 1997 revision of DAP, edited by Bredekamp and Copple, the importance of individualizing instruction to meet the educational needs of children with disabilities was addressed. Similarly, the use of developmentally appropriate practices in the natural environment with the necessary environmental adaptations and modifications necessary for children with disabilities to participate in chronological age-appropriate activities with their typically developing peers was identified as a major tenant in an approach to early childhood special education known as Activity-Based Instruction (Bricker & Cripe, 1992).

Taken together, these actions may have increased the probability of young children with disabilities participating in learning activities with their typically developing peers. As noted by Odom and Diamond (1998), the inclusion of children with disabilities into the general education setting was only one aspect of diversity that has impacted the educational system, and the growing cultural diversity in the classrooms of the nation was likely to continue into the next century. As classrooms become more diverse, teachers will be required to teach children with varying needs and many of those children with high needs may not have a diagnosed disability.

The Annie E. Casey Foundation (1999) published statistics regarding child well-being across the country. According to the findings, 53% of children born in the United States experienced one or more risk factors associated with healthy development. The risk factors identified were absence of a parent, parent educational level, poverty status, parent employment status, welfare assistance, and health insurance coverage. While experiencing one of these risk factor was associated with higher levels of difficulty, 13% or 9.2 million children were experiencing a multitude of disadvantages that may

negatively impact their likelihood of becoming productive members of society.

Regarding children with disabilities, Wolery, et al., (1993) randomly surveyed four groups of early childhood educators from across the United States and territories to determine the status of inclusive programming for preschool children with disabilities. They mailed 893 questionnaires to educators in Head Start, public pre-kindergarten, public school kindergarten, and community based preschool/childcare programs. The return rate was 483 (51.4%). Of those programs, Head Start reported the highest number of programs that enrolled a child with a disability (94%) followed by public school kindergarten (81.5%), public school pre-kindergarten (73%), and community programs (59.2%). The data also showed that the number of children with disabilities enrolled in the programs increased during each of the school years from 1985-86 through 1989-90 with the exception of the Head Start programs which reported the same percentage for the 1986-87 year and the 1988-89 year. Over the 5 year period covered by the survey, the number of programs enrolling children with disabilities grew from 37.5% in 1985-86 to 74.2% in 1989-90. Given these data, it may be increasingly

important for early childhood teachers to have skills needed to work with a highly diverse student population.

As noted above, the philosophical, legislative, judicial, demographic changes, and mandates regarding the inclusive schooling of children with disabilities has increased the likelihood that a growing number of schools will educate children with disabilities in settings with their nondisabled peers. As this happened, an increasing number of school staff without special education training shared the responsibility of helping children with disabilities achieve IEP goals and objectives. The adoption of inclusive schooling practices, as described in the following section, has increased the benefits inclusive schooling provided to children with and without disabilities.

Inclusive Schooling

Studies describing essential elements of inclusive schools as well as studies that investigated the benefits of inclusive schooling will be presented in the following section. These research studies added important information to the study of social competence, because they provided information regarding social interactions of children with disabilities in settings where specific social skill instruction was not implemented. Setting did

influence the opportunity for children with disabilities to become an integral part of the social networks that made up the school environment and may lead to development of social relationships in community settings (Salisbury, Gallucci, Palombaro, & Peck, 1995).

Salisbury (1991) identified several factors associated with the provision of high quality educational services to children with disabilities in early childhood settings. She noted that while the concept of integration was superior to segregation, it still implied that there were two distinct groups of children in the school. One group belonged to the school while the group of children being integrated were "allowed" to participate in activities within the mainstream. Inclusion, however, referred to both a belief that all children belonged and a practice that provided opportunities for all children to participate in the general education setting and attend the class they would attend if they did not have disabilities. But the idea of inclusive programming was not just for students with disabilities. It was also applicable to children who with diverse cultural and linguistic backgrounds. The factors of a high quality inclusive school included staff who believed all children belonged, worked collaboratively to meet the needs of each child, interacted

cooperatively with parents, and received administrative support.

In an article describing qualitative research in two inclusive elementary schools, Salisbury, Gallucci, Palombaro, and Peck (1995) sought to identify strategies that general education teachers used to support and promote social relationships among students with and without disabilities. Participants in the study were 18 general education teachers who within the past 12 months had taught or were teaching one or more students with moderate to severe disabilities in 2 inclusive elementary schools. Ten teachers, one from each grade level (1-5) at each school, were selected from among the 18 teachers based on their observed ability to promote social interactions between children with and without disabilities in their classrooms. Each of these teachers participated in interviews and classroom observations in Phase I of the study. All 18 teachers participated in focus-group interview sessions in Phase II of the study.

During Phase I, 10 teachers participated in a 60-90 minute interview that incorporated open-ended questions to identify strategies the teachers felt were useful in facilitating the social relationships. A minimum 3 hours of observation was also conducted in each of these

teacher's classrooms to corroborate the information provided by the teachers during the interviews. Notes from classroom observations were compared and the information was collapsed into five different categories: 1) active facilitation of social interactions, 2) turning it over to the kids, 3) building community in the classroom, 4) modeling acceptance, and 5) organizational influences. Three weeks after collection of these data, Phase II of the study began in which focus group interviews with all 18 teachers were held to identify additional strategies used to promote social relationships. Major strategies used to actively facilitate social interactions included instructional practices that fostered interdependence such as cooperative grouping, collaborative problem solving, peer tutoring, and structuring time and opportunities for interactions. By turning it over to the kids, the teachers encouraged students to assist in problem solving and developing strategies that increased the likelihood of the child with a disability succeeding in the classroom. The third and fourth strategies were similar. By building a community in the classroom, the teachers helped students develop attitudes of acceptance toward diversity while the teachers actively modeled acceptance of all students. The final factor was related to the organizational support

(such as administrative support), collaborative planning and teaching, and an ability to partake in on-going planning for inclusive strategies.

The results from the study should be interpreted cautiously due to the small number of participants. However, the authors noted that many of the practices used by the teachers such as collaborative problem solving and cooperative learning were gaining acceptance as strategies that promoted the cognitive and social development of children without disabilities as well as children with disabilities. Finally, they suggested that many teachers were already using effective strategies and they provide natural sources of information for future research.

Another study designed to describe the social interactions of children attending inclusive programs was conducted by Hanline (1993). Her study described the social interactions of preschool children with profound disabilities and their classmates. Participants in the study were three children with significant disabilities, two boys and one girl aged 58 months, 60 months, and 45 months, respectively. All three attended an 8 week summer program located at Florida State University. Three typically developing peers attending the program were picked as comparison children, because they were judged to

be typical in social development and were of the same age and gender as the three children with disabilities. The children with disabilities only attended the program 1/2 day at the request of their parents. During that time, they participated in 45 minutes of outdoor play, 60 minutes of indoor play, 30 minutes of group activities, 15 minutes for snack, and 30 minutes for transitional activities and toileting. A total of 46 children attended the program in 2 different classrooms. An ongoing goal of the program was to promote the social interactions of all children through the use of developmentally appropriate curriculum and practices. Therefore, highly structured activities to promote social interactions between children with and without disabilities were not implemented. Strategies to promote social interactions that were implemented included placing or positioning children with disabilities in areas that would encourage socialization, prompting and reinforcing appropriate social behavior, modeling social interactions, interpreting behaviors of children with disabilities, and answering children's questions regarding their peers with disabilities.

Data were collected during the last four weeks of the program. Each child was observed in 5 minute intervals for 15 minutes per day during indoor center time and 15 minutes

per day during outdoor play. An analysis of the data indicated that social behavior did not change as a result of the indoor or outdoor setting. All social interactions of the children with disabilities occurred with their nondisabled peers. The number of interactions of children with disabilities during the entire observation period were 332, 224, and 498 compared to an average of 1088 interactions for the comparison children without disabilities. The comparison children engaged in substantially more interactions overall, but the mean number of behaviors per interaction were relatively similar. She found the average number of interactive behaviors per interaction for children with disabilities was relatively similar 3.01, 3.35, and 2.94 but differed from the average of 3.68 for the comparison children. The three children with disabilities were engaged in interactions 95%, 79%, and 92% of the observation periods, and most of these interactions were initiated by children without disabilities. Children with disabilities responded positively to 47.73% of the positive initiations of the comparison students compared to the comparison children who responded positively to 58.46% of positive initiations. When children with disabilities initiated interactions, they received positive responses only 35.78% of the time

compared to 55.03% for comparison children. During ongoing interactions, the children with disabilities responded positively to children without disabilities 59.45% of the time and comparison children responded positively 56.79% of the time.

A number of benefits of inclusive programming have been reported for children both with and without disabilities. Fryxell and Kennedy (1995) conducted a study to determine the effects of self-contained special education placement versus general education placement on the social contacts, social support behaviors, and friendship networks of students with severe disabilities. The participants in the study were nine students with severe disabilities who attended schools that employed an inclusive model and nine students with severe disabilities who attended schools that provided special education services in self-contained classrooms. The average age of students in the inclusive model was 9-2 years and 8-8 years for the students in the self-contained programs. All schools were in the same school district and the self-contained classrooms identified for the study were selected because they had a district reputation of providing high quality services. The students from the self-contained classrooms served as a comparison group and were selected

because they matched the included students on age, gender, severity of disability, social behavior, and communicative behavior.

Before beginning the study, survey data were collected and the schools were compared on the basis of general education participation, IEP staffing procedures, systematic instruction, program planning, transdisciplinary teaming, and home/school cooperation. The only area in which the schools differed significantly was in the area of general education participation where the average rate of participation was 92% for inclusive programs and 19% for the self-contained programs.

Two assessment methods were used to measure social interactions. The Social Contact Assessment Form (SCAF) was a direct observation method used to document the social contact between a peer with disabilities and his or her typically developing peer. A social contact was described as a student with a disability interacting with a student without a disability for 15 minutes or longer within the context of an activity, such as eating lunch or conducting a science experiment. The second measure, the School-based Social Network Form (SSNF) consisted of a 45 minute interview with the student with disabilities and two or three school personnel to gather information regarding the

student's social interactions. More specifically, the questions identified with whom the student had social contact during the previous two weeks, how long they had known each other, whether the student with a disability perceived that peer as a friend, and the occurrence or nonoccurrence of support behaviors such as emotional support, physical support, help with choices, and access to others.

On the SCAF, each student was observed for a total of 24 hours during school days; 6 hours per day across 4 days. Data indicated that students in the inclusive program had higher levels of contact with peers without disabilities than did students in the self-contained programs. A significant difference was found in SCAF scores of included and self-contained students, with included students receiving higher scores, in the following areas: number of social contacts per day with peers without disabilities, number of different peers without disabilities contacted per day, number of different activities completed with peers without disabilities, and number of different settings in which the social contacts occurred. Analysis of the information obtained from the SSNF also revealed significant differences between students in inclusive programs and students in self-contained programs in the

number of peers without disabilities perceived as friends and the number of general education personnel perceived as friends. Students in inclusive programs perceived an average of 11.9 students without disabilities as friends compared to an average of 0.7 for students in self-contained programs. Similarly, students in inclusive programs perceived an average of 2.1 general education personnel as friends compared with 0 for the students in self-contained programs. The two groups did not differ significantly on the number of special education personnel perceived as friends, an average of 2.6 and 2.3 respectively. Overall, the students in inclusive programs had higher numbers of social contacts with peers without disabilities, received and gave more social support, and had larger social networks with a majority of people without disabilities.

Buyse and Bailey (1993) reviewed literature regarding the outcomes of children with disabilities placed in integrated and segregated settings. They selected studies on the basis of subject age, study design, and dependent measures. The studies had to be conducted with children with disabilities from birth through five years of age unless the child was six-years old and still enrolled in an early intervention program. Research designs reviewed were

either within-group where the children participated in both integrated and segregated programs or between-group where one group was in an integrated setting and the other group was in an inclusive setting. For dependent measures, they required that studies reviewed contain at least one measure of child outcome comparing the effectiveness of integrated and inclusive programming. Based on these criteria, they selected and reviewed 22 studies, 4 single subject designs and 18 group designs. Of the group design studies, 6 were categorized as experimental where group assignment was random, 7 were categorized as nonequivalent control group designs where children in integrated and inclusive programs were compared but the group assignment was not random, and the remaining 5 studies were categorized as equivalent time samples design where the same group of children participated in both integrated and segregated settings. Of the 4 single subject design studies, 2 used a withdrawal of treatment design and 2 used an alternating treatment design.

Seven of the 22 studies compared the developmental outcomes of children in integrated and segregated settings. The mean level of children's performance on standardized developmental measures did not differ between integrated and segregated settings. Sixteen studies evaluated social-

behavioral outcomes with 11 reporting positive outcomes for children in integrated settings, 2 reporting no difference, and 3 providing mixed results. Ten studies evaluated other behavioral outcomes, such as level of play, and 7 reported differences in favor of integrated settings. The authors concluded their review by stating that the research supports the positive impact of integrated settings on the social-behavioral development of children with disabilities. The research did not demonstrate that the integrated settings increased children's attainment of developmental outcomes in areas other than behavior, but neither did it suggest that integrated settings were detrimental to the achievement of developmental outcomes.

A survey of parents of typically developing children who attended either an inclusive preschool or kindergarten and their general education teachers was conducted by Peck, Carlson, and Helmstetter (1992). One hundred twenty-five parents and ninety-five teachers completed the survey which was developed to identify the benefits they believed the children without disabilities received from participation in an inclusive program. To identify the parents and teachers, the authors contacted all public school districts in Washington state and asked them to participate in the study. All but one school district agreed. Surveys were

mailed to a contact person in each district who then distributed them to the teachers and to five randomly selected parents of five typically developing students in each program. The return rate was 44% for parents and 60% for teachers. Parent responses indicated that they believed their child's overall experience in integrated program was positive. They felt their children were more accepting of human differences, had less prejudice regarding people with disabilities, and were more helpful to other children. They did not believe that their children imitated undesirable behaviors from children with disabilities. Teacher responses were similar to those of parents and indicated that the overall experience was positive for children without disabilities.

Literature reviewed in this section revealed several programmatic factors related to the success of inclusive programs. Among those were working collaboratively to meet the needs of all children (Peck et al., 1992; Salisbury, 1991) adult modeling of acceptance (Salisbury, et al., 1995; Hanline, 1993), prompting and reinforcing social skills (Hanline, 1993), and promoting peer acceptance (Peck, et al., 1992; Salisbury, et al., 1995). Inclusive placements also resulted in a higher number of social contacts among children with and without disabilities

(Fryxell & Kennedy, 1995) than did segregated placements. While inclusive placements did not necessarily increase the developmental skill level of children with disabilities, they did not negatively impact attainment of developmental goals, but they did demonstrate increases in the desired social behaviors (Buysse & Bailey, 1993). Finally, the results from the Peck, Carlson, and Helmstetter (1992) survey indicated that parents of typically developing preschool and kindergarten children believed that inclusive programming had provided their children without disabilities benefits that would not have been realized in classrooms composed entirely of children without disabilities. It appeared that inclusive programming was a valuable step in providing children with disabilities the opportunities to develop friendships with their nondisabled peers.

Friendships of Children

Research indicated that an inclusive setting was a desirable factor in facilitating friendships between children with and without disabilities. Buysse (1993) noted that much of the research conducted to date had described the social interactions of children with disabilities without exploring issues related to the development of friendships. When friendship was

investigated, researchers focused on three primary measures: sociometric techniques, direct observation, and reports of knowledgeable informants. This study was developed to investigate the friendships among preschool children with disabilities in community child care settings. Two primary questions were addressed: 1) what is the incidence of children with disabilities who have mutual friends, and 2) what aspects of the child, environment, or friend are associated with friendship status. The subjects were 58 preschool children with disabilities who attended 27 different community day care programs, private preschools, or Head Start programs in North Carolina. The children were predominantly male (66%), with an average age of 4.2 years (range = 2.5-5.5). On average, 15% of the children in the programs had a diagnosed disability. Parents and teachers each completed the Early Childhood Friendship Survey which included information on the friendships of the children with disabilities as well as demographic information and professional information from the teachers. Teachers also completed a 5-point Likert-type scale to assess child related factors that could impede the development of friendships. Items assessed included: physical appearance, use of adaptive equipment, and unusual behaviors. To obtain information regarding child

characteristics, the Battelle Developmental Inventory (BDI) was administered to all but one child in the study to estimate developmental level. A second measure, the Carolina Record of Individual Behavior (CRIB), was administered to assess behavioral characteristics likely to influence the peer relations of young children.

Friendships were divided into three categories. The first, mutual friendship, was described as children having a mutual interest in playing or spending time together. Type I unilateral friendships were described as those in which the child with a disability initiated interactions but the peer did not reciprocate. The third type, Type II unilateral, was defined as a relationship where a peer initiated an interaction but the child with a disability did not reciprocate.

Analyses of the data were done to determine the incidence of the various types of friendships, the impact of child-related characteristics on friendships, parent and teacher identified factors that affect relationships, and the demographic characteristics of friendships. According to parent reports, 46 (79%) of the children had mutual friendships, 3 (5%) had Type I unilateral relationships, 1 (2%) had a Type II unilateral relationship, 2 (3%) had both Type I and Type II unilateral relationships, and 6 (10%)

had no friendships or unilateral relationships. Teacher reports differed. They indicated that 32 (55%) had mutual friendships, 4 (7%) had Type I unilateral relationships, 6 (10%) had Type II unilateral relationships, 1 (2%) had both Type I and Type II unilateral relationships, and 15 (26%) had no friendships or unilateral relationships. Some of the differences between parent and teacher ratings were attributed to teachers only rating child friendships at the child care facility while parents rated friendships outside that setting.

Univariate and multivariate analyses were conducted to identify relationships between friendship status and child characteristics. The following friendship types were used in the analyses: mutual friendships, unilateral relationships, and no unilateral relationships or friendships. Results indicated there were no significant differences in friendships on the basis of gender, ethnicity, chronological age, sibling status, or amount of time spent in the daycare setting. For teacher identified friendships, there was a significant difference based on diagnostic categories. Of the 29 children with a speech or language disability, 21 (72%) had mutual friendships while only 2 (18%) of 11 children with a cognitive delay had mutual friends. Statistical tests were not conducted on

parent reports due to the sample size, but they identified 6 children with cognitive delays as having mutual friends and 5 as having either unilateral or no relationships. Results from an ANOVA indicated a significant difference between mutual and unilateral friendship categories based on developmental age according to parent ratings.

Results of analyzed responses from open-ended parent interviews indicated that the factors contributing to friendships most frequently identified by parents were friends characteristics such as age, possessions, personality (32%), time spent together (27%), similarities such as shared interests or common backgrounds (20%), and characteristics of the child with disabilities such as friendliness (13%). Results of teacher responses to open-ended questions indicated that the most frequently identified factors they thought contributed to friendships were friend's characteristics (84%), characteristics of the child with disabilities (78%), classroom activities (69%), classroom materials (63%), and adult involvement (44%).

Both parents and teachers identified the following demographic characteristics of mutual friendships. Children identified as friends tended to be of similar age (within 12 months) and of same gender. Most friends were children without disabilities and the relationships had

some stability (\underline{M} = 1.7 years for parent ratings and \underline{M} = .73 for teacher ratings).

Evans, Salisbury, Palombaro, Berryman, and Hollowood (1992) investigated the peer interactions and social competence of 8 elementary age students who attended inclusive schools. The district consisted of one high school, one middle school, and two elementary schools. For accessibility reasons, the children with disabilities attended one of the two elementary schools. Three children with severe disabilities attended each grade level. For purposes of this study, the children with severe disabilities were members of one kindergarten class, two first grade classes, or one second grade class. The ages of these children ranged from 5 years 3 months to 8 years 5 months, and Vineland scores ranged from 2 to 36 months. All of these children's peers participated in the study, but a group of 8 children without disabilities matched only by gender was selected to serve as a comparison group. Teachers at the school had participated in training designed to help them adapt and modify curricular content and instructional strategies to meet the needs of students with severe disabilities; however, none had received training in strategies to promote social interactions. Social competence measures were obtained for children in

both the target group and comparison group using the Assessment of Social Competence (ASC) scale. The scale allowed a limited or even inappropriate behavior to be scored as long as it achieved the desired social function. Sociometric assessment on all children in the selected classrooms was conducted using a standard peer nomination technique and these data were analyzed as they related to the target and comparison groups. The procedure was conducted as follows. Each typically developing child was shown photographs of all children in the class and asked to identify three children he/she would like to play with. A child's popularity was based on the number of first, second and third place nominations received. Next, the children were shown photographs of the target children in the class, the comparison child, and a randomly selected classmate. They were asked if they played with each child and whether they considered each child to be a friend. Classroom observations were also conducted and focused on classroom interactions in which play interactions were limited but other social relations would occur. Eleven categories of social interactions were identified for observation: assistance, discipline, play, conflict resolution, instruction, physical aggression, verbal aggression, physical affection, affiliative comments, attention seeking

behavior, and talking. Three 5-minute observations of each target and comparison student were conducted each month for seven months. Data from the first 3 months (Phase I) were compared with data from the last 3 months (Phase II).

According to sociometric data, two children with severe disabilities received the most nominations in their classrooms and one child received the second most nominations. Two of eight target children received no nominations, none of the eight comparison peers received no nominations, but eleven other children did not receive any nominations across the 5 classrooms involved in the study. There was not a significant agreement between acceptance score (Is ____ your friend) and the number of times children were identified as a playmates. The children without disabilities were more likely to consider children with disabilities as friends than playmates; however, for children without disabilities, the rating of friend closely matched the rating of playmate. Social competency scores obtained on the ASC were significantly different between the target and comparison groups. ASC scores did not correlate significantly with acceptance ratings obtained from sociometric ratings, but they did correlate with the number of social interactions initiated by target students during Phase I and Phase II. Analyses of classroom

observation data revealed that target children were more likely to initiate interactions such as "attention seeking" and "play" while "talk" and "play" were the most common initiations of children in the comparison group. There was a significant difference between the number of initiations made and the number of initiations received by target students, but the difference was not significant for children in the comparison group. The number of interactions initiated and received by target peers decreased between Phase I and Phase II. The types of initiations that decreased were "play" and "attention seeking." The types of interactions of which they were recipients that decreased were "play," "assistance," "physical affection," and "attention". Except for "assistance," the rate of both initiations and received interactions were higher for target children than comparison children during Phase I.

The study demonstrated that some children with severe disabilities were considered the most popular children in their class. One cannot make generalized assumptions regarding rejection or acceptance on the basis of disability. Children with disabilities received more interactions than they initiated and the nature of the interactions was generally different than the more

reciprocal interactions between children without disabilities. Additionally, social competence, as rated by adults, did not correlate with acceptance of children with disabilities by their typically developing peers.

Observations revealed that most interactions in the classroom were conversational in nature and the limited communication skills of the children with severe disabilities may have influenced the observed decrease in social exchanges that occurred throughout the year. The authors also noted that physical demonstrations of affection diminished during the year and noted that this may have been positive if it indicated that the "novelty" of the children wore off as the year progressed. Thus the children were treated in a more natural way. However, this diminishing of social interaction led to less opportunity for the children with disabilities to interact and may have highlighted the importance of enhancing the communicative ability of children with disabilities.

Results of the preceding studies suggested that there were differences in the friendships of children with and without disabilities. The Evans et al. (1992) study indicated that young children with severe disabilities were not rejected as friends on the basis of disability alone. However, the inclusive nature of the school may have helped

promote understanding and acceptance by the children without disabilities. Still, some children with disabilities were not selected as friends and some children without disabilities were not selected as friends. Buysse (1993) found that a majority of the 58 children with disabilities involved in the study had friends. However, a small proportion of children with cognitive disabilities had mutual friendships (2%) compared to a larger percentage of children with a speech or language disability (72%) who had mutual friends. Both studies indicated that overall, children with disabilities had friendships that were less reciprocal in nature when compared with a majority of children without disabilities. Results from the Buysse (1993) study also indicated that children preferred to be friends with children their same age without disabilities. These findings will be discussed further in the following section.

