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Providing appropriate social interventions for preschool-age children with mild autism spectrum disorders

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Providing appropriate social interventions for preschool-age children with mild autism spectrum disorders

Abstract

This paper provides a variety of appropriate social interventions to use with preschool-age children with mild Autism Spectrum Disorder (ASD). Regardless of his or her diagnostic label, each individual child requires an individualized approach to treatment. Typically, multiple interventions are necessary for a successful program.

The questions this project will address include: (a) What are some possible social interventions to use with preschool-age children who have mild autism spectrum disorders, (b) what research supports current successful social interventions, (c) which social interventions could provide the most benefits and success, and (d) how can inclusion and interacting with typically developing peers assist in implementing interventions?

The recommendations described in this paper include information for teachers and paraprofessionals who work with preschool-age children with mild autism spectrum disorder. The purpose of the recommendations is to share the findings regarding different types of social interventions that are available in order to best meet each individual child's needs.

Providing Appropriate Social Interventions for Preschool-Age Children with Mild
Autism Spectrum Disorders

A Graduate Project

Submitted to the

Division of Early Childhood Education

Department of Curriculum and Instruction

In Partial Fulfillment

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By

Angela M. Riesberg

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ABSTRACT

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CHAPTER ONE

INTRODUCTION

According to Neisworth & Wolfe (2005), Autism was named by Leo Kanner in 1943 from the Greek *autos*, meaning *of or for oneself* based on the social disregard or avoidance shown by these children. The Autism Society of America (Autism Society of America, 2006), has compiled the following information on autism. Autism Spectrum Disorder (ASD) is a complex developmental disorder that typically appears during the first three years of life and is characterized with difficulty in communication and social relations. Atypical behaviors such as unusual responses to sensation, repetitive movements, and insistence on routine or sameness is also displayed.

Autism is the most common of the Pervasive Developmental Disorders (PDD), affecting an estimated 1 in 166 births (Autism Society of America, 2006).

Roughly translated, this means as many as 1.5 million Americans today are believed to have some form of autism. Moreover, this number is on the rise. Based on statistics from the U.S. Department of Education and other governmental agencies, autism is growing at a startling rate of 10-17 percent per year. At this rate, the ASA estimates that the prevalence of autism could reach 4 million Americans in the next decade. (¶ 4).

The Autism Society of America (2006) also states that autism is four times more prevalent in boys than girls. Autism knows no racial, ethnic, or social boundaries, nor does family income, lifestyle, or educational levels affect the chance of autism's occurrence.

Autism used to be considered a rare disorder (about 4 in 10,000 children); it is now diagnosed in about 10 out of 10,000 children. According to Neisworth and Wolf

(2005) “The U.S. Department of Education reported a total of 118,669 school-age children with autism for 2002-2003 as compared with the 1992-1993 report of about 16,000” (p. 20). It is unclear whether the increase in autism is due to early detection, a broader definition, or a real increase.

The term autism is widely used but is a term that lacks a clear definition. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (Answers Corporation: Online Encyclopedia, Thesaurus, Dictionary definitions and more, 2006), the criteria for a diagnosis of autism requires a total of six or more items from (1), (2), and (3), with at least two from (1), and one from each from (2) and (3). The areas are: (1) qualitative impairment in social interaction, as manifested by at least two of the following, (2) qualitative impairments in communication as manifested by at least one of the following, and (3) restricted or abnormal functioning in at least one of the following areas, with onset prior to age 3 years. See Appendix B for further details.

In my paper, I will be using the term ASD to describe children with autism. According to the website, Answers Corporation: Online Encyclopedia, Thesaurus, Dictionary definitions and more (2006), children with some characteristics of autism, but not a significant number to be diagnosed with the classical form of the disorder, often receive the diagnosis of Pervasive Developmental Disorder, Not Otherwise Specified (PDDNOS). People with characteristics of ASD, but who also have well-developed language skills, are often diagnosed with Asperger syndrome. Children who appear to be typically developing in their first several years, then lose skills and begin showing autistic like behaviors may be diagnosed with childhood disintegrative disorder (CDD). Girls

with Rett syndrome-linked genetic disorder characterized by inadequate brain growth, seizures, and other neurological problems, may also show characteristics of autism. PDD-NOS, Asperger syndrome, CDD, and Rett syndrome are diagnosed as autism spectrum disorders (Answers Corporation: Online Encyclopedia, Thesaurus, Dictionary definitions and more, 2006). Clearly, ‘autism’ is not easily defined as is demonstrated in the following quote:

Autism is a *spectrum disorder*. The symptoms and characteristics of autism can present themselves in a wide variety of combinations, from mild to severe. Although autism is defined by a certain set of behaviors, children and adults can exhibit *any combination* of the behaviors in *any degree of severity*. Two children, both with the same diagnosis, can act very differently from one another and have varying skills (§ 1).

Because the terminology used to describe specific types of disorders, characteristics of ASD, and intervention activities is very complex, all definitions of terms are included in Appendix A.

Social skills deficits are one of the main characteristics of ASD. There are some individuals who are totally isolated and withdraw from all social contexts; others who tolerate simple interactions and may learn basic skills; and still others who wish to engage socially but do not have the necessary skills to be successful (Yapko, 2003). Other impairments include difficulty in initiating interactions, engaging in reciprocity, maintaining eye contact, showing empathy, and recognizing or understanding the perspectives of others (Neisworth, 2005).

There is no *one size fits all* treatment approach for ASD (Neisworth, 2005).

Due to varying needs and abilities of children with autism spectrum disorders, the types of interventions and effectiveness will also vary. As Hannah (2001) stated, “The key to

offering good support and enabling progress where possible is to understand the individual child - no two children with autistic spectrum disorders will be the same” (p. 13). Individual needs must be considered when determining the most effective approach for each child.

The intent of this project is to help teachers and paraprofessionals become more aware of available social interventions and to identify a variety of positive intervention strategies. In a child’s Individual Education Program (IEP), at least one social goal must always be included because developing appropriate social skills is crucial for children with autism. Therefore, teachers who work with children with ASD need to know different interventions to facilitate social skills development. Many different interventions for children with autism exist. It can become overwhelming and time-consuming for general educators to attempt to determine the appropriate strategies to use. However, becoming more familiar with a wide spectrum of interventions can assist in building appropriate educational programs for each child’s individual functioning level.

Overview of the Project

This project will address the importance of providing appropriate social interventions for preschool-age children with mild ASD. The questions this project will address include: (a) What are some possible social interventions to use with preschool-age children who have mild Autism Spectrum Disorders, (b) what research supports current successful social interventions, (c) which social interventions could provide the most benefits and success, and (d) how can inclusion and interacting with typically

developing peers assist in implementing interventions? The following sections delineate the design, purpose, and rationale of this project.

Project Description

This project was the creation of a professional development program model for educating early childhood teachers and paraprofessionals in the Dubuque Community School District about appropriate social interventions for children with mild ASD. The intent of the professional development sessions was to share findings on research-supported intervention strategies that can be used in general education classrooms as well as to show new appropriate interventions and strategies for this population.

Purpose:

The purpose of this project was to provide early childhood teachers and paraprofessionals with effective strategies that can be used when working with children with mild ASD. A variety of strategies were presented in order to assist teachers in expanding their knowledge of different interventions, and to help paraprofessionals understand the importance of appropriate social interventions as well as why they need to be implemented. Research findings supporting the validity of the strategies were presented. Examples of how the interventions can be implemented in the classroom were demonstrated. Finally, during the implementation of the professional development sessions, teachers and paraprofessionals will be encouraged to implement selected strategies in their classrooms and share their experiences with other staff development participants.

Project Rationale

A funny thing seems to be happening out there in the world of educational/therapeutic treatment of autistic children. Common elements are appearing in approaches that were considered very different, even antagonistic, as programs learn and borrow from each other. (Cohen, 1998, p. 104)

While teaching children with ASD over the past few years, I have found that each child is at a different level and displays differing behaviors on the autism spectrum. Because of individual differences, there is no *one* method that is most effective for all children. Each unique child needs interventions tailored to meet his/her strengths and needs. I believe that it is critical for teachers to be knowledgeable of and open to implementing a variety of appropriate interventions. They must also be willing to implement different strategies in order to deliver a successful program for each individual child.

The Importance of Providing Appropriate Social Interventions for Preschool-Age Children with Mild Autism Spectrum Disorders.

According to Aristotle, friendship is the thing most essential to life, for without it, who would choose to live, though possessed of all other things (as cited in Strain & Schwartz, 2001). Children with ASD exhibit many different types of symptoms because autism is a spectrum disorder. According to Fouse and Wheeler (1997) “It occurs at all intellectual levels and resultant characteristics, difficulties in communication, social interaction, and behavior, are as unique as the individual” (p.1). Treatment of ASD requires many different forms of intervention. Finding developmentally appropriate social interventions directed at children’s individual characteristics can be challenging. However, discovering appropriate interventions is critical in order to increase each

child's level of skill and determining a child's success in the future. "For children with autistic spectrum disorders, early intervention together with appropriate teaching and management will help develop crucial social, communication and play skills provide a basis for future learning" (Hannah, 2001, p. 7).

CHAPTER 2

METHODOLOGY

I currently teach preschool-age children who have characteristics of ASD. The children are at school a full day, with an inclusion placement in the afternoon. I became interested in this project because I wanted to gain a more thorough understanding of the strategies that I have been implementing with my students, as well as to expand my repertoire of appropriate social interventions. I practice a variety of different strategies and interventions with my students since they display severe to high-functioning autism. Methods are carried out differently based on each individual child's needs, skills, and abilities. The current strategies I have been practicing I learned through attending conferences, engaging in workshops, following suggestions made by other teachers, and through instruction given by an early childhood consultant.

I have attended professional development on various topics pertaining to ASD. Such topics include an overview of ASD and structured teaching, best practices, and methods of intervention in autism ages birth through age eight. I have learned about visual supports, which include the use of social stories, visual schedules, visual task strips, and using visuals for directions. The workshops helped me develop a better understanding of the use of pictures and how they support oral directions. I have also attended discrete trial trainings (an intense instructional method) and workstation (independent work jobs) trainings. I have learned about the Picture Exchange Communication System (PECS), which is a training program that teaches children with ASD to initiate communication through the use of visuals. Do-Watch-Listen-Say is a

social and communication intervention. Other professional development sessions I have attended includes: sensory, communication, behavior strategies and social skills. I have had minimal trainings on peer-mediated strategies and effectively using typically developing peers (inclusion) to teach children with ASD social skills. It was my hope that through this extensive research on social intervention strategies, that I would gain a better understanding of strategies to apply in my classroom.

Review of Literature

The literature reviewed for this project includes research regarding social story interventions and peer-mediated interventions and concludes with a review of effective teacher staff development.

Social Story Interventions

Children with ASD have deficits in understanding and using social skills effectively to communicate and interact with others. According to Adams, Gouvousis, VanLue & Waldron (2004), characteristics of ASD include a lack of eye contact, and a lack of understanding with such social cues: body language, gestures, and facial expressions. Children with ASD may become aggressive, behave inappropriately, withdraw from others, or demonstrate self-injurious behaviors due to the misunderstanding of certain social cues. Using social stories is one widely used intervention that addresses the social skills deficits of children with ASD. Gray & Garand (1993) define Social Story Intervention as a technique for addressing the acquisition of new social skills and improving existing social behaviors.

Social Stories were created by an educator Carol Gray (as cited in Neisworth & Wolf, 2005), as a way to convey complex social information to children with ASD. Social Stories provide information about social circumstances, about the many ways social events might be experienced, and about expectations for appropriate behavior (Weiss and Harris, 2001). Social Stories can be illustrated with photographs, drawings, or other types of visuals. The story might just consist of words, or some words with illustrations depending on the child's abilities and needs. They are typically written in first person with present or future tense verbs. Social Stories essentially provide a written story of a social context to help individuals understand their personal role in the interaction, what they are doing and need to do, and the perspective of others in the interaction (Yapko, 2003). Social Stories can also be used to ease inclusion of children with ASD into general education classrooms and to introduce new routines and changes.

Kuoch and Mirenda (2003) investigated the effectiveness of Social Story interventions for three young boys (Andrew 3 years 10 months, Henry 5 years 9 months, and Neil 6 years 4 months) diagnosed with autism ASD. Each Social Story focused on describing an event, concept or skill that was needed in particular situations. The specific problem behaviors addressed were sharing, eating, and playing games. Andrew (age 3 years, 10 months) showed aggression, yelling, and crying when asked to share toys or materials. Henry (age 5 years, 10 months) had eating issues in which he would remove or spit out chewed food. Neil (age 6 years, 4 months) would cheat, touch, and make negative comments while playing games with peers.

For Andrew and Henry, ABA designs comparing a baseline/no Social Story condition (A) and a Social Story condition (B) were used, with the final A phase intended as a reversal. For Neil, an ACABA design was employed to compare baseline (A) and two conditions: a social story condition (B) and a book + reminder condition (C); again, the intention was to assess treatment reversal during the final A phase (Kuo and Mirenda, 2003). Baseline and Maintenance data were recorded in the target setting identified for each participant (during such relevant activities as sharing, eating, playing games with peers). If a target behavior occurred, interventionists provided relevant corrective, verbal feedback (e.g., *No cheating*). No other interventions were included during this phase.

Individual Social Story books were written and made by the experimenter to reflect each participant's target behaviors, interests, and abilities. Basic Social Story guidelines (Gray, 2000) were followed using descriptive, perspective, affirmative and/or cooperative sentences, along with directive or control sentences. The Social Stories were read to each child prior to the situations in which the target behaviors typically occurred. Neil was the only participant who participated in the Book + Reminder phase of the study. After the interventionist read the book to Neil, he was then verbally reminded about appropriate behaviors in the target situation (e.g., *Remember to play nicely with the other kids and no cheating*).

During Andrew's baseline phase, his problem behavior increased. There was an immediate decrease in the rate of problem behaviors when the Social Story was introduced. Henry's data showed high variability and a decreasing trend during the initial

baseline phase. There was an immediate decrease in the rate of the target behaviors and the data became less variable when the Social Story was implemented. Neil's initial baseline data (first A phase) indicated a mean level of 1.14 behaviors per minute. When the book + reminder was introduced (C), the mean level remained at 1.14 behaviors per minute, suggesting that this condition had no effect on Neil's target behaviors. The mean for the second A phase was 0.93 behaviors per minute, a rate similar to baseline. After the social story was introduced (B), there was a decrease in both the variability of his performance and the mean rate of problem behaviors.

According to the study's results, all three participants immediately reduced their rate of problem behaviors when the social story was implemented (Kuo and Mirenda, 2003). The study findings also revealed that the Social Story itself (not just the extra adult attention that accompanies it) was responsible for reductions in the target problem behaviors. This study is one of the few to provide evidence that young children with autism or Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS) (ages 3-6 years) can benefit from social story interventions (Lorimer, Simpson, Myles, & Ganz 2002, Thiemann & Goldstein 2001).

Autism is characterized by impairments in social interaction and communication, as well as restricted repertoires of behavior (American Psychiatric Association, 2000). Due to the impairments, problem behaviors commonly occur. Interventions that reduce problem behaviors can improve the quality of life for children with autism as well as for others in their family or community. A Social Story is one positive behavior intervention for children with autism. Crozier & Tincani (2005) investigated the effects of a modified

social story, with and without verbal prompts, on the disruptive behavior of a student with autism in a preschool classroom.

The participant in this study was an 8-year-old boy named Alex who was diagnosed with autism by his pediatrician. The intervention took place during a structured independent activity session in a private preschool classroom for children with developmental disabilities and challenging behaviors. Students were expected to work quietly and independently at a station on an activity (student's choice). During a teacher interview, the teacher explained how one target behavior, *talking out* (talking to adults without raising his hand or being called on to speak), most interfered with the student's ability to succeed while at school. According to observations, Alex would *talk out* during independent work times when he did not have a staff member's direct attention. Alex would talk to a staff member (teachers or volunteer assistant) until he was directed to continue working quietly. Alex would return to his work after the redirection and work quietly for a couple minutes before talking out again.

The first author wrote a modified Social Story for Alex that targeted his disruptive behavior and described functionally similar replacement behavior (Crozier & Tincani, 2005). The Social Story included descriptive, perspective, and directive sentences as well as illustrations. It was seven pages long, with two sentences per page, and included a line drawing illustrating the main point. This study used an ABAC reversal design (Barlow & Hersen, 1984). In the baseline phase (A), Alex was observed for 30 minutes in his classroom to assess the rates of target behavior. In the first intervention phase (B), the modified Social Story was read immediately before the observation period. After six

sessions of Phase B, the Social Story intervention was withdrawn to baseline conditions. In the second intervention phase (C), the Social Story intervention continued with adding verbal prompts. During maintenance probes, when the Social Story procedures had been transferred to the classroom staff that incorporated it into their routine, Alex was observed without any intervention (Crozier & Tincani, 2005).

The two interventions used included a modified Social Story without verbal prompts (Phase B) and a modified Social Story with verbal prompts (Phase C). Phase C consisted of reading the story (without verbal prompts). Immediately following the story reading, verbal prompts were used during the observation period (during the target activity). Verbal prompts (*Remember to raise your hand when you want to talk to a teacher*) were given on average of once every 6 minutes.

According to the results, Alex demonstrated a reduction in the disruptive behavior of *talking out*. The number of behavior incidents during the first baseline phase averaged 11.2 *talk-outs* during a 30-minute observation period. During the Social Story-only intervention, his *talk-outs* dropped to an average of 2.3 per 30-minute observation session. In the second baseline phase, *talk-outs* rose to an average of eight per 30-minute observation session. In the final intervention phase, Social Story plus verbal prompts, *talk-outs* dropped to an average of 0.2 per 30-minute observation session (Crozier & Tincani, 2005). While acquiring the new skill of hand raising, Alex benefited from the prompting and did not need prompting to maintain the skill once his proficiency increased.

The preschool staff had never used a modified Social Story before this study began. After the study was completed, the teachers were asked about their impressions of the intervention. All the teachers were impressed with the effectiveness of the intervention and indicated that they would like to learn how to write other Social Stories so they could continue to use them in their preschool classroom.

Numerous researchers have successfully used Social Stories to decrease socially unacceptable behavior, including tantrums, inappropriate sharing, poor eating manners, and verbal assaults (Kuo & Mirenda, 2003; Kuttler, Myles & Carlson, 1998; Lorimer, Simpson, Myles & Ganz, 2002; Norris & Dattilo, 1999).

Ivey, Heflin and Alberto (2004) studied previously undocumented use for Social Stories preparation for a novel event. The interest in this study derives from the diagnostic category of ASD related to restrictive and repetitive behaviors. Individuals with ASD may be observed to be rigid in expectations for events; they may become anxious when expected to incorporate change into their routine, and those with ASD may react negatively to even small changes in their environment (Ivey, Heflin and Alberto, 2004). Negative reactions arise on a continuum. On the mild end of the continuum, a child with ASD may try to manipulate a particular situation to fit into an anticipated routine or show mild distress about the change in the routine. A more severe response to changes in their environment may result in physical stress and aggressive behaviors.

The purpose of Ivey, Heflin and Alberto's (2004) study was to determine if the use of Social Stories before a novel event within a routine setting would lead to independent behavior during the actual event for children with ASD. The challenge in

performing such research is that once an event is experienced for baseline data, it is no longer novel for investigation of the treatment. Three participants were included in this study. They were all boys with a diagnosis (made by an independent psychologist, developmental pediatrician, or neurologist) of PDD-NOS. Ron was 7 years 5 months old, Adam was 5 years, 1 month old, and Hal was 5 years 8 months old when the study began. All the activities occurred within the routine setting of their weekly speech-language therapy sessions on the campus of a children's hospital in a metropolitan area.

A reversal (ABAB) design (Alberto & Troutman, 2003) was used to analyze the participation of the participants in the novel events without Social Stories (baseline) and with Social Stories (intervention). Four types of novel events were targeted within each phase. The events were: setting changes, novel toys presented by an unfamiliar person, purchases, and novel activities occurring within the session.

Five behaviors in four categories were the objective for each of the novel routines. Data on the occurrence or nonoccurrence of specific behaviors were collected during all target sessions through event recording on a checklist (Ivey, Heflin and Alberto, 2004). Five skills were targeted in each session. A child could receive five points possible per session (one point per skill). A child received credit when he used the skill and completed it independently or with one prompt. Key tasks identified for each activity generally required using necessary materials, following directions to continue the activity, or following the rules of a game. One example of a task is in the purchase situation. In the cafeteria, the child was instructed to give money to the cashier. Credit was given to a child when he used the targeted key skill if it was performed independently or with

minimal assistance. In each session, a necessary item or information was withheld from the child to determine if he would make a request. For example, during the novel games, essential pieces from the toys were withheld. The child was expected to ask the adult about the missing pieces. The child was never explicitly told to request, rather he was cued that an item or information was necessary.

The first author wrote a Social Story for each of the novel routines used in the study. The story books were made on black construction paper with the text printed on white paper. Digital photographs of key information and black-and-white line drawings, using the Boardmaker software (King, 1995) were used in the book. During the intervention phases, parents were given two Social Story books each week for the following week's target activities. Parents were to introduce the stories and read them to their child one time per day for 5 days prior to the events. Parents were to choose a time of day when the child was receptive to listening and calm. The stories were also available to the child throughout the day. Parents read the stories to their child just before going to therapy.

During target activities, the first author used event-recording data collection based on a predetermined checklist of target behaviors (Ivey, Heflin and Alberto, 2004). Skills were scored as zero (not demonstrated) or one (if demonstrated). The investigation lasted for 12 weeks for Adam and Hal and 11 weeks for Ron (due to absences).

In the results, all three boys evidenced an improvement in the percentage of participation skills observed from the baseline through the initial Social Story phase. During the initial baseline phase, Ron exhibited a mean of 55%. During the first Social

Story intervention phase, Ron was at 85%. In the withdrawal (second baseline) phase, Ron returned to 55%. In the second introduction of Social Stories, he went back up to 85%. Adam initially was at 55%. His scores increased to 85% with the addition of Social Stories. When the stories were removed, his scores dropped down to 50%. With the reintroduction, his scores increased to 80%. During the initial baseline, Hal was at 45%. With the introduction of social stories, his performance increased to 60%. When the stories were withdrawn, his participation decreased to 40%. During the second intervention phase, Hal's score increased to 70%. For all three boys, the range of increase was 15% to 30%, and the range of decrease was between 10% and 35%. Although the participants in their study made substantial gains in participation when using Social Stories, they still exhibited errors or omission of skills. The most frequent errors were decreased attention and failure to ask for information. However, attending to a task is usually a deficit area for children with ASD. Attending to the activity was not explicitly mentioned in the text of the stories as other target skills were.

Ivey, Heflin and Alberto (2004) used the Social Story method as a means of developing flexibility within a routine and taking into account the language interaction needs of children with ASD. Ferrara and Hill (1980) found that children with ASD became more engaged in play in predictable situations and more withdrawn in unpredictable and novel situations. Schmit, Alper, Raschke, and Ryndak (2000) discovered in their study that a combination of visual and verbal cueing reduced the number of tantrums and increased independence in the classroom. This outcome also generalized over to the student's home environment. Dettmer, Simpson, Myles, and Ganz

(2000) used a variety of visual cues to decrease inactiveness and increase independence during transitions for children with ASD. The visual cues included picture schedules, visual timers, and a finished box. Prizant, Wetherby, and Rydell (2000) stated,

Of primary importance is teaching the child with ASD *how* and *when* to use their communication and interaction skills by reading and understanding social rules and conventions, as well as by following the rules of social communication and play schemes inherent in play interactions. (p.215)

A Social Story is a short, simple story written from the perspective of the child that delivers instruction on appropriate social behaviors (Gray & Garand, 1993). The use of social stories is an appealing intervention for a number of reasons. Social stories are inexpensive and easy to produce. The writing process is not overly time-consuming, and there are many resources and training materials available for teachers. However, limitations exist regarding many of the social story studies published to date. Although findings from research studies on social stories showed results as significant changes in target behaviors, only one study used social stories as the sole intervention (others combined social stories within other treatments). In future studies, researchers need to examine the effects of Social Stories that rely on pictures and limited or no words for younger children and children who lack basic literacy skills.

Peer Mediated Interventions

Friendships and good social relations are vital to the ultimate functioning of people with and without autism (Strain & Hoyson, 2000). Children with ASD display substantial social interaction deficits. The development of social skills includes such factors as communication including body language, spatial issues (how physically close to be to others), facial expressions, play skills, and turn-taking skills. Other skills needed

to become socially competent include recognizing, responding to and expressing emotions, initiating, maintaining and ending interactions, perspective taking, reasoning and problem solving, and understanding motives of others (Yapko, 2003). A goal in integrated programs for children with ASD is to increase the frequency in which they engage in social interactions with typically developing peers. Through peer mediated interventions, children with ASD may watch more appropriate models of social behavior than would be provided by their peers with ASD, and could engage in more normalized social experiences than would occur with only children with autism spectrum disorders.

Two types of strategies have been used through peer-mediated approaches to increase the basic social skills of children with autism: social reinforcement procedures and peer social initiations. Studies of social reinforcement typically teach peers to attend to, comment on, and acknowledge the behavior of their peers with disabilities (Pierce & Schreibman, 1997). The second strategy, peer social initiation (PSI) interventions, peers are taught to initiate to their peers with ASD by using play organizers (such as “Let’s play catch”) or sharing (giving toys/materials to another child). The rationale for placing peers in that role are that peers may be more effective than adults in modeling age-appropriate play and leisure activities; in addition, peers may promote generalization and continuation of behavior change because they are a natural part of social environments (a teacher may not always be present).

A naturalistic strategy, called Pivotal Response Training (PRT; Koegel, Schreibman, Good, Cerniglia, Murphy, & Koegel, 1989) has been shown to increase language and symbolic play behaviors of children with ASD. Pierce & Schreibman

(1997) explored potential changes in collateral social behaviors, including language and play, after children with ASD were exposed to a naturalistic, peer-implemented social skills training intervention. Typical peers were taught to implement an adapted version of PRT in order to increase complex social behaviors and toy play skills in children with ASD. In this study, two children with ASD, Derrick (7 year-old boy) and Stan (8 year-old boy) along with eight typical peers (ranging in ages 7 to 8-years old) participated. Each typically developing peer was taught PRT strategies and given a manual in both picture and written form (see Appendix C, for PRT strategies).

Both Derrick and Stan played with a limited amount of toys during the baseline sessions with the peer trainers. On average, Derek played with four toys per session and Stan played with three. They played with the same few toys (seven toys for both Stan and Derrick during baseline) and did not interact with the other 13 toys available during baseline. Stan played mostly with cars and a cash register while Derek played games (Operation and Jumping Grasshoppers) and Legos. During post treatment, the boys played with the same number of toys (three or four toys). However, the range of toys played with increased significantly with Stan using 15 and Derek using 20 different toys. Eliminating or reducing stereotyped or repetitive play is an essential component of any social skills training package for young children with autism because much social interaction with other children occurs around the medium of toy play (Pierce & Schreibmen, 1997). The two boys in this study chose a wider array of toys to play with rather than playing with the toys repetitively. This is an important finding because less

repetitive play in children with ASD may make them more attractive play partners, which may lead to more social interactions with typically developing peers.

According to Pierce & Schreibman (1997), procedures need to be developed that target not merely one social behavior, such as maintaining interactions, but rather a constellation of social behaviors. In their research study, they concluded that placing two children in the same environment does not mean that interaction will occur. They suggest that one solution to this problem would be to have a training program set up for potential “buddies,” such as Pivotal Response Training (PRT) in order to help promote social interactions during these interactive periods. They reported that they have received anecdotal data from teachers (who used such social skills models) reporting much success. Teachers reported that taking time to explain to the peer trainers *what* they are supposed to be doing with the target child and giving them ideas about *how* to do it are critical for the success of a buddy system

Even though this study included children older than preschool age, the strategies used can be modified and adapted to meet the needs of preschool age children with ASD. Preschool-age typically developing peers can also be taught to play with children with ASD in ways to assist in teaching social interaction skills to children with ASD.