Social Behaviors and Social Skills

Guralnick and colleagues conducted a series of studies investigating the nature of social relationships of children with disabilities by observing their interactive behaviors during playgroups. Three of these studies will be discussed in the following paragraphs. Similarities among the studies included the following. Playgroups were

supervised by a teacher and graduate assistant. During playgroups, children participated in a variety of activities including circle time, music, art, snack, story, and a fifty minute free play period scheduled on most days. During free play, the interactions of the children were video taped and staff were directed to limit their interactions to only providing assistance to children when needed. The scale used to measure social participation and cognitive levels of play consisted of eleven categories. The first three categories were social classifications of play based on the work of Parten (1932) and included 1) solitary play, 2) parallel play, and 3) group play. Nested within these three categories were four cognitive classifications of play based on the work of Smilansky (1968) and included a) functional, b) constructive, c) dramatic, and d) games with rules. The remaining categories were 4) unoccupied, 5) onlooker, 6) reading, 7) rough and tumble, 8) exploration, 9) active conversation, 10) transitional, and 11) adult-directed. Individual social behaviors were also documented and consisted of the following fourteen categories: 1) gains attention of a peer, 2) leads in activities, positive and neutral, 3) leads in activities, negative, 4) imitates, 5) expresses affection, 6) expresses hostility, 7) competes for adult

attention, 8) competes for equipment, 9) shows pride, 10) follows peer activities, 11) follows lead of peer in response to verbal or nonverbal directions, 12) refuses to follow or ignores peer directions, 13) follows peer activities without being directed, and 14) served as a model for a peer.

In 1987, Guralnick and Groom investigated the peer relations of preschool children with mild developmental delays in mainstreamed playgroups. Eight playgroups of unacquainted children comprised of 3 typically developing three-year-old boys, 3 typically developing four-year-old boys, and 2 boys with mild cognitive delays were formed. Chronological age, mental age, language age, and intelligence quotient (IQ) were obtained for each of the four groups. The typically developing four-year-olds had an average age of 53.75 months with a range of 48-59 months, a mental age of 65.5 months with a range of 54-74 months, a language age of 62.76 months with a range of 56.3-69.8, and an intelligence quotient of 110.83 with a range of 93-124. The typically developing three-year-olds had an average age of 36.54 months with a range of 31-42 months, a mental age of 44.83 with a range of 38-58 months, a language age of 47.23 with a range of 39-57 months, and an IQ score of 106.5 with a range of 93-123. The children

with disabilities had an average age of 52.25 months with a range of 48-59 months, a mental age of 43.25 months with a range of 36-53 months, a language age of 41.7 months with a range of 33-54.8 months and an IQ score of 71.56 with a range of 59-86.

Each playgroup operated 2 hours per day, 5 days per week for a minimum of 20 sessions. Following each playgroup, peer sociometric ratings were taken. The social competence of older children, younger children, and children with delays was compared across groups and between two time periods. A 3 (Group) x 2 (Time) MANOVA was conducted on the frequency of intervals in which behavior was coded for the 11 categories on the social participation scale. The Time factor was based on observational data collected during the first five days of the playgroup (Time 1) and the last five days of the playgroup (Time 2). A significant effect was obtained for the Group factor. Univariate analysis revealed significant effects for solitary play, group play, and onlooker behavior. Children with delays engaged in significantly more solitary play than did the younger or older groups of children without disabilities. The group play difference indicated that the older group of children engaged in more interactive play than either of the other groups. The onlooker factor

indicated that the younger children without delays engaged in more onlooker behavior than either of the other groups. ANOVAs were also conducted on the number of functional, constructive, and dramatic play behaviors exhibited by children. Constructive play was most predominant among all groups. However, a significant effect was found for functional play, which indicated that the children with delays participated in more functional play than the older group of children without delays. Based on the proportion of interactions observed during Time 1 and Time 2, analyses were conducted to identify aspects of social integration. A 3 (Group) x 2 (Time) x 3 (Peer Group) ANOVA revealed significant effects for peer group, and a group x peer group interaction. Children without disabilities in the older group were preferred to children from either of the other groups. The older children also demonstrated a stronger preference to interact with children without disabilities than did children in either of the other groups. The children with disabilities preferred to interact with their chronologically same age peers as did the younger children. This resulted in the children with disabilities being preferred by none of the three groups. Average ratings of sociometric data were also analyzed. A one-way ANOVA indicated a significant effect for group.

Children with disabilities received lower ratings than children in either of the other groups. They also received the least number of positive ratings, and the most negative ratings.

Guralnick and Groom (1988) compared the peer interactions and cognitive levels of play of previously unacquainted young boys with developmental delays in integrated playgroups and then in their specialized special education programs. Observations of the social interactions of the children with disabilities in their specialized programs were conducted within three weeks of the end of the integrated playgroups. Of the 16 children with delays who participated in the play groups, only 11 were observed in the specialized setting. The specialized program ended for four of the children before they could be observed and one child moved. For the group of 11 children, the mean chronological age was 53.64 months, mean IQ score was 71.73, and mean language age was 42.51 months. None of these children knew the typically developing peers and none had experience with integrated programs. Additionally, each child was enrolled in a specialized class. For the 24 typically developing same-age peers, the average age was 53.75 months and the mean IQ was 110.83.

For the 24 younger peers without disabilities, the mean age was 36.54 months and the mean IQ was 106.5.

Eight playgroups were developed over two years and consisted of 3 three-year-old boys without disabilities, 3 four-year-old boys without disabilities, and 2 four-year-old boys with mild cognitive delays. Each playgroup operated two hours per day, five days per week for four weeks for a minimum of twenty sessions. During free play, the interactions of the children were video-taped and staff were directed to limit their interactions to only providing assistance to children when needed. During the playgroup, each child was observed for one hundred minutes in 10 minute segments. The last four recordings obtained during the integrated playgroup were compared to the social interactions of the children with disabilities in the specialized programs.

The children with disabilities attended a specialized program 2.5 hours per day for four to five days per week. They were provided with a thirty to forty minute free play period each day and teachers were instructed to limit their interactions to only providing assistance when necessary. Observations of children's social interactions during free play were conducted within three weeks of the completion of

the integrated playgroups, and each child was observed for 80 minutes in this setting.

The results obtained from a MANOVA conducted on the frequency of the eleven categories of the social participation scale showed a significant multivariate effect. The results of univariate analyses indicated a significant difference between groups only on the transitional and adult directed categories. Higher frequencies were observed in the specialized settings. The only significant difference between groups on the frequency of play exhibited at the different cognitive levels was in the higher proportion of constructive play in the integrated setting.

More differences were noted when the data on individual social behaviors were compared. The categories were organized into negative and positive interactions. An ANOVA comparing the number of positive interactions was significant, with children with delays exhibiting twice as many positive interactions in the integrated setting as in the segregated setting. There were also significant differences between specific behaviors exhibited in integrated and segregated settings. For each finding of significance, the children with disabilities demonstrated the behavior more frequently in the integrated playgroup:

gains attention of peer, leads peers - positive, follows lead, follows activity, refused to follow, and pride in product.

The results of the study suggested that children with disabilities exhibited higher rates of behavior when they participated in integrated playgroups compared with segregated playgroups. The researchers stated that the most likely cause of the increased frequency of social interactions in the integrated playgroups was the result of increased child-child interactions that may be attributed to the higher level of social behaviors of children without disabilities. Observations of the playgroups revealed that the peer related social play of children without disabilities was more frequent than that of children with disabilities. The researchers also noted that the children with disabilities were chosen as playmates less frequently and that when the children with disabilities chose a playmate, they chose a same-age peer without a disability most frequently. The results of this study differed from previous studies in that significant differences were found between the social interactions of children with disabilities in the two settings. The researchers attributed the difference to the fact that previous studies included only children with disabilities or included too

high a proportion of children with disabilities. In the present study, 80% of the children in the integrated playgroups were nondisabled and may have generated more interest in interactions and been able to maintain interactions more effectively. Regarding future research, Guralnick & Groom (1988) noted that the occurrence of group play by children with disabilities did not differ between settings. Social skills needed to maintain interactions and enable children with disabilities to participate in group play requires additional research attention and may require specific, systematic instruction in the classroom.

Guralnick, Connor, Hammond, Gottman, and Kinnish (1995) conducted a 4 year study to evaluate the effects of placement in mainstreamed playgroup placements on the social interactions and social integration of preschool boys. Twelve play groups of six children each were developed. Three playgroups composed of children with developmental delays only and three playgroups consisting of typically developing children only, were referred to as specialized groups. The remaining 6 playgroups consisted of 4 children without delays and two children who had developmental delays. Across play groups, children without disabilities were equivalent on chronological age, intelligence quotient, language, and adaptive behavior,

with the exception of daily living skills on the Vineland, where children in the playgroups consisting only of other typically developing children received higher scores. Similarly, children with disabilities were equivalent to each other across all measures.

Each playgroup was conducted 2.5 hours per day, 5 days per week for 10 sessions. Each child was observed for 60 minutes during free play time during the two week period beginning on the second day of the playgroup. Three observations during the first week comprised the scores for Time 1 and three observations during the second week comprised the scores for Time 2. Following each playgroup, peer sociometric ratings were obtained.

A MANOVA conducted on the 10 social participation categories revealed a significant effect for group. Analysis for group indicated that typically developing children engaged in more group play, parallel play, and conversation with peers. In contrast, children with developmental delays participated in more solitary play, transitions, and interactions with adults. A strong trend was noted for setting. Univariate effects were identified for parallel play and unoccupied play. Parallel play occurred more frequently in mainstreamed setting and unoccupied play occurred twice as frequently in the

specialized setting. A MANOVA on the frequency of the 15 most commonly occurring social behaviors was significant for group and time. Further analyses revealed that children without disabilities were more interactive than children with disabilities. They engaged in and led more activities, used peers as resources, and followed the leads of peers. Children with disabilities engaged in a higher proportion of negative behaviors. The success of social initiations, both positive and negative, did not differ significantly across groups. However, children with disabilities did engage in a greater percentage of social initiations than did typically developing peers (means were 35.81% and 19.73%, respectively).

File (1994) examined the play of children with disabilities in integrated preschools and their interactions with their teachers. Twenty-eight children with disabilities and their teachers were the subjects of the study. The children were enrolled in 13 different classrooms in 9 community-based centers. Each child with a disability was matched with a typically developing classmate of the same age and gender. The behaviors of the children were observed during free play as were the behaviors of teachers toward the children with disabilities. Data collected on the children revealed that

the proportion of time involved in play activities was 70% for children with disabilities and the comparison children, and the majority of time (56%) was spent in functional play for both groups. However, the level of interaction differed between the groups. Children with disabilities spent an average of 28% of play time at an interactive level compared with 45% for the comparison children. Similarly, children with disabilities spent 32% of the time engaged in solitary play while comparison children spent only 17% of the time in solitary play.

Children tended to spend the majority of play time uninvolved with teachers (67%). An ANOVA revealed a significant main effect for type of play support. Teachers were more likely to support cognitive play than social play. There was not a difference in the amount of support provided to the children with disabilities or the comparison group; however, the type of play support did differ. Children with disabilities received more directive support from the teachers while the comparison children received indirect support. When supporting the social interactions of children, 82% of the teacher behaviors were directive in nature with both the comparison group and the children with disabilities.

In addition to social interactions, playmate preference has also been studied. Nabors (1997) investigated the playmate preference of preschool children without disabilities regarding their classmates with disabilities. Four classrooms with a total of 59 students, 40 without disabilities and 19 with disabilities, were included in the study. The rate of parental permission and willingness of children to participate resulted in a total of 27 children without disabilities and 19 children with disabilities participating in the study. The children were interviewed to determine attributes of friendships and determine sociometric ratings. Of 146 positive nominations, children with disabilities received 9. For negative nominations, they received 21 while children without disabilities received 61. A chi square procedure was conducted and revealed that children with disabilities did not receive more negative nominations than expected but did receive fewer positive nominations expected. When children stated they did not like a peer with a disability, 85% of those comments were because they perceived the child as being aggressive while only 11% of the reasons given for disliking children without disabilities was due to aggression. Reasons for disliking peers with disabilities were not related to any aspect of disability, rather the

majority of statements came from boys who did not like other boys who behaved aggressively.

Howes and Phillipsen (1992) noted that gender preference in selecting playmates is common among children three year-old children. In their study of friendship patterns of young children, they found that cross-gender friendships that developed before the toddler years were likely to be maintained into the preschool years. Goin (1998) noted that same gender preferences, particularly among boys, may become common during the preschool years. In a study on the parent perspectives of friendships, Guralnick, Connor, and Hammond (1995) reported that 91% of the parents of preschool children who reported their child had a mutual friend indicated that the friend was of the same gender. While there may be numerous reasons for the development of same-gender friendships, a number of researchers have matched children with disabilities with same-gender peers when investigating the development of social relationships (Evans et al., 1992; File, 1994; Fryxell & Kennedy, 1995; and Hanline, 1993).

Even though all playgroups were artificially assembled through the recruitment of nondisabled children to participate, the playgroups conducted by Guralnick and colleagues provided considerable data regarding the social

behaviors of children with disabilities. Like Buysse (1993), they found that children prefer to interact with typically developing children of the same chronological age. Due to subject recruitment and the number of boys with disabilities in special education programs, subjects of the playgroup studies were boys only. A gender preference was not investigated in the playgroups; however, other researchers have indicated that after the toddler stage, young children demonstrate a preference for same-gender playmates (Howes & Phillipsen, 1992; Nabors, 1997).

Results of the studies also indicated that children with disabilities were less interactive during play than their nondisabled peers (File, 1994; Guralnick and Groom, 1987). When the interactions of children with disabilities in integrated settings were compared with their interactions in segregated settings, Guralnick and Groom (1988) found that positive interactions occurred twice as often in the integrated setting and the level of interactive play was higher. However, children with disabilities tended to engage in more solitary play than did their peers without disabilities (Guralnick & Groom, 1987; Guralnick et al., 1995; File, 1994). While integrated playgroups did increase the social interactions of children with disabilities, Guralnick and Groom (1987)

noted that social skill intervention was still needed to increase the social interactions of children with disabilities.

Social Skill Intervention Strategies

Hundert and Houghton (1992) implemented a Classwide Social Skills Program (CCSP) for all children in four integrated preschool classes and measured the generalization of behaviors across settings and maintenance of behaviors over time for 14 children with disabilities between the ages of 3 and 5 years. The CCSP was a training package that consisted of student instructions on specific behaviors, puppet modeling of the social skill, rehearsal with feedback, teacher prompting and praising of positive social interactions during free play, token contingencies, and teacher evaluation of children's appropriate social behaviors. Subjects were 14 children with disabilities, 12 boys and 2 girls, who attended one of four integrated preschools. The children ranged in age from 3.4 years to 5.4 years with a mean of 4.4 years. The CCSP was implemented by one of three therapists who worked in conjunction with the classroom teacher. Ten, 3 hour training sessions provided to the therapists consisted of verbal instruction, written procedures, modeling of procedures, role playing, and practice with feedback. Two

types of sessions were held daily in each of four different classrooms. During the 20 minute training session, children were free to circulate through centers of their choosing. During the 20 minute generalization session, children were free to choose from a variety of activities on the playground. During the generalization sessions a partial interval recording procedure was used to document positive play by children and teacher reinforcement of positive play. At the end of each experimental phase and at the 3 month follow-up, the children completed a sociometric rating of classmates.

A multiple-baseline design across groups of children with disabilities was used to measure their social interactions during each phase of the study, baseline, program, fading, and follow-up. During baseline, the behaviors of children with disabilities and their teachers were measured until stability in the slope of positive play by each group was obtained. During the program phase, 10 minutes of instruction using the CCSP procedures was implemented. Skills taught during this phase were giving play invitations, sharing, persisting at play, complimenting, and helping. After the first 5 sessions, no additional social skills were introduced. Instead, during the initial 10 minutes, the teacher reminded the students

of the skills using a question and answer format. Following the lesson, the class was directed to begin a 20 minute free play period, called the training session. During free play, the teacher and therapist would praise children for positive social interactions and prompt interactions when necessary. A 4 minute variable interval schedule was implemented in which adults gave stickers to children with and without disabilities who were playing together. Following the free play period, the group met for five minutes to discuss how they had earned the stickers and receive teacher feedback on positive interactions observed. During the fading phase, the stickers were gradually faded out but the remainder of the intervention continued. Finally, maintenance was measured during 1, 3, and 6 month follow up sessions in which the social behaviors of children with disabilities were monitored. During fading and at each follow-up session, the behavior of 5 randomly selected children without disabilities was observed to determine their level of interaction toward their peers with disabilities.

The level of positive play during the training session increased over baseline immediately for Groups (classrooms) 2, 3, and 4. The mean level of positive play did increase for the Group 1, but the increase was gradual rather than

immediate. The change in mean level of positive play for the groups from baseline to program phase was: Group 1 (32.8% to 43.7%), Group 2 (9.6% to 30.3%), Group 3 (12.8% to 45.4%), and Group 4 (9.3% to 45.5%). There was no increase in positive behavior in the generalization setting, and the increases observed in the training phase did not maintain through fading or follow-up periods among children with disabilities.

The level of teacher praise directed toward children with disabilities was similar to the levels of positive play exhibited by the children. During the program phase, the number of positive responses increased immediately for teachers in Groups 2, 3, and 4. The mean level of teacher praise for the teacher in Group 1 increased gradually. The change in mean level of teacher praise from baseline to program phase was: Group 1 (not given), Group 2 (2.1% to 6.1%), Group 3 (1.1% to 11.6%) and Group 4 (4.7% to 7.8%). As with student behavior, there was no increase in the amount of praise provided during the generalization setting and increases observed in the training phase did not maintain through fading or follow-up periods.

A Pearson product-moment correlation revealed a significant correlation between the positive play of children and teacher praise. During fading, the mean

positive play of children with disabilities was 27.6% compared to 29.6% for comparison children. At the three month follow-up, there was a significant difference between the levels of positive play between the comparison children (33.4%) and the children with disabilities (16%).

Sociometric ratings of the children with disabilities did not differ significantly throughout the study.

Odom, et al. (1999) evaluated the effectiveness of four different interventions designed to enhance the social competence of young children with disabilities. Ninety-eight preschool children with disabilities were recruited for the study and participated in the pre-test. Ninety-two remained throughout the year and completed the post-test, and eighty-three participated in the follow-up assessment. The mean chronological age of the children was 58.5 months at pre-test and their mean Batelle Developmental Inventory (BDI) score was 32.2 months. The children were enrolled in 20 segregated and 2 integrated classrooms. The integrated two classrooms contained primarily students with disabilities. Since children could not be randomly assigned to treatment groups, the treatment conditions were randomly assigned to classrooms for each of the interventions and comparison. One integrated class served as a Comparison group (C) and the other integrated class

served as a Comprehensive group (CM). Teachers in the C group were asked to conduct their classes as usual. In the segregated classroom assigned to C, typically developing children did not participate in any classroom activities but shared an outdoor playground at times. In the Environmental Arrangement (EA) group, teachers organized playgroups that included children with and without disabilities. They were directed to introduce activities and suggest play activities but not to prompt social interactions. In the Child Specific (CS) group, the children participated in 5-10 minute social skills lessons for 25 days. During this phase, teachers introduced the skill, asked children to verbally respond to the description of the skill, demonstrated the skill with children in the group, and had children role-play the skill. The skills taught were starting, sharing, agreeing, leading a game, and trying a new way. Following the training, they participated in playgroups similar to the EA group, but the teachers prompted interactions and praised children for interacting. In the Peer Mediated (PM) group, children without disabilities participated in 10 social skill lessons. Skills taught included share, share request, play organizer, assistance, assistance request, and persistence. Following the training, they participated

in play activities with two children with disabilities and two kindergarten peers. On the thirty-fifth day of intervention, teachers began to fade their prompts by introducing a happy face card on which they drew a happy face every time a child with a disability interacted with a peer. Next, they reduced the number of verbal prompts, and finally, they removed the happy face card. In the CM condition, children with and without disabilities participated in 25 social skill lessons and playgroups. Social skills taught were the same as those taught in the PM group. Teachers followed the same prompting procedures as the teachers in the PM group.

Data were collected by direct observation, adult ratings, and peer sociometric ratings. Six 5-minute observations were conducted during free play periods in which only children with disabilities were present for both the pre-test (Pre) and post-test (Post-S) observational measures. Three additional observations were conducted after the intervention in play groups consisting of children with and without disabilities (Post-I). For follow-up data, six 5-minute observations were conducted of children with disabilities the following year in their classroom, most of the children attended segregated classrooms during the follow-up. In addition to

observations of children, teachers were observed twice during the intervention to ensure that they were implementing the program as directed. Following the direct observations of the children the observers completed the Observer Impressions Scale (OIS), a 5 point Likert scale, to assess the quality of the interactions. Teacher Ratings of Social Competence, a 4 point Likert scale, was completed for each child at pre-test, post-test, and follow-up. The sociometric measures were also collected at pre-test, post-test, and follow-up.

Analysis of data on teacher behavior indicated that the teachers were implementing the intervention according to instructions. Prompts and praise of child behavior were at levels expected during the various phases of treatment. For child data, the EA, CS, and PM conditions had the greatest effects on frequency of interactions both during and after intervention. The EA also had the greatest effects on peer ratings. During follow-up, children in the PM group had a significantly higher frequency of interactions than children in any of the other treatment groups. The results of the study indicate that three interventions had positive effects on the social interactions of children with disabilities. The results, however, should be viewed cautiously, because most of the

participants were in segregated classrooms and the information may not be directly applicable to inclusive settings. Odom et al., (1999), noted that a logical extension of this study would be to study the effects of these interventions as used by general and special education teachers in inclusive classrooms.

The two studies reviewed indicate that interventions can increase the social interactions of children with disabilities. Hundert and Houghton (1992) found that a structured class-wide program could increase the level of positive play between children with and without disabilities. They also found that the behaviors did not generalize from the classroom to the playground setting for either the students or teachers. Odom et al., (1999) also found that interventions could positively impact the frequency of interactions of children with disabilities. Few children without disabilities participated in the study, so the results should be interpreted cautiously with regards to inclusive placements, but the results did indicate that at least three intervention strategies produced some change in child behavior. Generalization and maintenance of skills were also areas of concern in this study.

Teacher Training

Peterson and McConnell (1996) evaluated intervention integrity and student outcomes in different social skill approaches. Intervention integrity was defined as the level in which an intervention was implemented as intended. The subjects of the study were 34 children with disabilities enrolled in 16 early childhood special education programs and their teachers. Eleven of the 16 programs were segregated special education settings. The children ranged in age from 34 to 70 months with an average age of 55 months. The Scale of Intervention Features (SIF) was a direct observation measure in which observers rate the implementation of a social skill intervention on a 5 point Likert scale ranging from (5) indicating the intervention was implemented as directed in the manual to (1) indicating that the intervention was not implemented as directed. A total SIF score, integrity score, and 5 subscale scores were obtained from the instrument. The subscale scores were in the following areas: social skills instruction, environmental arrangements, structuring play sessions, prompting use of social skills, and teacher feedback on use of social skills. The social skill performance of children was rated using the Performance-Based Assessment of Social Competence (PASC) which

incorporates information from the teacher ratings on the California Preschool Scale of Social Competence, peer sociometric ratings, observational assessment, and total score from the Observer Impressions Rating Scale (OIS). The OIS is a Likert type scale on which observers record the quality of social behaviors of children. Before conducting any intervention, teachers also completed the Teacher Rating of Intervention Acceptability (TRIA) designed to measure teachers ratings of intervention acceptability.