A study conducted by Fierce-Jordan & Lifter (2005), investigated the relationship between the social and play behaviors of young children with and without pervasive developmental disorder (PDD). Their results suggested that social interventions should be implemented in the context of play activities that the child has mastered, as opposed to those activities the child is in the process of learning. From a cognitive/developmental

perspective, both social behavior and play behavior use cognitive resources, and when these behaviors occur at the same time, they compete for these cognitive resources. Competition for resources may make it difficult for children to engage in social and play actions at the same time, especially if the actions are complicated for the child.

According to Sawyer, Luiselli, Ricciardi & Gower (2005), poor play skills can lead to more serious problem behaviors and possibly, peer rejection. A study conducted by these authors suggests that sharing behaviors can be taught successfully to children who have autism and interact with typical peers within integrated educational settings. In their study, they exposed a 4-year old boy with autism to a multicomponent intervention plan that targeted his verbal and physical sharing among typical peers in an integrated preschool classroom. Two sharing behaviors were measured, physical and verbal sharing. The two types of social validation, which also served as evaluative measures, were normative comparison and intervention acceptability.

The participant, 4- year old Jamie, was diagnosed with autistic disorder. He enjoyed playing with toys typically by himself but also looked interested in peer activities. He would seek interaction with or respond to a social initiation from a peer occasionally. Jamie rarely shared toys with peers or joined cooperatively with them during activities. The study took place in an integrated preschool classroom at a private preschool for children (ages 3-12 years) with developmental disabilities. The procedures were implemented during daily 30-minute play sessions in the classroom. Toys, books, crafts materials, and games were provided in the activity centers for Jamie and the other students to play with during the play session. A classroom teacher or assistant would

supervise Jamie and between 3-5 children. Of all the peers interacting with Jamie, none had disabilities.

The following definitions of behaviors measured in this study (physical and verbal) are from Sawyer, Luiselli, Ricciardi & Gower (2005):

Physical sharing was defined as Jamie (1) handing play materials to another child, (2) allowing another child to take his play materials, (3) using play materials that another child had during the same play session, and (4) simultaneously manipulating play materials with another child during an activity. Verbal sharing was defined as all verbal attempts at initiating physical sharing or verbal acceptance of such attempts, which included Jamie (1) requesting play materials from another child, and (2) asking a child to share play materials. (p. 2)

Prompts were recorded during intervention phases.

When the instructor gave Jamie a verbal direction (e.g., *Jamie, give the truck to Ben.*), it was defined as a prompt. During the initial 10 minutes of the 30-minute play session, the frequency of verbal sharing, physical sharing, and prompts to share were recorded on a standardized form. Verbal and physical sharing were scored when Jamie performed behaviors independently and in response from an instructor's prompt. Social validity was assessed by comparing Jamie's sharing with his peers and through intervention acceptability ratings. The classroom teacher and assistants implemented intervention with Jamie in addition to data collection.

An ABCB single-case design was used in this study in which *A* represented baseline, and *B* and *C* represented two intervention conditions. During baseline, Jamie and his peers were told by the instructor to participate in the activities at the beginning of each play session. During the play session, the instructor monitored the children and made comments on appropriate behaviors. The instructor did not give play-specific

instructions or prompts to share and did not speak to Jamie and the other children if they demonstrated verbal or physical sharing.

During Intervention 1, priming, prompting, and praise were used. When the play session would start, the instructor sat with Jamie and one typical peer (rotated across days) at a table separate from other children in the classroom. The importance to share and explanations of how to share were described by the instructor (e.g. “We can share by giving other children things when they ask nicely for them.”). Jamie then observed the instructor and the peer demonstrate 2-3 examples of verbal and physical sharing. Jamie practiced sharing with the instructor 2-3 times and was praised accordingly. Lastly, the instructor guided him to perform verbal and physical sharing with the peer while giving feedback and praise. After Jamie and the peer returned to the play area in the classroom, the play session began. During the play session, the instructor gave Jamie a prompt to share whenever one minute elapsed without Jamie sharing verbally or physically. Jamie was praised by the instructor each time he shared. During Intervention 2 (prompting and praise), the instructor did not meet with Jamie and a peer before the play session but continued to prompt Jamie and praise him for verbal and physical sharing.

According to Sawyer, Luiselli, Ricciardi & Gower (2005), the results were as follows. In Baseline, physical sharing was low ($M = .5$ per session), while verbal sharing was more frequent ($M = 4.8$ per session). Physical sharing ($M = 5.8$ per session) and verbal sharing ($M = 8.0$ per session) increased in Intervention 1. Prompts to share averaged 5.6 per session. When only prompts and praise were programmed during Intervention 2, physical sharing decreased ($M = 4.3$ per session), but verbal sharing

continued to increase ($M = 10.0$ per session). Prompts increased to 7.0 per session on average. The re-introduction of Intervention 1 was associated with an increase in physical sharing ($M = 8.9$ per session); verbal sharing stayed at the same frequency recorded during Intervention 2 ($M = 10.6$ per session.). An average of 2.7 prompts were delivered per session.

Sawyer, Luiselli, Ricciardi & Gower's (2005) study findings suggested that priming before a classroom play session, combined with in-session prompting and reinforcement, improved sharing behaviors. Obtaining normative peer data was valuable in showing that with intervention, Jamie's physical sharing was comparable to typically developing peers. It appeared that the intervention might also have had a positive effect on the physical sharing of the typically developing peers. For many children, intervention that targets sharing must address both physical and verbal behaviors (Sawyer, Luiselli, Ricciardi & Gower, 2005). This study's findings suggested that sharing behaviors can be taught successfully to children with ASD who interact with typical peers within integrated educational settings.

In a case study by Francke & Geist (2003), research was conducted in attempt to answer the question: If play strategies are taught, what would be the effect on social interaction of a child with ASD with typically developing peers? Typically developing children naturally engage in purposeful play because they are intrinsically motivated (the motivation comes from within the child and not from external demands or rewards). Children with ASD do not easily produce meaningful learning from play or manipulate toys the same way a typically developing child would. When playing with a toy car, a

typically developing 3- year-old child might *drive* across the floor while making car sounds or even create dialogues for the pretend driver inside. In the same situation, a child with ASD might display such play behaviors with the car as turning the car over and spinning the wheels, or might lay on the floor watching the wheels move as they push the car back and forth in the same spot for an extended period of time. It is also less likely to hear the child with ASD making any car sounds or create a dialogue for the driver.

Children with ASD also do not pick up on social cues in the environment (Francke & Geist, 2003). Typical children can make choices in what centers they want to play in and are able to become engaged in an activity. Children with ASD tend to become overwhelmed in a setting where there is free choice and unstructured play (Schopler, 1996). They may become distracted by all the stimuli in the environment. Hypersensitivity to sight, sound, touch, or smell is a classic characteristic symptom of autism, and may cause confusion and distress (Janzen, 1996; Schopler, 1996). With overstimulation, the child may exhibit nonproductive types of play, repetitive movements with a toy, or rocking. The repetitive movement helps to soothe the child, but also replaces meaningful play. These factors all have clear implications for organizing a teaching environment that attends to the needs of the child with ASD (Francke & Geist, 2003).

Many types of teaching techniques and philosophies exist for teaching children with ASD. Two ends of the spectrum of teaching techniques includes the Lovaas methodology and on the other end, the Treatment and Education of Autistic and Related

Communication Handicapped Children model (TEACCH). The Lovaas methodology advocates teaching children in a highly structured environment in a segregated setting in which skills are taught in isolation and students are drilled for multiple hours a day (Francke & Geist, 2003). The TEACCH curriculum model incorporates some elements of the Lovaas model of structured teaching. It fosters a child's independence while using structured teaching and visual supports.

In Francke & Geist's (2003) study, they based their research on the TEACCH curriculum model with modifications made by using typically developing peers as part of the teaching strategies, while keeping the focus on play. Their study is a qualitative case study of one child with ASD in an integrated setting that included children with a variety of disabilities as well as children who were considered to be typically developing peers. The researchers used participant observation to study how teaching play strategies to a child with ASD affected his cognitive development, academic progress, and social interactions. The child's teacher was responsible for collecting data and did the observations.

The participant, Jay, was a 3-year-old boy with a diagnosis of autism. He also was also diagnosed with "global delay" (a delay in all areas of development: social-emotional, cognitive, communication, motor, and adaptive skills). The characteristics of ASD that Jay displayed included a lack of social relationships, significantly impaired communication skills, limited eye contact, and a lack of imagination (child-appropriate play). Therapies for Jay's specific needs included sensory integration activity, oral motor activity, speech therapy, and occupational and physical therapy.

This study was conducted in a rural public elementary preschool classroom. The classroom served 12 students. Four children (5-year-olds) were considered typical in their development, and eight children were identified as having developmental delay. The scheduled observations were done four times a week in 20-minute segments at predetermined times. The data was collected during the structured teaching, free choice playtime, lunch, small-group activities, and large-group activities. The scheduled observations began at the beginning of the school year in August and ended the last day of school in June.

The baseline observations were conducted from August through the beginning of October. Jay's baseline data indicated that his play behavior and interactions with peers were not typical for his age (Francke & Geist, 2003). During play, a typical 3-year-old includes social interaction, imaginative play, interaction, engaging in play and explores with toys. The baseline data indicate that in his interaction and exploration of materials, Jay is in the practice play stage. Jay engaged in unoccupied (no interaction, just observing others) and solitary (playing separately from others with no reference to what peers are doing) play. During circle time, the children would have the chance to choose their activities. According to Francke & Geist (2003), Jay had three distinct problems with this arrangement: 1) he could not make a play choice, 2) he was unable to enter a play area to engage in play with other children, and 3) once he did make a play choice, he did not know what to do with the toy.

In the first baseline observation, the activities were child directed without adult intervention. Jay was not able to choose a toy for 5 or 6 minutes due to the overwhelming

number of choices available. When he did choose a toy, he did not know what to do with it. He stayed far away from the play areas in which peers were engaged in play. During the 15-minute second baseline observation, Jay ran back and forth from the block area to the housekeeping area. He did not engage in play; rather he would sit and giggle without involving anyone else. In a third baseline observation, the researcher attempted to redirect Jay to a meaningful activity with a typically developing peer. In this observation, Jay was throwing play food around in the housekeeping area. The teacher held out her cupped hands and said, “in.” Jay complied with her request and did so for about 10 minutes. The teacher brought in a typically developing peer to perform the same scenario. The peer did as she was asked, with a big smile on her face. When the little girl said *in*, Jay threw the food and ran off. When the teacher attempted to put her hand over Jay’s to show him to put the food in the girl’s hand, he became upset and screamed. Jay was not able to generalize because social interactions with peers is extremely difficult for him.

Jay’s behavior and interaction during the actual treatment phase was observed and recorded during the implementation of the play strategies approach. Two play scenarios show the progression of teaching play strategies. They are lunchtime imitation games and a play scenarios involving rolling a truck back and forth with a play partner. During the modeling of rolling the truck, the researcher and Jay’s personal attendant faced each other. Jay sat in his personal attendant’s lap. The attendant used hand-over-hand instruction to teach Jay how to play. He was not to roll the truck to the researcher until she said, *go*. When more than 45 seconds passed, a cue was given. In later observations of the same scenario, the wait time was only about 15-20 seconds until he rolled the

truck. The next step was incorporating a peer into the activity. The peer was to wait for Jay to sign and say “go” to get Jay to roll the truck to him. He was then to wait until Jay signed “go” before rolling the truck back. They were able to roll the truck back and forth with only verbal prompts to Jay as a reminder to sign “go.” During free choice time, Jay went to the shelves, got the car he liked to play with, and pulled the researcher’s hand down to the floor (indicating her to sit). Jay then sat in his assistant’s lap. A few minutes later, a peer came by and sat in the lap of the researcher. The peer and Jay began laughing and smiling as they were pushing the truck back and forth to each other. They interacted for about 20 minutes. This observation reveals that Jay was able to make a play choice and used the toy appropriately. There was also an increase in eye contact between the play partners. Jay also requires infrequent prompts to sign “go” to his play partner and the waiting time had significantly decreased.

According to Francke & Geist (2003), before Jay had been taught play strategies, he would not have tolerated another child entering the play and would have left the area. After learning play skills, Jay was not only tolerating peers; he was also engaging in play with them and having fun. This study demonstrates that teaching play strategies could assist children with ASD to generalize skills taught in the structured setting and use them to enter into real play situations where natural learning takes place. Fostering a community of learners where all children are respected and accepted was one component of the successful research environment. Each child was shown patience, kindness, and respect by the adults and, in turn, these qualities were fostered among peers (Francke & Geist, 2003). This study involved a child who is on the moderate to severe end of the

autism spectrum. However, play scenarios and activities with typically developing children can be modified and adapted to meet the social skill needs of a child anywhere on the autism spectrum.

Kohler, Anthony, Steighner & Hoyson (2001) studied ways of using naturalistic tactics to increase the social interaction skills of four preschool children with ASD. There have been a number of interventions developed to improve social and communication skills of young children with ASD. One promising approach called naturalistic teaching involves a variety of techniques, including milieu teaching, incidental teaching, the mand-model procedure, naturalistic time delay, and activity-based interventions (Bailey & Wolery, 1992). These techniques include two common elements. The first component is the use of environmental structuring tactics. It includes giving the child choices, gaining children's interests, and planned forgetfulness and sabotage (i.e., neglecting to provide necessary materials or placing furniture upside down). The second component includes the use of instructional tactics that match children's interests and actions (i.e., a teacher might join an activity and provide comments designed to stimulate further interest and engagement). Brown and Odom (1995) recommend that teachers be careful not to force children's interactions, but allow children to choose their own materials, activities, situations, and peers within an activity.