Teachers selected one of four different social skill intervention approaches to use in with one to three students in each classroom. The interventions were either Environmental Arrangements, Child Specific, Peer Mediation, or Comprehensive. These were described above in the Odom, et al. (1999) study. Following selection of the training package, teachers were randomly assigned to either the training only group or the training with consultation group. Teachers then attended a workshop on implementing the intervention and met with a consultant to plan the implementation of the selected strategy. Teachers who received consultative support throughout the intervention, met with the consultants every 2 weeks to receive feedback on ways to increase intervention integrity.

Teacher SIF scores were compared with child PASC scores to determine whether there were any relationships. For both integrity SIF score (percentage of observed implementation scores compared with possible implementation scores) and total SIF score (overall score indicating amount of intervention) there were significant positive correlations with child PASC scores for each of the target children. When comparing teacher ratings of intervention acceptability (TRIA) with intervention integrity, only 4 significant correlations were identified. It appeared that teacher ratings of acceptability were not good predictors of intervention integrity. To evaluate the relationship of consultative support with intervention integrity and child outcome, an ANOVA was conducted. There were not a significant differences between consultative and training groups on the SIF integrity score or the total SIF score. Neither consultative support nor intervention type was significantly related to child outcome.

Hendrickson, Gardner, Kaiser, and Riley (1993) conducted a multiple baseline across teachers research design to evaluate the effectiveness of a coaching procedure on the teaching behaviors of 3 daycare teachers. The study was conducted in an integrated day care center with 60-75 students. Approximately 25% of the students had

multiple disabilities, 33% were at-risk, and the remainder were typically developing children. Two teachers worked in a classroom with 4 year-olds and the other worked with 3 year-olds. The coaching intervention consisted of a 15 to 25 minute session preceding classroom observations during the intervention phase. During coaching, the coach met with the teacher to discuss aspects of the lesson that went well, identify aspects of the activity the teacher would change, review data related to teacher support behaviors and child interactions, identify things to continue and things to change, and to make short term goals.

Two or three observations were held in each classroom on a weekly basis. Teacher support behaviors were described as verbal or nonverbal cues, modeling, instruction or feedback regarding social interactions. Social interaction of the children was defined as a verbal or motor behavior initiated to another child and responded to within 5 seconds. Baseline data showed that the teachers used almost no supportive behaviors during observations. During the coaching intervention, teacher use of supports increased immediately. The social interactions of the target children also increased during the intervention phase. Both student and teacher behaviors were maintained at 3 week and 3 month follow-ups. Teachers

also completed a survey describing how they viewed the coaching process. All gave positive ratings and noted that the procedure had most improved their reinforcing positive interactions, prompting abilities, and providing supports for interactions.

Peck, Killen, and Baumgart (1989) conducted two studies evaluating the effectiveness of a consultation strategy in increasing the instruction of the IEP objectives for children in mainstreamed preschool programs. Three general education teachers with little experience working with children with disabilities and one child with a disability in each teacher's classroom were selected as subjects in the first study. Each teacher was observed with the matched student during both training and generalization sessions. Teacher behaviors that were monitored included prompts designed to elicit target behaviors and consequences, such as praise and positive touch, that were used in response to the performance of the child. Child behaviors monitored were selected from IEPs and for the first child consisted of answering yes/no questions, for the second child, labeling specific actions, and for the third child, following simple directions.

A multiple baseline across subjects design was used in both training and generalization settings. Target

behaviors for teachers and students were at or near zero during baseline sessions in both training and generalization settings. The interventions phase consisted of the facilitator describing the desired behaviors to the teacher, the teacher and facilitator viewing a 10-15 minute videotaped recording of the teacher and child in the training activity, and the facilitator asking the teacher before and after viewing the tape "Can you observe ways in which you were able to address this specific objective in the course of this activity?" and "Can you see any instances where you might have been able to incorporate this objective into this activity?" The teacher then identified possible strategies. None were provided by the facilitator. During subsequent viewings of the video, the teacher was provided with positive verbal feedback for each suggestion generated. During the intervention, there were increases in the target behavior of teachers and students in both the training and generalization settings.

The second study was similar but rather than view video tapes, the review was conducted verbally and a special education teacher who served the students in the daycare was taught to act as the facilitator. The results were similar to the first study.

These studies suggested that teacher training in the implementation of social skills instruction positively impacted the delivery of social skills instruction and/or teacher behaviors. Peterson and McConnell (1996) found that if teachers implemented programs according to specifications, they usually delivered the program more effectively and spent more time conducting social skill interventions. Student scores on social skill measures were positively correlated with teacher consistency in using the social skill program. Informal coaching was also found to be a useful method of helping teachers increase their facilitation of children's social skills (Hendrickson et al., 1993). In a similar approach, Peck et al., (1989), found that coaching positively impacted the behavior of teachers. Rather than telling the teacher what to do, both studies indicated that assisting teachers in reviewing lessons and identifying ways to intervene on specified objectives increased teacher effectiveness in dealing with the area of concern.

Summary

A large body of research has demonstrated the relationship between poor social skill development in childhood and social problems in adolescence and adulthood (McFall, 1982; Parker & Asher, 1987). These social

problems may have led to isolation, depression, and unemployment; thereby, negatively impacting the quality of life experienced by the individual. Given the generally lower social skill level exhibited by children with disabilities, the importance of providing interventions to facilitate social competence is necessary to improve their prospects of developing meaningful relationships (Guralnick & Groom, 1987; File, 1994). In addition to and possibly due to lower levels of social competence, children with disabilities were identified as friends less frequently than children without disabilities (Buysse, 1993; Guralnick & Groom, 1987; Guralnick & Groom, 1988).

While some children with disabilities may be rejected, Evans et al. (1992) found that children with disabilities were accepted as friends when the school operated under an inclusive philosophy that taught children to value diversity. In studying inclusive programming, researchers have found that supportive strategies facilitated the social interactions of children with disabilities with their typically developing peers (Salisbury, 1991; Hanline, 1993; Fryxell & Kennedy, 1995). Other researchers have found that the social interactions of children with disabilities were more frequent in integrated playgroups than in segregated playgroups (Guralnick & Groom, 1988;

Guralnick et al., 1995). The research suggests that inclusive programming was an important factor in helping children with disabilities develop prosocial skills. However, it was not the only factor necessary.

Social skill training has been found to have positive effects on the social interactions of children with disabilities. Hundert and Houghton (1992) found that a classwide approach to social skills instruction positively impacted the social behavior of preschool children with disabilities attending integrated classes. The changes were noted during the training sessions, but the change in behavior did not generalize across settings or maintain over time. Odom et al., (1999) also found positive effects for social skills approaches when working with preschool children in primarily segregated settings. They found the peer-mediated approach resulted in maintenance of skills, but the training was conducted in primarily segregated settings so they did not have the benefits afforded by inclusive settings.

In addition to studying setting, friendships, and social skill training procedures, researchers have investigated the efficacy of teacher training. Hundert and Houghton (1992) found training provided to teachers did not generalize across settings or maintain over time. Odom et

al., (1999), found that teachers who implemented social skills training as directed by the researchers tended to achieve better outcomes with children. Peterson and McConnell (1996) found that neither biweekly consultation nor intervention programs were significantly related to child outcome. As noted by Odom et al., (1999), the intervention integrity maintained by the teacher was the most important factor in ratings of children's social competence. Other researchers have found that coaching teachers on the implementation of interventions can positively impact their behavior and result in maintenance of teacher behavior (Hendrickson et al., 1993) and generalization of teacher behavior (Peck et al., 1989).

The research demonstrated a need for social skill intervention with children with disabilities. It appeared that inclusive programming facilitated the acquisition of social skills; however, social skill interventions were also necessary. Training teachers to teach or facilitate socially competent behaviors appeared to be an area requiring additional research.

CHAPTER 3
METHODS AND PROCEDURES
Subjects

Teachers

Three preschool teachers who worked at the University of Nevada, Las Vegas (UNLV)/Consolidated Students of the University of Nevada, Las Vegas Preschool (CSUN) were randomly selected to participate in the study. The UNLV/CSUN Preschool employed eight teachers. Four were not eligible to participate in the study because they were currently working in the classrooms from which the student subjects would be selected and using those teachers was considered a threat to the validity. Validity was a concern, because they could use the strategies with some of the target children throughout the day and inadvertently impact the outcome of the study. Following the teacher selection, each was randomly assigned to either the comparison group or one of the two experimental groups, Proactive or Reactive. All three teachers were enrolled in an undergraduate program in early childhood education at UNLV. Additional demographic information describing these

teachers and their group assignment is contained in Table 1.

Table 1

Demographic Information About Teachers

	Proactive Teacher	Reactive Teacher	Comparison Teacher
Preschool Experience	2.5 yrs.	14.5 yrs.	9.0 yrs.
Education Level	Associate	Associate	Associate
Years at UNLV/CSUN Preschool	1 yr. 8 mo.	3 yr. 4 mo.	0 yr. 8 mo.

Children

Three groups of 8 children from two UNLV/CSUN preschool classrooms serving children age 4-5 years were selected to participate in the study. Since children may show a gender preference with playmates (Nabors & Keyes, 1995), each group consisted of 4 boys and 4 girls. Additionally, since children with disabilities were to be included in the groups, one boy and one girl in each group had an identified disability and a current Individualized Education Program (IEP).

Before selecting the children, a letter was sent to parents briefly describing the goals of the study and requesting permission for their child or children to participate. All but two parents had only one child enrolled in the preschool. One parent had twins enrolled and one parent had triplets attending the preschool. A copy of the letter is contained in Appendix A. Of sixty-four letters sent home, fifty-six were returned for a return rate of 88%. Fifty-five (98%) of the parents gave permission for their child or children to participate in the study.

Once the permission forms were returned, the specific selection criteria were determined. There were a variety of attendance options at the preschool including full day attendance five days per week, morning attendance only, afternoon attendance only, Monday, Wednesday, Friday attendance only, and Tuesday, Thursday attendance only. To ensure an adequate number of children from which to select, only those children who attended on Monday, Wednesday, and Friday and had 9 or fewer absences during the previous semester were included in the pool of possible subjects. Once the pool had been developed, it was divided into four sections: typically developing boys only, typically developing girls only, boys with disabilities only, and

girls with disabilities only. For each of the three groups (Proactive, Comparison, and Reactive), three typically developing boys, three typically developing girls, one boy with a disability, and one girl with a disability were randomly selected and placed in one of the groups. The ages of the children ranged from 4 years, 3 months to 5 years, 3 months with a mean of chronological age of 4 years, 9 months. Descriptive information regarding the children with disabilities is contained in Table 2. Following the selection of the children, a letter was sent by the preschool director to the parents of each participating child. The letter stated the anticipated beginning and ending dates of the study and encouraged regular attendance. A copy of the letter is contained in Appendix A.

Group Activities and Target Behaviors

The specific methods and procedures followed during each phase of the study will be discussed in the following sections. Before beginning the study, the researcher met with the teachers to provide them with the information necessary for them to participate in the study. They were told the days the study would be conducted, where the art activities would occur, and directed not to talk with each other or anyone else about their role in the study. A copy

of the statement read to the teachers is contained in Appendix C.

Table 2

Descriptive Information on Children with Disabilities

<u>Student</u>	<u>Group</u>	<u>Eligibility</u>	<u>Reasons for Initial Referral</u>	<u>IQ range</u>
1*	1	DD	motor, language, social	average
2	1	Orthopedic	motor	borderline
3*	2	DD	social	average
4	2	DD	social	average
5*	3	DD	language, motor, cognitive	borderline
6	3	DD	language, social, self-help	borderline

Note. * indicates the child is female

Group 1 = Proactive

Group 2 = Comparison

Group 3 = Reactive

DD signifies developmental delay

* indicates the child is female

During all phases, data were collected during a 10-minute art activity. A description of each art activity is contained in Appendix D. For all three groups, the art

activity was held in a separate room approximately 10' x 13' located within one of the preschool classrooms. Each activity was videotaped using a Panasonic 23-X Palmcorder. One group was held during the morning preschool session and two groups were held during the afternoon sessions to ensure that all subjects could participate. Before each art session, the researcher assembled the necessary materials and set up the room for the activity. With the exception of one child with an orthopedic disability, all children completed the activities while seated on the floor. The child with the orthopedic disability completed the activities while laying on a foam wedge for support; however, during the middle of the Intervention phase, he had surgery and both legs were put in casts, so he completed the remaining activities while sitting in a Rifkin. Accommodations were made to allow him to participate in the activities. For example, when painting, the brush handle was extended so he could paint the object with the other children.

For each art activity, data were collected regarding child initiations toward peers and responses to peers. Initiations and responses were categorized as either positive or negative. The behavioral descriptions used to code child behaviors are contained in Appendix E. Teacher

behaviors counted during all activities included praising children following an initiation with a peer, praising children following a response to a peer, discussing the importance of the skill, identifying the steps necessary to complete the skill, modeling the skill, and providing feedback to children during role-play. The behavioral descriptions used to code teacher behaviors are contained in Appendix F.

Experimental Phases

Pre-Intervention Phase

A small group art activity was conducted for ten minutes per day for five days. Each teacher was told that social interactions will be observed and that they should behave as they would during any other time. On day one of the study, the researcher met separately with each teacher before the art activity to describe the activity and tell the teacher to behave as she would during any group art activity. Beginning on the second day of the study, the teacher and researcher met before the art activity to view the video of the previous day's activity and to inform the teacher of the art activity to be done that day. The teacher was simply told to continue interacting as with the children in the same manner. At the end of Pre-intervention, data relative to both student and teacher

behaviors were checked to make sure no significant differences existed among groups.

Intervention Phase

Comparison Group. No specific Intervention procedure was used with either the teacher or the children in the comparison group. Before each session, the teacher and researcher met to view the video of the previous day's activity and the researcher described the art activity to be done that day. The teacher was told to continue interacting as with the children in the same manner.

Proactive Group. The teacher was taught to implement a sequence of 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 to children during the Intervention phase were: joining in, sharing, waiting your turn, and asking someone to play. These strategies and skills were adapted from Skillstreaming in Early Childhood (McGinnis & Goldstein, 1984). On days 1 and 2 of the Intervention, the researcher taught the teacher to teach the children the skill of joining in, sharing was taught on days 3 and 4, waiting your turn was

taught on days 5 and 6, and asking someone to play was taught on days 7 and 8. The daily training of the teacher was conducted in the following manner. The researcher provided the teacher with a written description of the skill to be taught that day, verbally reviewed the description with the teacher, and provided suggestions for teaching the skill. A copy of the written description provided to the teacher for each skill is contained in Appendix G. The researcher and teacher then viewed the video from the previous day and the researcher verbally praised the teacher for teaching the skill and provided the teacher with input on when the skill could have been taught during the art activity. Following this session with the researcher, the teacher took the written description of the skill and met with her group of students for 5 minutes prior to the art activity to teach the skill. When the 5-minute teaching session ended, the teacher returned the written skill description to the researcher and began the art activity with the children.

Reactive Group. The teacher was taught to verbally praise children after they exhibited a positive initiation with another peer or positively responded to another peer. Daily training of the teacher was conducted by the researcher ten minutes before the teacher began the art

activity. The training sequence consisted of the researcher stating the importance of praise followed by a viewing of the previous day's video during which the teacher received verbal praise from the researcher for praising the children and received direct instruction and modeling from the researcher in the use of praise. The researcher then instructed the teacher to use verbal praise with the children when they either positively initiated or responded to another peer during the art activity that day.

Follow-up Phase

Comparison Group. The activities conducted with the teacher continued as they had throughout the study. Ten minutes before the art activity, the teacher and researcher met and watched the video from the previous day. The teacher was told of the art activity and instructed to continue doing what she had been doing with the children.

Proactive Group. Ten minutes before the art activity, the teacher and researcher met and watched the video from the previous day. The researcher told the teacher that she had been asked to provide instruction in specific skills during the past eight sessions and was now able to do what she felt was best during the remaining art activities. On each of remaining 4 days of the phase, the researcher and teacher watched the previous day's video, discussed the art

activity for that day, and the researcher told her to do what she thought was best.

Reactive Group. Ten minutes before the art activity, the teacher and researcher met and watched the video from the previous day. The researcher told the teacher that she had been asked to praise children during the past eight sessions and was now able to do what she felt was best during the remaining art activities. On each of remaining 4 days of the phase, the researcher and teacher watched the previous day's video, discussed the art activity for that day, and the researcher told her to do what she thought was best.

Data Collection

Each session was videotaped using a camcorder mounted on a tripod located at the entrance to the room. A total of 180 minutes of data per teacher were collected. Due to the absences of children, the number of minutes of data collected per child ranged from 90 to 180 ($\underline{M} = 136$). Data were coded into the previously described categories on a continuous interval.

Inter-rater reliability was computed by comparing the ratings of the researcher and a trained observer on 25% of the video recordings from each phase of the study. For the group data, percent agreement was calculated by dividing

the sum of agreements by the sum of disagreements for each child on each target behavior. The percentages for each target behavior were then added and averaged. For teacher data, percent agreement was also calculated by dividing the sum of agreements by the sum of disagreements in each of the target areas.

CHAPTER 4

RESULTS

The first purpose of this study was to determine whether or not instruction to teachers resulted in differences in their performance. The second purpose of this study was to compare the effectiveness of two social skill training methods, a proactive approach and a reactive approach, on increasing the "positive initiations" and/or "positive responses" of preschool children toward their peers. Additionally, the responses of children were documented to determine whether the intervention resulted in a decrease in the number of "negative initiations" and/or "negative responses" toward peers. The proactive approach consisted of the teacher providing children with instruction in specific social skills while the reactive approach consisted of the teacher providing verbal praise to children following "positive initiations" or "positive responses" to peers. Teacher 1 received instruction in the proactive intervention, Teacher 2 served as the comparison, and Teacher 3 received instruction in the reactive

intervention. The group of children who participated in activities with Teacher 1 were referred to as the proactive group, those with Teacher 2 were referred to as the comparison group, and those with Teacher 3 were referred to as the reactive group.

Results of Analyses of Teacher Behaviors

The data were analyzed to answer the following research questions.

1. Will there be a difference in the teacher behaviors during intervention in the following areas: 1) discussing the importance of the skill, 2) identifying the steps necessary to complete the skill, 3) modeling the skill, 4) providing feedback to the children during role-play, 5) praising children for "positive initiations" with peers, and 6) praising children for "positive responses" to peers.
2. Will there be differences in teacher behaviors during follow-up in the six areas listed above?

Phases by Behaviors Analyses

Immediately following Pre-intervention, teacher behaviors were analyzed to determine whether there were any significant differences in teacher performance of any of the six behaviors listed above. A visual inspection of the data revealed that none of the teachers exhibited any of

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. Two separate one-way analyses of variance (ANOVAs) were conducted to determine whether there were significant differences between teachers for the remaining two Behaviors: praising children for "positive initiations" and praising children for "positive responses." Results of the first ANOVA indicated that there was not a significant difference between teachers on praising children for "positive initiations" with peers, $F(2,12) = 1.4$, $p > .05$. Similarly, the results of the second ANOVA indicated that there was not a significant difference between teachers on praising children for "positive responses" to their peers, $F(2,12) = .667$, $p > .05$.

At the conclusion of the study, a two-way ANOVA was conducted for each teacher to determine whether there were significant changes in individual teacher behaviors across phases (Pre-intervention, Intervention, Follow-up). Six teacher behaviors were specified in the research questions; however, statistical analyses were conducted using only three behaviors because a visual inspection of the data revealed that none of the teachers exhibited the following

behaviors during observations: discussing the importance of the skill, modeling the skill, or providing feedback to children during role-play.

Teacher 1 (proactive). Results from the two-way ANOVA (3 Phases x 3 Behaviors) revealed a significant main effect for Phases, $F(2,45) = 6.961$, $p < .05$ and Behaviors, $F(2,45) = 4.826$, $p < .05$. There was also a significant Phases by Behavior interaction, $F(4,45) = 5.279$, $p < .05$. A graphic depiction of these analyses is contained in Figure 1 and descriptive statistics are contained in Table 3.

To determine the source of the interaction, a multiple comparison analysis was conducted using the Tukey procedure (Hinkle, Wiersman, & Jurs, 1994) for both Phases and Behaviors. For Phases, results of this analysis revealed a significant difference ($p < .05$) between the teacher behaviors exhibited during the Pre-intervention ($M = .33$) and the Intervention ($M = 3.13$) and between the Intervention ($M = 3.13$) and Follow-up ($M = .33$). This teacher exhibited significantly more Behaviors during the Intervention Phase than during either the Pre-intervention or Follow-up Phases.

For Behaviors, the results from the Tukey procedure revealed a significant difference between "praise for

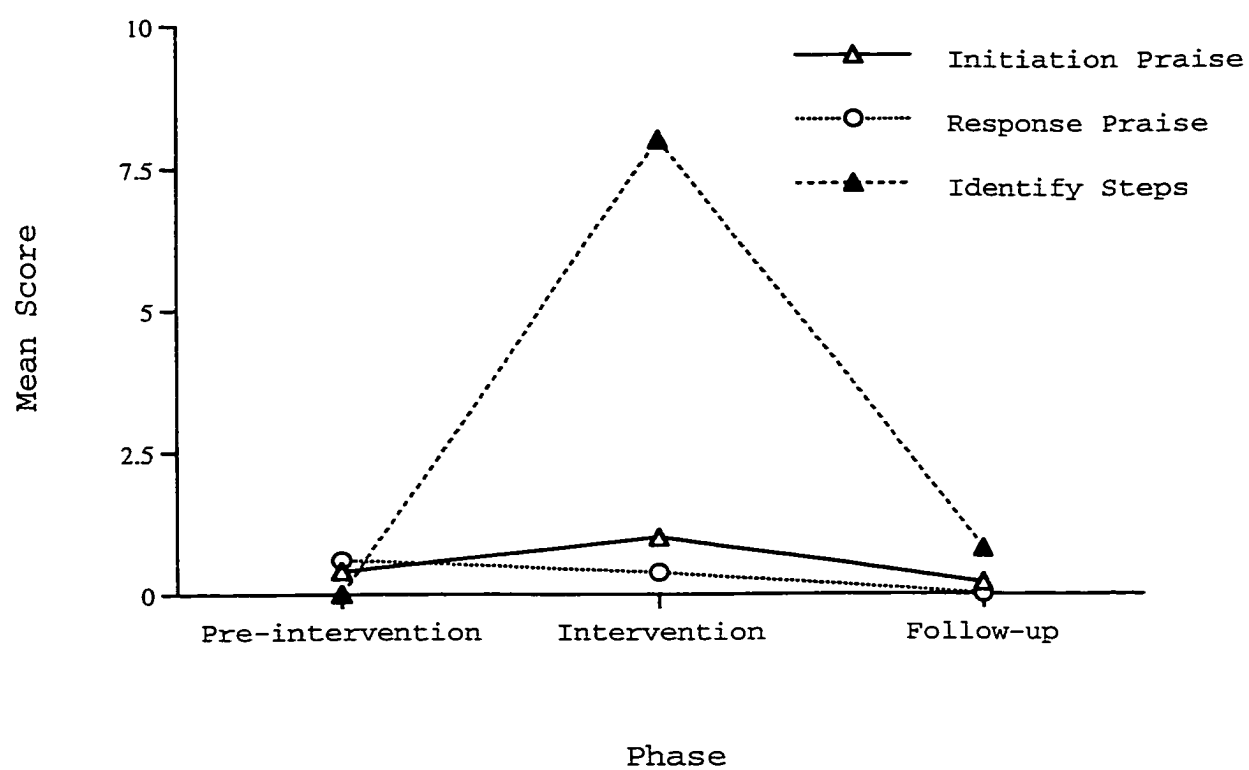


Figure 1. Teacher 1 (proactive) mean scores for Behaviors across Phases.