This study investigated four preschoolers with disabilities and 35 of their typically developing peers in a half-day integrated preschool program. Each class consisted of a head teacher, one aide, 3 to 4 children with ASD/PDD, and 8 to 10 typically developing children. The experimental sessions were 10 minutes long and occurred during a 40-

minute activity. The children could play in six to eight different areas such as gross motor, table games, dramatic play, blocks, computer, books, art, etc.

Sam was a 4-year 2-month old boy with ASD. He had some appropriate language and independent play skills, but exhibited tantrums when others tried to include him in parallel play and interaction. Adam was a 4-year 1-month old boy who had a dual diagnosis of ASD and PDD. Adam often wandered around the classroom during unstructured times and engaged in little sustained play within an activity. When adults or peers tried to interact with Adam, he would ignore them or walk away. Jacob was a 4-year, 7 month old boy with a diagnosis of PDD. Jacob exhibited a variety of appropriate play skills, but rarely interacted with peers during unstructured activities. The fourth participant, Arthur, was a 4-year 4-month old boy who had a dual diagnosis of autism and PDD. He showed some appropriate language and play skills but rarely interacted with peers in his class.

All four teachers were introduced to the naturalistic teaching approach before beginning this study. This approach encompasses seven tactics that rely on the provision of antecedent variables that are designed to accomplish two important objectives: (a) stimulate the child's interest, enjoyment, and play within the activity and (b) facilitate the child's communication and social interaction with others (Anthony, Steighner, & Hoyson, 2001).

During baseline, all four teachers participated in a 45-minute meeting to become familiar with the naturalistic tactics. In the technical assistance phase, each teacher received daily feedback and assistance on how to use the naturalistic tactics to help guide

the focal child's interest and social interaction. In the maintenance phase, each child was observed in one to two sessions per week. Research staff provided a completed feedback form only after the second session during this phase. They did not give suggestions, comments, or assistance during any of the actual play sessions.

In order to examine the effects of various experimental conditions on the four boy's interactions with a teacher or peers, a multiple baseline across subjects design was used. Sam, Adam, and Jacob all began the study in February, while Arthur began in the month of April.

During baseline observations, Sam and Adam directed few social overtures to their teachers. Jacob and Arthur exhibited low levels of interaction with peers. The daily feedback phase was only done with Sam (due to the need of completing the study before the end of the summer session and its minimal impact). The daily feedback phase did not make much of an impact on Sam's social interaction with the teacher (overall mean increased from 15% to 19%). All four boys were included in the technical assistance condition. Sam showed the least increase during this phase. His social interaction was consistently higher than the baseline levels (mean of 29%).

Six-second partial interval time sampling system was used to code three categories of child behavior. Social Interaction was coded each time the focal child directed a discrete social overture to others (talking to, touching, or exchanging materials with someone). Other Active Behavior was coded when the focal child did not engage in social interaction but showed other active responses (manipulating toys, climbing on the slide, singing, dancing, etc.). Lastly, Passive Responding was coded when the focal child

did not engage in any of the previously listed behaviors (wandering around the room, looking at an object without touching it). All four boys showed high levels of total active participation during baseline phase (range of 65%-85%). Social interaction accounted for a small part of the overall active participation (range 12%-31%). Other active behaviors met or exceeded 50% for all four boys. Active participation consistently met or exceeded 70%. Sam, Adam and Jacob's proportion of the social interaction relative to other active behaviors increased from the baseline range of 29%-35%.

In Anthony, Steighner, & Hoyson's (2001) discussion, they claim that each boy exhibited higher levels of social exchanges after teachers received daily assistance (i.e., instruction, coaching, feedback, and encouragement) on the use of the naturalistic approach. Sam and Adam were more social towards their teachers, while Jacob and Arthur were more social towards their peers. Sam's interaction was at 18% in baseline and increased to 30% during the technical phase. Jacob's interaction with peers rose from 1% to 17%. These increases don't seem very high, but it is important to note that the children's social interactions occurred without explicit adult prompts. These increases are comparable to those of past studies that have examined the impact of incidental teaching on children's social interactions (Kohler, Strain, Hoyson, & Jamieson, 1997).

All four teachers dealt with some frustration in learning how to use the various naturalistic tactics. Their initial efforts were often met with child indifference, avoidance, and opposition that led to frustration. There was also some initial difficulty in learning how to facilitate their children's interest and social interaction. Learning how to stimulate children's interests and motivation within the context of an ongoing play activity was a

vital step in learning naturalistic tactics. It was also essential for the teachers to have some knowledge of each child's individual needs and characteristics. The teachers were able to use the naturalistic tactics to facilitate social interactions once they learned the children's interest and motivators. The results of this study indicate that a naturalistic teaching approach increased the number of social interactions by the four preschool boys with ASD.

In my review of existing research, I explored the variety of social interventions currently being used with preschool-age children. More importantly, I identified interventions that are appropriate. While exploring and learning new strategies, I began thinking about other teachers in my district and how they could benefit from a professional development program in which I would share the findings from a variety of interventions. There are a variety of social interventions and strategies being implemented in the classrooms, but how much do teachers know about the interventions they are using, and are there others they do not know about that may be more successful? I also reviewed literature regarding professional development, which is discussed in the next section of my review of literature.

Effective Professional Development

Professional development, as defined by Hassel (1999), is the process of improving staff skills and competencies needed to produce outstanding educational results for students. A study of more than 1,000 districts found that every additional dollar spent on developing teachers netted improvements in student achievement greater than any other school

resource (National Research Council, 1999). Teachers have become recognized as the centerpiece of educational change. Teachers truly have the power to make a difference.

Kent (2004) investigated an abundant amount of research on professional development. Even though there is a multitude of materials that reveals the importance of professional development for teachers, there is little on what is needed. Shortfalls in professional development can be contributed to short duration, low intellectual level, poor focus, and little substantive research-based content. It is crucial that teachers stay current in best teaching practices in order to improve their overall program quality. Through professional development, teachers can feel motivated, inspired, curious, capable, and develop new ways of thinking. Professional development must include organized, appropriate, well-thought-out training and individual follow-up in order for effectiveness. Teachers must be given on-going opportunities.

Research indicates that some children may learn in spite of incidental teaching, but others will never learn unless they are taught in an organized, systematic, efficient way by a knowledgeable teacher using a well-designed instructional approach (American Federation of Teachers, 1999). Teachers must be willing to continually observe and modify learning environments and teaching practices. They need to strive to be the best they can be for their students and for themselves as professionals. According to Kent (2004), it is imperative that staff development focus on local schools, be specific to identified needs, and continue through on-going follow-up support.

While the field of research is relatively young, there is evidence that professional development can lead to improvements in instructional practices and student learning

(Borko, 2004). In order to improve our schools, it is essential for teachers, administrators, and faculty to attend on-going staff development. Borko (2004) identified four key elements that make up any professional development system:

They are (1) the professional development program, (2) the teachers, who are the learners in the system, (3) the facilitator, who guides the teachers as they construct new knowledge and practices, and (4) the context in which the professional development occur. (p. 4)

The goal of the first key element, the professional development program, is to provide evidence that the professional development program can impact teacher learning in a positive way. Professional development programs that provide specific focus on a subject can help teachers develop a deeper understanding. The second key element refers to teachers, who are the learners. Strong professional learning communities can foster teacher learning and instructional improvement (Borko, 2004). During professional development sessions, teachers are often encouraged to discuss ideas and materials related to what they teach. Supportive yet challenging conversations contribute to successful learning communities. The third key element, the facilitator, guides the teachers as they construct new knowledge and practice. The facilitator can be a teacher leader presenting to their colleagues. This type of situation can provide teachers with a valuable teaching network. The last key element, the context of the professional development, includes well-defined systems. They include activities and instructional materials, descriptions of facilitator roles, and teacher outcome measures.

Social Interventions Project Procedures

Within my school district, there are currently six preschool teachers who teach children with ASD. Each year, the number of preschool-age children identified with ASD

characteristics increases. We teach in a somewhat new field and as teachers, we are always searching for new strategies and interventions that we can use with our students because of their vast range of needs and abilities.

In my school district, I am on the Early Childhood Advisory Board. This group of teachers and administrators meet to discuss and set up professional development for early childhood teachers from the Dubuque Community School District throughout the school year. I will be bringing my professional development information on social stories and peer-mediation to a preschool advisory board meeting. I will ask the board if I would be able to add my professional development sessions onto the professional development calendar. I will also talk with the early childhood consultant to see if presenting this professional development to Kindergarten teachers in our district would be appropriate and accepted. This professional development may also be used in the future for childcare programs and daycare centers in Dubuque who will be soon receiving our students with ASD due to new changes in Least Restrictive Environment (LRE) mandates.

The professional development will consist of three sessions each two and one-half hours long with each followed by a feedback session a few weeks later (see Appendix E). The time between the sessions will allow teachers to integrate what they learned and apply it in their classrooms. The three professional development sessions are intended to add to their current knowledge of autism through an ASD overview, to provide them with Social Stories interventions and Peer-mediated strategies to use with their students.

Figure 1

Professional Development Sessions Flyer

AUTISM:
EFFECTIVE INTERVENTIONS TO HELP YOUNG
CHILDREN DEVELOP SOCIAL SKILLS

What: Using Social Stories Effectively in the Classroom

Who: Preschool Teachers and Paraprofessionals

When: (Date) 1:00-3:30 p.m.

Where: Keystone, Room -

Why: To gain knowledge of Autism Spectrum Disorder.

To learn how to make and incorporate Social Stories with your students.

What: Successful Social Interventions through Inclusion

Who: Preschool Teachers and Paraprofessionals

When: (Date) 1:00-3:30 p.m.

Where: Keystone, Room -

Why: To understand Social Skills Challenges in young children with Autism Spectrum Disorder.

To learn social interventions that promote play interactions between children with ASD and typically developing peers. Interventions include Pivotal Response Training (PRT), Physical and Verbal Sharing Behaviors, TEACCH Curriculum Model and Naturalistic Teaching.

- Please register by (date).
- Coffee and cookies will be provided
- Questions? Contact Angela Riesberg at: (Phone Number) or ariesberg@(Email)

Participants will be strongly encouraged to attend both sessions as well as the feedback sessions. I will be distributing a flyer (see Figure 1) containing the information about when and where these professional development sessions will take place. I will put the flyer in teacher's mailboxes, and will hang them up on the message board in the mailroom. I will also distribute flyers to appropriate Area Education Agency staff.

Day One Session

As the participants enter the room, they will each pick up a participant packet of materials (See Appendix G) that includes the agenda for the day 1 presentation as well as the power point presentation slides. I will begin my presentation by welcoming my participants and then introducing myself. I will describe the goals and purpose of this professional development session. The first session for this professional development will include an overview of ASD and will be followed by Social Stories strategies that are simple to make and can be incorporated right into a classroom's routine.

Overview of ASD. I will share the characteristics of ASD and explain what the term "spectrum" entails. Spectrum Disorder includes various levels of ability, from mild to severe, and PDD-NOS, Asperger syndrome, CDD, and Rett syndrome are diagnosed as autism spectrum disorders. I also include ASD facts such as how ASD is more prevalent among boys than girls, the number of births affected by ASD, and ASD statistics. The ASD overview also includes treatments and interventions and that there is no one size fits all approach. The ASD overview ends with deficits and the lack of social skills of children with ASD. After the ASD overview, my presentation continues with Social Story interventions.

Figure 2

Using Social Stories Effectively in the Classroom (Day 1)

Day 1: Social Story Interventions

- 1:00 – Welcome and Introductions
- 1:05 – Define Objectives and Purpose of this Professional Development Session
- 1:10 – Overview of ASD
 - Power Point presentation on ASD
- 1:30 – Read through Social Story of this Professional Development Session
- 1:35 – Power Point Presentation of Social Story Interventions
 - Research on Social Story Interventions
 - Social Story Content and uses
 - How to make a Social Story
- 2:20 – Short Break
- 2:25 – Writing a Social Story in Small Groups
- 2:45 – Large Group Sharing of Small Group's Social Stories
- 3:15 – Describe Homework and Ongoing Assessment
- 3:20 – Closing Questions/Concerns

Day 2: Feedback Session

Large group sharing of effectiveness and usage of Social Story Interventions with their own students

Social stories. I will begin the Social Story section by simulating a social story for my participants about the professional development session they are attending (participants will take on the role of a child by learning to sit, to listen, etc.). This will give them a first glimpse of a Social Story to experience how one is used. Next, I will explain who created Social Stories (Carol Gray). Social Story content will be included. Content information includes the use of words, illustrations, and writing the story in first person. A description of three sentence types, Descriptive, Directive and Perspective Sentences, will be explained. Descriptive Sentences explain what is going to happen and

why. Directive Sentences include individualized statements of desired responses.

Perspective Sentences describe the reactions of others in the target situation. I will also point out the importance of reading the Social Story to the child days, weeks, or even months in advance, then reading it that same day and right before the specific event or situation occurs.

Next, I will show the participants how to make a social story and will include a Social Story example in their participant packet of materials. The Social Story is one I recently created for a student, Timmy in my classroom. His mother told me he always cries and becomes very upset during haircuts. She asked me for suggestions or ideas to help him during his haircut. I made a Social Story for Timmy (see Figure 3), and read it to him a few times throughout the school day. I asked his mother to read it to him before his haircut. The mother called me after his haircut and was excited and amazed at the immediate success of using the Social Story. It was the first time Timmy did not cry during a haircut! She now reads this story to him before haircuts and sends it to school the day of his haircut so that I can also read it to him the same day. I was also told by this mother that she has recently made a Dentist Social Story for Timmy. The Social Story helped him during his dental appointment also. His mother reported that the dentist was impressed with Timmy's behavior and how much it improved after reading this Social Story.

Writing social stories. I will then lead my participants into a large group discussion. Participants will reflect on their current students and recent situations and activities in which a particular student of theirs might have a difficult time. Participants

Figure 3

Social Story Example

Timmy's Haircut

Timmy is going to go get his hair cut.

Timmy will sit in a chair.

Mr. John will cut Timmy's hair.

Timmy will be o.k.

When Mr. John is all done, Timmy will get a sucker.

Timmy got his hair cut.

Good job Timmy!

will then share the activities and situations in a large group discussion as I write them on chart paper. Next, I will have participants break into small groups or pairs with other participants who choose to write a Social Story on the same or similar situation. Participants can use situations from our large group list or from scenarios; I have available on my power point presentation.

Concluding activities. When each group is finished writing a Social Story, they will share their stories in large group. I will conclude my Power Point presentation with some research to back up the effectiveness of using Social Stories as well as my own personal story of a successful Social Story. I will then explain their homework. I am going to have the participants use the Social Stories they made, modify and adapt it to a student's individual needs, and implement it. Lastly, I will conclude my presentation with answering any questions and listening to any concerns from the participants.

We will then meet again approximately three weeks later (Figure 2: Day 2) at the feedback session to show each other our Social Stories and discuss the implications and effectiveness of using the Social Story. In order to provide on-going opportunities, I will make arrangements with teachers to visit their classrooms and answer any questions they may have about creating or using Social Stories.

As participants enter the room, they will each pick up a participant packet of materials (Appendix H) that includes the agenda for the day 3 presentation. After I welcome my participants and introduce myself, I begin with a poem about the importance of friendships. The goals and purpose of this professional development session is for

Figure 4

Successful Social Interventions and Inclusion (Day 3)

Day 3: Peer-Mediated Interventions (Part 1)

- 1:00 – Welcome and Introductions
- 1:05 – Share Quote/Poem about Friendships
- 1:10 – Pair Up and Reflect on Students Social Friendships
- 1:25 – Define Objectives and Purpose of this Professional Development Session
- 1:30 – Overview of Social Challenges of children with ASD
Overview of Inclusion (children with ASD and Typically Developing Peers)
- 1:45 – Power Point Presentation on Peer-Mediated Interventions
Examples of Promoting Peer Interactions through the use of the following interventions:
Pivotal Response Training (PRT)
- 2:10 – Large Group Discussion
- 2:20 – Physical and Verbal Sharing Behaviors
- 2:45 – Small Group Discussion
- 3:00 – Large Group Sharing of Small Group's Discussion
- 3:20 – Describe Homework and Ongoing Assessment
Evaluation of Social Interventions Professional Development
- 3:25 – Closing Questions/Concerns

Day 4: Feedback Session

Large group sharing of effectiveness and usage of Peer-Mediated Interventions with their own students

participants to learn about social skills challenges in young children with ASD, and interventions that help teach and promote social interactions.

Overview. I will begin the power point presentation by having my participants pair up and reflect on the social friendships they witness with their students in their own classrooms. Participants will then share their responses in large group. After

sharing and discussion of our student's friendships, I will give an overview of the social skills challenges and deficits of children with ASD. The term autism will be defined, which means *of or for oneself* (Neisworth & Wolfe, 2005). I will explain the development of social skills that include skills needed to be socially competent. Such skills include turn-taking, play skills, and perspective taking. I will talk about social skill deficits and characteristics in children with ASD (i.e., odd play, little or no eye contact). There are various levels of social interaction. They can range from no contact with others, to little contact, or interactions with others but lack necessary skills to be successful.

After the overview of ASD and social skills deficits, I will include goals of inclusion. One such goal is for children with ASD to increase frequency in which they engage in social interactions. Peer-mediated interventions provide normalized social experiences and models that are more appropriate. I will share the names of specific interventions (Pivotal Response Training, Physical and Verbal Sharing Behaviors, TEACCH Curriculum Model, and Naturalistic Teaching) that promote play interactions between children with ASD and typically developing peers. The peer-mediated interventions that I will be presenting during this presentation (day 3) include Pivotal Response Training (PRT), and Physical and Verbal Sharing Behaviors. In the second part of my presentation, (day 5), the TEACCH Curriculum Model, And Naturalistic Teaching intervention will be presented.

Pivotal Response Training (PRT). This intervention is used to teach communication, language skills, and how to have effective interactions (Exkorn 2005). PRT is designed to fit into natural learning opportunities in any inclusive setting. I will

give 10 Pivotal Response Training strategies that a facilitator should use. Next, I will provide the participants with Fierce, Jordan & Lifter's (2005) study, an investigation of the relationship between the social and play behaviors of children with and without PDD. I will share a few activity ideas (such as painting a mural, playing organized games, putting together floor puzzles). I will end the Pivotal Response Training section with a large group discussion to create a list of motivating activities children with ASD and typically developing peers can play together to promote social interactions.

Physical and verbal strategies. A Physical sharing example is sharing and exchanging play materials by one child handing them to another child. A verbal sharing example is having a child request play materials from another child. I will include research from Sawyer, Luiselli, Ricciardi & Gower (2005) which showed how priming before a classroom play session, combined with in-session prompting and reinforcement, improved sharing behaviors. I will then have my participants break into small groups to discuss how they can facilitate physical and verbal sharing within the list of activities we made (I will assign each group with three activities from our list.) Each group will then discuss their ideas during large group. To end my presentation, I will assign homework. Each participant will need to choose a few of the activities from our list. They also need to facilitate some examples of verbal and physical sharing during the activities. I will take any questions or comments before participants leave. We will share our activities and the effectiveness during our feedback session that will take place approximately three weeks later.

Day Five Session

As the participants enter the room, they will each pick up a participant packet of materials (Appendix I) that includes the agenda for the day 5 presentation. After I welcome my participants back, I will begin with a brief summary of what teachers found effective and not effective from our discussion during the last feedback session. Next, participants will be asked to take several minutes to fill out the Child Interests Profile (located in their packet of materials). The objectives and purpose of this session is for participants to learn how to teach play strategies to children with ASD, and Naturalistic Teaching Strategies that promote social interactions between children with ASD and their typically developing peers.

Peer-mediated intervention. This section includes TEACCH Curriculum Model and Naturalistic Teaching. The TEACCH Curriculum Model fosters independence while using structured teaching and visual supports. It focuses on meeting each child's specific communication, social, and educational needs. The Francke & Geist (2003) study demonstrated that teaching play strategies could assist children with ASD to generalize skills taught in the structured setting and to generalize skills taught and use them to enter real play situations. I will provide the participants with an example of an activity. If you were trying to teach a child to roll a car back and forth with a peer, you would first have the child practice with only adults, and then bring a peer in with the adults. The last step would be pulling the adults out and having the child taking turns with just the peer.

Figure 5

Successful Social Interventions and Inclusion (Day 5)

Their	Day 5: Peer-Mediated Interventions (Part 2)	
	1:00 – Welcome Back	
	1:05 – Results Shared from our Last Feedback Session	
	1:15 – Participants Individually Fill Out Children’s Interest Profile on One of	
	Current Students	
	1:25 – Define Objectives and Purpose of this Professional Development	
	Session	
	1:30 – Power Point Presentation on Peer-Mediated Interventions	
	Examples of Promoting Peer Interactions through the use of the	
	following interventions:	
	TEACCH Curriculum Model	
	1:50 – Demonstration in Large Group (Modeling of Teaching Students Play	
	Strategies)	
	2:05 – Small Group Role Plays of Teaching Students Play Strategies	
	2:15 – Short Break	
	2:20 – Naturalistic Teaching Intervention	
	2:45 – Small Group Activity	
	3:00 – Share Small Group’s Discussion in Large Group	
	3:15 – Main Points of Peer-Mediated Interventions	
	3:20 – Describe Homework and Ongoing Assessment	
	Evaluation of ALL Social Interventions Professional Development	
	Sessions	
	Closing Questions/Concerns	
Day 6: Feedback Session		
Large group sharing of effectiveness and usage of teaching play strategies, using sabotage strategies, and Sharing Children’s Interests Profiles.		

Figure 6

Child Interests Profile

Child Interests Profile

Child's Name: _____ Date: _____

1) Favorite Toys:

2) Preferred Activities:

3) Favorite Characters (from T.V./Movies):

4) Favorite Games:

5) Peers the Child Plays With/Alongside the Most:

6) Song/Music Preferences:

7) Other Motivators/Interests:

I will ask three volunteers to help me demonstrate this example of teaching a play strategy (rolling a car back and forth). After the demonstration, all participants will break into groups of four and use the toys I will have available. They will role-play the two adults teaching a child with ASD play strategies, with the fourth adult taking on the role of the peer.

Naturalistic teaching. After a short break, I will be sharing the last intervention, Naturalistic Teaching intervention. This intervention warns teachers not to force children's interactions, but allow children to choose their own materials, activities, situations, and peers within an activity (Brown & Odom, 1995). Naturalistic Teaching incorporates two objectives. The first objective includes stimulating a child's interest, enjoyment and play within the activity. The second objective is to facilitate the child's communication and social interaction with others (Anthony, Steighner, & Hoyson, 2001). Next, I will present Naturalistic Teaching techniques that includes the use of environmental tactics (give choices, gain child's interest, sabotage), and the use of instructional tactics (teacher joins in play and provides comments). I will also provide participants with seven strategies to use with Naturalistic Teaching. According to Anthony, Steighner, & Hoyson (2001), such strategies include using comments and questions, require expansion of talk, and inviting interaction with peers. I will provide research on Naturalistic Teaching from Anthony, Steighner, & Hoyson's (2001) study. The researchers studied a way to use naturalistic tactics to increase social interaction skills. The results of this study indicate that a Naturalistic Teaching approach increased the number of social interactions by the four preschool boys with ASD.

I will ask my participants to get back into their same small groups of four. I will assign each group a Naturalistic Teaching strategy (they can look at the descriptions in their Packet of Materials.) Each group will come up with some ideas and examples they could use with their assigned strategy. We will then get back into a large group and each small group will share their ideas and examples.

Next, the main points of the interventions will be reviewed. I will point out that typically, multiple interventions for children with ASD are necessary for a successful program. For children with autistic spectrum disorders, early intervention together with appropriate teaching and management will help develop crucial social, communication and play skills that provide a basis for future learning” (Hannah, 2001, p. 7).

To conclude the presentation, I will assign homework. I will ask participants to finish filling out and add to their Child Interests Profile. Participants also need to teach a play strategy to a child (a child they filled out the Child Interests Profile on). Participants may use the play strategies they performed during the professional development session. Lastly, they will need to try at least two sabotage strategies with their students.

Approximately three weeks later, participants will be strongly encouraged to attend my Feedback Session (Figure 4: Day 6) so they can share their Child Interests Profile, the effectiveness of teaching play strategies, and their sabotage strategies reactions. After giving the homework assignments, I will ask if participants have any questions or comments. In order to evaluate the effectiveness of the professional development sessions, I will have my participants fill out an evaluation form and I will collect them before they leave the last session (see Appendix F).

CHAPTER 3

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This project was based on four essential questions: (1) What are some possible social interventions to use with preschool-age children who have mild autism spectrum disorders, (2) what research supports current successful social interventions, (3) which social interventions could provide the most benefits and success, and (4) how can inclusion and interacting with typically developing peers assist in implementing interventions?

As an early childhood special education teacher, I have tried different strategies and interventions in order to meet each individual child's specific needs. I currently use Social Stories with my students. I recently began making and using them more frequently after I have come to the realization of the effectiveness of using them. I have also found that the more I create, the easier it is to come up with the wording for the stories. Through reading research and finding resources about Social Stories. I feel I have a better understanding of what a Social Story is comprised of in order for them to be the most successful.

I have been teaching in an inclusive classroom setting. My goal with my students has been to promote social interactions and to work on social skills. There is a variety of peer-mediated interventions available. I have explored some of the interventions and

activities that teachers can use to assist in their student's success. My goal for creating these professional development sessions is to share the knowledge and resources I have acquired by developing this project.

Personally, I have found Social Stories, the TEACCH Curriculum Model, and Naturalistic Teaching Strategies successful in my classroom. I have used some strategies from Pivotal Response Training, and Physical and Verbal Sharing. I am now planning to implement the interventions more completely in my own classroom from what I have learned.

There is research available for teachers that support current successful interventions. I was able to locate a variety of research studies on peer-mediated interventions. However, I found it difficult to find studies on Social Stories used with preschool-aged children. I believe that strategies shown with older children can easily be adapted and modified to meet a child's needs, abilities, and age.

Recommendations

In order to make resources more easily available for teachers, administrators, and paraprofessionals, I recommend gathering a variety of commonly used Social Stories and storing them in central locations. I would recommend creating an autism resource library at our Early Childhood School. The autism resource library at our Area Education Agency already exists. However, the AEA library currently could use more resources for early childhood teachers.

Resources that would be useful to have at the libraries would include Social Stories and information on teaching social interactions. Social Stories would include

commonly used stories, as well as anecdotes from teachers on their effectiveness. Pivotal Response Training strategies for the facilitator, and motivating activities typically developing peers and children with ASD can do to promote social interactions. There could also be a list of ideas for facilitating physical and verbal sharing. The TEACCH Curriculum Model could be available with activities that readers could use to teach play strategies to children with ASD. Lastly, the library could include Naturalistic Teaching techniques and strategies.

I also believe it would be beneficial to make Social Stories and Social Skills interventions resources available for families. Social Stories and examples of social interaction strategies that families have actually used with their children could be added to the library for families to checkout. A parent night could be developed to inform families on how to make and effectively use Social Stories with their children. There could also be parent meetings in which parents could learn strategies that promote social interactions as well as share their own experiences.

I would like to recommend Social Stories Intervention and Peer-Mediated Interventions become a regular part of professional development sessions due to the steady increase of structured teaching classrooms (classrooms for children with ASD) here in Dubuque. There is a great need for professional development sessions for teachers of young children with ASD due to the newness of the field, and the vast amount of available interventions, strategies, and methodologies. I would also like to recommend on-going learning of strategies and interventions by observing teachers and

paraprofessionals implementing interventions and strategies, as well as teachers and paraprofessionals observing each other's classrooms.