Table 3

Descriptive Data for Teacher 1 (proactive)Phases by Behaviors

Phases	Behaviors	<u>M</u>	<u>SD</u>	n
Pre-Intervention	Initiation Praise	.40	.55	5
	Response Praise	.60	.89	5
	Identify Steps	.00	.00	5
	Total	1.00	.62	15
Intervention	Initiation Praise	1.00	1.60	8
	Response Praise	.38	.52	8
	Identify Steps	8.00	6.63	8
	Total	3.13	5.17	24
Follow-up	Initiation Praise	.20	.45	5
	Response Praise	.00	.00	5
	Identify Steps	.80	.84	5
	Total	.33	.63	15
Total	Initiation Praise	.61	1.14	18
	Response Praise	.33	.59	18
	Identify Steps	3.78	5.79	18
	Total	1.57	3.71	54

"positive initiations" and "identifying the steps necessary to complete the skill" ($p < .05$) and between "praise for positive responses" and "identifying the steps necessary to complete the skill" ($p < .05$). The teacher exhibited the behavior of "identifying the steps necessary to complete the skill" ($\underline{M} = 3.78$) significantly more frequently than she exhibited "praise for positive initiations" ($\underline{M} = .61$) or "praise for positive responses" ($\underline{M} = .33$).

Teacher 2 (comparison). Results from the two-way ANOVA (3 Phases x 3 Behaviors) indicated that there were no significant main effects, for either Phases, $\underline{F}(2,45) = 1.354$, $p > .05$ or Behaviors, $\underline{F}(2,45) = 1.429$, $p > .05$. There was not a significant Phases x Behaviors interaction, $\underline{F}(4,45) = 1.354$, $p > .05$. A graphic presentation of these data is contained in Figure 2, and descriptive data for Teacher 2 (comparison) are contained in Table 4.

Teacher 3 (reactive). Results from the two-way ANOVA (3 Phases x 3 Behaviors) revealed a significant main effect for Phases, $\underline{F}(2,45) = 17.138$, $p < .05$ and Behaviors, $\underline{F}(2,45) = 22.089$, $p < .05$. There was also a significant Phases by Behaviors interaction, $\underline{F}(4,45) = 4.543$, $p < .05$. A graphic presentation of these data is contained in Figure 3, and descriptive statistics are contained in Table 5.

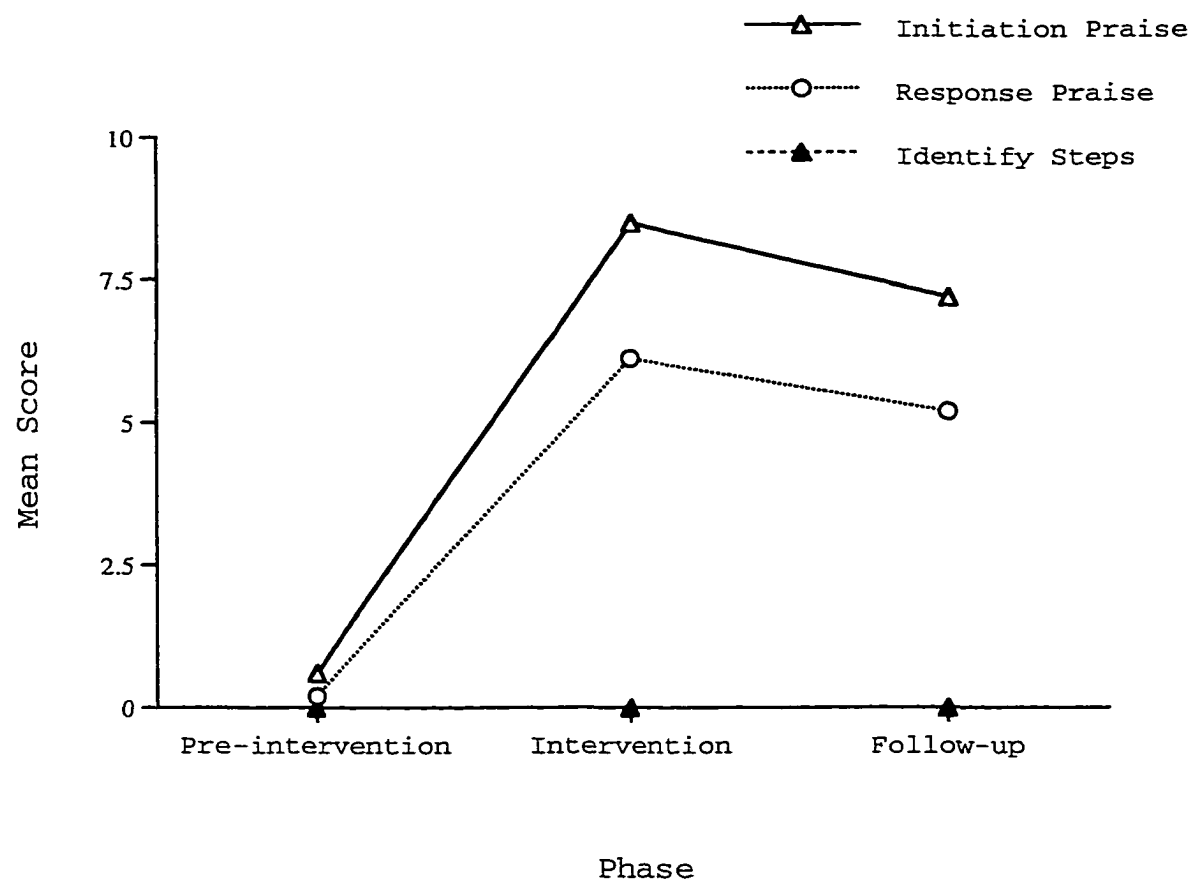


Figure 2. Teacher 2 (comparison) mean scores for Behaviors across Phases.

Table 4

Descriptive Data for Teacher 2 (comparison)Phases by Behaviors

Phases	Behaviors	<u>M</u>	<u>SD</u>	n
Pre-Intervention	Initiation Praise	.00	.00	5
	Response Praise	.00	.00	5
	Identify Steps	.00	.00	5
	Total	.00	.00	15
Intervention	Initiation Praise	.00	.00	8
	Response Praise	.00	.00	8
	Identify Steps	.00	.00	8
	Total	.00	.00	24
Follow-up	Initiation Praise	.00	.00	5
	Response Praise	.20	.45	5
	Identify Steps	.00	.00	5
	Total	6.67E-02	.26	15
Total	Initiation Praise	.00	.00	18
	Response Praise	5.56E-02	.24	18
	Identify Steps	.00	.00	18
	Total	1.85E-02	.14	54

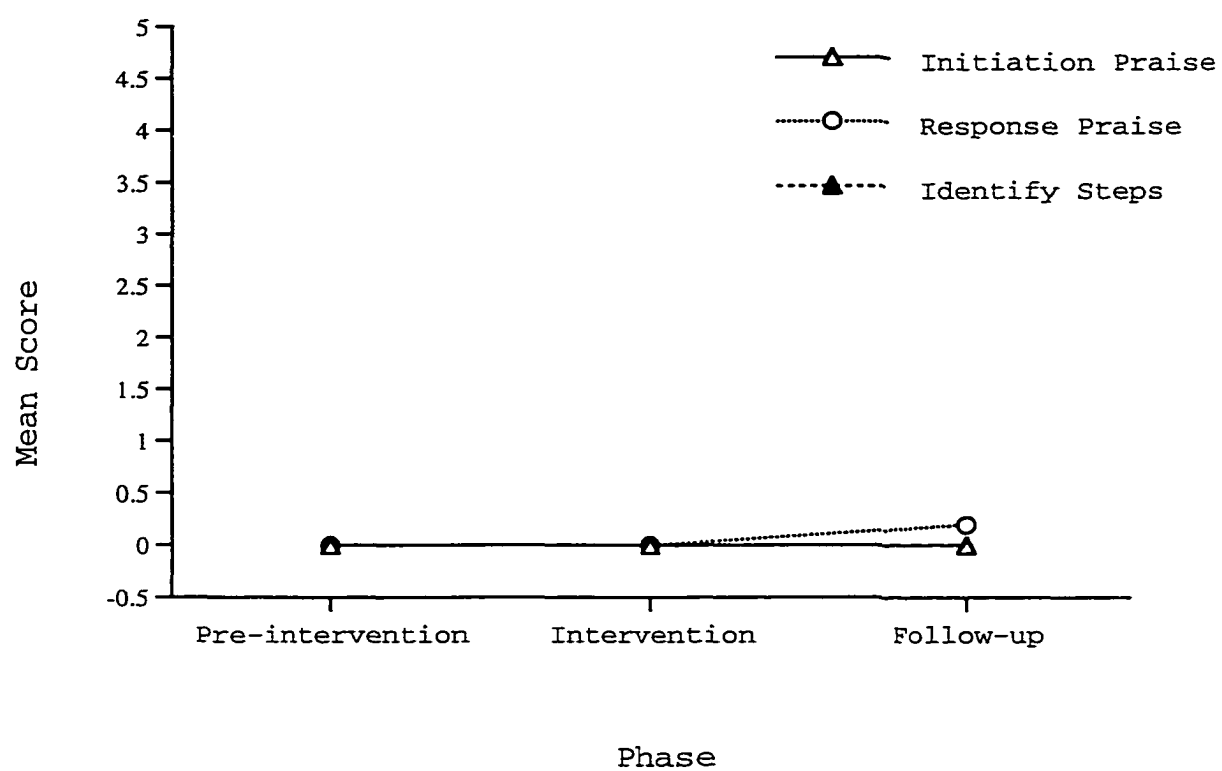


Figure 3. Teacher 3 (reactive) mean scores for Behaviors across Phases.

Table 5

Descriptive Data for Teacher 3 (reactive)Phases by Behaviors

Phases	Behaviors	<u>M</u>	<u>SD</u>	n
Pre-Intervention	Initiation Praise	.60	1.34	5
	Response Praise	.20	.45	5
	Identify Steps	.00	.00	5
	Total	.27	.80	15
Intervention	Initiation Praise	8.50	4.00	8
	Response Praise	6.13	3.83	8
	Identify Steps	.00	.00	8
	Total	4.88	4.77	24
Follow-up	Initiation Praise	7.20	2.77	5
	Response Praise	5.20	2.17	5
	Identify Steps	.00	.00	5
	Total	4.13	3.66	15
Total	Initiation Praise	5.94	4.56	18
	Response Praise	4.22	3.73	18
	Identify Steps	.00	.00	18
	Total	3.39	4.18	54

To determine the source of the interaction, a multiple comparison analysis was conducted using the Tukey Honestly Significant Difference (HSD) procedure for both Phases and Behaviors. For Phases, results of this analysis revealed a significant difference ($p < .05$) between Pre-intervention ($\bar{M} = .27$) and Intervention ($\bar{M} = 4.88$) and between Pre-intervention ($\bar{M} = .27$) and Follow-up ($\bar{M} = 4.13$). This teacher exhibited significantly more target Behaviors during Intervention and Follow-up than during Pre-intervention.

For Behaviors, the Tukey procedure revealed a significant difference ($p < .05$) between "praise for positive initiations" ($\bar{M} = 5.94$) and "identifying the steps necessary to complete the skill" ($\bar{M} = 0$) and between "praise for positive responses" ($\bar{M} = 4.22$) and "identifying the steps necessary to complete the skill" ($\bar{M} = 0$).

In summary, these results indicated that there were differences in the target Behaviors of individual teachers during Intervention in three of the six specified Behaviors for teachers in the two experimental groups. The Behaviors of Teacher 2, comparison, did not differ significantly between Phases. There was a significant increase over Pre-intervention in the behavior of Teacher 1, proactive, for "identifying the steps necessary to complete the skill"

during Intervention, but this increase did not continue during follow-up. For Teacher 2, reactive, significant increases in "praising positive initiations" and "praising positive responses" were noted during Intervention and continued into Follow-up.

Teachers by Phases Analyses

To determine whether there were differences among Groups on the four measures, a series of two-way ANOVAs (Teachers x Phases) was conducted, one for each measure (praise for positive initiations, praise for positive responses, and identifying the steps necessary to complete the skill).

Praise for Positive Initiations. On the first measure, results from the two-way ANOVA (Teachers x Phases) revealed a significant main effect for Teachers, $F(2,45) = 40.701$, $p < .05$, and for Phases, $F(2,45) = 10.025$, $p < .05$. There was also a significant Teachers by Phases interaction, $F(4,45) = 8.568$, $p < .05$. A graphic presentation of these data is contained in Figure 4, and descriptive statistics are contained in Table 6.

To determine the source of the interaction, a multiple comparison analysis was conducted using the Tukey Honestly Significant Difference (HSD) procedure for both Phases and Teachers. For Phases, results of this analysis revealed a

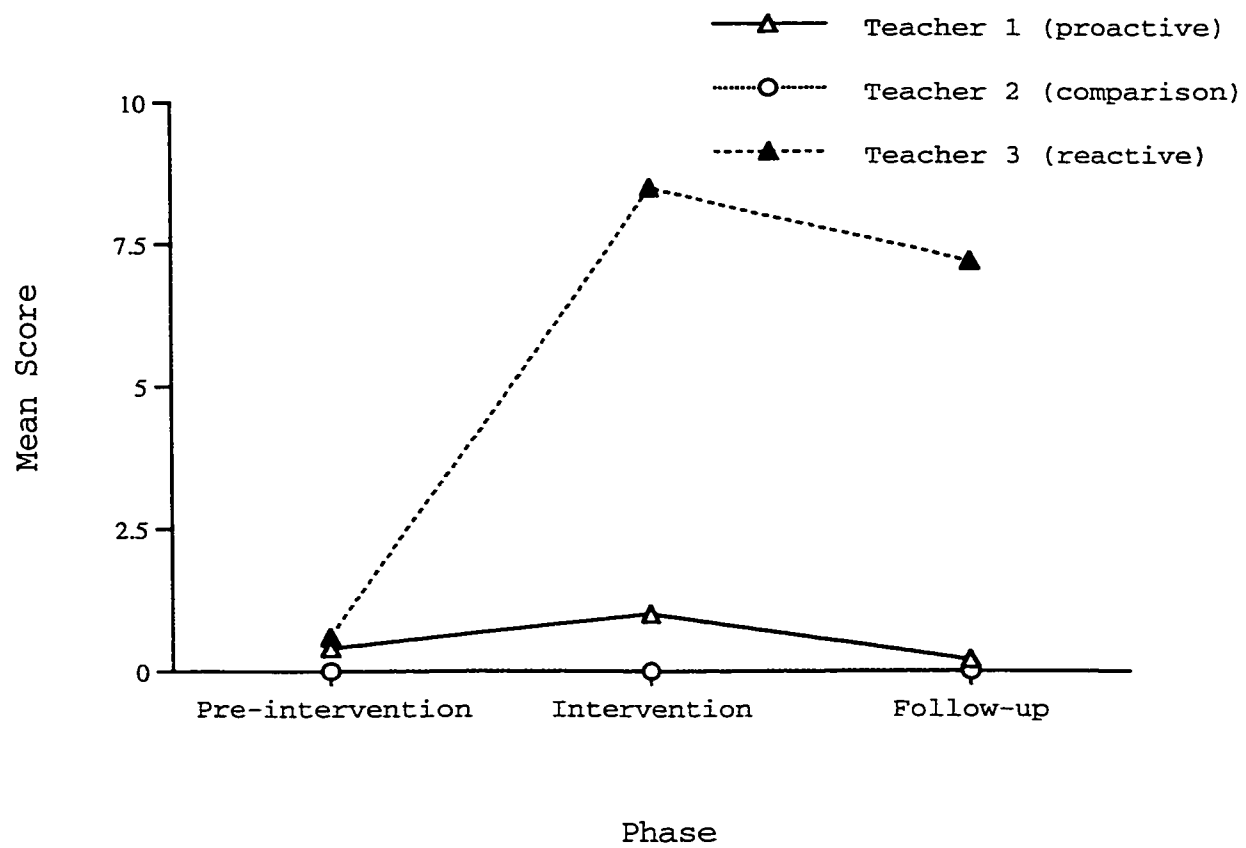


Figure 4. Mean scores of Teachers by Phases for Praise for Positive Initiations.

Table 6

Descriptive Data for Praise for Positive InitiationsTeachers by Phases

Teachers	Phases	<u>M</u>	<u>SD</u>	n
Teacher 1	Pre-Intervention	.40	.55	5
	Intervention	1.00	1.60	8
	Follow-up	.20	.45	5
	Total	.61	1.14	18
Teacher 2	Pre-Intervention	.00	.00	5
	Intervention	.00	.00	8
	Follow-up	.00	.00	5
	Total	.00	.00	18
Teacher 3	Pre-Intervention	.60	1.34	5
	Intervention	8.50	4.00	8
	Follow-up	7.20	2.77	5
	Total	5.94	4.56	18
Total	Pre-Intervention	.33	.82	15
	Intervention	3.17	4.55	24
	Follow-up	2.47	3.78	15
	Total	2.19	3.79	54

significant difference ($p < .05$) between the Pre-intervention ($\underline{M} = .33$) and Intervention ($\underline{M} = 3.17$) and between the Pre-intervention ($\underline{M} = .33$) and the Follow-up ($\underline{M} = 2.47$) in "praise for positive initiations". For Teachers, the Tukey procedure revealed significant differences between Teachers ($p < .05$). Teacher 1, proactive, ($\underline{M} = .61$) differed significantly from Teacher 3, reactive, ($\underline{M} = 5.94$) and Teacher 2, comparison, ($\underline{M} = 0$) differed significantly from Teacher 3, reactive, ($\underline{M} = 5.94$).

Praise for Positive Responses. A second two-way ANOVA was conducted to determine whether there were significant differences between Teachers and across Phases for the behavior of "praise for positive responses". The results of the test revealed a significant main effect for Teachers, $\underline{F}(2,45) = 26.73$, $p < .05$ and for Phases, $\underline{F}(2,45) = 6.093$, $p < .05$. There was also a significant Teachers by Phases interaction, $\underline{F}(4,45) = 7.095$, $p < .05$. A graphic presentation of these data is contained in Figure 5, and descriptive statistics are contained in Table 7.

To determine the source of the interaction, a multiple comparison analysis was conducted using the Tukey Honestly Significant Difference (HSD) procedure for both Phases and Teachers. For Phases, there was a significant difference ($p < .05$) between Pre-intervention ($\underline{M} = .27$) and

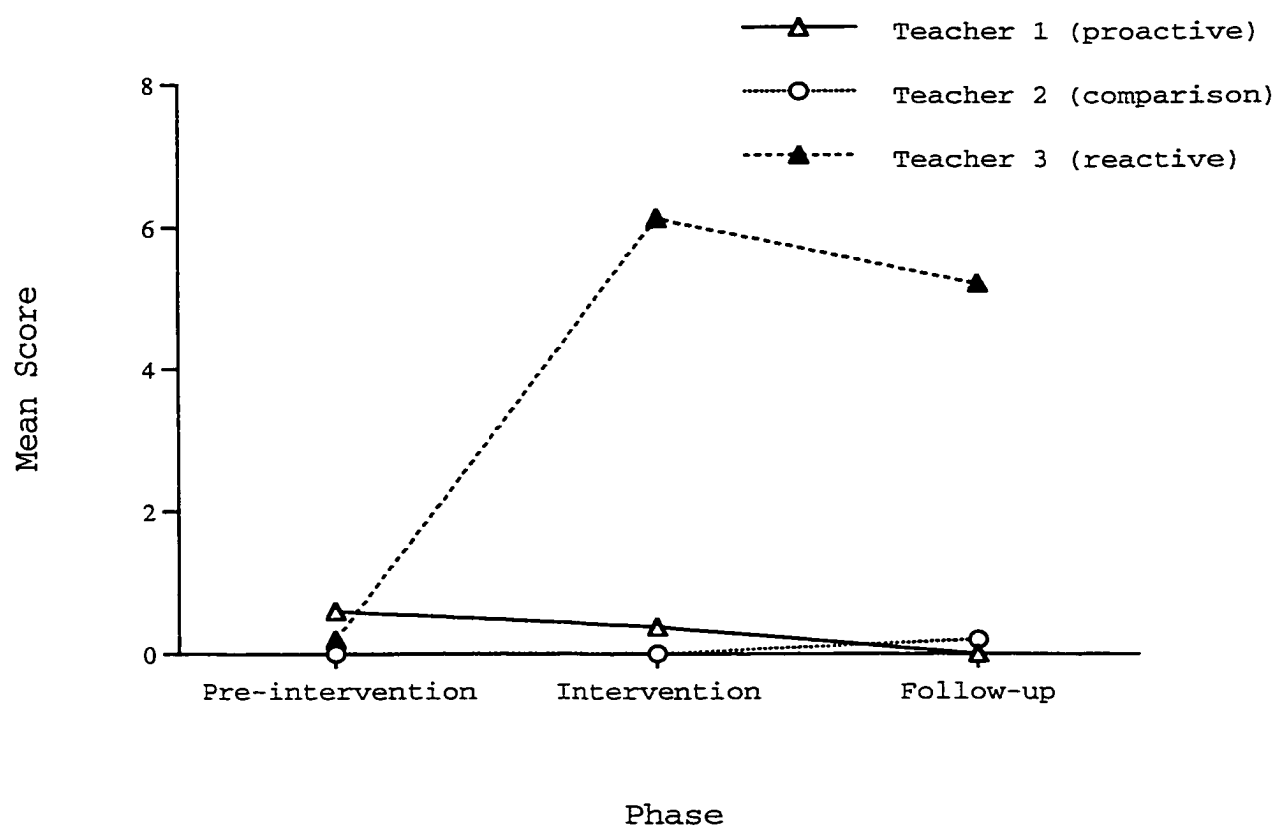


Figure 5. Mean scores of Teachers by Phases for Praise for Positive Responses.

Table 7

Descriptive Data for Praise for Positive ResponseTeachers by Phases

Teachers	Phases	<u>M</u>	<u>SD</u>	n
Teacher 1	Pre-Intervention	.60	.89	5
	Intervention	.38	.52	8
	Follow-up	.00	.00	5
	Total	.33	.59	18
Teacher 2	Pre-Intervention	.00	.00	5
	Intervention	.00	.00	8
	Follow-up	.20	.45	5
	Total	5.56E-02	.00	18
Teacher 3	Pre-Intervention	.20	.45	5
	Intervention	6.13	3.83	8
	Follow-up	5.20	2.17	5
	Total	4.22	3.73	18
Total	Pre-Intervention	.27	.82	15
	Intervention	2.17	3.57	24
	Follow-up	1.80	2.76	15
	Total	1.54	2.88	54

Intervention ($\underline{M} = 2.17$) and between Pre-intervention ($\underline{M} = .27$) and Follow-up ($\underline{M} = 1.80$). For Teachers, the Tukey procedure revealed significant differences ($p < .05$) between Teacher 1, proactive, ($\underline{M} = .33$) and Teacher 3, reactive, ($\underline{M} = 4.22$) and between Teacher 2, comparison, ($\underline{M} = 0$) and Teacher 3, reactive, ($\underline{M} = 4.22$). The results indicated that the differences were the result of the behavior of Teacher 2 during both Intervention and Follow-up.

Identifying the Steps Necessary to Complete the Skill.

The final two-2 way ANOVA for Teachers was conducted to determine whether there were significant differences between Teachers and across Phases for the behavior of "identifying the steps necessary to complete the skill". The results of the test revealed a significant main effect for Teachers, $F(2,45) = 7.119$, $p < .05$ and for Phases, $F(2,45) = 6.233$, $p < .05$. There was also a significant Teachers by Phases interaction, $F(4,45) = 6.233$, $p < .05$. A graphic presentation of these data is contained in Figure 6, and descriptive statistics are contained in Table 8.