The professional development sessions should provide teachers with new instructional practices, useful ideas and practical strategies that they can implement in their classrooms. Learning and becoming familiar with a variety of social interventions can assist teachers in meeting the wide range of individual needs of their students in order to help each child become successful in school and in life outside school.

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APPENDIX A
DEFINITIONS OF TERMS

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Activity-Based Instruction: *See* naturalistic interventions.

Asperger Syndrome (AS): Also called *Asperger disorder*, one of the conditions considered a pervasive developmental disorder (PDD), AS is characterized by marked and sustained social and behavioral impairment but no significant cognitive or language delays.

Autism Spectrum Disorders (ASD): Term used to refer to any disorder in the array of pervasive developmental disorders (PDDs).

Affirmative sentences: Enhance the meaning of surrounding statements and express commonly shared opinions.

Childhood Disintegrative Disorder (CDD): Children with CDD develop symptoms resembling autism but do so after a period of normal development – minimally 2 years – with an age onset prior to 10 years.

Control Sentences: written by the focus individual (with assistance as needed), identify strategies that the person can use to recall the social story at an appropriate time and place.

Cooperative Sentences: Identify what other people will do to support the focus individual as he or she learns a new skill or behavior.

Descriptive sentences: Provide information about specific social settings or situations and describes what happens and why.

Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR): Published by the American Psychiatric Association (APA), the professional membership organization representing psychiatrists in the United States. DSM-IV-TR contains a listing of disorders and corresponding diagnostic codes.

Directive sentences: Provide information about what a person should do to be successful in the target situation.

Discrete Trial Training (DTT): Breaks down complex skills into small, easily manageable steps so that skills can be more easily mastered by the child with ASD.

High-Functioning Autism: Although not officially recognized as a diagnostic category, it refers to individuals with ASDs who have near-average to above average cognitive abilities and can communicate through receptive and expressive language.

Incidental Teaching: A variety of methods for teaching skills in typical environments.

Inclusion: Education of children with disabilities in general education classrooms with typical same-age peers.

Individualized Education Program (IEP): Comprehensive written yearly plan designed to ensure that 1) students with disabilities receive the services they need to benefit from an education, 2) parents are fully involved in the decision-making process, 3) educators understand their obligations to the individual child, 4) the effectiveness of service is evaluated, 5) the child's needs

are viewed from multiple vantage points, and 6) the child is provided with services to support the move to adult independence.

Intrinsic Reinforcement: The positive reinforcement that radiates from within, stemming from satisfaction or pride in accomplishing a task.

Lovaas methodology: Behavioral language intervention that uses discrete trial training and other procedures based on principles of applied behavior analysis (ABA). This approach breaks skills down into discrete trials, or small, measurable steps that are presented in a massed and rapid sequence.

Mand-Model Procedure: The mand-model procedure involves the teacher or caregiver modeling and/or manding (requesting) a response from the child.

Milieu Teaching: An approach to teaching that uses the child's natural environment as the teaching situation.

Naturalistic Interventions: Techniques and/or strategies that occur in a natural environment (e.g., classroom, home, community), rather than in a decontextualized setting, and that are designed to teach specific functional behaviors or skills (i.e., relevant for the settings in which they are learned). Specific intervention approaches often described as naturalistic are activity-based intervention, incidental teaching, and milieu and enhanced milieu training.

Occupational Therapy (OT): A therapy that focuses on improving the development of fine and gross motor skills, sensory integration skills, and daily living skills.

Oral Motor Activity: Movement of the muscles located in and around the mouth.

Peer-Mediated Intervention: Intervention or instruction delivered by a peer to an individual with autism. Intervention designed to promote social, communication, academic, and other social skills. Peers are taught specific behaviors and instructions to direct to an individual with autism.

Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS): A diagnosis used when a child displays fewer criteria than are required for a diagnosis of autism but does evidence autism-like problems that constitute developmental risk. PDD-NOS is often used when a child is too young for a more definitive diagnosis, and display higher language and cognitive skills than children with an autism diagnosis.

Perspective sentences: Describe the internal states of other people, as well as information about their thoughts, feelings, or moods.

Physical Therapy (PT): A therapy that specializes in the improvement of developing motor skills, with an emphasis on gross motor skills.

Pivotal Response Training: A treatment intervention approach based on teaching fundamental behaviors that then permit the child to acquire many other behaviors.

Rett's Disorder: Features reduced head growth and usually profound cognitive delays. An extremely rare genetic disorder affecting only girls.

Sensory Integration: The harmonic organization of parts of the nervous system so that an individual can effectively interact with the environment.

Social Impairment: Impairment in social skills, including difficulties initiating interactions, engaging in reciprocity, maintaining eye contact, showing empathy, and recognizing or understanding the perspective of others.

Social Skills: Specific skills an individual uses to interact with others.

Social Stories: Stories written by parents or professionals from the perspective of the child to teach social skills. Has a specific format and guidelines and objectively describes a person, skill, event, concept or social situation.

Sociodramatic Play: Activities such as playing house, playing school, or playing store.

Speech –Language Pathologist (SLP): A qualified professional who improves communication skills as well as oral motor abilities.

Treatment and Education of Autistic and Related Communication Handicapped Children model (TEACCH) curriculum model: A structured teaching intervention developed by Division TEACCH of the University of North Carolina. TEACCH is developed to meet an individual's specific communication, social and educational needs. TEACCH utilizes a highly structured physical environment.

APPENDIX B

CRITERIA FOR CLASSIFICATION OF ASD

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Autism is defined in section 299.00 of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) as (Answers Corporation: Online Encyclopedia, Thesaurus, Dictionary definitions and more, 2006):

1. The criteria for a diagnosis of autism requires a total of six (or more) items from (1), (2) and (3), with at least two from (1), and one each from (2) and (3):
 1. qualitative impairment in social interaction, as manifested by at least two of the following:
 1. marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction
 2. failure to develop peer relationships appropriate to developmental level
 3. a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest)
 4. lack of social or emotional reciprocity
 2. qualitative impairments in communication as manifested by at least one of the following:

1. delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mime)
 2. in individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others
 3. stereotyped and repetitive use of language or idiosyncratic language
 4. lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level
3. restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:
1. encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
 2. apparently inflexible adherence to specific, nonfunctional routines or rituals
 3. stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting, or complex whole-body movements)
 4. persistent preoccupation with parts of objects
2. Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (1) social interaction, (2) language as used in social communication, or (3) symbolic or imaginative play.

3. The disturbance is not better accounted for by Rett's Disorder or Childhood Disintegrative Disorder.

APPENDIX C
PIVOTAL RESPONSE TRAINING

PIVOTAL RESPONSE TRAINING

(PRT; Koegel, 1989)

1. *Paying attention* - Ensure that the target child is attending before delivering a prompt or suggestion. For example, the peers were instructed to try to make eye contact or hold a toy in view of the target child in an attempt to get his attention.
2. *Child's choice* – Give choices between different play activities to keep motivation high. For example, if the target child is looking at the ball, give a choice between that toy and another.
3. *Vary toys* – Try not to play with the same toys repeatedly; vary toys frequently according to the target child's preferences.
4. *Model appropriate social behavior* – Provide frequent and varied examples of appropriate play and social skills, including verbal statements (e.g., saying “This game is fun”) and complex play actions (e.g., acting out a script with dolls).
5. *Reinforce attempts* – Verbally reinforce any attempt at social interaction or functional play (e.g., while playing catch, say, “Great throw”).
6. *Encourage conversation* – Withhold desired play object until the target child emits a verbal response related to that object or activity (e.g., requiring target child to say, “Let's play ball” before allowing child to have ball).
7. *Extend conversation* - Ask questions or encourage conversation centered on tangible objects in the room (e.g., while playing with toy food say, “I like to eat ice cream; do you like to eat ice cream or pizza?”).

8. *Turn taking* – Take turns during play to provide examples of appropriate play, promote sharing, and increase motivation.
9. *Narrate play* – Provide descriptions of play actions and scripts. That is, the peers were told to talk about what they were doing. For example, while at the car garage, a peer might say, “OK, I’m getting my tire changed.”
10. *Teach responsivity to multiple cues* – Comment on object properties and require the target child to talk about object properties whenever possible (e.g., “Do you want to play with the small, green ball or the big, blue ball?”).

APPENDIX D

DESCRIPTION OF NATURALISTIC TEACHING STRATEGIES

DESCRIPTION OF NATURALISTIC TEACHING STRATEGIES

Strategy: Use Novel Materials

Description: Incorporate materials that are novel and/or unique into the activity.

These may be items in which the child has shown previous interest, such as Pooh characters, balloons, bubbles, and so forth.

Strategy: Join the Activity

Description: The teacher joins the activity and engages in play-related actions and themes with the children.

Strategy: Invite Child to Make Choices

Description: The teacher invites the child to make choices about desired actions and/or materials. This can be done through questions or nonverbal overtures (e.g., holding out a container of markers so the child can select one).

Strategy: Use incidental strategies

Description: Place items out of reach, block the child's access to desired items, sabotage the materials, and act in ways that violate the child's expectations (use materials incorrectly or respond to child's overtures in the wrong way).

Strategy: Use Comments and Questions

Description: The teacher uses comments and questions to facilitate the child's interest and/or play-related talk (e.g., "I think that I'll put my baby right next to yours" or "Why are you coloring your turtle purple?").

Strategy: Require Expansion of Talk

Description: Respond to the child's talk in a manner that generates elaboration. If the child requests a ball, the teacher might ask, "What color is the ball?" and "What are you going to do with it?" before giving the child the ball.

Strategy: Invite Interaction with Peers

Description: The teacher encourages interaction with other children by drawing the child's attention to peers or prompting peers to direct overtures to the focal child (e.g., "Maybe you could ask Sam if he will play with you").

(Anthony, Steighner, & Hoyson, 2001).

APPENDIX E

SOCIAL INTERVENTIONS PROFESSIONAL DEVELOPMENT

SOCIAL INTERVENTIONS PROFESSIONAL DEVELOPMENT

Day 1: Social Story Interventions

- 1:00 – Welcome and Introductions
- 1:05 – Read through Social Story of this Professional Development Session
- 1:10 – Overview of ASD
 - Power Point presentation on ASD
- 1:30 – Define Objectives and Purpose of this Professional Development Session
- 1:40 – Power Point Presentation of Social Story Interventions
 - Research on Social Story Interventions
 - Social Story Content and uses
 - How to make a Social Story
- 2:15 Short Break
- 2:20 – Writing a Social Story in Small Groups
- 2:45 – Large Group Sharing of Small Group's Social Stories
- 3:15 – Describe Homework and Ongoing Assessment
- 3:20 – Closing Questions/Concerns

Day 2: Feedback Session

Large group sharing of effectiveness and usage of Social Story Interventions with their own students

SOCIAL INTERVENTIONS PROFESSIONAL DEVELOPMENT

Day 3: Peer-Mediated Interventions

- 1:00 – Welcome and Introductions
 - Share Quote about Friendships
- 1:10 – Define Objectives and Purpose of this Professional Development Session
- 1:15 – Overview of Social Challenges of children with ASD
 - Overview of Inclusion (children with ASD and Typically Developing Peers)
- 1:25 – Power Point Presentation on Peer-Mediated Interventions
 - Examples of Promoting Peer Interactions through the use of the following interventions:
 - Pivotal Response Training (PRT)
 - Physical and Verbal Sharing Behaviors
 - TEACCH Curriculum Model
 - Naturalistic Teaching
- 2:35 – Short Break
- 2:40 – Break into Small Groups
- 3:00 – Large Group Sharing of Small Group's Discussion
- 3:20 – Describe Homework and Ongoing Assessment
 - Evaluation of Social Interventions Professional Development
 - Closing Questions/Concerns

Day 4: Feedback Session

Large group sharing of effectiveness and usage of Peer-Mediated Interventions with their own students

SOCIAL INTERVENTIONS PROFESSIONAL DEVELOPMENT

Day 5: Peer-Mediated Interventions (Part 2)

- 1:00 – Welcome Back
- 1:05 – Results Shared from our Last Feedback Session
- 1:15 – Participants Individually Fill Out Children’s Interest Profile on one of their Current Students
- 1:25 – Define Objectives and Purpose of this Professional Development Session
- 1:30 – Power Point Presentation on Peer-Mediated Interventions
Examples of Promoting Peer Interactions through the use of the following interventions:
TEACCH Curriculum Model
- 1:50 – Demonstration in Large Group (Modeling of Teaching Students Play Strategies)
- 2:05 – Small Group Role Plays of Teaching Students Play Strategies
- 2:15 – Short Break
- 2:20 – Naturalistic Teaching Intervention
- 2:45 – Small Group Activity
- 3:00 – Share Small Group’s Discussion in Large Group
- 3:15 – Main Points of Peer-Mediated Interventions
- 3:20 – Describe Homework and Ongoing Assessment
Evaluation of ALL Social Interventions Professional Development Sessions
Closing Questions/Concerns

Day 6: Feedback Session

Large group sharing of effectiveness and usage of teaching play strategies, using sabotage strategies, and Sharing Children’s Interests Profiles.

APPENDIX F
EVALUATION FORM FOR PARTICIPANTS

EVALUATION FORM FOR PARTICIPANTS

Your Current Position: _____
 (Please circle those that apply):

1. I attended:

Social Story Session	Social Story Feedback Session
Peer-Mediated Intervention (Part1)	Peer-Mediated Intervention Feedback (Part 1)
Peer-Mediated Intervention (Part2)	Peer-Mediated Intervention Feedback (Part 2)

2: I have used the following interventions before attending the sessions:

Social Stories	Inclusion	Pivotal Response Training	TEACCH
Physical & Verbal Sharing		Naturalistic Teaching	

3. After learning about them, I now intend to implement intervention(s):

Social Stories	Inclusion	Pivotal Response Training	TEACCH
Physical & Verbal Sharing		Naturalistic Teaching	

Please circle the number that best describes your response.

SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

4. I have learned more about autism by attending these sessionsSD D N A SA

5. I believe typically developing peers can help improve social skills of children with autism.....SD D N A SA

6. What could be done to improve the Professional Development and Feedback Sessions?

(Please write on the back)

APPENDIX G

PARTICIPANT PACKET OF MATERIALS (DAYS 1 & 2)

PARTICIPANT PACKET OF MATERIALS (DAYS 1 & 2)

**Professional Development Sessions: Using Social Stories
Effectively in the Classroom**

Day 1: Social Story Interventions

- 1:00 - Welcome and Introductions
- 1:05 - Read through Social Story of this Professional Development Session
- 1:10 - Overview of ASD
 - Power Point presentation on ASD
- 1:30 - Define Objectives and Purpose of this Professional Development Session
- 1:40 - Power Point Presentation of Social Story Interventions
 - Research on Social Story Interventions
 - Social Story Content and uses
 - How to make a Social Story
- 2:15 Short Break
- 2:20 - Writing a Social Story in Small Groups
- 2:45 - Large Group Sharing of Small Group's Social Stories
- 3:15 - Describe Homework and Ongoing Assessment
- 3:20 - Closing Questions/Concerns

Day 2: Feedback Session

Large group sharing of effectiveness and usage of Social Story Interventions with their own students

Providing Social Story Interventions for Preschool-Age Children with Mild Autism Spectrum Disorders

Angela Riesberg

What is Autism Spectrum Disorder (ASD)?

- Autism Spectrum Disorder (ASD) is a complex developmental disorder.
- A child with ASD displays examples of the following behaviors to some degree:
 - Qualitative Impairment in Social Interaction
 - Qualitative Impairments in Communication
 - Restricted, Repetitive, and Stereotyped Patterns of Behaviors, Interests, and Activities

ASD Characteristics

- Difficulty in expressing needs; uses gestures or pointing instead of words
- Repeating words or phrases in place of normal, responsive language
- Laughing, crying, showing distress for reasons not apparent to others
- Prefers to be alone; aloof manner
- Tantrums

(Autism Society of America, 2006)

ASD Characteristics

- Sustained odd play
- Spins objects
- Inappropriate attachments to objects
- Apparent over-sensitivity or under-sensitivity to pain
- No real fears of danger
- Noticeable physical over-activity or extreme under-activity
- Uneven gross/fine motor skills

(Autism Society of America, 2006)

ASD Characteristics

- Difficulty in mixing with others
- May not want to cuddle or be cuddled
- Little or no eye contact
- Unresponsive to normal teaching methods
- Not responsive to verbal cues; acts as if deaf although hearing tests in normal range.
- Unusual responses to sensation
- Repetitive movement
- Insistence on routine or sameness

(Autism Society of America, 2006)

What is a Spectrum Disorder?

- Pervasive Developmental Disorder, Not Otherwise Specified (PDDNOS):
 - children with some characteristics of autism, but not a significant number to be diagnosed with the classical form of the disorder

What is a Spectrum Disorder?

- Asperger Syndrome:
 - children with characteristics of ASD, but who also have well-developed language skills

What is a Spectrum Disorder?

- Childhood Disintegrative Disorder (CDD)
 - children who appear to be typically developing in their first several years, then lose skills and begin showing autistic like behaviors

What is a Spectrum Disorder?

- Girls with Rett syndrome-linked genetic disorder:
 - characterized by inadequate brain growth, seizures, and other neurological problems, may also show characteristics of autism.
- PDD-NOS, Asperger syndrome, CDD, and Rett syndrome are diagnosed as autism spectrum disorders

(Answers Corporation: Online Encyclopedia, Thesaurus, Dictionary definitions and more, 2006)

Spectrum Disorder

- The symptoms and characteristics of autism can present themselves in a wide variety of combinations, from mild to severe.
- Although autism is defined by a certain set of behaviors, children and adults can exhibit *any combination* of the behaviors in *any degree of severity*.
- Two children, both with the same diagnosis, can act very differently from one another and have varying skills

(Autism Society of America, 2006)

ASD Facts

- Typically appears during the first three years of life.
- 4 times more prevalent in boys than girls
- Autism knows no racial, ethnic, or social boundaries, nor does family income, lifestyle, or educational levels affect the chance of autism's occurrence

ASD Facts

- Autism is the most common of the Pervasive Developmental Disorders (PDD), affecting an estimated 1 in 166 births (Centers for Disease Control Prevention, 2004).
- As many as 1.5 million Americans today are believed to have some form of autism.
- Based on statistics from the U.S. Department of Education and other governmental agencies, autism is growing at a startling rate of 10-17 percent per year.

Treatments and Interventions

- There is *no one size fits all* treatment approach for ASD (Neisworth, 2005).
- Due to varying needs and abilities of children with autism spectrum disorders, the types of interventions and effectiveness will also vary.

Children with ASD and Social Skills

- Deficits in understanding and using social skills effectively to communicate and interact with others.
- Lack of eye contact
- Lack of understanding with such social cues: body language, gestures, and facial expressions.
- Aggressive/inappropriate behaviors, withdraw from others, or demonstrate self-injurious behaviors due to the misunderstanding of certain social cues.

Social Story

- It is professional development time.
- When it is time for professional development, I go sit in a chair.
- I sit with my feet on the floor and my hands to myself.
- I help Angela during professional development time by listening.
- I will wait for my turn to talk.
- When professional development time is over, I wait until Angela tells me it is time to go.
- I will do great during professional development time and Angela will be so happy!

Social Stories

- Social Stories were created by an educator Carol Gray
- Using social stories is one widely used intervention that addresses the social skills deficits of children with ASD.

(Gray & Garand, 1993)

Social Story Content



- Depending on the child's needs, a Social Story consists of:
 - illustrations (photographs, drawings, or other types of visuals).
 - words alone or with illustrations
 - typically written in first person with present or future tense verbs

Social Story Content 3 Sentence Types

- Descriptive Sentences
- Directive Sentences
- Perspective Sentences

(Quill, 1995)

Social Story Sentence Type Number 1

Descriptive Sentences:

- Explain what occurs and why, "painting the backdrop" of a story
- Point out the relevant features of a situation
- Often are used to begin social stories



Social Story Sentence Type Number 2

Directive Sentences:

- Individualized statements of desired responses
- Often begin with "I will..." or "I can..."



Social Story Sentence Type Number 3

Perspective Sentences:

- Describe the reactions of others in the target situation



Reading Social Stories:

- It is important to read/have the child read his/her Social Story often before the specific event or situation.
- Can start reading months, weeks, or days in advance.
- Make sure to also read just before the specific event or situation (that same day).



How to Make a Social Story

- See example in handout
- Other Examples



Your Turn to Make a Social Story

- Large Group Discussion:
 - Think about your current students
 - What are some challenging situations/activities for a particular student(s) that you could make a Social Story about?



Social Stories Research

- Study: Kuoch and Mirenda (2003)
- Investigated:
 - the effectiveness of Social Story interventions for three young boys.
- The specific problem behaviors addressed were sharing, eating, and playing games
- Results:
 - revealed that the Social Story itself (not just the extra adult attention that accompanies it) was responsible for reductions in the target problem behaviors.



Your Turn to Make a Social Story

- Other Scenarios you may choose from:
 - Brandon will be transitioning to Kindergarten (a new school, new classroom, new teachers).
 - Andrea has a difficult time sitting and listening to a book during story time.
 - Jonathan sticks his finger in his nose instead of using tissues.
 - Justin has difficulty waiting for his turn while playing the game Candy Land. He often takes others' turns.
 - Abby is verbal but does not use words to ask friends if she can play with their toys. She grabs toys away from friends.



Your Turn to Make a Social Story

- Small Group Discussion:
 - Pair up/get into small groups with other teachers who have the same type of scenario that you are going to write a Social Story about.
- Write out your Social Story to share with our large group.



Social Stories Research

- Study: Ivey, Heflin and Alberto (2004)
- Determined:
 - if the use of Social Stories before a novel event within a routine setting would lead to independent behavior during the actual event for children with ASD
- Results:
 - three boys evidenced an improvement in the percentage of participation skills observed from the baseline through the initial Social Story phase.



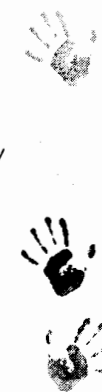
Social Stories Research

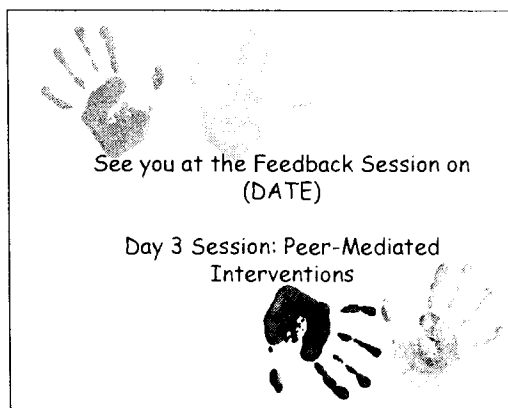
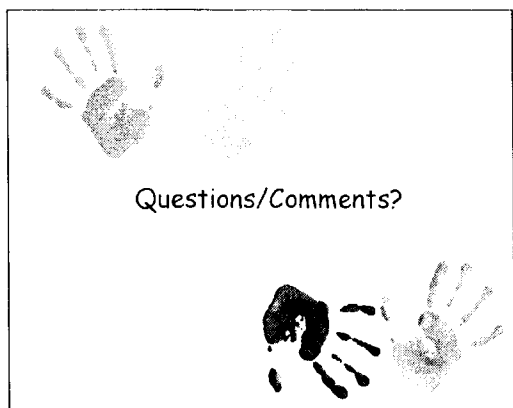
- Study: Schmit, Alper, Raschke, and Ryndak (2000)
- Discovered in their study:
 - a combination of visual and verbal cueing reduced the number of tantrums and increased independence in the classroom. This outcome also generalized over to the student's home environment.



Homework

- Use the Social Story you made today with a student in your classroom (you may use the story you made today or modify/adapt the story to meet an individual's needs)
- Feedback Session:
 - Share Social Stories and discuss effectiveness.

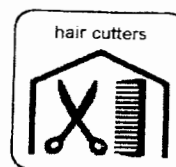




PARTICIPANT PACKET OF MATERIALS (DAYS 1 & 2)

Timmy's Haircut

Timmy is going to go get his hair cut.



Timmy will sit in a chair.



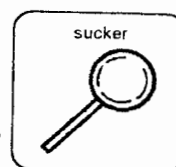
Mr. John will cut Timmy's hair.



Timmy will be o.k.



When Mr. John is all done, Timmy will get a sucker.



Timmy got his hair cut.



Good job Timmy!



APPENDIX H

PARTICIPANT PACKET OF MATERIALS (DAYS 3 & 4)

APPENDIX H

PARTICIPANT PACKET OF MATERIALS (DAYS 3 & 4)


Successful Social Interventions through Inclusion

Day 3: Peer-Mediated Interventions

- 1:00 - Welcome and Introductions
Share Quote about Friendships
- 1:10 - Define Objectives and Purpose of this Professional Development Session
- 1:15 - Overview of Social Challenges of children with ASD
Overview of Inclusion (children with ASD and Typically Developing Peers)
- 1:25 - Power Point Presentation on Peer-Mediated Interventions
Examples of Promoting Peer Interactions through the use of the following interventions:
 - Pivotal Response Training (PRT)
 - Physical and Verbal Sharing Behaviors
 - TEACCH Curriculum Model
 - Naturalistic Teaching
- 2:35 - Short Break
- 2:40 - Break into Small Groups
- 3:00 - Large Group Sharing of Small Group's Discussion
- 3:20 - Describe Homework and Ongoing Assessment
Evaluation of Social Interventions Professional Development
Closing Questions/Concerns

Day 4: Feedback Session

Large group sharing of effectiveness and usage of Peer-Mediated Interventions with their own students



Providing Peer-Mediated Interventions for Preschool-Age Children with Mild Autism Spectrum Disorders - Part 1

Angela Riesberg



Friendships



Friendship is the thing most essential to life, for without it, who would choose to live, though possessed of all other things.


- Aristotle



(Strain & Schwartz, 2001)


Friendships



- Pair up and reflect on the social friendships you witness with your students
 - Share responses in large group
- 


Autism




- Named by Leo Kanner (1943) from the *Greek autos*
 - Meaning: *of or for oneself*
 - Social disregard or avoidance of others
- 

(Neisworth & Wolfe, 2005)


Social Skills Development




- The development of social skills includes such factors as communication including:
 - body language
 - spatial issues (how physically close to be to others)
 - facial expressions
 - play skills
 - turn-taking skills
- 

(Yapko, 2003)

Social Skills Development



- Other skills needed to become socially competent include:
 - recognizing, responding to and expressing emotions
 - initiating, maintaining and ending interactions
 - perspective taking
 - reasoning and problem solving
 - understanding motives of others
- 

(Yapko, 2003)

Social Skills and ASD

- Social Skills Deficits = one of the main characteristics of ASD.
- Characteristics may include:
 - Prefers to be alone
 - Difficulty in mixing with others
 - May not want to cuddle/ be cuddled
 - Little or no eye contact
 - Sustained odd play
 - Spins objects
 - Inappropriate attachments to objects

(Autism Society of America, 2006)

Various Levels of Social Interaction

- Totally isolated, withdraw from all social contexts.
- Tolerate simple interactions, may learn basic skills.
- May wish to engage socially but lack necessary skills to be successful.

(Yopko, 2003)

Inclusion Goals

- For children with ASD to increase the frequency in which they engage in social interactions with typically developing peers.
- Children without disabilities may become more tolerant and accepting of others.
- Fostering a community of learners where all children are respected and accepted.