To determine the source of the interaction, a multiple comparison analysis was conducted using the Tukey Honestly Significant Difference (HSD) procedure for both Phases and Teachers. For Phases, there was a significant difference

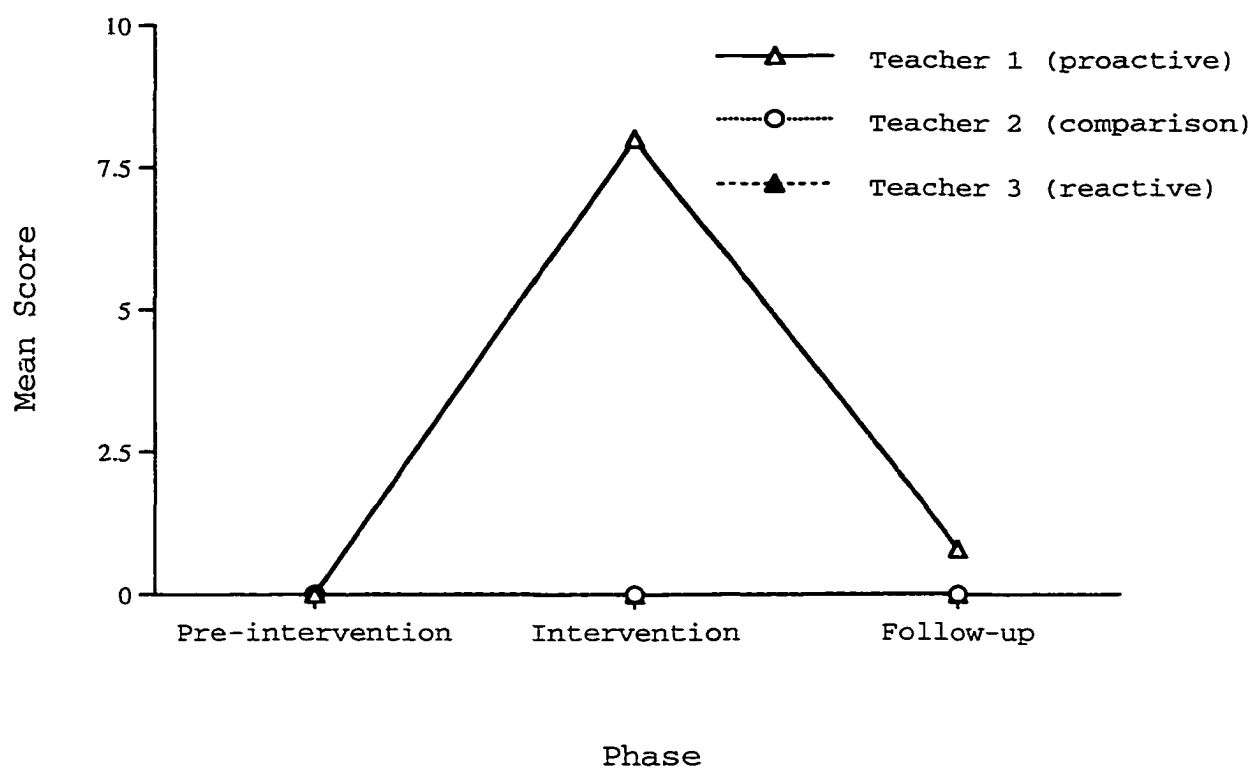


Figure 6. Mean scores of Teachers by Phases for Identifying the Steps Necessary to Complete the Skill.

Table 8

Descriptive Data for Identifying StepsTeachers by Phases

Teachers	Phases	<u>M</u>	<u>SD</u>	n
Teacher 1	Pre-Intervention	.00	.00	5
	Intervention	8.00	6.63	8
	Follow-up	.80	.84	5
	Total	3.78	5.79	18
Teacher 2	Pre-Intervention	.00	.00	5
	Intervention	.00	.00	8
	Follow-up	.00	.00	5
	Total	.00	.00	18
Teacher 3	Pre-Intervention	.00	.00	5
	Intervention	.00	.00	8
	Follow-up	.00	.00	5
	Total	.00	.00	18
Total	Pre-Intervention	.00	.00	15
	Intervention	2.67	5.31	24
	Follow-up	.27	.59	15
	Total	1.26	3.74	54

($p < .05$) between Pre-intervention ($\underline{M} = .0$) and Intervention ($\underline{M} = 2.67$) and between Intervention ($\underline{M} = 2.67$) and Follow-up ($\underline{M} = .27$). For Teachers, the Tukey procedure revealed significant differences ($p < .05$) between Teacher 1, proactive, ($\underline{M} = 3.78$) and Teacher 2, comparison, ($\underline{M} = 0$) and between Teacher 1, proactive, ($\underline{M} = 3.78$) and Teacher 3, reactive, ($\underline{M} = 0$). The results indicated that the differences were the result of the behavior of Teacher 1 during intervention.

In summary, the results from these analyses indicated that there were differences in the target behaviors of Teachers throughout the Intervention and Follow-up Phases. Teacher 3, reactive, praised students for "positive initiations" and "positive responses" at a rate significantly higher than either Teacher 1, proactive, or Teacher 2, comparison. Teachers 1 and 2 did not differ significantly from each other in the frequency in which they praised children for "positive initiations" or "positive responses" during any of the Phases of the study. Teacher 1, proactive, was the only teacher to "identify the steps necessary to complete the skill." The occurrences of this behavior increased during Intervention but decreased during Follow-up. The only Teacher who demonstrated

significant changes in Behavior during Follow-up was Teacher 3, reactive.

Results of the Analyses of Child Behavior

The data were analyzed to answer the following research questions:

1. Will there be a difference in the social behaviors of children in the three groups in relation to the positive initiations with peers and positive responses to peers?
2. Will there be a difference in the positive initiation and positive response behaviors of children with peers in the groups during a follow-up measure?

In addition to collecting data on "positive initiations" and "positive responses," data were collected on "negative initiations" and "negative responses." The first set of analyses was conducted to compare scores on each measure (positive initiations, negative initiations, positive responses, and negative responses) across Groups and the second set was conducted to compare children's scores on each of the four measures within each group and across Phases. In addition, the performance of children with disabilities on each of these measures (positive initiations, negative initiations, positive responses, and negative responses) across groups was analyzed.

Phases by Measures Analyses

To determine whether there were differences in children's score on each of the four Measures (positive initiations, negative initiations, positive responses, negative responses) across Phases a series of two-way ANOVAs (Phases x Measures) was conducted for each group.

Group 1 (proactive). The first two-way ANOVA was conducted with data from Group 1. The independent variables were Phases and Measures, and the dependent variable was score. Results of this analysis indicated that there was a significant main effect for Phases, $F(2,492) = 6.230$, $p = .002$, and Measures, $F(3,492) = 56.034$, $p = .000$. There was not a significant interaction between Phases and Measure, $F(6,492) = 1.578$, $p = .157$. A graphic presentation of these data is contained in Figure 7, and descriptive data are contained in Table 9.

To locate the source of the main effect for Phases a one-way ANOVA was conducted with Phases as the independent variable and score as the dependent variable. The results of the analysis were significant, $F(2,501) = 4.600$, $p = .010$. The Tukey multiple comparison procedure was used to determine where the differences existed. There was a significant difference ($p < .05$) between the mean scores of Pre-intervention ($\bar{M} = .88$) and Follow-up ($\bar{M} =$

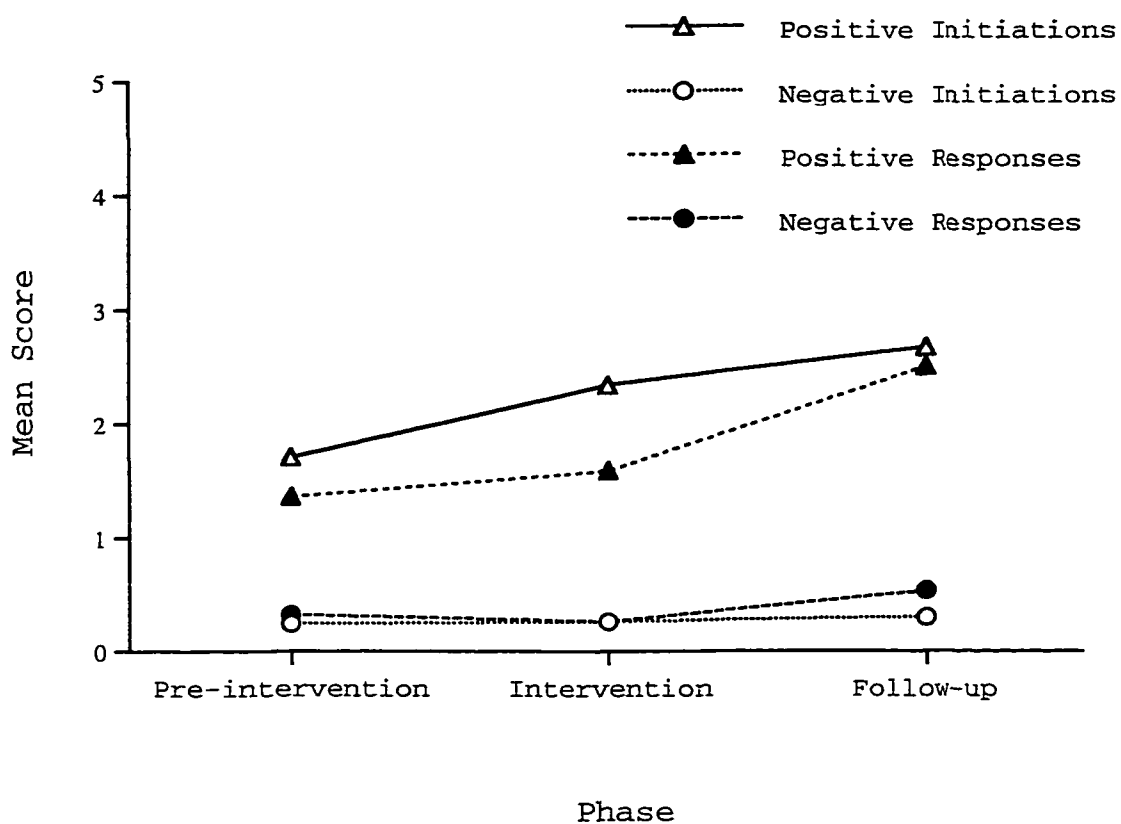


Figure 7. Group 1 (proactive) mean scores for Measures across Phases.

Table 9

Descriptive Data for Group 1 (proactive) for Phases by Measures

Phases	Measures	<u>M</u>	<u>SD</u>	n
Pre-intervention	Positive Initiation	1.71	1.52	38
	Negative Initiation	.24	.68	38
	Positive Response	1.36	1.48	38
	Negative Response	.32	.62	38
	Total	.88	1.31	152
Intervention	Positive Initiation	2.34	2.54	58
	Negative Initiation	.26	.69	58
	Positive Response	1.59	1.49	58
	Negative Response	.26	.85	58
	Total	1.11	1.80	232
Follow-up	Positive Initiation	2.67	2.07	38
	Negative Initiation	.30	.84	38
	Positive Response	2.50	1.76	38
	Negative Response	.53	.97	38
	Total	1.50	1.84	152
Total	Positive Initiation	2.23	2.18	126
	Negative Initiation	.26	.72	126
	Positive Response	1.71	1.61	126
	Negative Response	.34	.82	126
	Total	1.13	1.69	504

1.50). This analysis revealed that there was a difference in scores across Phases, but did not identify whether there were differences among Measures.

To determine whether scores on specific Measures differed across Phases, a one-way ANOVA was conducted for each of the four Measures with score as the dependent variable and Phases as the independent variable. For Measure 1, "positive initiations", results of the ANOVA were not significant, $F(2,123) = 1.782$, $p = .173$. Similarly, the results of the ANOVA for Measure 2, "negative initiations", were not significant, $F(2,123) = .065$, $p = .937$, and the results of the ANOVA for Measure 4, "negative responses", were not significant, $F(2,123) = 1.135$, $p = .325$. However, the results of the one-way ANOVA for Measure 3, "positive responses", were significant, $F(2,123) = 5.633$, $p = .005$. To identify where the difference existed, a Tukey multiple comparison procedure was conducted, and the results indicated that the score on positive responses was significantly different ($p < .05$) between Pre-intervention ($\bar{M} = 1.26$) and Follow-up ($\bar{M} = 2.50$) and between Intervention ($\bar{M} = 1.59$) and Follow-up ($\bar{M} = 2.50$).

To locate the source of the main effect for Measures, a one-way ANOVA with Measures as the independent variable

and score as the dependent variable was conducted. Results of this analysis were significant, $F(3,500) = 57.425$, $p = .000$. The Tukey procedure was used to determine where the differences existed among measures. The results indicated that the mean score for "positive initiations" ($\bar{M} = 2.23$) was significantly greater ($p < .05$) than the mean scores for "negative initiations" ($\bar{M} = .26$), "positive responses" ($\bar{M} = 1.71$), and "negative responses" ($\bar{M} = .34$). The mean score for "positive responses" ($\bar{M} = 1.71$) was also significantly higher than the mean scores for "negative initiations" ($\bar{M} = .26$) and "negative responses" ($\bar{M} = .34$).

Group 2 (comparison). A two-way ANOVA was conducted with data for Group 2, comparison. The independent variables were Phases and Measures and the dependent variable was score. Results of this analysis indicated that there was a significant Main effect for Phases, $F(2,480) = 5.275$, $p = .005$, and Measures, $F(3,480) = 13.633$, $p = .000$. There was not a significant interaction between Phases and Measures, $F(6,480) = 1.494$, $p = .178$. A graphic presentation of these data is contained in Figure 8, and descriptive data are contained in Table 10.

To locate the source of the main effect for Phases, a one-way ANOVA with Phases as the independent variable and score as the independent variable was conducted. Results of

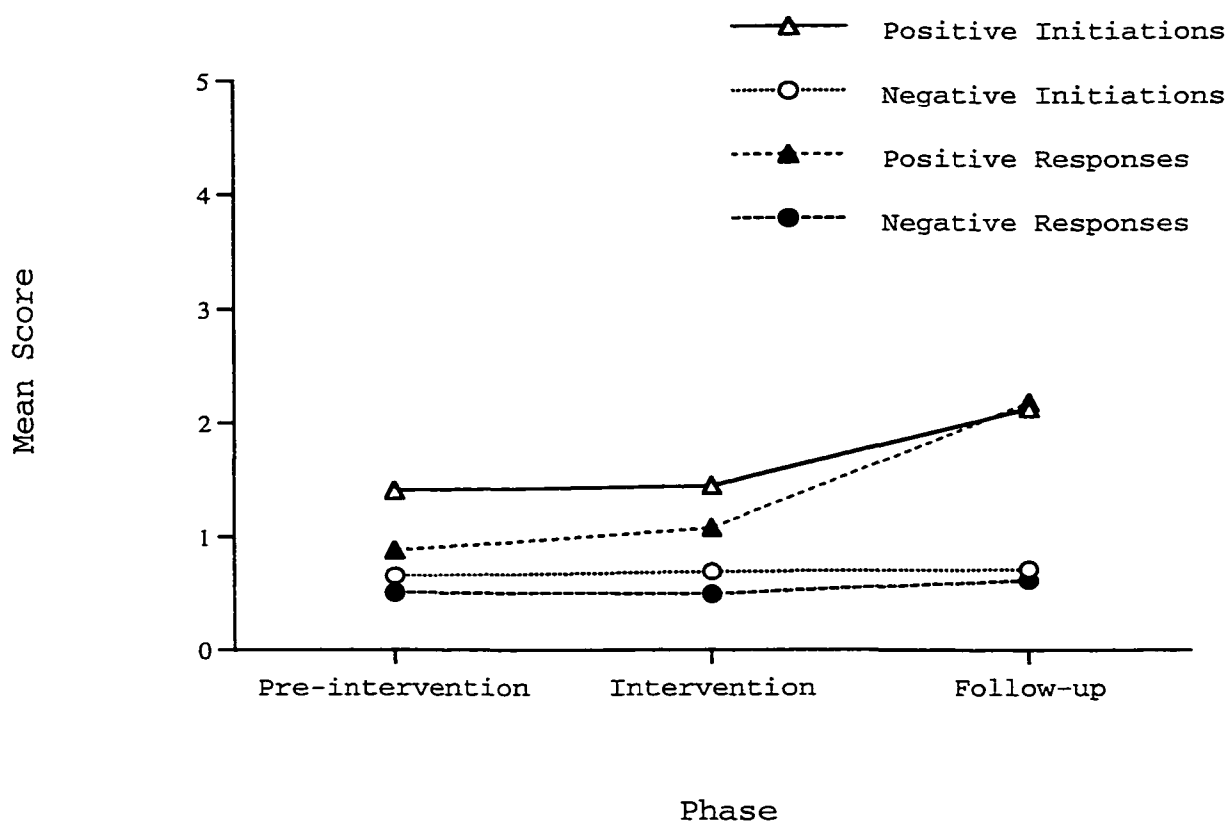


Figure 8. Group 2 (comparison) mean scores for Measures across Phases.

Table 10

Descriptive Data for Group 2 (comparison) for Phases by Measures

Phases	Measures	<u>M</u>	<u>SD</u>	n
Pre-intervention	Positive Initiation	1.41	1.86	34
	Negative Initiation	.65	1.30	34
	Positive Response	.88	1.32	34
	Negative Response	.50	1.19	34
	Total	.86	1.47	136
Intervention	Positive Initiation	1.45	1.87	51
	Negative Initiation	.69	1.42	51
	Positive Response	1.08	1.65	51
	Negative Response	.49	1.07	51
	Total	.93	1.56	204
Follow-up	Positive Initiation	2.13	2.17	38
	Negative Initiation	.71	1.43	38
	Positive Response	2.18	2.41	38
	Negative Response	.61	1.05	38
	Total	1.41	1.98	152
Total	Positive Initiation	1.65	1.98	123
	Negative Initiation	.68	1.38	123
	Positive Response	1.37	1.91	123
	Negative Response	.53	1.09	123
	Total	1.06	1.69	492

this analysis were significant, $F(2,489) = 4.868$, $p = .008$. The Tukey multiple comparisons procedure was conducted to determine where the differences existed. Results indicated that there was a significant difference in overall mean score ($p < .05$) between Pre-intervention ($M = .86$) and Follow-up ($M = 1.41$) and between Intervention ($M = .93$) and Follow-up ($M = 1.41$). This analysis revealed that there was a difference in behaviors but did not identify where the difference existed.

To determine whether scores on specific Measures differed by Phases, a one-way ANOVA was run for each of the four Measures with score as the dependent variable and Phase as the independent variable. The results were not significant for Measure 1, "positive initiations," $F(2,120) = 1.653$, $p = .196$, Measure 2, "negative initiations," $F(2,120) = .019$, $p = .981$, or Measure 4, "negative response," $F(2,120) = .136$, $p = .873$. However, the results of the ANOVA for Measure 3, "positive responses," were significant, $F(2,120) = 5.518$, $p = .005$. To assist in identifying where the difference existed, a Tukey multiple comparison procedure was conducted, and the results indicated that the score on "positive responses" was significantly different ($p < .05$) between Pre-intervention

(\underline{M} = .88) and Follow-up (\underline{M} = 1.08) and between Intervention (\underline{M} = 1.08) and Follow-up (\underline{M} = 1.08).

To locate the source of the main effect for Measures, a one-way ANOVA was conducted with Measures as the independent variable and score as the dependent variable. The results of the analysis were significant, $F(3,488) = 13.343$, $p = .000$. The Tukey multiple comparison procedure was used to determine where the differences existed. There was a significant differences ($p < .05$) between the mean scores for "positive initiations" (\underline{M} = 1.65) and "negative initiations" (\underline{M} = .68); between "positive initiations" (\underline{M} = 1.65) and "negative responses" (\underline{M} = .53); between "negative initiations" (\underline{M} = .68) and "positive responses" (1.37); and between "positive responses" (\underline{M} = 1.37) and "negative responses" (\underline{M} = .53).

Group 3 (reactive). A two-way ANOVA was conducted for Group 3 (reactive) with Phases and Measures as the independent variables and score the dependent variable. Results of this analysis indicated a significant main effect for Phases, $F(2,504) = 6.984$, $p = .001$, and a significant main effect for Measures, $F(3,504) = 69.235$, $p = .000$. The analysis also revealed a significant interaction between Phases and Measures, $F(6,504) = 2.634$, $p = .016$. Results from the Tukey multiple comparisons

procedure indicated that there were significant differences ($p < .05$) in the scores received on Measures between Pre-Intervention ($\underline{M} = 1.13$) and Follow-up ($\underline{M} = 1.78$) and between Intervention ($\underline{M} = 1.26$) and Follow-up ($\underline{M} = 1.78$). For Measures, results of the Tukey procedure indicated significant differences between scores on the following measures: "positive initiation" ($\underline{M} = 2.88$) and "negative initiation" ($\underline{M} = .3$), "positive initiation" ($\underline{M} = 2.88$) and "positive response" ($\underline{M} = 1.89$), "positive initiation" ($\underline{M} = 2.88$) and "negative response" ($\underline{M} = .41$), "negative initiation" ($\underline{M} = .33$), and "positive response" ($\underline{M} = 1.89$) and between "positive response" ($\underline{M} = 1.89$) and "negative response" ($\underline{M} = .41$). A graphic presentation of these data is contained in Figure 9, and descriptive data are contained in Table 11.

To determine the source of the interaction, a series of one-way ANOVAs was conducted for each measure with score as the dependent variable and Phase as the independent variable. For Measure 1, "positive initiations", the results were significant, $F(2,126) = 6.085$, $p = .003$. Tukey comparison results indicated a significant difference ($p < .05$) existed between Intervention ($\underline{M} = 2.71$) and Follow-up ($\underline{M} = 3.87$) and between Pre-intervention ($\underline{M} = 2.06$) and Follow-up ($\underline{M} = 3.87$). The results of the ANOVA

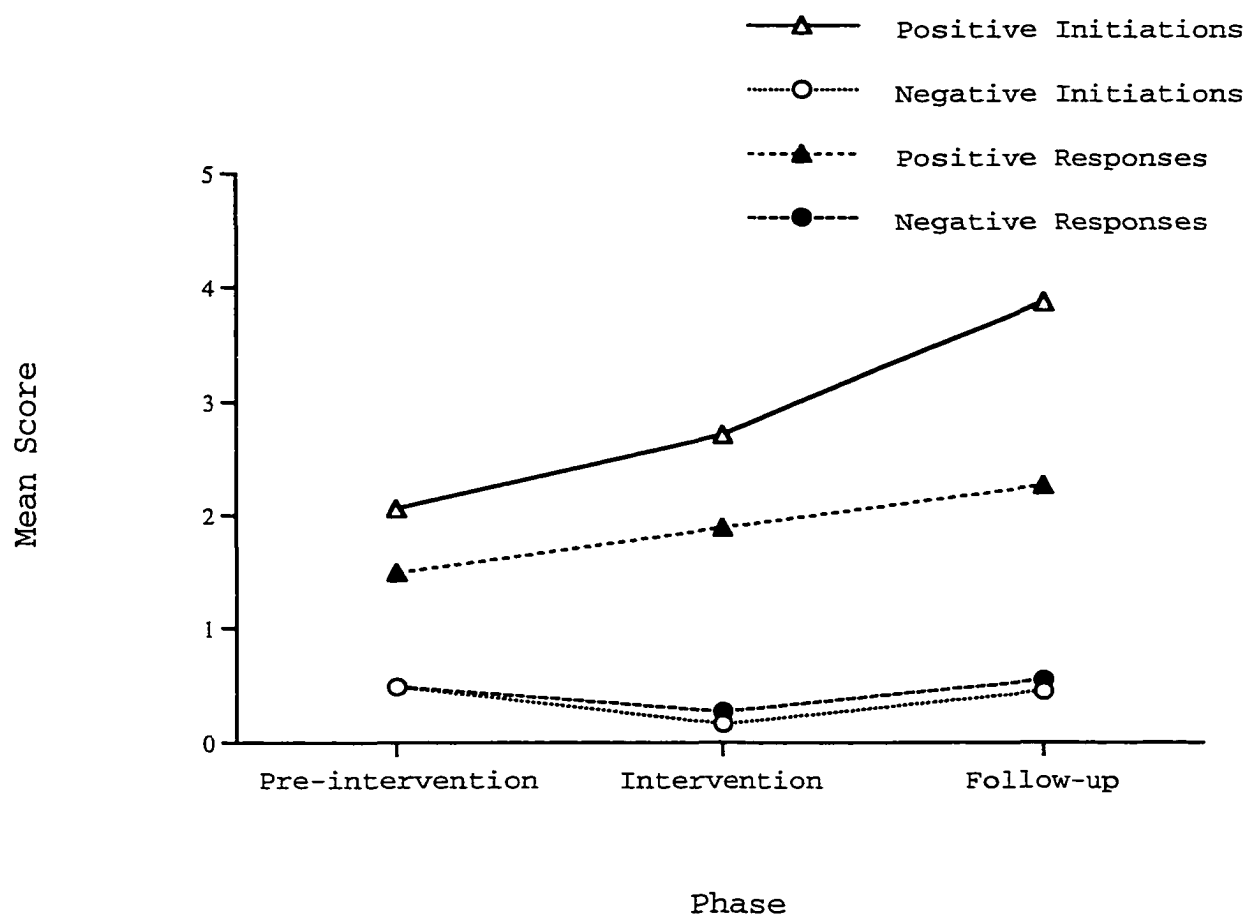


Figure 9. Group 3 (reactive) mean scores for Measures across Phases.

Table 11

Descriptive Data for Group 3 (reactive) for Phases by Measures

Phases	Measures	<u>M</u>	<u>SD</u>	n
Pre-intervention	Positive Initiation	2.06	2.17	35
	Negative Initiation	.49	1.56	35
	Positive Response	1.49	2.29	35
	Negative Response	.49	1.09	35
	Total	1.13	1.94	140
Intervention	Positive Initiation	2.71	1.85	56
	Negative Initiation	.16	.50	56
	Positive Response	1.89	1.65	56
	Negative Response	.27	.65	56
	Total	1.26	1.69	224
Follow-up	Positive Initiation	3.87	2.84	38
	Negative Initiation	.45	.83	38
	Positive Response	2.26	1.81	38
	Negative Response	.55	1.13	38
	Total	1.78	2.29	152
Total	Positive Initiation	2.88	2.35	129
	Negative Initiation	.33	.99	129
	Positive Response	1.89	1.90	129
	Negative Response	.41	.94	129
	Total	1.38	1.97	516

conducted on the other three measures were not significant:
 "negative initiations", $F(2,126) = 1.540$, $p = .218$;
 "positive responses", $F(2,126) = 1.544$, $p = .218$, and
 "negative responses", $F(2,126) = 1.193$, $p = .307$.

In summary, the differences between the performance of students in Group 1 and Group 2, as indicated by their scores on the Measures and across Phases, was not significantly different. In fact, the patterns in the data revealed during these analyses were similar. For Group 3; however, the significant difference among Measures was for Measure 1, "positive initiations", not Measure 3, "positive responses". It is likely that this difference was due to the intervention. While there was not a significant difference in Measure 3, the data indicated that students in Group 3 had steadily increased their performance on this skill across Phases.

Groups By Phases Analyses

To determine whether there was a difference among Groups on the four measures, a series of two-way ANOVAs (Groups x Phases) was conducted, one for each measure (positive initiations, negative initiations, positive responses, and negative responses).

Positive Initiations. On the first measure, "positive initiations," the results of the two-way ANOVA indicated

that there was a significant main effect for Groups, $F(2,369) = 9.834$, $p = .000$, and a significant main effect for Phases, $F(2,369) = 7.990$, $p = .000$. The Groups by Phases interaction was not significant, $F(4,369) = .860$, $p = .488$. A graphic presentation of these data is contained in Figure 10, and descriptive statistics are contained in Table 12.

To locate the source of the main effect for Groups, separate ANOVAs were conducted for Groups for each of the three Phases (Pre-intervention, Intervention, and Follow-up) with Groups as the independent variable and score on "positive initiations" as the dependent variable. The results of the ANOVA for Pre-intervention were not significant, $F(2,104) = 1.041$, $p = .157$, indicating that the Groups did not differ on the measure of "positive initiations". The results of the ANOVA for Intervention indicated significant differences, $F(2,162) = 4.958$, $p = .008$. The Tukey multiple comparison procedure revealed that during Intervention, the mean score ($M = 1.45$) for Group 2 (comparison) differed significantly ($p < .05$) from the mean score ($M = 2.71$) for Group 3 (reactive). The results of the ANOVA for Follow-up were significant, $F(2,103) = 5.147$, $p = .007$. The Tukey multiple comparison procedure revealed a significant difference ($p < .05$)

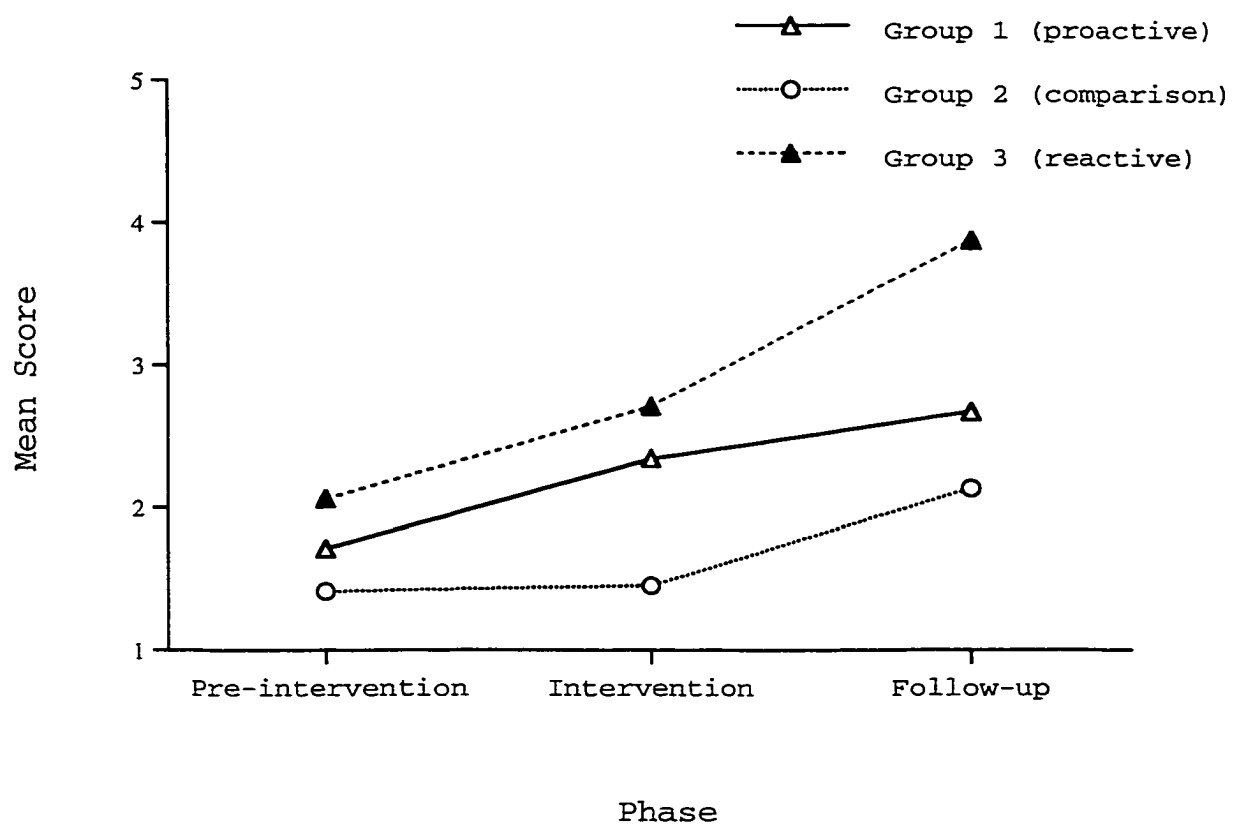


Figure 10. Mean scores of Groups by Phases for Positive Initiations.

Table 12

Descriptive Data for Groups by Phases for Positive
Initiation

Groups	Phases	<u>M</u>	<u>SD</u>	n
Group 1 (Proactive)				
	Pre-Intervention	1.71	1.52	38
	Intervention	2.34	2.54	58
	Follow-up	2.67	2.07	30
	Total	2.23	2.18	126
Group 2 (Comparison)				
	Pre-Intervention	1.41	1.86	34
	Intervention	1.45	1.87	51
	Follow-up	2.13	2.17	38
	Total	1.65	1.98	123
Group 3 (Reactive)				
	Pre-Intervention	2.06	2.17	35
	Intervention	2.71	1.85	56
	Follow-up	3.87	2.84	38
	Total	2.88	2.35	129
Total				
	Pre-Intervention	1.73	1.86	107
	Intervention	2.19	2.17	165
	Follow-up	2.91	2.50	106
	Total	2.26	2.23	378

between the mean scores ($\underline{M} = 2.67$) for Group 2 (Comparison) and the mean scores ($\underline{M} = 3.87$) Group 3 (reactive) during Follow-up.

To locate the source of the main effect for Phases, a one-way ANOVA was conducted with Phases as the independent variable and score on "positive initiations" as the dependent variable. Significant results were obtained, $\underline{F}(2,375) = 7.830$, $\underline{p} = .000$. To determine where the differences occurred, a Tukey multiple comparison procedure was conducted. The results indicated a significant difference ($\underline{p} < .05$) between the mean score for Pre-intervention ($\underline{M} = 1.73$) and Follow-up ($\underline{M} = 2.91$) and between the mean score of Intervention ($\underline{M} = 2.19$) and Follow-up ($\underline{M} = 2.91$).

Negative Initiations. The second two-way ANOVA was conducted for "negative initiations" with Groups and Phases independent variables and score on the measure as the dependent variable. Results of the analysis indicated a significant main effect for Groups, $\underline{F}(2,369) = 4.952$, $\underline{p} = .008$. The main effect for Phases was not significant, $\underline{F}(2,369) = .449$, $\underline{p} = .638$ nor was the interaction of Groups by Phases, $\underline{F}(4,369) = .449$, $\underline{p} = .771$. A graphic presentation of these data is contained in Figure 11, and descriptive data are contained in Table 13.

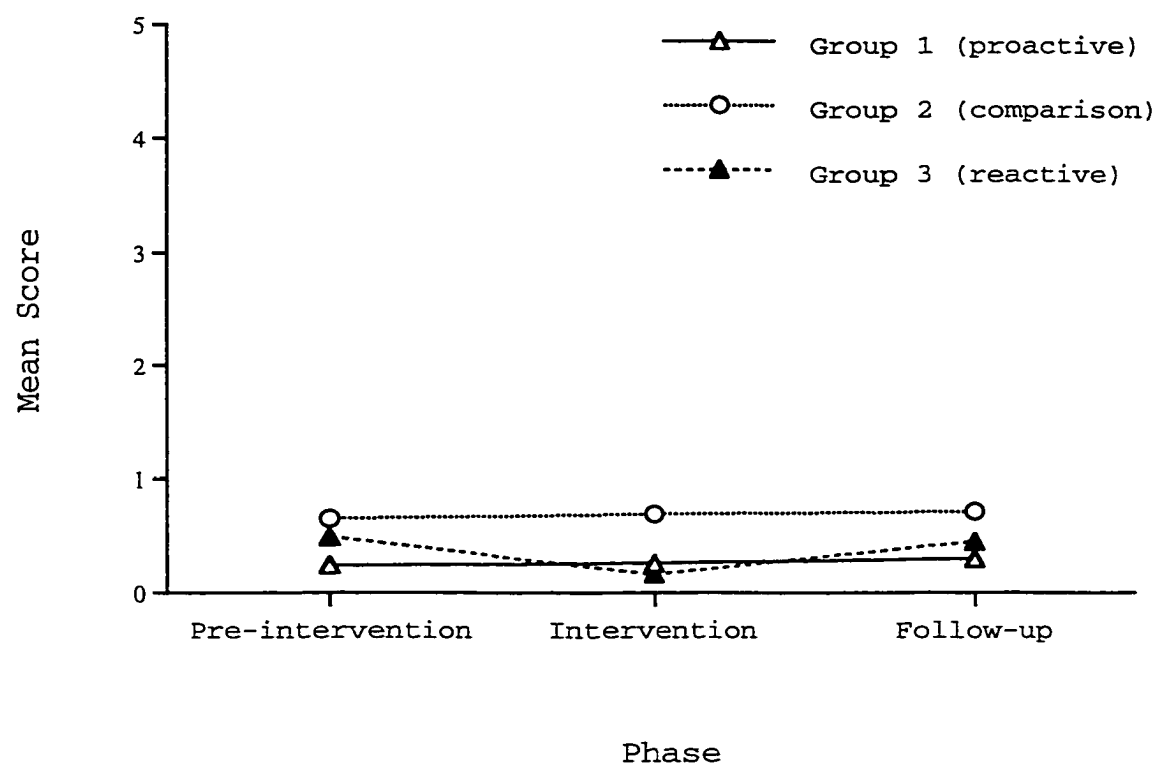


Figure 11. Mean scores of Groups by Phases for Negative Initiations.

Table 13

Descriptive Data for Groups by Phases for Negative
Initiation

Groups	Phases	<u>M</u>	<u>SD</u>	n
Group 1 (Proactive)				
	Pre-Intervention	.24	.68	38
	Intervention	.26	.69	58
	Follow-up	.30	.84	30
	Total	.26	.72	126
Group 2 (Comparison)				
	Pre-Intervention	.65	1.30	34
	Intervention	.69	1.42	51
	Follow-up	.71	1.43	38
	Total	.68	1.38	123
Group 3 (Reactive)				
	Pre-Intervention	.49	1.56	35
	Intervention	.16	.50	56
	Follow-up	.45	.83	38
	Total	.33	.99	129
Total				
	Pre-Intervention	.45	1.22	107
	Intervention	.36	.96	165
	Follow-up	.50	1.09	106
	Total	.42	1.07	378

To locate the source of the main effect for Group, an ANOVA was conducted for Groups for each of the three Phases with Group as the independent variable and score on "negative initiations" as the independent variable. The results of the ANOVA for the Pre-intervention were not significant, $F(2,104) = 1.035$, $p = 3.59$, indicating that the performance of the Groups on "negative initiations" during Pre-intervention was equivalent. The results of the ANOVA for Intervention were significant, $F(2,162) = 4.717$, $p = .010$. The results of the ANOVA conducted for Follow-up were not significant, $F(2,103) = 1.267$, $p = .286$. To determine where the differences existed during Intervention, the Tukey multiple comparison procedure was conducted. The results indicated a significant difference ($p < .05$) in the mean scores between Group 1, proactive, ($M = .26$) and Group 2, comparison, ($M = .69$) and between Group 3, reactive, ($M = .16$) and Group 2, comparison, ($M = .69$).

Positive Responses. The third two-way ANOVA was conducted for "positive responses" with Groups and Phases independent variables and score on measure the dependent variable. Results of the analysis indicated that the main effect for Groups was not significant, $F(2,369) = 2.691$, $p = .069$, nor was the interaction between Groups and Phases, $F(4,369) = .534$, $p = .711$. However, the main

effect for Phases was significant, $F(2,369) = 11.155$, $p = .000$. A graphic presentation of these data are contained in Figure 12, and descriptive data are contained in Table 14.

To locate the source of the main effect for Phases a one-way ANOVA was conducted with Phases as the independent variable and score on "positive responses" the dependent variable. Significant results were obtained, $F(2,375) = 10.715$, $p = .000$. The Tukey multiple comparison procedure was used to determine where the differences existed. Results indicated a significant difference ($p < .05$) in the mean scores received by the Groups between Pre-intervention ($M = 1.21$) and Follow-up ($M = 2.30$) and between Intervention ($M = 1.53$) and Follow-up ($M = 2.30$).

Negative Responses. The fourth two-way ANOVA was conducted for "negative response" with Groups and Phases the independent variables and score on measure the dependent variable. Results of the ANOVA were not significant for Groups, $F(2,369) = .913$, $p = .402$, or Phases, $F(2,369)$, $p = .170$. Similarly, the results for interaction between Groups and Phases were not significant, $F(4,369) = .145$, $p = .965$. A graphic presentation of these data is contained in Figure 13, and descriptive data are contained in Table 15.

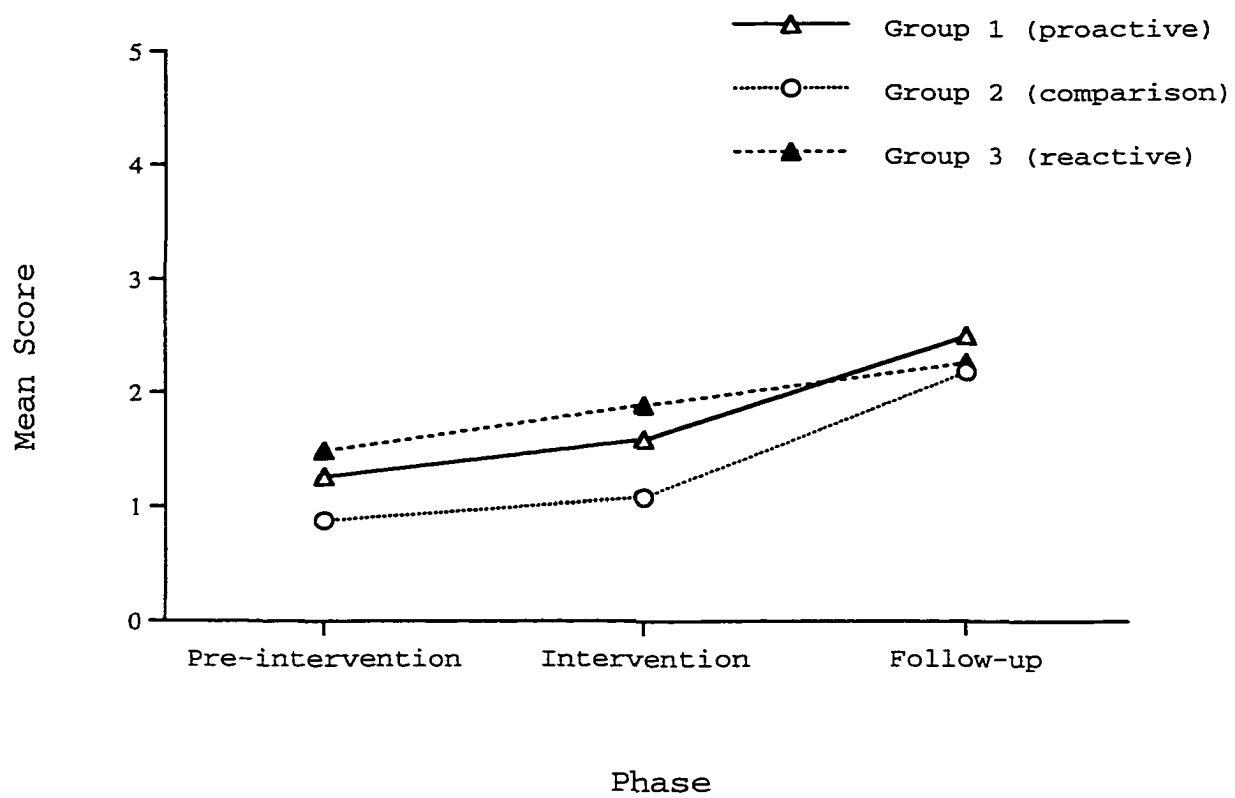


Figure 12. Mean scores of Groups by Phases for Positive Responses.

Table 14

Descriptive Data for Groups by Phases for Positive Response

Groups	Phases	<u>M</u>	<u>SD</u>	n
Group 1 (Proactive)				
	Pre-Intervention	1.26	1.48	38
	Intervention	1.59	1.49	58
	Follow-up	2.50	1.76	30
	Total	1.71	1.61	126
Group 2 (Comparison)				
	Pre-Intervention	.88	1.32	34
	Intervention	1.08	1.65	51
	Follow-up	2.18	2.41	38
	Total	1.37	1.91	123
Group 3 (Reactive)				
	Pre-Intervention	1.49	2.29	35
	Intervention	1.89	1.65	56
	Follow-up	2.26	1.81	38
	Total	1.89	1.90	129
Total				
	Pre-Intervention	1.21	1.75	107
	Intervention	1.53	1.62	165
	Follow-up	2.30	2.02	106
	Total	1.66	1.82	378

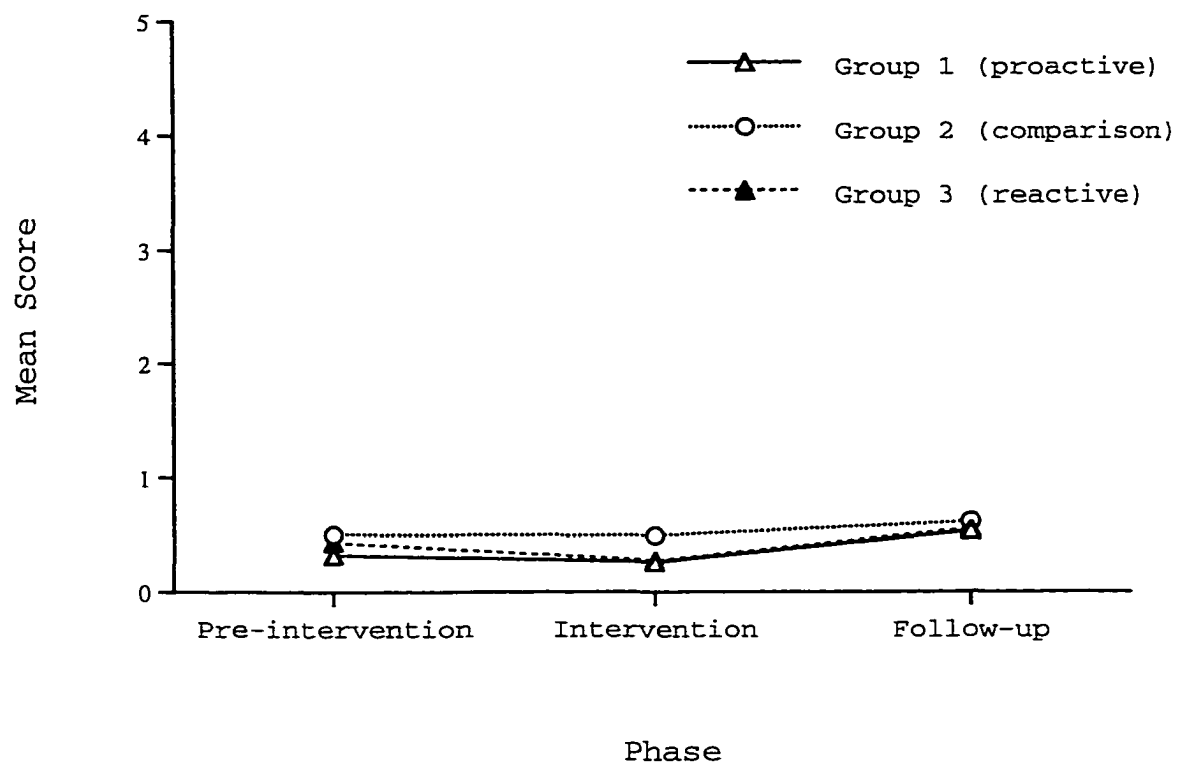


Figure 13. Mean scores of Groups by Phases for Negative Responses.