Inclusion



- Peer-Mediated Interventions provides children with ASD:
 - Positive connections with peers.
 - opportunities to learn from peer-modeling

Peer Mediated Interventions

- Children with ASD may watch more appropriate models of social behavior than would be provided by peers with ASD.
- Children with ASD could engage in more normalized social experiences

Peer Mediated Interventions

- Pivotal Response Training (PRT)
- Physical and Verbal Sharing Behaviors

Part 2 will include:

- TEACCH Curriculum Model
- Naturalistic Teaching

Pivotal Response Training (PRT)

- Specific behaviors (pivotal behaviors) are central in affecting areas of functioning.
- Change the pivotal behaviors with such techniques as:
 - Positive reinforcement
 - Changing & correcting behaviors
 - Child choice and motivation

(Exkorn, 2005)

Pivotal Response Training



- Focuses on:
 - Teaching communication
 - Teaching language skills
 - How to have effective social interactions

(Exkorn, 2005)

Pivotal Response Training



- Designed to fit into child's everyday life
- Uses natural learning opportunities in any inclusive setting

PRT Strategies for the Facilitator

1. Paying Attention
2. Child's Choice
3. Vary Toys
4. Model Appropriate Social Behavior
5. Reinforce Attempts
6. Encourage Conversation
7. Extend Conversation
8. Turn-Taking
9. Narrate Play
10. Teach Responsivity to Multiple Cues

(PRT Koegel, 1989) (Koegel & Koegel, 2006)

PRT Research

- Study: Pierce-Jordan & Lifter (2005)
- Investigation:
 - The relationship between the social and play behaviors of young children with and without pervasive developmental disorder (PDD).
- Results:
 - Social interventions should be implemented in the context of play activities that the child has mastered, as opposed to those activities the child is in the process of learning.

PRT Activity Ideas

- Motivating Activities typically developing peers and children with ASD can do to promote play interactions:
 - Paint a mural
 - Play organized games (Duck, Duck, Goose, or "Tag")
 - Work on a floor puzzle together

Physical & Verbal Sharing Intervention

- Physical Sharing can include:
 - handing play materials to another child
 - allowing another child to take play materials
 - using play materials that another child had during the same play session
 - simultaneously manipulating play materials with another child during an activity.

(Sawyer, Luiselli, Ricciardi & Gower, 2005)

Physical & Verbal Sharing Intervention

- For many children, intervention that targets sharing must address **both physical and verbal behaviors**

(Sawyer, Luiselli, Ricciardi & Gower, 2005)

PRT Activity Ideas

- Large Group Discussion:
 - Together we will come up with a list of motivating activities children with ASD and typically developing peers can play together to promote social interactions.

Physical & Verbal Sharing Intervention

- Verbal Sharing can include:
 - all verbal attempts at initiating physical sharing or verbal acceptance of such attempts
 - requesting play materials from another child
 - asking a child to share play materials

(Sawyer, Luiselli, Ricciardi & Gower, 2005)

Physical & Verbal Sharing Research

- Study: Sawyer, Luiselli, Ricciardi & Gower (2005)
- Suggests: priming before a classroom play session, combined with in-session prompting and reinforcement improved sharing behaviors
- It appeared that the intervention might have had a positive effect on the physical sharing of the typically developing peers.
- This study suggests that sharing behaviors can be taught successfully to children with ASD and interact with typical peers within integrated educational settings.

Physical & Verbal Sharing Discussion

- Discuss in small group:
 - How can you facilitate physical and verbal sharing within the list of activities we made?
 - I will assign each group with 3 activities
- Each group will discuss their ideas in large group

Homework

- Choose a few of the activities we talked about today that promote social interactions.
- Apply them with your students and facilitate some examples of Verbal and Physical Sharing
- Feedback Session:
 - Share activities you implemented and their effectiveness

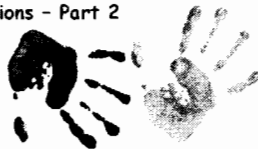


Questions/Comments?



See you at the Feedback Session on
(DATE)

Day 5 Session: Peer-Mediated
Interventions - Part 2



Participant Packet of Materials

Successful Social Interventions through Inclusion (Days 3 & 4)

Pivotal Response Training (PRT; Koegel, 1989)

- 1 *Paying attention* - Ensure that the target child is attending before delivering a prompt or suggestion. For example, the peers were instructed to try to make eye contact or hold a toy in view of the target child in an attempt to get his attention.
- 2 *Child's choice* - Give choices between different play activities to keep motivation high. For example, if the target child is looking at the ball, give a choice between that toy and another.
- 3 *Vary toys* - Try not to play with the same toys repeatedly; vary toys frequently according to the target child's preferences.
- 4 *Model appropriate social behavior* - Provide frequent and varied examples of appropriate play and social skills, including verbal statements (e.g., saying "This game is fun") and complex play actions (e.g., acting out a script with dolls).

- 5 *Reinforce attempts* - Verbally reinforce any attempt at social interaction or functional play (e.g., while playing catch, say, "Great throw").
- 6 *Encourage conversation* - Withhold desired play object until the target child emits a verbal response related to that object or activity (e.g., requiring target child to say, "Let's play ball" before allowing child to have ball).
- 7 *Extend conversation* - Ask questions or encourage conversation centered on tangible objects in the room (e.g., while playing with toy food say, "I like to eat ice cream; do you like to eat ice cream or pizza?").
- 8 *Turn taking* - Take turns during play to provide examples of appropriate play, promote sharing, and increase motivation.
- 9 *Narrate play* - Provide descriptions of play actions and scripts. That is, the peers were told to talk about what they were doing. For example, while at the car garage, a peer might say, "OK, I'm getting my tire changed."

10 Teach responsivity to multiple cues - Comment on object properties

and require the target child to talk about object properties whenever possible (e.g., "Do you want to play with the small, green ball or the big, blue ball?").

Participant Packet of Materials

Successful Social Interventions through Inclusion (Days 3 & 4)

Description of Naturalistic Teaching Strategies

Strategy: Use Novel Materials

Description: Incorporate materials that are novel and/or unique into the activity. These may be items in which the child has shown previous interest, such as Pooh characters, balloons, bubbles, and so forth.

Strategy: Join the Activity

Description: The teacher joins the activity and engages in play-related actions and themes with the children.

Strategy: Invite Child to Make Choices

Description: The teacher invites the child to make choices about desired actions and/or materials. This can be done through questions or nonverbal overtures (e.g., holding out a container of markers so the child can select one).

Strategy: Use incidental strategies

Description: Place items out of reach, block the child's access to desired items, sabotage the materials, and act in ways that violate the child's expectations (use materials incorrectly or respond to child's overtures in the wrong way).

Strategy: Use Comments and Questions

Description: The teacher uses comments and questions to facilitate the child's interest and/or play-related talk (e.g., "I think that I'll put my baby right next to yours" or "Why are you coloring your turtle purple?").

Strategy: Require Expansion of Talk

Description: Respond to the child's talk in a manner that generates elaboration. If the child requests a ball, the teacher might ask, "What color is the ball?" and "What are you going to do with it?" before giving the child the ball.

Strategy: Invite Interaction with Peers

Description: The teacher encourages interaction with other children by drawing the child's attention to peers or prompting peers to direct overtures to the focal child (e.g., "Maybe you could ask Sam if he will play with you").

(Anthony, Steighner, & Hoyson, 2001).

APPENDIX I

PARTICIPANT PACKET OF MATERIALS (DAYS 5 & 6)

APPENDIX I

PARTICIPANT PACKET OF MATERIALS (DAYS 5 & 6)

Successful Social Interventions through Inclusion**Day 5: Peer-Mediated Interventions (Part 2)**

- 1:00 - Welcome Back
- 1:05 - Results Shared from our Last Feedback Session
- 1:15 - Participants Individually Fill Out Children's Interest Profile on one of their Current Students
- 1:25 - Define Objectives and Purpose of this Professional Development Session
- 1:30 - Power Point Presentation on Peer-Mediated Interventions
Examples of Promoting Peer Interactions through the use of the following interventions:
TEACCH Curriculum Model
- 1:50 - Demonstration in Large Group (Modeling of Teaching Students Play Strategies)
- 2:05 - Small Group Role Plays of Teaching Students Play Strategies
- 2:15 - Short Break
- 2:20 - Naturalistic Teaching Intervention
- 2:45 - Small Group Activity
- 3:00 - Share Small Group's Discussion in Large Group
- 3:15 - Main Points of Peer-Mediated Interventions
- 3:20 - Describe Homework and Ongoing Assessment
Evaluation of ALL Social Interventions Professional Development Sessions
Closing Questions/Concerns

Day 6: Feedback Session

Large group sharing of effectiveness and usage of teaching play strategies, using sabotage strategies, and Sharing Children's Interests Profiles.

Providing Peer-Mediated Interventions for Preschool-Age Children with Mild Autism Spectrum Disorders - Part 2

Angela Riesberg

Results from our Last Feedback Session

- How did the interventions work?
- Here is a compilation of what you said was effective/not effective during the activities tried to promote social interactions...

How Well Do You Know Your Students?

- Please take several minutes to fill out the Child Interests Profile (choose one of your current students) in your Packet of Materials

Peer Mediated Interventions

- TEACCH Curriculum Model
- Naturalistic Teaching

Learned in our last session (Part 1):

- Pivotal Response Training (PRT)
- Physical and Verbal Sharing Behaviors

TEACCH Curriculum Model

- Treatment and Education of Autistic and Related Communication Handicapped Children model (TEACCH).
- The TEACCH curriculum model incorporates some elements of the Lovaas model of structured teaching. It fosters a child's independence while using structured teaching and visual supports.

TEACCH Curriculum Model

- This approach focuses on the person with autism and the development of a program around the person's skills, interests, and needs.
- Developed to meet an individual's specific communication, social, and educational needs.

(Exkorn, 2005)

TEACCH Research

- Study: Francke & Geist's (2003)
- Research Based On: TEACCH curriculum model with modifications made by using typically developing peers as part of the teaching strategies, while keeping the focus on play.
- According to Francke & Geist (2003), before the participant (Jay) had been taught play strategies, he would not have tolerated another child entering the play, and would have left the area.
- After learning play skills, Jay was not only tolerating peers, he was also engaging in play with them and having fun.

TEACCH Research

- This study demonstrates that teaching play strategies could assist children with ASD to generalize skills taught in the structured setting and use them to enter into real play situations where natural learning takes place.

(Francke & Geist, 2003)

TEACCH Example

- During the modeling of rolling the truck, the researcher and Jay's personal attendant faced each other.
- Jay sat in his personal attendant's lap. The attendant used hand-over-hand instruction to teach Jay how to play.
- He was not to roll the truck to the researcher until she said, "go." When more than 45 seconds passed a cue was given.
- The next step was incorporating a peer into the activity.

Francke & Geist's (2003)

Volunteers?

- Need 3 volunteers to demonstrate how to teach play strategies to children.
- Your Turn
 - Get into groups of 4 and use the available toys to teach a "child" play strategies. Need: 2 "adults" and two "children"

Naturalistic Teaching

- There have been a number of interventions developed to improve social and communication skills of young children with ASD. One promising approach is called naturalistic teaching.
- Brown and Odom (1995) recommend that teachers be careful not to force children's interactions, but allow children to choose their own materials, activities, situations, and peers within an activity.

Naturalistic Teaching Objectives

- Two important Objectives:
 - (a) stimulate the child's interest, enjoyment, and play within the activity
 - (b) facilitate the child's communication and social interaction with others

(Anthony, Steighner, & Hoyson, 2001)

Naturalistic Teaching Techniques

- The first component is the use of environmental structuring tactics. It includes giving the child choices, gaining children's interests, and planned forgetfulness and sabotage (i.e., neglecting to provide necessary materials or placing furniture upside down).
- The second component includes the use of instructional tactics that match children's interests and actions (i.e., a teacher might join an activity and provide comments designed to stimulate further interest and engagement).

Naturalistic Teaching Strategies

1. Use Novel Materials (motivation)
2. Join the Activity
3. Invite Child to Make Choices
4. Use Incidental Strategies (sabotage)
5. Use Comments and Questions
6. Require Expansion of Talk
7. Invite Interaction with Peers

(Anthony, Steighner & Hoyson, 2001)

Naturalistic Teaching

- Learning how to stimulate children's interests and motivation within the context of an ongoing play activity was a vital step in learning naturalistic tactics.
- It was also essential for the teachers to have some knowledge of each child's individual needs and characteristics.
- The teachers were able to use the naturalistic tactics to facilitate social interactions once they learned the children's interest and motivators.

Naturalistic Teaching Research

- Anthony, Steighner, & Hoyson (2001) studied ways of using naturalistic tactics to increase the social interaction skills of four preschool children with ASD.

Naturalistic Teaching Group Activity

- In same groups of 4:
 - use your Naturalistic Teaching assigned strategy (can look at descriptions in your Packet of Materials) to come up with some ideas/examples you could use with the strategy I have assigned to your group.
- Large Group
 - Small groups will share their ideas/examples.

Main Points of Peer-Mediated Interventions

- Typically, multiple interventions are necessary for a successful program
- Different types of social interventions are available in order to best meet each individual child's needs.
- There is no *one size fits all* treatment approach for ASD (Neisworth, 2005).

Main Points of Peer-Mediated Interventions

- For children with autistic spectrum disorders, early intervention together with appropriate teaching and management will help develop crucial social, communication and play skills that provide a basis for future learning" (Hannah, 2001, p. 7).



Homework

- Finish/add to your Child Interests Profile
- Teach a play strategy to the same child (can use play examples from today)
- Try at least 2 "sabotage" strategies.
- Feedback Session:
 - Share Child Interest Profiles, effectiveness of teaching play strategies, and your "sabotage" strategy reactions.



Before You Go...

- Please take a minute to fill out my evaluation form.
- Please give it to me before you leave today.
- THANK YOU!



Questions/Comments?



See you at our Final Feedback Session on
(DATE)

THANK YOU FOR YOUR PARTICIPATION!



Child Interests Profile

Child's Name: _____ Date: _____

1) Favorite Toys:

2) Preferred Activities:

3) Favorite Characters (from T.V./Movies):

4) Favorite Games:

5) Peers the Child Plays With/Alongside the Most:

6) Song/Music Preferences:

7) Other Motivators/Interests:

Participant Packet of Materials

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Using Social Stories Effectively in the Classroom & Successful Social Interventions through Inclusion

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