Table 15

Descriptive Data for Groups by Phases for Negative Response

Groups	Phase	<u>M</u>	<u>SD</u>	n
Group 1 (Proactive)				
	Pre-Intervention	.32	.62	38
	Intervention	.26	.85	58
	Follow-up	.53	.97	30
	Total	.34	.82	126
Group 2 (Comparison)				
	Pre-Intervention	.50	1.19	34
	Intervention	.49	1.07	51
	Follow-up	.61	1.05	38
	Total	.53	1.09	123
Group 3 (Reactive)				
	Pre-Intervention	.43	1.07	35
	Intervention	.27	.65	56
	Follow-up	.55	1.13	38
	Total	.40	.93	129
Total				
	Pre-Intervention	.41	.97	107
	Intervention	.33	.86	165
	Follow-up	.57	1.05	106
	Total	.42	.95	378

In summary, the results of the analyses conducted to compare performance of Groups across Phases and on each of the four measures indicated that the performance between Groups was not significantly different during Pre-intervention. There were no significant interactions; however, analyses of main effects did indicate that some significant differences existed between Groups, particularly between Group 2 and Group 3 on "positive initiations" with Group 3 scoring significantly higher than Group 2 during Intervention and Follow-up. Overall, the score for "positive initiations" showed increases between Pre-intervention and Follow-up and between Intervention and Follow-up. For "positive response," there were no significant differences among Groups, but there were significant differences across Phases. Follow-up scores were significantly higher than either Pre-intervention or Intervention scores. For "negative initiations" and "negative responses," there were no significant differences between Groups or across Phases.

Performance of Children with Disabilities

Before comparing data related to the performance of children with disabilities during the different phases of the study, a series of one-way ANOVAs with Pre-Intervention score as the dependent variable and Groups as the

independent variable was conducted determine whether the performance of the students differed across Groups during Pre-Intervention on each of the four measures. The results of the ANOVA for "positive initiations" were significant, $F(2,24) = 3.650$, $p = .041$, indicating a difference between Groups on this measure during Pre-intervention. The results of the ANOVAS for the other measures were not significant "negative initiations", $F(2,24) = 1.726$, $p = .199$; "positive responses", $F(2,24) = 2.848$, $p = .078$; and "negative responses", $F(2,24) = 3.036$, $p = .067$.

Phases by Measures Analyses

To determine whether there were differences in the scores of children with disabilities on each of the four Measures (positive initiations, negative initiations, positive responses, negative responses) in each Group across Phases a series of two-way ANOVA (Phases x Measures) was conducted for each group.

Group 1 (proactive). The first two-way ANOVA was conducted with data from Group 1. The independent variables were Phases and Measures, and the dependent variable was score. Results of this analysis indicated that there was a significant main effect for Measures, $F(3,120) = 15.2600$, $p < .05$. There was not a significant main effect for Phases, $F(2,120) = 2.754$, $p > .05$, nor was

there a significant interaction between Phases and Measures, $F(6,120) = 1.053$, $p > .05$. Descriptive statistics are contained in Table 16.

To locate the source of the main effect for Measures, a Tukey multiple comparison procedure was conducted. Results of the analyses indicated that there was a significant differences between the mean scores of Measure 1, "positive initiations" ($\bar{M} = 1.76$) and Measure 2, "negative initiations" ($\bar{M} = 0$); Measure 1, "positive initiations" ($\bar{M} = 1.76$) and Measure 4, "negative responses" ($\bar{M} = 1.09$); Measure 2, "negative initiations" ($\bar{M} = 0$) and Measure 3, "positive responses" ($\bar{M} = 1.09$); Measure 3 "positive responses" ($\bar{M} = 1.09$) and Measure 4, "negative responses" ($\bar{M} = 0$).

Group 2 (comparison). A two-way ANOVA was conducted with data from Group 2, comparison. The independent variables were Phases and Measures, and the dependent variable was score. Results of this analysis indicated that there was a significant main effect for Measures, $F(3,112) = 4.238$, $p < .05$. There was not a significant main effect for Phases, $F(2,12) = .951$, $p > .05$, nor was there a significant interaction between Phases and Measures, $F(6,112) = 1.363$, $p > .05$. Descriptive statistics are contained in Table 17.

Table 16

Descriptive Data for Group 1 (proactive) for Phases by Measures
Children with Disabilities

Phases	Measures	<u>M</u>	<u>SD</u>	n
Pre-intervention	Positive Initiation	.89	1.17	9
	Negative Initiation	.00	.00	9
	Positive Response	.67	1.12	9
	Negative Response	.00	.00	9
	Total	.39	.87	36
Intervention	Positive Initiation	1.79	2.81	14
	Negative Initiation	.00	.00	14
	Positive Response	.93	.92	14
	Negative Response	.00	.00	14
	Total	.68	1.62	56
Follow-up	Positive Initiation	2.50	2.12	10
	Negative Initiation	.00	.00	10
	Positive Response	1.70	.95	10
	Negative Response	.00	.00	10
	Total	1.05	1.57	40
Total	Positive Initiation	1.76	2.28	33
	Negative Initiation	.00	.00	33
	Positive Response	1.09	1.04	33
	Negative Response	.00	.00	33
	Total	.71	1.45	132

Table 17

Descriptive Data for Group 2 (comparison) for Phases by Measures
Children with Disabilities

Phases	Measures	<u>M</u>	<u>SD</u>	n
Pre-intervention	Positive Initiation	.40	.70	10
	Negative Initiation	1.00E-01	.32	10
	Positive Response	.30	.95	10
	Negative Response	.10	.32	10
	Total	.23	.62	40
Intervention	Positive Initiation	.82	1.40	11
	Negative Initiation	.27	.47	11
	Positive Response	.18	.40	11
	Negative Response	9.09E-02	.30	11
	Total	.34	.81	44
Follow-up	Positive Initiation	.70	.82	10
	Negative Initiation	.00	.00	10
	Positive Response	1.00	1.25	10
	Negative Response	1.00E-01	.32	10
	Total	.45	.85	40
Total	Positive Initiation	.65	1.02	31
	Negative Initiation	.13	.34	31
	Positive Response	.68	.96	31
	Negative Response	9.68E-02	.30	31
	Total	.34	.76	124

To locate the source of the main effect for Measure, a Tukey multiple comparison procedure was conducted. Results of the analyses indicated that there were significant differences between the mean scores of Measure 1, "positive initiations" ($\bar{M} = .65$) and Measure 2, "negative initiations" ($\bar{M} = .13$) and between Measure 1, "positive initiations" ($\bar{M} = .65$) and Measure 4, "negative responses."

Group 3 (reactive). A two-way ANOVA was conducted with data from Group 3, reactive. The independent variables were Phases and Measures, and the dependent variable was score. Results of this analysis indicated that there was a significant main effect for Measures, $F(3,108) = 6.379$, $p = .002$. There was not a significant main effect for Phases, $F(2,108) = 2.266$, $p > .05$, nor was there a significant interaction between Phases and Measures, $F(6,108) = .687$, $p > .05$. Descriptive statistics are contained in Table 18.

To locate the source of the main effect for Measures, a Tukey multiple comparison procedure was conducted. Results of the analyses indicated that there was a significant differences between the mean scores of Measure 1, "positive initiations" ($\bar{M} = 2.90$) and Measure 2, "negative initiations" ($\bar{M} = .73$) and between Measure 1,

Table 18

Descriptive Data for Group 3 (reactive) for Phases by Measures
Children with Disabilities

Phases	Measures	<u>M</u>	<u>SD</u>	n
Pre-intervention	Positive Initiation	2.75	3.20	8
	Negative Initiation	1.38	3.11	8
	Positive Response	2.75	3.92	8
	Negative Response	1.13	1.89	8
	Total	2.00	3.06	32
Intervention	Positive Initiation	2.29	1.38	14
	Negative Initiation	.14	.36	14
	Positive Response	2.14	1.70	14
	Negative Response	.21	.43	14
	Total	1.20	1.51	56
Follow-up	Positive Initiation	4.13	4.39	8
	Negative Initiation	1.13	1.13	8
	Positive Response	1.62	1.06	8
	Negative Response	1.50	2.00	8
	Total	2.09	2.69	32
Total	Positive Initiation	2.90	2.93	30
	Negative Initiation	.73	1.74	30
	Positive Response	2.17	2.34	30
	Negative Response	.80	1.49	30
	Total	1.65	2.36	120

"positive initiations" ($\bar{M} = 2.90$) and Measure 4, "negative responses" ($\bar{M} = .80$).

Groups by Phases Analyses

To determine whether there were differences in the performance of children with disabilities among Groups on the four measures (positive initiations, negative initiations, positive responses, negative responses), statistical analyses were conducted. Results of these analyses are presented in the following sections.

Positive Initiations. Due to the significant differences among groups during Pre-intervention, a Groups by Phases ANCOVA was conducted with Groups and Phases (Intervention and Follow-up) independent variables, score as the dependent variable, and Pre-intervention was the covariate. The following results for Tests of Within-Subject Effects were not significant; Phases, $F(1,2) = 1.657$, $p > .05$; Phases by Pre-intervention interaction, $F(1,2) = .431$, $p > .05$; Phases by Groups interaction, $F(2,2) = .626$, $p > .05$. For the Tests of Between-Subjects Effect, there was a significant difference for Groups, $F(2,2) = 62.673$, $p < .05$, but there was not a significant effect for Pre-intervention, $F(1,2) = 3.599$, $p > .05$. The mean score for Group 1, proactive, was 2.064; for Group 2, .494; for Group 3, 3.355.

Negative Initiations. A two-way ANOVA was conducted for "negative initiations" with Groups and Phases independent variables and score on the measure as the dependent variable. Results of the analysis indicated a significant main effect for Groups, $F(2,85) = 6.908$, $p < .05$. The main effect for Phases was not significant, $F(2,85) = 1.111$, $p > .05$, nor was the Phases by Groups interaction, $F(4,85) = 1.994$, $p > .05$. Descriptive statistics are contained in Table 19.

To locate the source of the main effect for Groups, an ANOVA was conducted for Groups for each of the three Phases with Groups as the independent variable and score on "negative initiations" as the dependent variable. The results of the ANOVA for Pre-intervention were not significant, $F(2,24) = 1.726$, $p > .05$ nor were the results for Intervention, $F(2,36) = 2.138$, $p > .05$. However, the results for Follow-up were significant, $F(2,25) = 10.186$, $p < .05$. To determine where the differences existed during Follow-up, the Tukey multiple comparison procedure was conducted. The results indicated that there was a significant ($p < .05$) difference in the mean scores between Group 1, proactive, ($M = .00$) and Group 3, reactive, ($M = 1.38$) and between Group 2, comparison, ($M = .10$) and Group 3, reactive, ($M = 1.38$).

Table 19

Descriptive Data for Groups by Phases for Negative InitiationsChildren with Disabilities

Groups	Phases	<u>M</u>	<u>SD</u>	n
Group 1 (Proactive)	Pre-Intervention	.00	.00	9
	Intervention	.00	.00	14
	Follow-up	.00	.00	10
	Total	.00	.00	33
Group 2 (Comparison)	Pre-Intervention	1.00E-01	.32	10
	Intervention	.27	.47	11
	Follow-up	.00	.00	10
	Total	.13	.34	31
Group 3 (Reactive)	Pre-Intervention	1.38	3.11	8
	Intervention	.14	.36	14
	Follow-up	.73	1.13	8
	Total	.44	1.74	30
Total	Pre-Intervention	.13	1.74	27
	Intervention	.32	.34	39
	Follow-up	.28	.77	28
	Total	2.26	1.04	94

Positive Responses. A two-way ANOVA was conducted for "positive responses" with Groups and Phases independent variables and score on the measure as the dependent variable. Results of the analysis indicated a significant main effect for Group, $F(2,85) = 8.710$, $p < .05$. There was not a significant difference for Phases, $F(2,85) = .425$, $p > .05$ nor was there a significant Groups by Phases interaction, $F(4,85) = 1.251$, $p > .05$. Descriptive statistics are contained in Table 20.

To locate the source of the main effect for Groups, an ANOVA was conducted for Groups for each of the three Phases with Group as the independent variable and score on "positive initiations" as the independent variable. The results of the ANOVA for Pre-intervention were not significant, $F(2,24) = 2.848$, $p > .05$ nor were the results for Follow-up, $F(2,25) = 1.202$, $p > .05$. However, the results for Intervention were significant, $F(2,36) = 8.878$, $p < .05$. To determine where the differences existed during Intervention, the Tukey multiple comparison procedure was conducted. The results indicated that there was a significant ($p < .05$) difference in the mean scores between Group 1, proactive, ($M = .93$) and Group 3, reactive, ($M = 2.14$) and between Group 2, comparison, ($M = .18$) and Group 3, reactive, ($M = 2.14$).

Table 20

Descriptive Data for Groups by Phases for Positive ResponsesChildren with Disabilities

Groups	Phases	<u>M</u>	<u>SD</u>	n
Group 1 (Proactive)	Pre-Intervention	.67	1.12	9
	Intervention	.93	.92	14
	Follow-up	1.70	.95	10
	Total	1.09	1.04	33
Group 2 (Comparison)	Pre-Intervention	.30	.95	10
	Intervention	.18	.40	11
	Follow-up	1.00	1.25	10
	Total	.48	.96	31
Group 3 (Reactive)	Pre-Intervention	2.75	3.92	8
	Intervention	2.14	1.70	14
	Follow-up	1.62	1.06	8
	Total	2.17	2.34	30
Total	Pre-Intervention	1.15	2.44	27
	Intervention	1.15	1.41	39
	Follow-up	1.43	1.10	28
	Total	1.23	1.69	94

Negative Responses. A two-way ANOVA was conducted for "negative responses" with Groups and Phases independent variables and score on the measure as the dependent variable. Results of the analysis indicated a significant main effect for Groups, $F(2,85) = 11.579$, $p < .05$. There was not a significant difference for Phases, $F(2,85) = 2.423$, $p > .05$ nor was there a significant Groups by Phases interaction, $F(4,85) = 2.348$, $p > .05$. Descriptive statistics are contained in Table 21.

To locate the source of the main effect for Groups, an ANOVA was conducted for Groups for each of the three Phases with Group as the independent variable and score on "negative initiations" as the independent variable. The results of the ANOVA for Pre-intervention were not significant, $F(2,24) = 3.036$, $p > .05$ nor were the results for Intervention, $F(2,36) = 1.783$, $p > .05$. However, the results for Follow-up were significant, $F(2,25) = 5.218$, $p < .05$. To determine where the differences existed during Intervention, the Tukey multiple comparison procedure was conducted. The results indicated that there was a significant ($p < .05$) difference in the mean scores between Group 1, proactive, ($M = .00$) and Group 3, reactive, ($M = 1.50$) and between Group 2, comparison, ($M = .10$) and Group 3, reactive, ($M = 1.50$).

Table 21

Descriptive Data for Groups by Phases for Negative Responses
Children with Disabilities

Groups	Phases	<u>M</u>	<u>SD</u>	n
Group 1 (Proactive)	Pre-Intervention	.00	.00	9
	Intervention	.00	.00	14
	Follow-up	.00	.00	10
	Total	.00	.00	33
Group 2 (Comparison)	Pre-Intervention	.10	.32	10
	Intervention	9.09E-02	.30	11
	Follow-up	1.00E-01	.32	10
	Total	9.68E-02	.30	31
Group 3 (Reactive)	Pre-Intervention	1.13	1.89	8
	Intervention	.21	.43	14
	Follow-up	1.50	2.00	8
	Total	.80	1.49	30
Total	Pre-Intervention	.37	1.11	27
	Intervention	.10	.31	39
	Follow-up	.46	1.23	28
	Total	.29	.92	94

CHAPTER 5

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

The first purpose of the study was to determine whether or not instruction to teachers resulted in differences in their performance. The second purpose of this study was to compare the effectiveness of a proactive social skill training approach with a reactive, praise-based, approach on increasing the rate of children's "positive initiations" to peers and "positive responses" to peers. In addition to data related to the research questions, data were collected and analyzed regarding the "negative initiations" and "negative responses" of children to determine whether there were differences in the occurrence of these behaviors among the three groups and whether the interventions impacted those behaviors. Finally, the performance of children with disabilities in each of the three groups was analyzed to determine whether there were differences in behaviors that could be attributed to the effects of intervention.

Discussion of Teacher Behaviors

The following discussion was based on these research questions:

1. Will there be a difference in teacher behaviors during intervention in the following areas: 1) discussing the importance of the skill, 2) identifying the steps necessary to complete the skill, 3) modeling the skill, 4) providing feedback to the children during role-play, 5) praising children for "positive initiations" with peers, and 6) praising children for "positive responses" to peers.
2. Will there be a difference in teacher behaviors during follow-up in the six areas listed above?

Individual Teacher Behaviors

Teacher 1 (proactive). Teacher 1 (proactive) incorporated the behavior of "identifying the steps necessary to complete the skill" into art activities during Intervention. She did not incorporate the other behaviors taught to her: "discussing the importance of the skill," "modeling the skill," or "providing feedback to children during role-play." Several factors may have resulted in her not using all four teaching behaviors during the art activity. First, it was possible that the training session provided by the researcher may not have been adequate to

produce significant behavior change across all four behaviors. Second, it was possible that the teacher had difficulty trying to incorporate all steps of skill instruction into an ongoing activity. For example, stopping an activity to have a child role-play a skill may not have been considered an effective use of time. However, "identifying the steps necessary to complete the skill" typically required few words and could have been done from across the room with minimal disruption in the current activity. Third, it was possible that the teacher viewed proactive social skill instruction as a teaching activity that was separate from typical classroom activities. Studies reviewed in Chapter 2 indicated that social skill instruction has typically been conducted as a lesson in and of itself, not in conjunction with other activities. Fourth, the teacher may not have implemented all four teaching behaviors during the art activity because she was not specifically directed to. She was a willing participant in the study and her responses during the 10 minute meetings with the researcher indicated that she wanted to comply with all requests. Fifth, it was possible that she did not see the value in using the teaching skills during the art activity.

Teacher 2 (comparison). The behavior of Teacher 2 (comparison) remained consistent throughout the study. These results indicated that simply watching a video of one's own lesson did not lead to changes in any of the six teacher behaviors targeted in this study. This may have been due to the teacher not knowing exactly what behaviors were being monitored in the study. It was also possible that she did not identify any behavioral changes that would have improved her teaching performance, or if she did notice areas in which she could improve, she chose not to make any changes. Additionally, she was a reluctant participant in the study and her lack of enthusiasm may have had a negative impact on her performance.

Teacher 3 (reactive). The use of target behaviors (praise for positive initiations and praise for positive responses) of Teacher 3 (reactive) increased during Intervention and was maintained during Follow-up. These changes may have been the result of several factors. First, it was possible that the training resulted in positive behavioral outcomes for the teacher. During Intervention, the teacher stated that she believed praising children was a valuable strategy. It was also possible that rather than obtaining new skills from the training, the process heightened her awareness and she naturally

increased the use of praise behaviors that she believed were important. Third, the behaviors of the children may have served as a source of positive reinforcement to the teacher for exhibiting the praise behaviors.

Comparison of Performance Between Teachers

During Intervention, Teacher 1 (proactive) exhibited the behavior of "identifying the steps necessary to complete the skill" significantly more frequently than did either Teacher 2 (comparison) or Teacher 3 (proactive). This change in the behavior of Teacher 1 (proactive) was not maintained during Follow-up when her performance returned to the level found during Pre-intervention. The results indicated that the performance of Teacher 1 (proactive) changed only when she received training and/or praise from the researcher during Intervention and that the training provided by the researcher did not impact the behaviors of the other teachers.

During Intervention and Follow-up, Teacher 3 (reactive) praised students for "positive initiations" and "positive responses" at rates significantly higher than either Teacher 1 (proactive) or Teacher 2 (comparison). This indicated that the training had a positive effect on increasing the performance of Teacher 3 (reactive) during Intervention, that the behavior change continued into

Follow-up, and the training did not impact the behaviors of the other teachers.

Summary.

These results indicated that there were changes in the behaviors of Teacher 1 (proactive) and Teacher 3 (reactive) during Intervention. Teacher 1 (proactive) demonstrated a change in only 1 of the 4 behaviors taught to her, "identifying the steps necessary to complete the skill;" while Teacher 3 (reactive) demonstrated significant changes in both behaviors taught to her, praise for "positive initiations" and praise for "positive responses." The comparison, Teacher 2, did not exhibit any change in her performance on any of the 6 target behaviors during Intervention. The results also indicated that the behavior change exhibited by Teacher 1 (proactive) during Intervention did not continue into Follow-up but returned to a rate at a rate similar to that noted during Pre-intervention. However, Teacher 3 (reactive) maintained the behavioral gains obtained during Intervention and Follow-up. The behaviors of Teacher 2 (comparison) remained consistent throughout all Phases of the study.

Discussion of Child Behaviors

The discussion of the analyses of child data will be based upon the following research questions:

3. Will there be a difference in the social behaviors of children in the three groups in relation to "positive initiations" with peers and "positive responses" to peers?
4. Will there be a difference in the "positive initiations" and "positive responses" of children with peers in the groups during Follow-up?

In addition to discussing the behaviors identified in the research questions, the occurrence of "negative initiations" and "negative responses" will be described and discussed, and additional analyses related to the performance of children with disabilities was discussed.

Individual Behavior Differences Across Groups

Group 1 (proactive). The only significant change in behavior across Phases was attributed to "positive responses" between Pre-Intervention and Follow-up, and between Intervention and Follow-up. This may have indicated that the training implemented by the teacher either did not have an immediate or substantial effect on this behavior. A graphic display of the data indicated that this behavior had a positive trend during Pre-

intervention, and it was possible that this trend would have continued without any intervention.

Throughout the study, "positive initiations" were exhibited more frequently than any other measure and "positive responses" were exhibited more often than either "negative initiations" or "negative responses." This finding suggested that the occurrence of the "positive" behaviors was naturally more frequent than was the occurrence of the "negative" behaviors.

Group 2 (comparison). The occurrence of both "positive initiations" and "positive responses" remained constant between Pre-intervention and Intervention but increased during Follow-up. However, the only significant difference noted was for "positive responses" between Pre-intervention and Follow-up and between Intervention and Follow-up. This finding indicated that these behaviors may have increased as a natural consequence of the children spending time together working on art activities. As with Group 1 (proactive), "positive initiations" and "positive responses" occurred more frequently than "negative initiations" or "negative responses".

Group 3 (reactive). Both "positive initiations" and "positive responses" increased throughout the study. However, "positive initiations" showed a significant

increase between each phase. This indicated that the reactive intervention had a greater effect on "positive initiations" than it had on any of the other target behaviors. As with the other groups, "positive responses" tended to increase with time. The occurrence of "negative initiations" and "negative responses" remained relatively constant across phases.

Comparison of Performance Between Groups

During Intervention and Follow-up, the children in Group 3 (reactive), exhibited significantly more "positive initiations" toward their peers than did the students in Group 2 (comparison). The frequency of "positive initiations" for each Group increased across Phases which suggested that as children spent more time together, they naturally increased their demonstration of "positive initiations." Even though there was an increase in "positive initiations" across Phases, the significant difference between the children in Group 3 (reactive) and Group 2 (comparison) indicated that the reactive intervention had a positive impact.

The results indicated that the students in Group 2 (comparison) exhibited significantly more "negative initiations" than children in either Group 1 (proactive) or Group 3 (reactive) during Intervention. Given the low rate

of occurrence of this behavior and the relative consistency in its occurrence across Phases, it was difficult to draw definitive conclusions from the data that would have suggested a socially significant impact of either intervention. It was also possible that the behavior occurred at a sufficiently low level that there was little room for improvement. It was also possible that the teacher of Group 2 (comparison) allowed more "negative initiations" than did the other two teachers.

There were not significant differences in the occurrence of "positive responses" among groups. However, there were differences among Phases. These differences were identified between Pre-intervention and Follow-up and between Intervention and Follow-up. These findings suggest that the intervention did not significantly impact this behavior; rather, it increased with time.

The frequency of "negative responses" was relatively low and stable throughout the study. The interventions did not appear to have had any significant impact on this behavior.

Summary

There were positive trends in the occurrence of "positive initiations" and "positive responses" among each of the Groups. This trend may have been a natural outcome

of the children spending more time together. However, the students in Group 3 (reactive) did experience a significant increase in the frequency of "positive initiations" between Pre-intervention and Follow-up and between Intervention and Follow-up. The "positive initiations" of children in Group 3 (reactive) were significantly higher than those of children in Group 2 (comparison) during both Intervention and Follow-up. This finding indicated that the intervention provided by Teacher 3 (reactive) was more effective than the teaching interactions provided by Teacher 2 (comparison).

For all three groups, the occurrence of "positive" behaviors was significantly greater than "negative" behaviors. The interventions did not appear to impact either "negative initiations" or "negative responses."

The performance of children on both "positive initiations" and "positive responses" in Group 2 (comparison) and Group 3 (reactive) increased between Pre-intervention and Follow-up and between Intervention and Follow-up. For children in Group 1 (proactive), the only significant increase noted during Follow-up was for "positive responses." These findings suggested that the increase in "positive" behaviors may have been related to spending time together. However, the children in Group 3

(reactive) did exhibit "positive initiations" at a significantly higher level than did children in Group 2 (comparison) during Follow-up which indicated that the reactive intervention had a positive impact.

Discussion of Child Behaviors, Children with Disabilities
Individual Behavior Differences Across Groups, Children
with Disabilities

Group 1 (proactive). The children with disabilities in Group 1 (proactive) exhibited significantly more "positive initiations" than any of the other measured behaviors. They also exhibited significantly more "positive responses" than either "negative initiations" or "negative responses." The behavior of children with disabilities in Group 1 (proactive) did not change significantly as a result of the intervention.

Group 2 (comparison). The children with disabilities in Group 2 (comparison) exhibited significantly more "positive initiations" than either "negative initiations" or "negative responses." Their behaviors did not change across phases.

Group 3 (reactive). The children with disabilities in Group 3 (reactive) exhibited significantly more "positive initiations" than either "negative initiations" or "negative responses." Their behaviors did not change

across Phases. This suggested that the reactive strategy did not have a significant impact on their behaviors across Phases.

Comparison of Performance Between Groups, Children with Disabilities

The children in Group 3 (reactive) exhibited significantly more "positive initiations" than the children in Group 2 (comparison). These results indicated that over time, the reactive approach may have had a positive impact on the children in Group 3 (reactive). Even though the children in Group 3 (reactive) did not exhibit significant increases in "positive initiations" across Phases, their use of this behavior was significantly greater than the use of the behavior by children in Group 2 (comparison).

The children in Group 3 (reactive) also exhibited significantly more "negative initiations" and "negative responses" than the children in either Group 1 (proactive) or Group 2 (comparison). This may have occurred because the children with disabilities in Group 3 (reactive) tended to exhibit more behaviors than the children with disabilities in either of the other two Groups. However, given the low frequency of the "negative" behaviors, the statistical significance may have been of little practical value.

During Intervention the children with disabilities in Group 3 (reactive) exhibited significantly more "positive responses" than children with disabilities in either Group 1 (proactive) or Group 2 (comparison).

Summary

The results indicated that the performance of children in each of the individual Groups did not differ significantly across Phases. However, there were differences among groups. The children in Group 3 (reactive) exhibited significantly more "positive initiations" than did the students in Group 2 (comparison). The children in Group 3 (reactive) also exhibited significantly more "negative initiations," "positive responses," and "negative responses" than did children in either Groups 1 (proactive) or 2 (comparison). The children in Group 3 (reactive) tended to exhibit more behaviors, both "positive" and "negative" than did students in the other two Groups. It was possible that the intervention provided by Teacher 3 (reactive) had the effect of encouraging behaviors and that the increase in "positive behaviors" was accompanied by an increase in "negative behaviors." It was also possible that some of the difference between children in Group 1 (proactive) and

Group 3 (reactive) was related to the limited verbal skills of one student in Group 1 (proactive).

Conclusions and Recommendations

For teachers, the results of the study tended to support the efficacy of the reactive approach over either the proactive approach or a comparison situation. The teacher who was trained in the reactive approach continued to use the strategies during Follow-up while the behavior of the teacher trained in the proactive approach returned to Pre-intervention levels during Follow-up. It was possible that reactive strategies were more easily implemented during traditional classroom activities than are proactive strategies. It was also possible that specific teacher training incorporating actual classroom activities into the proactive approach could increase the use of that approach during typical classroom activities.

For all students combined, the findings indicated that the occurrence of both "positive initiations" and "positive responses" tended to increase with time. This may have had a positive relationship with the amount of time the children spend with each other. As the time increased, so did the occurrence of the "positive" behaviors. However, the children in Group 3 (reactive) did exhibit "positive" behaviors at a significantly higher level than did the

children in Group 2 (comparison). This may suggest that, as used in this study, the reactive approach resulted in more substantial behavioral changes than did the proactive approach, especially when the additional 40 minutes of training (5 minutes x 8 sessions) provided to children in Group 1 (proactive) was considered.

For children with disabilities, their behaviors did not appear to change as a result of the different Phases of the study. Overall, the children in Group 3 (reactive) exhibited more target behaviors than did the children with disabilities in either Group 1 (proactive) or Group 2 (comparison). It was possible that the reactive intervention may have had a greater impact had the study been conducted over a longer time period.

Questions and recommendations for replications or extensions of the study include the following:

Questions

1. Do replications of the study support the efficacy of the proactive approach?
2. Would the proactive approach result in greater gains than demonstrated in this study if more time had been allocated to teaching the skills to either the children or the teacher?

3. Would the proactive approach result in greater gains if the teacher were specifically taught how to implement the approach during typical classroom activities?
4. Do preschool children have the cognitive ability to understand and benefit from a proactive approach?
5. Given the choice, which approach will teachers be more likely to implement on a consistent basis?
6. Does providing praise for "positive initiations" and "positive responses" result in increased behaviors, whether "positive" or "negative?"
7. Would the proactive approach result in gains that are maintained over an extended period of time?
8. Would teaching children to address each other by name before trying to initiate an interaction increase the rate of responses?
9. What are the differences in interaction rates between children with and without disabilities?

Recommendations

1. Consider measuring the time children with disabilities are engaged in either cooperative or associative activities with peers without disabilities regardless of whether active communication is occurring.
2. Compare the proactive and reactive approaches in an academically focused activity.

APPENDIX A

PARENT PERMISSION LETTER

February 2, 2000

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

My name is Keith Hyatt, and I am a doctoral student in Special Education at UNLV. In conjunction with Catherine Lyons, Preschool Director, Dr. John Filler, Professor of Special Education, Dr. Jeffrey Gelfer, Professor of Early Childhood Education, Dr. Paul Jones, Professor of Education, Dr. Peggy Perkins, Professor of Education, and Dr. Tom Pierce, Professor of Special Education, I will be conducting my doctoral research at the UNLV/CSUN Preschool located on the UNLV campus.

The purpose of the study is to investigate the use of intervention strategies designed to facilitate positive social interactions among children with and without disabilities. Children who participate in the study will be randomly assigned to one of three groups of 8 students. Each group will participate in art activities with a teacher and their interactions with other children will be recorded. Teachers for two of the groups will implement either a reactive or proactive approach for facilitating social behaviors among the children. The teacher in the third group will conduct the group as usual and the information obtained regarding the social interactions of children in this group collected. The social interactions of the children in each of the three groups will then be compared to determine which intervention was most effective in facilitating positive social interactions. The art activities will be conducted for a total of 23 days for ten minutes per day. Each session will be videotaped so accurate data can be taken regarding the social interactions that occurred in each group. These videotapes will be used for research purposes only and will not be seen by anyone not involved in the current study. At the conclusion of the study, the videotapes will be destroyed. If you would like a copy of the report, please indicate your desire on this form and a copy will be sent to you upon completion.

Anticipated benefits of the study will be to determine which teaching strategy is most effective in facilitating social interactions. Since this study involves naturalistic observation of the usual activities of children in the preschool setting, there is no risk to the children from participation (physical, psychological, social, or legal). 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. Participation is voluntary and children may withdraw at any time.

Please initial one of the following:

_____ I hereby authorize the above named investigators to observe my child and allow my child to participate in the teacher led activities. Further, I understand that my child's first name and information such as age, IEP goals, and other non-identifying information will be provided to the investigators because they have 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 above.

Signature of Parent of Guardian _____ Date _____

_____ I would like a copy of the report.

For further information about this study, please contact:
John Filler, Professor, Department of Special Education
College of Education
University of Nevada, Las Vegas
Las Vegas, NV 89154
(702)-895-1105

For information on rights of
subjects, contact:
Office of Sponsored Programs
(702)-895-1357

APPENDIX B

CONFIRMATION LETTER

February 4, 1999

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

Thank you for giving your 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 Monday, February 7 and continue through March 29. With the exception of Valentine's Day, Presidents' Day, and 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.

Thanks again 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 C

TEACHER STATEMENT

Catherine has asked that I meet with you today to discuss the upcoming study. Thank you for helping with this study. Since this is a research study and I need to document my interactions, I will read the following description to you. You will then be allowed to ask questions.

Please remember that this is a research study and you must not discuss it with people until the study is finished. In fact, upon completion of the study, I will share results with you and provide you with a copy of the results if you desire.

I will be studying the social interactions of 4 and 5 year old children. To help guard against teacher bias, I asked Catherine if I could have teachers who don't currently work with children in the Rainbow or Butterfly rooms assist with the study. You were selected. I believe that you will enjoy the activities with the children.

Each of you has been assigned to a different group of eight children. There will be children from both the Rainbow and Butterfly classrooms in each group. The groups will run approximately ten minutes per day for eighteen days (Mondays, Wednesdays, and Fridays) beginning next Monday. There will not be groups held on Valentine's day since that is usually a very busy day for the children and the teachers. During the group times, you will be provided with art materials and asked to conduct a pre-selected art activity with the children. It is possible that the children may not complete the art activity during this time. That is not an area of concern. In fact, some of the activities will take two days to complete. It is important that you try to keep the children working on the art task for the ten minute time period. This activity will take place in the Rainbow classroom and will be video-taped. The video tapes will be destroyed upon completion of the study.

Beginning next Wednesday, I will meet with each of you ten minutes before your group is scheduled to begin. We will watch the video taken during the art activity you conducted with the children during the previous session. Unless asked to do something, please interact with the children in the usual and normal manner.

Once again, please remember that this is a research study and you must not discuss it with people until the study is

finished. In fact, upon completion of the study, I will share results with you and provide you with a copy of the results if you desire.

APPENDIX D

DESCRIPTIONS OF ART ACTIVITIES

Art Projects

- Project 1 Activity: Paint a dinosaur.
Materials:
One dinosaur outline drawn on 5' x 7' butcher paper, six different colors of liquid tempera paint (blue, red, yellow, orange, green, purple) poured onto paper plates, and one paintbrush for each child.
Directions:
Lay the butcher paper flat on the floor. The children are to paint the dinosaur using the materials provided.
- Project 2 Activity: Decorate the painted dinosaur.
Materials:
Bottled white glue, assorted yarn strands, paper scraps, fabric scraps, buttons, painted dinosaur from Project 1, cotton balls, markers, two cups containing white glue and a popsicle stick for applying the glue, crayons, and markers.
Directions:
Lay the decorated dinosaur flat on the floor. Children are to decorate the dinosaur using the materials provided.
- Project 3 Activity: Paint a house.
Materials:
Refrigerator box, six different colors of liquid tempera paint (blue, red, yellow, orange, green, purple) poured onto paper plates, and one paintbrush for each child.
Directions:
Lay the refrigerator box flat on the floor with two sides exposed. The children are to make a house by painting the outside of the box provided.
- Project 4 Activity: Paint a house.
Materials:
Refrigerator box, six different colors of liquid tempera paint (blue, red, yellow, orange, green, purple) poured onto paper plates, and one paintbrush for each child.
Directions:

Lay the refrigerator box flat on the floor with the unpainted sides exposed. The children are to finish the house by painting the opposite side of the refrigerator box.

Project 5

Activity: Make a collage.

Materials:

5' x 7' butcher paper, glue, 6 brushes, 4 bottles of colored glitter, two cups containing white glue and a popsicle stick for applying the glue, colored paper scraps, foil scraps, fabric scraps, buttons, and cotton balls.

Directions:

Lay the butcher paper flat on the floor. The children are to make a collage using the materials provided.

Project 6

Activity: Make a school bus.

Materials: Refrigerator box with outline of school bus drawn on it, six different colors of liquid tempera paint (blue, red, yellow, orange, green, purple) poured onto paper plates, and one paintbrush for each child.

Directions:

Lay the refrigerator box flat on the floor. The children are to paint a school bus using the materials provided.

Project 7

Activity: Make a boat.

Materials:

Refrigerator box with outline of a boat drawn on it, six different colors of liquid tempera paint (blue, red, yellow, orange, green, purple) poured onto paper plates, and one paintbrush for each child.

Directions:

Lay the refrigerator box flat on the floor. The children are to paint a boat using the materials provided.

Project 8

Activity: Make dough sculptures.

Materials:

One large bowl containing salt, flour, water, and liquid tempera paint for each child, paper plates.

Directions:

Each child should be given a bowl and instructed to knead the dough. Once it is thoroughly mixed, the child can begin making a sculpture and place the finished sculpture on a paper plate to allow it to dry.

Project 9

Activity: Paper mache balloons.

Materials:

Blown up round balloon taped to the floor, four large bowls containing colored paper mache paste (flour, water, tempera paint), two large bowls containing torn strips of newspaper, assorted yarn, and glitter.

Directions:

The children should each have their own balloon and be told to cover the balloon with the newspaper and yarn by using the paper mache paste.

Project 10

Activity: Vase

Materials:

Six bowls containing liquid starch, one brush for each student, seven paper plates each holding a different color of cut tissue paper scraps, one empty plastic water bottle for each student.

Directions:

Demonstrate pasting the tissue paper to the bottle and have children cover their bottles using the materials provided.

Project 11

Activity: Make flowers.

Materials:

Paper cupcake baking cups sorted by color and green pipecleaners. Each cupcake baking cup should be cut down the side at one third intervals and should have a hole poked in the middle of the holder.

Directions:

Demonstrate making a flower using the following steps. First, select at least three cupcake baking cups and stack them together, squeeze them together to make a ball, unfold the paper and position to look like flower petals, insert pipecleaner through the hole in the middle of the papers

and fold over the pipecleaner so the paper stays in the desired position on the pipecleaner. Children should be allowed to make as many flowers as they want and use the cupcake baking cups to make single or multi-color flowers.

Project 12

Activity: Make a Space Ship

Materials:

Refrigerator box, six different colors of liquid tempera paint (blue, red, yellow, orange, green, purple) poured onto paper plates, glitter sprinkled on top of paint, and one paintbrush for each child.

Directions:

Lay the refrigerator box flat on the floor. The children are to paint a boat using the materials provided.

Project 13

Activity: Make a space ship.

Materials: Refrigerator box used during the previous session, eight 2" x 1" sponge pieces, one paint brush for each child, six bowls containing a different color of puff paint made by combining 1 cup of shaving cream with 1 cup of white glue and colored by adding liquid tempera paint.

Directions:

Lay the refrigerator box flat on the floor with the unpainted sides exposed. The children are to finish the space ship by painting the opposite side of the refrigerator box.

Project 14

Activity: Make a garden.

Materials:

5' x 7' butcher paper, bottled glue, two cups containing glue and a popsicle stick for applying the glue, one large bowl of twigs, one large bowl of sand, one large bowl of leaves, one large bowl of cotton balls, assorted markers and crayons.

Directions:

The children are to make a garden using the materials provided.

- Project 15 Activity: Make space creatures.
Materials:
Assorted colors of poster board
approximately 12" x 18", bowls containing
assorted colors of construction paper cut
into a variety of geometric shapes, assorted
markers and crayons, bottled glue, two cups
containing glue and a popsicle stick for
applying the glue, assorted yarn strips,
glitter, and assorted fabric strips.
Directions: Children select a large poster
board and are directed to use the materials
provided to make a space creature.
- Project 16 Activity: Make a rainbow
Materials:
5' x 7' butcher paper with a rainbow
outline, brushes for each child, six
different colors of liquid tempa paint
contained in paper plates.
Directions:
Children are instructed to make a rainbow
using the paint provided.
- Project 17 Activity: Make a butterfly
Materials: 5' x 7' butcher paper with a
butterfly outline, brushes for each child,
six different colors of liquid tempa paint
contained in paper plates.
Directions:
Children are instructed to make a butterfly
using the paint provided.
- Project 18 Activity: Make a mask.
Materials:
Paper plates, assorted markers and crayons,
bottled glue, two cups containing glue and
popsicle sticks for applying the glue,
assorted yarn, assorted colored paper
shapes, glitter, and cotton balls.
Directions:
Demonstrate that a paper plate could be used
as a support for a mask. Instruct children
to make a mask using the materials provided.

APPENDIX E

DESCRIPTIONS USED FOR CODING CHILD BEHAVIORS

Definitions of Child Behaviors

Initiation Behavior (Initiation behavior occurs only when there has not been either an initiation or response from the peer within the previous 3 seconds)

Positive - Child clearly directs initial, positive task related behavior toward a child. The attempt must be clearly directed toward a specific peer as indicated by:

- 1) Stating the peers name and speaking
- 2) Touching peer and speaking
- 3) Directly facing and speaking to peer
- 4) Passing an item to a peer
- 5) Verbalizations clearly directed to a peer if not looking at the peer or didn't say the peer's name
- 6) Following teacher prompts to interact with a peer

Examples include:

Passing materials
Asking peer to pass materials
Showing or discussing material
Asking to trade items
Asking peer to work together
Talking to peer about topic related to completing the task

Does **not** include just looking at a peer or telling a peer he or she has paint on his or her pants.

Negative - Child clearly directs initial, negative behavior toward a specific peer that does not clearly promote cooperative, task-related behavior.

Examples include:

Pushing, hitting, arguing, calling names, making derogatory remarks, telling a peer not to do something.

Response Behavior (Response begun within 3 seconds of an initiation or response.)

Positive - Child directs positive, task-related response to a peer following an initiation or response from that peer.

Examples include:

Following peer directions, passing materials, trading items, talking with a peer about topics related to completing task, taking items offered by a peer or other affirmative response

Negative - Child directs negative response to a peer following an initiation or response from that peer. These behaviors do not generally provide an opportunity for positive, task-related interactions.

Examples include:

Hitting, pushing, telling a peer not to do something, calling names, saying "no" to a peer, making derogatory remarks, disagreeing.

APPENDIX F

DESCRIPTIONS USED FOR CODING TEACHER BEHAVIORS

Teacher Behaviors

1. Discuss the importance of the skill - The teacher discusses the importance of completing one of the skills.
2. Identify the steps necessary to complete the skill - The teacher describes or states any of the steps necessary to complete one of the skills. This **does not** include just telling the student to "ask" unless other steps are also included.
3. Model the skill - The teacher demonstrates how to complete the skill in the correct sequence.
4. Provide feedback during role-play - The teacher has children role-play the skill and provides feedback during the role-play.
5. Praise positive initiations to peers - The teacher provides verbal praise to an individual child following the child's positive initiation with a peer. **Does not** include group praise or statements such as "nice work."
6. Praise positive responses to peers - The teacher provides verbal praise to an individual child following the child's positive response to a peer. **Does not** include group praise or statements such as "nice work."

Teacher behaviors

For teacher behaviors 1 - 4, the skills to be addressed are any of the following: Joining in, Waiting your turn, Sharing, and Asking someone to play.

Joining in: This skill requires the child to ask to join an ongoing activity. For example, the child could ask to paint part of a picture with a peer.

The steps for completing this skill are:

1. Move closer,
2. Watch,
3. Ask

Waiting your turn: This skill requires a child to wait until the other person is finished. For example, the child may wait until a peer is finished using a particular item.

The steps for completing this skill are:

1. Say "It's hard to wait, but I can do it."
2. Choose to wait quietly or do something else
3. Do it (act out your choice)

Sharing: This skill requires children to share materials.

The steps for completing this skill are:

1. Make a sharing plan
2. Ask
3. Do it

Asking someone to play: This skill requires a child to ask another to work together.

The steps for completing this skill are:

1. Decide if you want to,
2. Decide who,
3. Ask

APPENDIX G

SKILL DESCRIPTIONS PROVIDED TO TEACHER 1 (PROACTIVE)

Joining in

This skill requires the child to ask to join an ongoing activity. For example, the child could ask to paint part of a picture with a peer.

Discuss the importance of the skill

Sometimes we see friends playing a game or painting a picture or doing something else and we want to play with them. It can be hard to decide how to ask your friend to join in but if you don't get their permission and just start playing, sometimes they get angry. If we ask, our friend may say "yes" and then we can play with them. Sometimes, they say "no" and then we should do something else for a while. Today we are going to learn how to join in an activity with a peer. First, I'll tell you the steps, then I'll show you how, and then we'll practice.

Identify the steps to complete the skill.

1. Move closer - you should be close to your friend.
2. Watch - watch and wait for a pause (before the activity begins or when there is a pause)
3. Ask - Suggest things to say, such as "Can I help?" or "Can I do that with you?"

Model the skill

With another peer, model the three steps to completing the skill. Examples of activities could be: You want to ask a friend to play with them.

Provide feedback to children as they role-play

Each child should be encouraged to role-play the skills. Have them practice the same example you modeled and provide them with feedback on how they completed the three steps of the skill.

Sharing

This skill requires the child to wait to cooperatively use an item. For example, the child could ask to work on a project with another peer or to have some of the material the peer is using in the art project.

Discuss the importance of the skill

Sometimes we see friends playing with something or using an art material and we would like to use it, too. If we just take it from our friends, they may get upset. A better way would be to share with our friends so we both get turns. Today we are going to learn how to share. First, I'll tell you the steps, then I'll show you how, and then we'll practice.

Identify the steps to complete the skill.

1. Make a sharing plan.
 - a. play together
 - b. take turns
2. Ask to either play together or take turns.
3. Do it. Follow through on the plan unless you agree on a different plan.

Model the skill

With another peer, model the three steps to completing the skill. Examples of activities could be: You want to ask a friend to share a colored paint with you.

Provide feedback to children as they role-play

Each child should be encouraged to role-play the skills. Have them practice the same example you modeled and provide them with feedback on how they completed the three steps of the skill.

Waiting Your Turn

This skill requires the child to wait to use an item that a peer is currently using. For example, the child may need to wait until a peer is finished using a particular paintbrush.

Discuss the importance of the skill

Sometimes we see friends using or playing with something that we would like to use. Sometimes we can share or join the activity with our friends and other times, we need to wait until they are finished. Waiting can be a hard thing to do. If we don't wait and just grab the item, our friend may get angry. Today we are going to learn how to wait your turn. First, I'll tell you the steps, then I'll show you how, and then we'll practice.

Identify the steps to complete the skill.

1. Say "It's hard to wait, but I can do it."
2. Choose to either wait quietly or do something else
3. Do it. (Complete one of your choices)

Model the skill

With another peer, model the three steps to completing the skill. Examples of activities could be: You want to use a paintbrush or color of paint that a friend is using.

Provide feedback to children as they role-play

Each child should be encouraged to role-play the skills. Have them practice the same example you modeled and provide them with feedback on how they completed the three steps of the skill.

Asking Someone to Play

This skill requires the child to decide whether he or she wants to play alone or with another peer. If the child wants to play with another peer, steps for completing the skill are provided. In an art activity, the child could ask a peer to work on the activity together.

Discuss the importance of the skill

Sometimes we want to play alone and sometimes we want to play with a friend. It can be hard to ask another friend to play with us, but we can learn how to ask. Today we are going to learn how to ask someone to play. First, I'll tell you the steps, then I'll show you how, and then we'll practice.

Identify the steps to complete the skill.

1. Decide if you want to.
2. Decide who
3. Ask

Model the skill

With another peer, model the three steps to completing the skill. Examples of activities could be: You want a friend to help you work on a project.

Provide feedback to children as they role-play

Each child should be encouraged to role-play the skills. Have them practice the same example you modeled and provide them with feedback on how they completed the three steps of the skill.

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